



# Red Hat Subscription Management 2023

## Using Red Hat Subscription Management

managing your Red Hat subscriptions, entitlements, and errata



# Red Hat Subscription Management 2023 Using Red Hat Subscription Management

---

managing your Red Hat subscriptions, entitlements, and errata

## Legal Notice

Copyright © 2023 Red Hat, Inc.

The text of and illustrations in this document are licensed by Red Hat under a Creative Commons Attribution–Share Alike 3.0 Unported license ("CC-BY-SA"). An explanation of CC-BY-SA is available at

<http://creativecommons.org/licenses/by-sa/3.0/>

. In accordance with CC-BY-SA, if you distribute this document or an adaptation of it, you must provide the URL for the original version.

Red Hat, as the licensor of this document, waives the right to enforce, and agrees not to assert, Section 4d of CC-BY-SA to the fullest extent permitted by applicable law.

Red Hat, Red Hat Enterprise Linux, the Shadowman logo, the Red Hat logo, JBoss, OpenShift, Fedora, the Infinity logo, and RHCE are trademarks of Red Hat, Inc., registered in the United States and other countries.

Linux<sup>®</sup> is the registered trademark of Linus Torvalds in the United States and other countries.

Java<sup>®</sup> is a registered trademark of Oracle and/or its affiliates.

XFS<sup>®</sup> is a trademark of Silicon Graphics International Corp. or its subsidiaries in the United States and/or other countries.

MySQL<sup>®</sup> is a registered trademark of MySQL AB in the United States, the European Union and other countries.

Node.js<sup>®</sup> is an official trademark of Joyent. Red Hat is not formally related to or endorsed by the official Joyent Node.js open source or commercial project.

The OpenStack<sup>®</sup> Word Mark and OpenStack logo are either registered trademarks/service marks or trademarks/service marks of the OpenStack Foundation, in the United States and other countries and are used with the OpenStack Foundation's permission. We are not affiliated with, endorsed or sponsored by the OpenStack Foundation, or the OpenStack community.

All other trademarks are the property of their respective owners.

## Abstract

Red Hat Subscription Management tools and applications provide different ways to view system-level and organization-level notifications and statuses and to respond to changing subscription needs. This guide details the different reporting and notification mechanisms and some quick paths to remediating insufficient and expired subscriptions.

---

## Table of Contents

<b>CHAPTER 1. UNDERSTANDING RED HAT SUBSCRIPTION MANAGEMENT</b> .....	<b>3</b>
<b>CHAPTER 2. VIEWING SUBSCRIPTIONS WITH RED HAT SUBSCRIPTION MANAGER</b> .....	<b>4</b>
<b>CHAPTER 3. USING SYSTEM PURPOSE WITH RED HAT SUBSCRIPTION MANAGER</b> .....	<b>6</b>
3.1. LISTING AVAILABLE VALUES FOR SYSTEM PURPOSE ATTRIBUTES	6
3.2. SETTING CUSTOM VALUES FOR SYSTEM PURPOSE ATTRIBUTES	7
<b>CHAPTER 4. ENABLING SIMPLE CONTENT ACCESS WITH RED HAT SUBSCRIPTION MANAGEMENT</b> ...	<b>9</b>
4.1. ENABLING SIMPLE CONTENT ACCESS WITHOUT A RED HAT SATELLITE SERVER	9
<b>CHAPTER 5. USING MANIFESTS FOR A DISCONNECTED SATELLITE SERVER</b> .....	<b>10</b>
5.1. CREATING A NEW SUBSCRIPTION ALLOCATION FOR A DISCONNECTED SATELLITE SERVER	10
5.2. ADDING SUBSCRIPTIONS TO A SUBSCRIPTION ALLOCATION FOR A DISCONNECTED SATELLITE SERVER	10
5.3. DOWNLOADING A MANIFEST FOR A DISCONNECTED SATELLITE SERVER	11
<b>CHAPTER 6. UNDERSTANDING ERRATA</b> .....	<b>12</b>
6.1. MANAGING ERRATA NOTIFICATION SETTINGS	12
6.2. TROUBLESHOOTING ERRATA APPLICABILITY	12
<b>CHAPTER 7. USING MODULE STREAMS</b> .....	<b>13</b>
7.1. INSTALLING MODULE PROFILES	13
7.1.1. %end	13
7.2. ENABLING MODULE STREAMS	13



# CHAPTER 1. UNDERSTANDING RED HAT SUBSCRIPTION MANAGEMENT

While Red Hat products are available through a GNU Public License, Red Hat supports its products through a subscription-based license. Support includes:

- Downloadable content and updates
- Access to the knowledge base
- Support for your product

Subscription management tasks are generally performed on the [Red Hat Hybrid Cloud Console](#), however, your environment might require you to perform some tasks through the Customer Portal. Red Hat provides organization-wide methods to track the software products and subscriptions deployed across an account.

Red Hat Subscription Management provides administrators with the following information:

- Which products are available to your organization
- Which products are installed on your systems
- The status of your subscriptions

Red Hat Subscription Management allows administrators to identify the relationship between their systems and the subscriptions used by those systems from two different perspectives:

- All active subscriptions for an account and which systems are consuming them
- All systems profiled within the inventory and which subscriptions they are consuming

Red Hat Subscription Management can perform many of the tasks of the on-premise tools including:

- Registering systems
- Activating and renewing subscriptions
- Retrieving system facts, contract information, and UUID

## Additional resources

- For information about how to register your RHEL system, see [Getting Started with RHEL System Registration](#). For information about managing user roles for services hosted on the Hybrid Cloud Console, see [User Access Configuration Guide for Role-based Access Control \(RBAC\)](#).

## CHAPTER 2. VIEWING SUBSCRIPTIONS WITH RED HAT SUBSCRIPTION MANAGER

To manage subscriptions, administrators need to know the following information:

- What subscriptions are available to the system
- What subscriptions are being used by the system

You can view your subscriptions in the following ways:

- From the command line interface (CLI) using the **subscription-manager** command
- From the [Subscription Inventory](#) page on the Hybrid Cloud Console.

The following table shows options that you can use to manage your subscriptions with the **subscription-manager** command.

**Table 2.1. subscription-manager list Options**

Command	Description
--installed (or nothing)	Lists all of the installed products on the system. If no option is given with 'list', it is the same as using the '--installed' argument.
--consumed	Lists all of the subscriptions associated with the system.
--available[-all]	Using '--available' alone lists all of the compatible, active subscriptions for the system. Using '--available --all' lists all options, even ones not compatible with the system.
--ondate=YYYY-MM-DD	Shows subscriptions which are active and available on the specified date. This is only used with the '--available' option. If this is not used, then the command uses the current date.
--installed	Lists all of the products that are installed on the system (and whether they have a subscription) and it lists all of the product subscriptions which are associated with the system (and whether those products are installed).

### Example 'list' showing subscriptions consumed

```
[root@server1 ~]# subscription-manager list --consumed
```

```
+-----+
Consumed Product Subscriptions
+-----+
```



```
ProductName:   Red Hat Enterprise Linux Server
ContractNumber: 1458961
SerialNumber:  171286550006020205
Active:        True
Begins:        2009-01-01
Expires:       2011-12-31
```

### Example 'list' showing all available subscriptions

```
[root@server1 ~]# subscription-manager list --available --all
```

```
+-----+
| Available Subscriptions |
+-----+
```

```
ProductName:   RHEL for Physical Servers
ProductId:     MKT-rhel-server
PoolId:        ff8080812bc382e3012bc3845ca000cb
Quantity:      10
Expires:       2011-09-20
```

```
ProductName:   RHEL Workstation
ProductId:     MKT-rhel-workstation-mkt
PoolId:        5e09a31f95885cc4
Quantity:      10
Expires:       2011-09-20
```

### Additional resources

- For information about viewing your subscription inventory with the Hybrid Cloud Console GUI, see [Viewing and managing your subscription inventory on the Hybrid Cloud Console](#)

## CHAPTER 3. USING SYSTEM PURPOSE WITH RED HAT SUBSCRIPTION MANAGER

You use system purpose to record the intended use of a Red Hat Enterprise Linux (RHEL) system. Setting system purpose allows you to specify system attributes, such as the role, service level agreement, and usage. The following values are available for each system purpose attribute by default.

### Role

- Red Hat Enterprise Linux Server
- Red Hat Enterprise Linux Workstation
- Red Hat Enterprise Linux Compute Node

### Service Level Agreement

- Premium
- Standard
- Self-Support

### Usage

- Production
- Development/Test
- Disaster Recovery

Configuring system purpose offers the following benefits:

- In-depth system-level information for system administrators and business operations.
- Reduced overhead when determining why a system was procured and its intended purpose.

You can set system purpose data in any of the following ways:

- During activation key creation
- During image creation
- During a GUI installation when using the Connect to Red Hat screen to register your system
- During a Kickstart installation when using the `syspurpose` Kickstart command
- After installation using the `subscription-manager` command-line (CLI) tool

### Additional Resources

- To configure system purpose with an activation key, see [Creating an activation key](#).

## 3.1. LISTING AVAILABLE VALUES FOR SYSTEM PURPOSE ATTRIBUTES

As the root user, you can enter the **subscription-manager syspurpose** command and subcommand (**role**, **usage**, **service-level**, or **addons**) with the **--list** option to list available values for all system purpose attributes. To list the available values for a system purpose attribute, you must enter the command on a registered system or enter the command with authentication options on an unregistered system. The following examples show how to list the available system purposes values for the role attribute on registered and unregistered systems.

When the system is registered, enter the following command:

```
[root@localhost ~]# subscription-manager syspurpose role --list
```

When the system is unregistered, enter the following command with the **--username**, **--password**, **--org**, and **--token** authentication options, as required:

```
[root@localhost ~]# subscription-manager syspurpose role --list --username=<username> --password=<password> --org=<organization_ID> --token=<token>
```

where: The **--username** option specifies the name of a user with organization administrator authority in your Red Hat account. The **--password** option specifies the associated password. The **--org** option specifies the organization ID number. The **--token** option specifies the token of the virt-who service account.



#### NOTE

Specifying the organization ID is only required if you have multiple organizations and need to specify a particular organization.



#### NOTE

Specifying the token is only required if you have configured virt-who to connect to OpenShift Virtualization.

When you enter the command on a registered system or on an unregistered system with authentication options, the expected output is the list of available values for the role attribute:

```
+-----+
| Available role |
+-----+
- Red Hat Enterprise Linux Workstation
- Red Hat Enterprise Linux Server
- Red Hat Enterprise Linux Compute Node
```

System purpose addons are specific to your organization and do not appear in the list of available values. If you try to list available system purpose addons with the **--list** option on a registered system or on an unregistered system with authentication options, subscription-manager displays a warning message. For example:

```
# subscription-manager syspurpose addons --list
There are no available values for the system purpose "addons" from the available subscriptions in this organization.
```

## 3.2. SETTING CUSTOM VALUES FOR SYSTEM PURPOSE ATTRIBUTES

If the value you want to set is not included in the list of valid values for the account, you can enter a custom system purpose value with the **--set** option. To set a custom value, you must enter the command on a registered system or enter the command with authentication options on an unregistered system.

The following examples show how to set a custom value of "foo" for the system purpose role attribute on registered and unregistered systems.

When the system is registered, enter the following command:

```
[root@localhost ~]# subscription-manager syspurpose role --set="foo"
```

When the system is unregistered, enter the following command with the **--username**, **--password**, **--org**, and **--token** authentication options, as required:

```
[root@localhost ~]# subscription-manager syspurpose role --set="foo" --username=<username> --password=<password> --org=<organization_ID> --token=<token>
```

where: The **--username** option specifies the name of a user with organization administrator authority in your Red Hat account. The **--password** option specifies the associated password. The **--org** option specifies the organization ID number. The **--token** option specifies the token of the virt-who service account.



#### NOTE

Specifying the organization ID is only required if you have multiple organizations and need to specify a particular organization.



#### NOTE

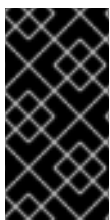
Specifying the token is only required if you have configured virt-who to connect to OpenShift Virtualization.

When you set a custom value on a registered system or on an unregistered system with authentication options, the expected output displays a warning message because the custom value is considered invalid. However, the output also displays a confirmation message because subscription-manager sets the custom value despite the warning.

```
Warning: Provided value "foo" is not included in the list of valid values
```

- Red Hat Enterprise Linux Workstation
- Red Hat Enterprise Linux Server
- Red Hat Enterprise Linux Compute Node

```
role set to "foo".
```



#### IMPORTANT

Subscription-manager will only display the warning message when the system is registered or when you enter authentication credentials on an unregistered system. If your system is unregistered and you do not provide authentication options, subscription-manager will set the custom value without displaying the warning message.

## CHAPTER 4. ENABLING SIMPLE CONTENT ACCESS WITH RED HAT SUBSCRIPTION MANAGEMENT

If you use a Red Hat Satellite Server, then you can enable simple content access in the following ways:

- On a subscription manifest on the Red Hat Hybrid Cloud Console [Manifests](#) page.
- On a Satellite organization using the Satellite graphical user interface.



### NOTE

The simple content access setting on the Satellite organization supersedes the settings on the manifest.

If you do not use a Satellite Server, then you can enable simple content access through the Red Hat Customer Portal.

After simple content access is enabled, you then complete additional, post-enablement steps related to activation key, host group, and host configuration.

### 4.1. ENABLING SIMPLE CONTENT ACCESS WITHOUT A RED HAT SATETLLITE SERVER

When you enable simple content access, you change the content access mode. You stop using the traditional mode, where you must attach a subscription to a system as a prerequisite of gaining access to content. You start using a new mode, where you can consume content regardless of the presence of an attached subscription.

#### Prerequisites

- The Organization administrator role for the organization

#### Procedure

To enable simple content access for the directly connected systems in Red Hat Subscription Management without a Satellite Server, complete the following steps:

1. Log in to the Red Hat Customer Portal.
2. On the **Overview** page, set the **Simple content access for Red Hatswitch** to **Enabled**.

After you complete these steps, simple content access is enabled for all current and newly registered systems. Current systems will download the required simple content access certification information the next time that they check in to the subscription management services.

#### Additional resources

- For information about how to enable simple content access for a Satellite-supported system, see [Setting the simple content access mode from Red Hat Hybrid Cloud Console](#) .

## CHAPTER 5. USING MANIFESTS FOR A DISCONNECTED SATELLITE SERVER

Only users using a disconnected Satellite Server create and manage subscription manifests from the Customer Portal.

Users using a connected Satellite Server create and manage their subscription manifests in the [Manifests](#) section of the Red Hat Hybrid Cloud Console. For information about creating and managing subscription manifests for a connected Satellite Server, see [Creating and managing a manifest for a connected Satellite Server](#).

### 5.1. CREATING A NEW SUBSCRIPTION ALLOCATION FOR A DISCONNECTED SATELLITE SERVER

Users using a connected Satellite Server create subscription manifests in the [Manifests](#) section of the Red Hat Hybrid Cloud Console. For information about how to create a manifest for a connected Satellite Server, see [Creating a manifest for a connected Satellite Server](#).

Users using a disconnected Satellite Server can still create a new subscription allocation to set aside subscriptions and entitlements for a system that is offline or air-gapped. This is necessary before you can download its manifest and upload it to a system.

#### Procedure

To create a manifest for a disconnected or air-gapped Satellite Server, complete the following steps:

1. From the [Subscription Allocations](#) page, click **Create Manifest**.
2. Click **New Subscription Allocation**
3. Enter a **Name** for the allocation so that you can find it later.
4. Select the **Type** of subscription management application you plan to use on the system.
5. Click **Create**.

### 5.2. ADDING SUBSCRIPTIONS TO A SUBSCRIPTION ALLOCATION FOR A DISCONNECTED SATELLITE SERVER

Only users using a disconnected Satellite Server need to add subscriptions to a subscription allocation. If you are a disconnected user, you must complete this step before you can download the manifest and add it to the host system.

Users using a connected Satellite Server skip this step. For information about managing a subscription manifest for a connected Satellite Server, see [Creating and managing a manifest for a connected Satellite Server](#).

#### Procedure

To add subscriptions to a subscription allocation for a disconnected Satellite Server, complete the following steps:

1. From the [Subscription Allocations](#) page, click the allocation to which you are adding subscriptions.

2. Click the **Subscriptions** tab.
3. Click **Add Subscriptions**.
4. Enter the number of entitlements for each subscription you plan to add. Ensure that you are adding the correct number of entitlements for the system you are using.
5. Click **Submit**.

**NOTE**

- You can include future-dated subscriptions, or subscriptions that have a start date in the future, to an allocation.

## 5.3. DOWNLOADING A MANIFEST FOR A DISCONNECTED SATELLITE SERVER

Only users using a disconnected Satellite Server download a subscription manifest from the Customer Portal.

Users using a connected Satellite Server download subscription manifests in the [Manifests](#) section of the Red Hat Hybrid Cloud Console. For information about how to export and download a manifest for a connected Satellite Server, see [Exporting and downloading a manifest for connected Satellite servers](#) .

### Procedure

To download a subscription manifest for a disconnected Satellite Server, complete the following steps:

1. From the [Subscription Allocations](#) page, click the allocation to which you are adding subscriptions.
2. Click the **Subscriptions** tab.
3. Click **Export Manifest**.

**NOTE**

The file saves to your default downloads folder.

After you download the manifest, you can import it into your Satellite Server. You can then use the Satellite web UI to update the manifest and refresh it to reflect the changes. Alternatively, you can import an updated manifest that contains the changes. For more information, see [Importing a Subscription Manifest into Satellite Server](#) in the Red Hat Satellite Content Management Guide.

## CHAPTER 6. UNDERSTANDING ERRATA

Part of subscription management is tracking updates and new releases of software. Whenever an update is available – from a bug fix to a new release – a notification email can be sent to you. The notifications are only sent for registered systems which have subscriptions for that product associated with them.

### 6.1. MANAGING ERRATA NOTIFICATION SETTINGS

Errata notifications are set as a preference for the user account, not for an individual system. When Red Hat Subscription Management checks for potential errata updates, it checks the entire inventory, not specific systems. An errata notification is sent if any registered system is affected, but the email does not list what systems are actually affected.

#### Procedure

1. From the [Overview](#) page, click the account name.
2. Click **Account Settings**.
3. Click **Errata Notifications**.
4. Select the types of errata you want to receive. Security errata relate to critical security issues. Bug fixes and enhancement notifications relate to incremental updates to the product.
5. Select the notification frequency.
6. Click **Save**.

### 6.2. TROUBLESHOOTING ERRATA APPLICABILITY

If you see applicable errata displayed in Red Hat Subscription Management but have no yum updates available, it can mean one of a couple of settings are not correct.

#### Procedure

1. Verify that you have the proper permissions to install all available updates on the system. If you do not have the necessary permissions, contact your organization administrator.
2. If you are running RHEL 5 or RHEL 6.4 or earlier, please consider [upgrading your system](#) so that you can have the most up-to-date errata and system updates.
3. Force a check in and run yum update again.\* If the system has not been checked in recently, you may see a discrepancy between what you see in the Customer Portal and what is actually installed on your system.

```
# rm -f /var/lib/rhsm/packages/packages.json
# service rhsmcertd stop
# rhsmcertd --now
# yum update
```



#### NOTE

After forcing your system to check in again, please wait up to four hours for the errata data on Red Hat Subscription Management to update to their correct data.



## CHAPTER 7. USING MODULE STREAMS

Modules are a package organization mechanism which enables the user to choose from multiple versions of package sets. Modules combine features of groups and repositories. For example, it would allow a network to more frequently update some systems with the most recent version of one piece of software while keeping the version consistent on others.

The Anaconda installer can enable module streams and install module profiles.

### 7.1. INSTALLING MODULE PROFILES

Install module profiles to enable the module and stream combination and install multiple packages at once. Use the `@module:stream/profile` syntax in place of a package in the `%packages` section.

- When a module has a default stream specified, you can leave it out. When the default stream is not specified, you must specify it.
- When a module stream has a default profile specified, you can leave it out. When the default profile is not specified, you must specify it.
- Installing a module multiple times with different streams is not possible.
- Installing multiple profiles of the same module and stream is possible.

When a module and a package group exist with the same name, the module takes precedence.

The following values are possible in the `_%packages_` section after introduction of modules:

```
----
%packages
```

```
@^an_environment @a_group @module_with_default_stream
@module_without_default_stream:stream_name @some_module:some_stream_name/profile_1
@some_module:some_stream_name/profile_2 a_package
```

#### 7.1.1. %end

In Red Hat Enterprise Linux 8, modules are present only in the Application Stream repository. To list available modules, use the `yum module list` command on an installed Red Hat Enterprise Linux 8 system.

### 7.2. ENABLING MODULE STREAMS

You can also enable modules and streams with a command.

#### Procedure

To enable a package module stream within kickstart script, use the `module` command:

```
module --name=NAME [--stream=STREAM]
```

In the command:

- `--name=` Specifies a name of the module to enable. Replace NAME with the actual name.
- `--stream=` Specifies a name of the module stream to enable. Replace STREAM with the actual name.

### **Additional Resources**

[Red Hat Enterprise Linux 8 Beta Using Application Stream](#)