



Red Hat Subscription Management 2023

Using Red Hat Subscription Management

managing your Red Hat subscriptions

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managing your Red Hat subscriptions

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Abstract

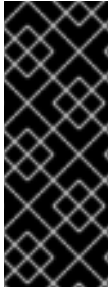
Red Hat Subscription Management tools and applications provide different ways to view system-level and organization-level notifications and statuses and to respond to changing subscription needs.

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CHAPTER 1. UNDERSTANDING RED HAT SUBSCRIPTION MANAGEMENT

Red Hat Subscription Manager tracks the Red Hat products that your organization has purchased and the systems that the products are installed on. Subscription Manager establishes the relationship between the product subscriptions that are available to the system and the elements of infrastructure of your business where those subscriptions are allocated.



IMPORTANT

Red Hat subscription services have moved from Red Hat Customer Portal to [Red Hat Hybrid Cloud Console](#), however, your technical environment might require you to perform some tasks in the Customer Portal. For example, a user with a Red Hat Satellite Server on a disconnected network will continue to use the Customer Portal to create and manage subscription manifests. Also, a connected user without a Satellite Server will use the Customer Portal to enable simple content access for their organization.



NOTE

If simple content access mode is enabled for your Red Hat organization, then you do not need to attach subscriptions or manage entitlements. The simple content access mode is enabled at the organization-level for new accounts by default. For information about enabling simple content access mode for an existing organization, see [Enabling simple content access with 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

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

Additional resources

- For information about the changes and improvements to the subscription management platform, see [Transition of Red Hat's subscription services to console.redhat.com](#)

- For more information about simple content access, see [Getting Started with Simple Content Access](#).
- 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. UNDERSTANDING YOUR WORKFLOW FOR SUBSCRIBING WITH RED HAT PRODUCTS

Before you can register your system to Red Hat, you need an active subscription. Subscriptions can be purchased through the [Red Hat Store](#) or by contacting Sales directly. With a registered system and an active subscription, you can do the following tasks:

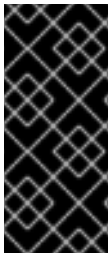
- View or manage any systems for your account in the [Systems](#) inventory on the Red Hat Hybrid Cloud Console
- View or manage any subscriptions for your account in the [Subscription Inventory](#) on the Red Hat Hybrid Cloud Console
- Download software packages and updates from the content delivery network for as long as the subscription is active

Each element in the subscription service must be uniquely identified. This allows true relationships to be established between the system, the products, and the subscriptions. The subscription service generates and installs these certificates on the local system:

- An identity certificate for the system. This certificate is created when the system is registered. The system uses it to authenticate to the subscription service and periodically check for updates.
- A product certificate for each Red Hat product installed on the system. This certificate is installed on the system along with the product. It identifies the product, but it is not unique to the system.
- A subscription certificate for each subscription associated with the system. This certificate includes information about the subscription from the inventory.

Subscription management delivers better information and offers administrators better control over their infrastructures.

CHAPTER 3. TOOLS AND APPLICATIONS AVAILABLE FOR RED HAT SUBSCRIPTION MANAGEMENT



IMPORTANT

Red Hat Subscription services have moved from the Customer Portal to [Red Hat Hybrid Cloud Console](#), however, your technical environment might require you to perform some tasks in the Customer Portal. For example, a user with a Red Hat Satellite Server on a disconnected network will continue to use the Customer Portal to create and manage subscription manifests.

All Red Hat Enterprise Linux subscriptions automatically include the following tools for managing the subscription configuration:

- Red Hat Subscription Manager client tools to manage local systems on the command line
- Red Hat Subscription Management on the Red Hat Hybrid Cloud Console to manage systems and subscriptions for your account
- Red Hat Satellite as an on-premise solution for systems that may not regularly check in

The diversity of tools allows administrators to create a workflow that fits both the business and infrastructure demands of their organization.

3.1. RED HAT SUBSCRIPTION MANAGER

Red Hat Subscription Manager tracks and displays what subscriptions are available to the local system and what subscriptions have been consumed by the local system. It works as a conduit back to the subscription service to synchronize changes, such as available product quantities or subscription expiration dates.

The Subscription Manager includes the following components:

- A UI-based client to manage the local machine
- A CLI client, which can be used with other applications or in automation scripts

These tools allow authorized users to perform tasks directly related to managing subscriptions, such as registering a system to Red Hat and updating the certificates required for authentication. Some minor operations, such as updating system facts, are available to help show and track available subscriptions.



NOTE

You must have root privileges to run the Subscription Manager CLI tool because of the nature of the changes to the system. However, Subscription Manager connects to the subscription service as a user account for the subscription service.

The Subscription Manager is part of the firstboot process for configuring content and updates, but you can register the system at any time through the Subscription Manager UI or CLI. New subscriptions, new products, and updates can be viewed and applied to a system through the Subscription Manager tools.

Additional resources

- For information about how to register your RHEL system, see [Getting Started with RHEL System Registration](#).
- For information about how to view and manage your subscriptions and their details, see [Viewing and managing your subscription inventory on the Hybrid Cloud Console](#)

3.1.1. Launching Red Hat Subscription Manager

You can run Red Hat Subscription Manager from the Red Hat Enterprise Linux UI. The following instructions show you how to run Subscription Manager from the RHEL UI based on the release version of your system:

- In RHEL 9, click **Activities > Show Applications**
- In RHEL 8, click **Activities > Show All Programs**
- In RHEL 7, click **System Tools > Administration**

CHAPTER 4. 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 and their details 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 4.1. 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[<i>-all</i>]	Using '--available' alone lists all of the compatible, active subscriptions for the system. Using '--available <i>-all</i> ' 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 5. 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 installation using the Connect to Red Hat screen to register your system
- During installation using the syspurpose Kickstart command
- After installation using the subscription-manager CLI tool

Additional resources

- To configure system purpose with an activation key, see [Creating an activation key](#).
- To configure system purpose with the Subscription Manager CLI tool, see [Configuring System Purpose using the subscription-manager command-line tool](#)

5.1. LISTING AVAILABLE VALUES FOR SYSTEM PURPOSE ATTRIBUTES

As the root user, you can enter the **subscription-manager syspurpose** command and the **role**, **usage**, **service-level**, or **addons** subcommand with the **--list** option to list available values for all system purpose attributes. Listing system purpose values for an unregistered system requires you to enter additional information on the command line.

The following examples show how to list the available system purposes values for the role attribute for 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, then 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.
```

5.2. 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.

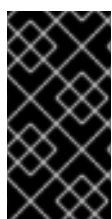


NOTE

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 only outputs the warning message if the system is registered or if you enter authentication credentials on an unregistered system. If your system is unregistered and you do not enter authentication options, Subscription Manager sets the custom value without displaying the warning message.

CHAPTER 6. 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 can complete additional post-enablement steps related to activation key, host group, and host configuration through the Hybrid Cloud Console.

6.1. ENABLING SIMPLE CONTENT ACCESS WITHOUT A RED HAT SATELLITE 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 Hat** switch 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 7. USING MANIFESTS FOR A DISCONNECTED SATELLITE SERVER

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

Users on 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](#).

7.1. CREATING A SUBSCRIPTION ALLOCATION FOR A DISCONNECTED SATELLITE SERVER

Users on 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**.

7.2. ADDING SUBSCRIPTIONS TO A SUBSCRIPTION ALLOCATION FOR A DISCONNECTED SATELLITE SERVER

Only users on 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 on 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.

7.3. DOWNLOADING A MANIFEST FOR A DISCONNECTED SATELLITE SERVER

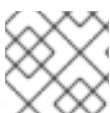
Only users on a disconnected Satellite Server download a subscription manifest from the Customer Portal.

Users on 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 that you want to add subscriptions to.
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 8. 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.

8.1. 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**.

8.2. 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.

