Subscription Central 2021

Getting Started with Simple Content Access
Abstract

This guide is for users who want to understand how the capabilities of simple content access improve the Red Hat subscription experience, simplifying the workflow that needs to be completed when adding, removing, and renewing subscriptions.
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PART I. ABOUT SIMPLE CONTENT ACCESS

Simple content access provides a new subscription experience that removes many of the time-consuming and complex business processes associated with the classic Red Hat entitlement-driven enforcement model. The simple content access tool is intended to simplify content access (consumption of technology, including product and service offerings) and streamline the workflow associated with adding, removing, and renewing subscriptions.

Learn more

- To learn more about simple content access, see the following information:
  - What is simple content access?

- To learn more about the benefits and limitations of simple content access, see the following information:
  - What are the benefits and limitations of simple content access?

- To learn more about how enabling simple content access creates significant operational changes for subscription management, see the following information:
  - How does simple content access change subscription tools and workflows?
CHAPTER 1. WHAT IS SIMPLE CONTENT ACCESS?

Simple content access is a set of capabilities that enables a change in the way Red Hat manages its subscription and entitlement enforcement model. The older, classic model of attaching subscriptions can be error-prone and inconvenient for your operational workload requirements, while this newer model of content access and consumption results in fewer barriers to content deployment.

With simple content access, the enforcement model changes from a per-system requirement, where you must attach a subscription to a system before you can access content, to a per-organization requirement, where you can access content on a system without attaching a subscription to that system.

In its simplest form, simple content access provides unlimited access to any content for which you have at least one subscription.

Because of the added freedom and flexibility to consume content that simple content access provides, and in the absence of strict entitlement enforcement from the classic subscription model, it becomes important for you to keep track of how you are using your subscriptions. With the subscriptions service, Red Hat provides additional tooling to help you with tracking and compliance. The subscriptions service is a reporting solution that provides account-wide visibility of both subscription usage and utilization and aids in self-governance of your entire subscription profile.

When simple content access and the subscriptions service are used together, they enable a different and more flexible subscription experience. Overall, this experience removes or improves many of the time-consuming and complex business processes that are associated with the classic Red Hat entitlement-driven enforcement subscription model:

- Time-consuming processes that require multiple Red Hat tools and many steps for content to be accessed and used.
- Overly complex and sometimes highly manual processes that are needed to complete subscription reporting.
- Processes to resolve problems related to accessing content, under- and over-deployment, renewals, and so on, that resulted in significant business impact to Red Hat customers, including being blocked from content access.

You can choose to use neither, either, or both of these services. However, simple content access and the subscriptions service are designed as complementary services and function best when they are used in tandem. To learn more about the subscriptions service and how you can use it with simple content access, see the Getting Started with the Subscriptions Service guide.
CHAPTER 2. WHAT ARE THE BENEFITS AND LIMITATIONS OF SIMPLE CONTENT ACCESS?

The foundational benefit of simple content access is that it offers a less restrictive and more flexible way to consume your Red Hat subscriptions. However, this flexibility does include some limitations.

2.1. BENEFITS

Simple content access enables a better experience with the tools that help you manage subscriptions. By removing the need to attach subscriptions at the system level, simple content access streamlines the process of registering systems, enabling repositories, and consuming content so that you can more easily install the products that you want where you want them.

If you are a new Red Hat customer, you might not be familiar with the classic entitlement-level subscription model. However, customer survey data shows that adopting the organizational-level subscription model of simple content access can save system administrators an average of 10 hours per week. If you are an existing Red Hat customer, the time savings and added flexibility provided by simple content access can be demonstrated by a few examples of how the subscription management tools, and common processes for those tools, are changed.

For new customers

For new customers, this new organizational-level enforcement model enables you to consume content in a far more flexible way, without consideration of the artificial and arbitrary boundaries that can arise from the older system-level enforcement model. In turn, this flexibility enables you to design your IT environment in a manner that is more responsive to your business needs.

For existing customers

For existing customers, the new model allows you to consume content on your systems without strict entitlement enforcement. This process change allows a number of workflows to be handled that previously have been considered difficult or impossible, including the following examples:

- **Simplified subscription lifecycle management:** The subscription management tooling can now support more systems than it has valid subscriptions for, a scenario that is useful in true-up, buffer, and other complex purchasing arrangements. In addition, systems are allowed to consume content that was previously downloaded when some, but not all, of the subscriptions have since expired.

- **Simplified renewal process for Satellite:** Cumbersome reattachment processes are eliminated. Instead of having to reattach subscriptions to every host, you can simply add new valid subscriptions to a subscription allocation or manifest and refresh within Satellite.

- **Simplified activation key setup:** You no longer need to create complex activation key configurations to guide subscriptions to systems and to gain access to the repositories. You can register systems, enable the repositories, and install the content that you need where you need it. The subscription-related use of activation keys is removed, leaving only the content-related use of those keys.

- **Simplified hypervisor setup:** You no longer need to attach subscriptions to new hypervisors or remove them from old hypervisors.

- **Changed frequency and purpose for virt-who:** You no longer need to run virt-who as frequently (every hour or every few hours) to support fresh host-guest mappings for newly provisioned hosts or to inherit a host-based subscription from a hypervisor. You do need to run virt-who as
needed (usually once or twice per day) for proper reporting in the subscriptions service if that service is also being used.

- Elimination of auto-attach: You no longer need to use auto-attach because subscriptions are not required to be attached to systems. Therefore, the challenges associated with unexpected or incorrect auto-attach subscription assignments are eliminated.

2.2. LIMITATIONS

Although simple content access allows much more freedom in the consumption of your subscriptions, you should note the following limitations for content access:

- Simple content access does not provide access to repositories that you have not previously purchased.
  - For example, if you have subscriptions for RHEL only, simple content access does not provide access to any other Red Hat product subscription, such as a Red Hat JBoss Enterprise Application Platform subscription.

- Simple content access does not provide access within Satellite to repositories that are not included in the subscription manifest. The subscription manifest contains the following information:
  - A list of subscriptions and attached quantities.
  - Metadata and certificates that Satellite uses to synchronize the repositories.
CHAPTER 3. HOW DOES SIMPLE CONTENT ACCESS CHANGE SUBSCRIPTION TOOLS AND WORKFLOWS?

Simple content access is designed to improve the overall customer subscription experience by eliminating cumbersome and confusing parts of the subscription management workflow. When you enable simple content access, that action changes not only the user workflows that manage your subscriptions and provide access to content, but it also changes the way that the various subscription tools themselves operate. These tools include Red Hat Satellite, Red Hat Subscription Management, the `subscription-manager` command line tool, activation keys, virt-who, and others.

Because the behavior of the existing subscription tools is so fundamentally altered, subscription management with simple content access is a completely different operating model, with workflows that are incompatible with the traditional subscription management workflows.

**NOTE**

For Satellite, simple content access is enabled at the allocation level, so that setting corresponds to the matching Satellite organization. It is possible to have a mixed environment for your Red Hat account, where simple content access is enabled for some Satellite organizations and not enabled for others. For an account with a mixed environment, behaviors and workflows are changed only for those Satellite organizations where simple content access is enabled.

Compare the differences in tools and workflows before and after simple content access is enabled:

**Tracking subscription usage and reporting utilization**

**simple content access is disabled**

The classic subscription model is used, where access to content is controlled by the attachment of subscriptions to individual systems.

**simple content access is enabled**

The new subscription model is used, where you can register a system and then enable any additional repositories that are needed to access content for which you have a subscription.

**Using customized workflows that check the status of entitlements or subscriptions**

**simple content access is disabled**

Your organization might have custom post-provisioning workflows with steps that check for the status of an entitlement or a subscription before completing certain actions.

**simple content access is enabled**

With entitlement and subscription status removed from the data reported by the subscription management tools, those workflows will no longer be valid and must be disabled or redesigned.

**Checking subscription status**

**simple content access is disabled**

System-level subscription status (through `subscription-manager`) is used to check whether an individual system (or host) has a valid subscription for specific content. If status shows as Invalid or Insufficient, additional subscriptions could be attached to resolve this problem.

**simple content access is enabled**
Subscriptions are no longer required to be attached to individual systems. If you run the `subscription-manager status` command, the overall status displays as **Disabled** (or **Unknown** for Satellite 6.7 and earlier).

**NOTE**
You can still use the `subscription-manager identity` command to check whether a system is properly registered.

**Generating manifests**

**simple content access is disabled**
Satellite manifests must contain enough subscriptions for every system registered to that Satellite Server or Capsule Server.

**simple content access is enabled**
Satellite manifests must contain enough subscriptions to provide access to the software repositories that the systems will use. One of each subscription is sufficient.

**NOTE**
Beginning with Satellite Server 6.9, all newly created manifests use simple content access by default, regardless of the version of Satellite Server.

**Using activation keys**

**simple content access is disabled**
Activation keys supply a number of attributes that are used to register systems, including the following examples:

- subscriptions to attach
- repositories to enable
- environment and content view that is used to configure the system
- host collection to join

This complex process can require up to three keys to configure a system, for example, a key to grant a virtual subscription, a key to configure content, and a key to configure custom or layered subscriptions.

**simple content access is enabled**
Activation keys are still used to register systems, but the subscription-related purposes of the keys are now obsolete. This change simplifies the use case for activation keys. In most cases, only one key per system (or host) is sufficient to configure content-related attributes, such as repositories and content views. In addition, the software repositories that can be enabled or disabled are more clearly exposed.

**Using auto-attach**

**simple content access is disabled**
The auto-attach function is used to attach subscriptions to a system at the time of system registration or subscription expiration. Tasks that use auto-attach include the following examples:

- Running `subscription-manager attach --auto`
- Running `hammer host subscription auto-attach`
- Setting the Activation Key Type to Auto-Attach

**simple content access is enabled**

Subscriptions are no longer required to be attached to individual systems, so tasks related to the auto-attach function are obsolete. If you run a command or perform an action related to auto-attach, either no action will happen or an error message is shown.

**Using virt-who**

*simple content access is disabled*

You must use the virt-who tool to consume the content provided by subscriptions that support multiple guests, such as RHEL vDC subscriptions. To ensure reliable access to content, you must run the virt-who tool every 1 to 4 hours to gather and refresh host-guest mappings from hypervisors and report that data to subscription management tools.

**simple content access is enabled**

Because subscriptions are no longer required to be attached to individual systems, virt-who is not required for content access. However, the reporting function of virt-who is still critically important to support the subscriptions service. The host-guest mappings gathered by virt-who are used to create the subscriptions service data, including usage data in the graphs and system-specific data in the tables. However, you can reduce how frequently virt-who runs to a maximum of twice per day.

**Using system purpose (subscription attributes)**

*simple content access is disabled*

When system purpose values are set, the subscription tools, especially auto-attach, can more effectively attach a system to the best subscription. When auto-attach matches the requested attributes to a valid subscription, system purpose status updates from MISMATCHED to MATCHED. The attributes included in system purpose settings, including role, SLA (service level agreement), and usage values, provide data about how a system is being used and supported.

*simple content access is enabled*

Because subscriptions are no longer required to be attached to individual systems, and the auto-attach functions are obsolete, system purpose status is set to DISABLED. However, the technical, business, and operational use cases supplied by system purpose attributes are important to the subscriptions service. In the subscriptions service, system purpose attributes are used to identify and filter system data. Without these attributes, the subscriptions service data is less accurate.

**Using the subscription-manager command line tool**

*simple content access is disabled*

The `subscription-manager` command line tool functions as expected with the traditional entitlement-based subscription model.

*simple content access is enabled*

The behavior of the `subscription-manager` command line tool is changed. For version 1.27.9-1 and earlier, the tool might display misleading or false messages. For example, when you run `yum` commands, you might receive output that is similar to the following example:
This system is registered with an entitlement server but is not receiving updates. You can use subscription-manager to assign subscriptions.

For **subscription-manager** version 1.27.9-1 and earlier, you can ignore this message. For versions later than 1.27.9-1, this message is suppressed and does not appear. For more information about this known problem, see Bugzilla issue BZ1815624.

**Using the Satellite and Red Hat Subscription Management interfaces**

**simple content access is disabled**

The Satellite and Red Hat Subscription Management interfaces function as expected with the traditional entitlement-based subscription model.

**simple content access is enabled**

The Satellite and Red Hat Subscription Management interfaces contain messaging, including banners on pages with affected tasks, as reminders that simple content access is enabled and that subscriptions no longer need to be attached to systems.
PART II. REQUIREMENTS AND YOUR RESPONSIBILITIES

Before you start using simple content access, review the hardware and software requirements and your responsibilities when you use this tool.

Learn more

- Review the general requirements for using simple content access:
  - Requirements

- Review information about your responsibilities when you use simple content access:
  - Your responsibilities
CHAPTER 4. REQUIREMENTS

To begin using simple content access, you must meet the following software requirements.

For simple content access with Satellite:

- Red Hat Satellite 6.7 or later (versions that are under full support).

**NOTE**

For Satellite version support information, see the Red Hat Satellite Product Life Cycle life cycle and update policy document.

- Simple content access enabled for each allocation within Satellite where you want to use simple content access. Also, for every existing allocation that is changed to use simple content access, a refreshed manifest.

For simple content access with Red Hat Subscription Management:

- Simple content access enabled within Red Hat Subscription Management.
CHAPTER 5. YOUR RESPONSIBILITIES

Simple content access and the features that make up this offering are new and are rapidly evolving. During this rapid development phase, you have the ability to view, and more importantly contribute to, the newest capabilities early in the process. Your feedback is valued and welcome. Work with your Red Hat account team, for example, your technical account manager (TAM) or customer success manager (CSM), to provide this feedback.

As you use simple content access, note the following agreements and contractual responsibilities that remain in effect:

Simple content access does not eliminate any contractual requirements between you and Red Hat. You are still required to ensure that your deployments are in accordance with any Red Hat contracts.
PART III. ACTIVATING SIMPLE CONTENT ACCESS

When you enable simple content access, you change the content access mode. You stop using the classic 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.

Do these steps

1. To enable simple content access with Satellite, see the following information:
   - Enabling simple content access with Satellite

2. To enable simple content access with Red Hat Subscription Management, see the following information:
   - Enabling simple content access with Red Hat Subscription Management
The process of enabling simple content access includes enabling simple content access for one or more allocations and refreshing the manifests those allocations. After the systems are refreshed, you then complete additional, post-enablement steps related to activation key, host group, and host configuration.

Because you enable simple content access at the Satellite allocation level, that setting applies to the entire Satellite organization that corresponds to that allocation. However, it is possible within your account (also known as your Red Hat Customer Portal organization) to have a mixed environment where some Satellite organizations are enabled for simple content access and some are not, according to your business needs.

With the impact to your existing Satellite structure and workflows, it is most efficient and least disruptive to schedule simple content access enablement during a maintenance window. During that time, you can take advantage of Satellite functionality that can streamline any repetitive processes, functionality that includes bulk host management and remote execution.

NOTE

The simple content access April 2021 release contains the following changes that affect the interaction between simple content access and Satellite:

- Previous releases of simple content access required a two-stage enablement for Satellite, first at the organization level and then for individual allocations. For this release of simple content access, the organization-level enablement is removed.

- Beginning with the release of Satellite 6.9, all new allocations and manifests for Satellite 6.9 and earlier versions will use simple content access by default. This setting can be disabled during the configuration of the new allocation.

- For existing allocations, you must still manually enable the allocation to use simple content access and then refresh the manifest. For example, for an existing allocation and manifest, changing the Satellite version to 6.9 does not automatically enable simple content access.

- Beginning with the release of Satellite 6.9, you can enable simple content access on manifests from the Satellite web UI, in addition to using the Red Hat Subscription Management functions in the Customer Portal.

### 6.1. ENABLING SIMPLE CONTENT ACCESS ON AN EXISTING SATELLITE ALLOCATION AND MANIFEST

For allocations and manifests that already exist, complete the following steps to enable simple content access.

**Prerequisites**

- The organization administrator (org admin) role for the organization
- Red Hat Satellite 6.7 or later (versions that are under full support)

**Procedure**
To enable simple content access on an existing allocation and manifest:


2. Click My Subscriptions. When the page refreshes, click Subscription Allocations.

3. For each allocation that you want to be enabled for simple content access, click the allocation and view the Details page.
   
   a. In the Subscriptions section, set the Simple Content Access switch to Enabled.

   **NOTE**
   This action enables simple content access for the allocation. However, this change does not go into effect until the manifest for that allocation is refreshed in Satellite.

   b. From Satellite, refresh the manifest for the allocation by using the step that applies to a connected or disconnected Satellite configuration.
      
      - If your Satellite can connect to access.redhat.com, open the Satellite web UI and ensure that the correct organization is selected. Then click Content > Subscriptions in the navigation. Select the options to manage and refresh the manifest.
      
      - If your Satellite cannot connect to access.redhat.com, click Export Manifest to export the refreshed manifest to a location that your Satellite Server can access. Then open the Satellite web UI and ensure that the correct organization is selected. Then click Content > Subscriptions in the navigation. Select the options to manage a manifest and browse to the refreshed manifest that you exported.

4. Repeat these steps for each allocation that you want to be enabled for simple content access.

### 6.2. COMPLETING POST-ENABLEMENT STEPS FOR SATELLITE

After you enable simple content access for an allocation, the way that you interact with some subscription management tools, including Satellite, differs. You must make some changes in Satellite to accommodate these different workflows and the individual behaviors within them.

#### 6.2.1. Creating and configuring new activation keys

When simple content access is enabled, the subscription management functions of activation keys are obsolete, but the content access functions of the keys are still valid. Creating new activation keys to use with simple content access enables you to design those keys especially for simple content access. It also allows you to preserve the old activation keys in case some business purpose creates a need to revert an allocation from using simple content access back to using the traditional subscription model.

For most use cases, when simple content access is enabled, a single activation key per system (or host) is sufficient to configure content-related attributes, such as repositories and content views. This key replaces the older configuration of activation keys for the traditional subscription model, usually three if recommended configuration steps are followed, that managed both subscription-related and content-related functions.

To create new activation keys, use the following steps, repeating them for the number of new activation keys that are required. You can also perform these steps from the hammer command line interface. The following steps summarize the actions needed to create new activation keys. For more detailed
information about these steps, see the Red Hat Satellite documentation.

1. Create a new activation key.
   a. From the Satellite UI navigation, click **Content > Activation Keys** and create a new activation key.
   b. In the **Name** field, enter a name for the activation key.
   c. Make sure that the **Unlimited Hosts** check box is cleared.
   d. In the **Limit** field, set a value for the content host limit. With the added freedom to consume content that is provided by simple content access, you might prefer to set this limitation on the number of times that an activation key can be used.
   e. Set other values as needed, such as a description, life-cycle environment, and content view for the activation key.
   f. Click **Save** to save the new activation key.

2. Configure the new activation key.
   a. From the Satellite web UI navigation, click **Content > Activation Keys** and select the activation key that you just created.
   b. On the **Details** page, for Satellite 6.7 and later, set the system purpose values that will be used on hosts during registration.
   c. On the **Subscriptions** page, ensure that the **Auto-Attach** check box is cleared.
   d. On the **Repository Sets** page, click the **Show All** option for the filter. In the table of repositories, select each repository that you want to enable and click **Select Action > Override to Enabled**.
   e. On the **Host Collections** page, select the host collections that you want to add and click **Add Selected**.
   f. Click **Save** to save the configuration.

**NOTE**

The new activation keys are not automatically assigned to existing hosts, but they are applied to newly provisioned hosts. You must do additional steps to reconfigure existing hosts to apply the new activation keys.

6.2.2. Updating host groups

After the new activation keys are created and configured, use the following steps to update each relevant host group to use the new activation keys. You can also perform these steps from the **hammer** command line interface.

1. From the Satellite web UI navigation, click **Configure > Host Groups**

2. Click the host group that you want to update. Then click the **Activation Keys** tab.

3. On the **Activation Keys** page, enter the new activation key for the host group, replacing the old activation keys. Click **Reload data** to confirm the activation key change for the host group.
4. Click **Submit** to save the host group changes.

### 6.2.3. Reconfiguring hosts

For Red Hat Satellite 6.7 (or earlier, if you are using an earlier version that is not under full support), the new activation keys that you create for simple content access apply only to newly provisioned hosts. For existing hosts, you must do some reconfiguration and re-enable repositories.

When simple content access is enabled, all repositories are disabled by default if a host does not have a subscription attached. This default setting prevents conflicting repositories from being enabled when a host has access to repositories that span multiple operating system versions.

To do these changes, you can use the following commands as a snippet in a remote job that runs with the remote execution function of Red Hat Satellite. Comments are included in the following snippet to help you understand the series of tasks. You can also run these commands locally on each host, but using the bulk host management and remote execution capabilities of Red Hat Satellite during a maintenance window is more efficient.

```bash
# Get a list of all the currently enabled repos
REPOS=$(subscription-manager repos --list-enabled | grep "Repo ID" | cut -f 2 -d ': ')

# (Optional) dump that list to a file in case of errors
echo $REPOS >> ENABLED_REPOS.txt

# Construct a command line to pass to 'subscription-manager repos'
# so that we call it once, instead of once per repo. This would lower the
# number of API calls and load on the Satellite.
CMDLINE=$(echo $REPOS | sed 's/ / --enable /g')

# Disable all the repos & Remove any existing entitlements
subscription-manager repos --disable ***
subscription-manager remove --all

# Call subscription-manager fresh to ensure that we have a content access cert
# (which is the authorization method when SCA is enabled)
subscription-manager refresh

# Finally (re) enable the correct repos.
subscription-manager repos --enable $CMDLINE
```
CHAPTER 7. ENABLING SIMPLE CONTENT ACCESS WITH RED HAT SUBSCRIPTION MANAGEMENT

The process of enabling simple content access in Red Hat Subscription Management includes enabling simple content access for the directly connected systems in your organization. After simple content access is enabled, you then complete additional, post-enablement steps related to activation key, host group, and host configuration.

7.1. ENABLING SIMPLE CONTENT ACCESS FOR YOUR RED HAT SUBSCRIPTION MANAGEMENT MANAGED SYSTEMS

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 (org admin) role for the organization

Procedure

To enable simple content access for the directly connected systems in Red Hat Subscription Management:


2. On the Overview page, set the Simple content access for Red Hat Subscription Management switch in the banner 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.