



Red Hat Satellite 6.16

Release notes

New features, deprecated and removed features, Technology Previews, known issues, and bug fixes

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New features, deprecated and removed features, Technology Previews, known issues, and bug fixes

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Abstract

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CHAPTER 1. OVERVIEW

1.1. ADVISORIES

You can view [security and bug fix advisories](#) for major and minor versions of this release on the Red Hat Customer Portal.

1.2. MAJOR CHANGES IN 6.16

Web UI

- OpenSCAP compliance remediation wizard ([SAT-23240](#)).
- Extended **All Hosts** page and redesigned **Job details** page, as Technology Previews ([SAT-20041](#), [SAT-18427](#)).

Installation and upgrade

- **satellite-maintain update** command for minor releases ([SAT-21970](#)).
- Puppet server 8 support ([SAT-24140](#)).
- PostgreSQL 13 support ([SAT-23369](#), [SAT-24414](#)).
- Online backup replaces snapshot backup ([SAT-20955](#)).
- Capsule port 8443 disabled by default ([SAT-24522](#)).

Content management

- Simple Content Access replaces entitlement-based subscription management ([SAT-27936](#)).
- Hammer command repairs corrupted Capsule content ([SAT-16330](#)).
- Container management improvements ([SAT-20280](#), [SAT-23852](#)).

Host provisioning and management

- Kickstart provisioning template improvements ([SAT-23053](#), [SAT-23034](#)).
- Provisioning templates update self-signed CA certificates ([SAT-18615](#)).
- Job templates run remote scripts ([SAT-18615](#)).
- VMware support improvements ([SAT-21075](#), [SAT-23052](#)).
- **foreman_webhooks** plugin replaces the **foreman_hooks** plugin ([SAT-16036](#)).
- Telemetry disablement in Convert2RHEL job templates removed ([SAT-24654](#)).

Security compliance

- Open Vulnerability and Assessment Language support, 6.15 Technology Preview, removed ([SAT-23806](#)).

Documentation

- [Upgrading Red Hat Enterprise Linux on Satellite or Capsule](#) in *Upgrading connected Red Hat Satellite to 6.16* documents how to upgrade to RHEL 9 by using Leapp or migration.
- "Configuring external authentication" in *Installing Satellite Server in a connected network environment* moved to a new guide, [Configuring authentication for Red Hat Satellite users](#).

1.3. RED HAT SATELLITE

Red Hat Satellite is a system management solution that enables you to deploy, configure, and maintain your systems across physical, virtual, and cloud environments. Red Hat Satellite provides provisioning, remote management and monitoring of multiple Red Hat Enterprise Linux deployments with a single, centralized tool.

- *Red Hat Satellite Server* synchronizes content from the Red Hat Customer Portal and other sources. It provides detailed lifecycle management, user and group role-based access control, integrated subscription management, and advanced GUI, CLI, and API access.
- *Red Hat Satellite Capsule Server* mirrors content from the Red Hat Satellite Server and distributes it to different geographical locations. Host systems pull content and configurations from the Capsule Server in their location instead of the central Satellite Server. The Capsule Server also provides localized services such as Puppet server, DHCP, DNS, or TFTP, assisting in scaling Red Hat Satellite as the number of managed systems in your environment grows.

1.4. RED HAT CUSTOMER PORTAL LABS

[Red Hat Customer Portal Labs](#) provide applications to improve performance, troubleshoot issues, identify security problems, and quickly deploy and configure complex applications.

The following applications are available for Red Hat Satellite:

- [Red Hat Satellite Upgrade Helper](#)

1.5. ADDITIONAL RESOURCES

- [Red Hat Satellite product life cycle](#) describes the time period for each major version and its level of maintenance.
- [Satellite 6 component versions](#) describes upstream core components, Foreman plugins, and integrated projects.
- [Overview, concepts, and deployment considerations](#) describes Red Hat Satellite concepts, components, tools, and deployment planning.
- [Supported client architectures](#) in *Overview, concepts, and deployment considerations* describes supported client architectures for content management, host provisioning, and configuration management.

CHAPTER 2. NEW FEATURES

This section describes new features and major enhancements introduced in Red Hat Satellite 6.16.

2.1. WEB UI

Compliance remediation wizard

Previously, you had to remediate OpenSCAP compliance failures by manually creating a remote execution job to apply remediation scripts or snippets. With this update, Satellite web UI provides a compliance remediation wizard that you can use to remediate OpenSCAP compliance failures. For more information, see [Remediating compliance failures](#) in *Managing Security Compliance*.

Jira:SAT-23240

Manifest expiration warnings and extension of expiration date

Users are now notified in the web UI before their subscription manifest expires. The number of days of notice is determined by the **expire_soon_days** setting.

Refreshing a subscription manifest now extends the expiration date to one year from the current date. Refresh your manifest at least once a year so it will never expire.

The subscription manifest expiration date is displayed on the **Manage Manifest** page under **Content > Subscriptions**.

Jira:SAT-11630

2.2. INSTALLATION AND UPGRADE

satellite-maintain update command for minor releases

The `satellite-maintain update` command replaces **satellite-maintain upgrade** with **--target-version** for updating minor (z-stream) versions. As the upgrade command is now dedicated to major upgrades, the **--target-version** parameter has been removed.

Jira:SAT-21970

Puppet Server updated to version 8

Puppet Server 8 is now included in Satellite. Existing clients with Puppet agent 7 will continue to work against Puppet Server 8.

Jira:SAT-24140

Upgrading to Satellite 6.16 also upgrades to PostgreSQL 13

When you upgrade your Satellite Server 6.15 to version 6.16, the PostgreSQL database on the system is upgraded from version 12 to version 13. During the upgrade, a backup of the PostgreSQL data is created in the **/var/lib/pgsql/data-old/** directory. You can safely remove this directory after the upgrade completes.

To create the backup, you must ensure enough disk space is available in **/var/lib/pgsql/**. The additional space required for the backup equals the amount of space currently consumed by PostgreSQL 12. After you run **satellite-maintain** to start the upgrade, the utility performs a check to verify the available disk space.

Jira:SAT-23369

SCRAM hashing for PostgreSQL passwords

PostgreSQL 13 uses SCRAM hashing for passwords. The installer updates existing user passwords to SCRAM hashing. You can view the existing users and their password hashes by running the following command:

```
SELECT rolname,rolpassword FROM pg_authid WHERE rolpassword != "";
```

Jira:SAT-24414

2.3. CONTENT MANAGEMENT

Content repair command for Capsule

To repair all content on Capsule, run the following command:

```
$ hammer capsule content verify-checksum \  
--id My_Capsule_ID
```

Jira:SAT-16330

Publishing content views during repository synchronization is blocked to prevent incorrect metadata

An error message is displayed if you try to publish a content view while a child repository is performing one of the following actions:

- Sync
- Upload content
- Remove content
- Republish metadata

Similarly, you cannot initiate the above tasks on a repository while a parent content view is being published.

Without this error message, publishing a content view while synchronizing a repository can cause incorrect metadata.

Jira:SAT-20281

Containers can now be pushed to Satellite's container registry

Each pushed container repository path must include the organization, product, and repository name. Example: **podman push <image> satellite.example.com/organization/product/repository**.

Jira:SAT-20280

Command for container label migration

The container image API now shows manifest labels, annotations, and if the manifest represents bootable or flatpak content. Satellite performs a pre-migration in the background after the upgrade to make this data available.

Jira:SAT-23852

2.4. HOST PROVISIONING AND MANAGEMENT

Provisioning templates for reconfiguring a self-signed CA certificate on hosts

Satellite now provides public provisioning templates. You can use the templates to refresh your self-signed CA certificate on hosts when you renew the CA certificate on Satellite Server. You can use the following public provisioning templates:

foreman_ca_refresh

This template renders a shell script. You can use this template to execute the script on hosts, for example by using remote execution, to configure the CA certificate on hosts automatically.

foreman_raw_ca

This template renders raw content of the CA certificate. You can use this template to download the CA certificate and configure it on your hosts manually.

For more information, see [Refreshing the self-signed CA certificate on hosts](#) in *Managing hosts*.

[Jira:SAT-18615](#)

Job templates for running remote scripts on hosts

Satellite now provides job templates that you can use to download a script from a URL and execute the script on a host. You can use one of the following REX templates to run a script from an URL:

- **Download and run a script** in the **Commands** job category for the Script remote execution provider.
- **Download and execute a script** in the **Ansible Commands** job category for the Ansible remote execution provider.

[Jira:SAT-18615](#)

Root passwords are hashed by using SHA512

Satellite now uses the SHA512 algorithm to hash the root passwords of operating systems by default. The new default is only applied to new operating system entries. If you want to use the SHA512 algorithm in your existing operating systems, you have to change the algorithm manually and reprovision your hosts.

[Jira:SAT-26071](#)

Improved RHEL 9 network configuration in Kickstart provisioning templates

Previously, Satellite created **ifcfg** files in the Finish template to configure host network interfaces. In RHEL 9, the **ifcfg** files have been replaced with key files. For more information, see [RHEL 9 networking: Say goodbye to ifcfg-files, and hello to keyfiles](#).

With this release, the Kickstart provisioning templates rely on Anaconda to configure network interfaces, which makes the configuration process more robust. Additionally, Anaconda is now aware of the proper interface configuration and it can safely use those interfaces for the installation process.

This improvement also fixes [SAT-22579](#).

Jira:SAT-23034

rhsm command registers RHEL 9 hosts to Satellite and enables Insights

Previously, you registered RHEL hosts to Satellite in the **redhat_register** snippet and enabled Insights in the **insights** snippet. With this release, you can use the **kickstart_rhsm** snippet to register RHEL 9 hosts to Satellite and, optionally, enable Insights.. This snippet uses the **rhsm** command, which is part of Anaconda Kickstart native syntax. As a result, the number of required transactions is reduced to make the host configuration more robust. The workflow does not change for you. The new snippet accepts the same host parameters.

Jira:SAT-23053

timesource configures NTP server when provisioning RHEL 9 hosts

Previously, the *Kickstart default* provisioning template used the single **timezone** Kickstart command to configure both the time zone and NTP server. With this release, the NTP configuration is split into two Kickstart commands, **timezone** and **timesource**, to incorporate the new RHEL 9 Kickstart syntax.

Jira:SAT-23053

Updated syntax for Anaconda options when provisioning RHEL 8 hosts

Previously, the **kickstart_kernel_options** provisioning snippet used deprecated legacy syntax for Anaconda options when provisioning RHEL 8 hosts. With this release, the snippet uses the current syntax for Anaconda options. As a result, provisioning RHEL 8 hosts does not produce that warning.

Jira:SAT-23053

use-ntp installs chrony when provisioning RHEL 7 hosts

Previously, the **use-ntp** parameter installed the **ntpdate** package to configure an NTP client on RHEL 7 hosts. With this release, the *Kickstart default* provisioning template and **ntp** snippet install the chrony suite on RHEL 7 hosts. As a result, time synchronization is more accurate and robust.

Jira:SAT-23053

Improved customization of host registration

The **Global Registration** template can now include user-defined snippets **before_registration** and **after_registration**. You can create these snippets to add custom commands to registration without editing the original template.

For more information, see Foreman feature [#38189](#).

[Jira:SAT-23536](#)

VMware vCenter Server 8 support

You can now provision virtual machines by using a VMware compute resource with vCenter Server 8.

Jira:SAT-21075

Improved error message for missing VMware datastore

Previously, when you attempted to provision a host on a VMware datastore cluster by using the API, it might fail with an ambiguous **InvalidDatastorePath** error. With this release, the API produces a specific **ArgumentError** with a descriptive message when the datastore is missing. As a result, you can easily debug the problem.

Jira:SAT-23052

Provisioning supports NVMe

Previously, you could only provision VMware machines with SCSI controllers. With this release, you can provision VMware machines with non-volatile memory express (NVMe) storage options. As a result, your virtual machines can access data faster and you have more flexibility for storage solutions.

Jira:SAT-23052

SCSI storage connection for VMware ESXi Quick Boot enabled by default

Previously, when performing a VMware ESXi Quick Boot with GRUB2 chainloading, you had to enable the **connectefi scsi** command in the **pxegrub2_chainload** snippet and the provisioning templates in which it is included. With this release, the command is enabled by default and you can disable it with the **grub2-connectefi** host parameter. As a result, you do not have to edit the provisioning templates to enable the feature. For more information, see the snippet.

This improvement also fixes [SAT-19018](#).

Jira:SAT-23052

2.5. USERS AND ROLES

Active Directory login with user name only

Active Directory (AD) users can now log in to the web UI or use the **kinit** utility by entering only a user name without specifying a domain. You can set a default AD domain name by using the **foreman-ipa-sssd-default-realm** option in the **satellite-installer** utility.

[Jira:SAT-18360](#)

2.6. HAMMER CLI TOOL

New Hammer subcommands and options

The following Hammer command has been added:

- **hammer preupgrade-report**

The following Hammer subcommands have been added:

- **hammer capsule content verify-checksum**
- **hammer content-view version verify-checksum**
- **hammer product verify-checksum**
- **hammer proxy content verify-checksum**
- **hammer repository verify-checksum**

The following Hammer options have been added:

- **--content-view-environment-ids** and **--content-view-environments** added to the **hammer host create** command
- **--content-view-environment-ids** and **--content-view-environments** added to the **hammer host update** command

- **--include-latest-upgradable** and **--status** added to the **hammer host deb-package list** command
- **--include-latest-upgradable** and **--status** added to the **hammer host deb-package index** command
- **--limit-to-env** added to the **hammer host subscription content-override** command
- **--repo-data** added to the **hammer host-registration generate-command** command
- **--succeeded-only** added to the **hammer job-invocation rerun** command
- **--async** added to the **hammer product update-proxy** command
- **--exclude-refs** and **--include-refs** added to the **hammer repository create** command
- **--exclude-refs** and **--include-refs** added to the **hammer repository update** command

For more information, see [Using the Hammer CLI tool](#) or enter the commands with the **--help** option.

Jira:SAT-28136

2.7. REST API

New API endpoints

The following API endpoints have been added:

- **/katello/api/capsules/:id/content/verify_checksum**
- **/katello/api/content_view_versions/:id/verify_checksum**
- **/api/host_packages/:id**
- **/api/host_packages/compare**
- **/api/host_packages/installed_packages**
- **/api/hosts/:host_id/subscriptions/remove_subscriptions**
- **/api/hosts/bulk/build**
- **/api/hosts/bulk/reassign_hostgroups**
- **/katello/api/packages/thindex**
- **/api/permissions/current_permissions**

For more information, see the full API reference on your Satellite Server at <https://satellite.example.com/apidoc/v2.html>.

Jira:SAT-28134

CHAPTER 3. REMOVED FUNCTIONALITY

This section lists functionality that has been *removed* in Red Hat Satellite 6.16.

3.1. SECURITY AND AUTHENTICATION

OVAL-only contents and policies

Management of the Open Vulnerability and Assessment Language (OVAL) contents and policies, which were provided as Technology Previews, are no longer available. If you used an OVAL policy on your clients, you must reconfigure them.

[Jira:SAT-23806](#)

3.2. CONTENT MANAGEMENT

Entitlement-based subscription management

Entitlement-based subscription management has been removed. You must use Simple Content Access, which simplifies the entitlement experience for administrators. For more information, see the [Subscription Management Administration Guide for Red Hat Enterprise Linux](#) on the Red Hat Customer Portal.

[Jira:SAT-27936](#)

3.3. HOST PROVISIONING AND MANAGEMENT

Telemetry disablement in Convert2RHEL job templates

You cannot disable telemetry when you use the Convert2RHEL utility.

[Jira:SAT-24654](#)

foreman_hooks plugin

The **foreman_hooks** plugin has been removed. You must use the **foreman_webhooks** plugin instead.

[Jira:SAT-16036](#)

3.4. BACKUP AND RESTORE

Snapshot backup

satellite-maintain no longer supports snapshot backups. You must use online backups instead.

[Jira:SAT-20955](#)

3.5. HAMMER CLI TOOL

Removed Hammer commands and options

The following Hammer command has been removed:

- **hammer simple-content-access**

The following Hammer options have been removed:

- **--simple-content-access** removed from the **hammer organization create** command
- **--simple-content-access** removed from the **hammer organization update** command
- **--source-url** removed from the **hammer repository synchronize** command

Jira:SAT-28141

3.6. REST API

Removed API endpoints and routes

The following API endpoints have been removed:

- **/katello/api/organizations/:organization_id/simple_content_access/eligible**
- **/katello/api/organizations/:organization_id/simple_content_access/enable**
- **/katello/api/organizations/:organization_id/simple_content_access/disable**
- **/katello/api/organizations/:organization_id/simple_content_access/status**
- **/api/compliance/oval_contents**
- **/api/compliance/oval_contents/:id**
- **/api/compliance/oval_contents/sync**
- **/api/compliance/oval_policies**
- **/api/compliance/oval_policies/:id**
- **/api/compliance/oval_policies/:id/assign_hostgroups**
- **/api/compliance/oval_policies/:id/assign_hosts**
- **/api/compliance/oval_policies/:id/oval_content**
- **/api/compliance/oval_reports/:cname/:oval_policy_id/:date**

Jira:SAT-28135

CHAPTER 4. DEPRECATED FUNCTIONALITY

This part provides an overview of functionality that has been *deprecated* in Red Hat Satellite 6.16.

Deprecated functionality will likely not be supported in future releases of this product and is not recommended for new deployments. For the most recent list of deprecated functionality within a particular major release, refer to the latest version of release documentation.

The support status of deprecated functionality remains unchanged within Red Hat Satellite 6.16. For information about the length of support, see [Red Hat Enterprise Linux Life Cycle](#) and [Red Hat Enterprise Linux Application Streams Life Cycle](#).

Deprecated hardware components are not recommended for new deployments on the current or future releases. Hardware driver updates are limited to security and critical fixes only. Red Hat recommends replacing this hardware as soon as reasonably feasible.

A package can be deprecated and not recommended for further use. Under certain circumstances, a package can be removed from a product. Product documentation then identifies more recent packages that offer functionality similar, identical, or more advanced to the one deprecated, and provides further recommendations.

4.1. WEB UI

Package Group Actions

Package Group Actions in the web UI was deprecated in 6.10.

Jira:SAT-27578

4.2. HOST PROVISIONING AND MANAGEMENT

Capsule port 8443

Port 8443 on Capsules is deprecated in 6.16. This port is disabled by default on new installations and upgrades.

For new clients, use port 443 when communicating through a Capsule. If your existing clients use port 8443, reconfigure them to use port 443 in one of the following ways:

- Remote execution
- The **katello-ca-consumer** RPM
- Update the **/etc/rhsm/rhsm.conf** file: In the **[server]** section of the file, ensure that the **port** option is set to **443**

You can temporarily re-enable access to port 8443 by running the **satellite-installer** utility with the **--foreman-proxy-content-reverse-proxy=true** option. Note that re-enabling access to port 8443 is only a temporary solution. Make sure to migrate your integrations to call the API through your Satellite Server.

Jira:SAT-24522

Overriding organizations and locations on the filter level

The ability for a filter to override organizations and locations associated with a role is deprecated in 6.16. When the functionality is removed, filters will honor the organizations and locations set at the role level.

[Jira:SAT-28820](#)

Asynchronous SSH remote execution mode

The `async-ssh` remote execution mode was deprecated in 6.13. If you have unstable connectivity between Capsules and managed hosts, use the pull mode instead. For more information about pull mode, see [Transport Modes for Remote Execution](#) in *Managing hosts*.

Provisioning on Red Hat Virtualization

The integration of Red Hat Virtualization (RHV) with Satellite was deprecated in 6.13. All the existing compute resources of RHV type will be removed and the hosts associated with RHV will be disconnected.

Bootstrap.py

The `bootstrap.py` script used to register a host to Satellite or Capsule was deprecated in 6.9. It has been replaced by the `curl` command created with the global registration template.

[Jira:SAT-21137](#)

katello-ca-consumer package and katello-rhsm-consumer script

The `katello-ca-consumer` package and `katello-rhsm-consumer` script were deprecated in 6.9. You must use the global registration template to register a host.

[Jira:SAT-21372](#)

4.3. HAMMER CLI TOOL

hammer host subscription attach and hammer host subscription auto-attach commands

The `hammer host subscription attach` and `hammer host subscription auto-attach` commands are deprecated in 6.16. The commands are non-functional and do not result in attaching a subscription.

Note: Entitlement-based subscription management was removed in 6.16 ([SAT-27936](#)).

[Jira:SAT-28367](#)

CHAPTER 5. KNOWN ISSUES

This section describes known issues in Red Hat Satellite 6.16.

5.1. WEB UI

Unable to specify a custom organization label in the Satellite web UI

When creating a new organization in the Satellite web UI, the field to specify a custom label for the organization is missing. Each time you create a new organization from the Satellite web UI, Satellite creates a default label which mirrors the organization name. For example, if you create an organization named **New Organization**, Satellite creates a label named **New_Organization**. Note that you cannot change the label after it is created.

To work around this problem, create new organizations from CLI by using the **hammer organization create** command and pass the **--label** option to specify a custom label. For more information, see [Creating an Organization](#) in *Administering Satellite*.

[Jira:SAT-27703](#)

5.2. SECURITY AND AUTHENTICATION

Unable to upload an OpenSCAP report from hosts that run RHEL 9.3 or earlier with FIPS mode enabled

On Satellite hosts that run RHEL 9.3 or earlier with FIPS mode enabled, uploading an OpenSCAP report fails with the following error:

```
Unable to load certs
Neither PUB key nor PRIV key
```

For more details, see a related [Knowledgebase solution](#). Note that the problem has been fixed for hosts that run RHEL 9.4 or later. See also [Chapter 6, Bug fixes](#).

[Jira:SAT-28297](#)

5.3. CONTENT MANAGEMENT

Repositories listed but not active

The **Red Hat Repositories** page lists the Red Hat Satellite 6 Client 2 repositories as recommended repositories, but these repositories are not active yet. Continue using Red Hat Satellite Client 6 repositories.

[Jira:SAT-29303](#)

Organization deletion fails

If there are container push repositories among the organization's products, then organization deletion fails. To work around this problem, delete the container push repositories before deleting the organization.

[Jira:SAT-28387](#)

Concurrently synchronizing many large repositories to a Capsule might cause core dumps for the pulpcore-api

The pulpcore-api might experience core dumps when multiple large repositories are synchronized to a Capsule concurrently. When this problem occurs, the following error message is displayed in `/var/log/messages`: **capsule systemd-coredump[16056]: Process 9867 (pulpcore-api) of user 988 dumped core.** The synchronization completes successfully despite the errors.

[Jira:SAT-27979](#)

5.4. USERS AND ROLES

Newly created filters do not inherit organizations and locations associated with the role

When an organization and location are defined for a role, these organizations and locations are not propagated to the filters created within the role. Consequently, users with a role assigned can access resources in any other organization or location that they have sufficient permissions to view instead of only organizations and locations defined for the role.

To work around the problem:

1. Create your filter.
2. Start editing the filter.
3. Save the filter without making any changes. This ensures that organizations and locations defined on the role level are propagated to filters correctly.

This known issue does not affect cloned roles. If you clone an existing role and assign organizations and locations to the cloned role, the organizations and locations are propagated to filters correctly.

Note that defining organizations and locations on the filter level is deprecated. See [Overriding organizations and locations on the filter level](#).

[Jira:SAT-28731](#)

CHAPTER 6. BUG FIXES

This section describes bugs fixed in Red Hat Satellite 6.16 that have a significant impact on users.

6.1. WEB UI

Web UI displays short names of hosts consistently

Previously, some pages in the Satellite web UI displayed names of hosts as FQDNs even when **Display FQDN for hosts** was disabled. With this release, the **Display FQDN for hosts** setting is applied consistently.

[Jira:SAT-21815](#)

Suggest New link for IPv4 addresses exhausted Infoblox DHCP pool

Satellite suggests new IPv4 addresses in subnets with DHCP when creating or editing hosts in the UI via the **Suggest New** link or via the `/api/subnets/:id/freeip` API endpoint. Previously, when using the Infoblox DHCP provider, it would stop suggesting addresses after some time. This was because the suggestions did not expire after a period of time causing the pool of available IP addresses to be used up. With this release, the issue is now fixed.

[Jira:SAT-17785](#)

Libvirt VM details with any volume type can be accessed in the web UI

Previously, when you manually created a virtual machine with a volume type other than **file** in Libvirt and then attempted to access the details of the virtual machine in the web UI, Satellite produced an ambiguous error. The loading of volumes in the Libvirt compute resource has been fixed. As a result, you can access details of your virtual machines with volumes of any type in the web UI.

[Jira:SAT-23211](#)

Host details display all overridden Ansible variables

Previously, when you accessed the list of Ansible variables in Host details, Satellite displayed only the first page of Ansible variables and pagination controls were missing. The Satellite web UI has been fixed to provide pagination controls and follow the **Entries per page** setting. As a result, you can browse all Ansible variables that you have overridden for Ansible roles assigned to your host.

[Jira:SAT-21887](#)

Ansible jobs use passwords from Advanced fields correctly

Previously, the Ansible provider for remote execution ignored the following **Advanced fields** inputs from the job wizard:

- SSH password
- Effective user password

With this fix, the Ansible provider uses these values correctly.

[Jira:SAT-18270](#)

Ansible jobs use the SSH User field from Advanced fields

Previously, the Ansible provider for remote execution ignored the **SSH User** field of the **Advanced fields** inputs from the job wizard. The **foreman_ansible** component has been fixed to use the value of **SSH User** as the Ansible user. As a result, the Ansible provider uses this value correctly.

[Jira:SAT-23947](#)

6.2. SECURITY AND AUTHENTICATION

Uploading an OpenSCAP report no longer fails on hosts that run RHEL 9.4 or later with FIPS mode enabled

On Satellite hosts that run RHEL 9 in FIPS mode, uploading an OpenSCAP report previously failed with the following error:

```
Unable to load certs
Neither PUB key nor PRIV key
```

The problem has been addressed on the RHEL side and no longer affects Satellite hosts that run RHEL 9.4 or later. Note that uploading an OpenSCAP report in the described situation still fails on hosts that run RHEL 9.3 or earlier. See also [Chapter 5, Known issues](#).

[Jira:SAT-22421](#)

6.3. CONTENT MANAGEMENT

Checksum set value has changed

The supported **--checksum-type** set of **sha1** and **sha256** for repositories has changed to **sha256**, **sha384** and **sha512**. The checksum **sha1** is no longer secure and modern systems such as Red Hat Enterprise Linux 6 and up support file checksums greater than **sha1**. Synchronizing **sha1** content is still possible but content published in repositories by Satellite will now use **sha256**, **sha384**, or **sha512**. The default checksum is now **sha256** and not **sha1**.

[Jira:SAT-25511](#)

6.4. HOST PROVISIONING AND MANAGEMENT

Host owner set correctly during registration

Previously, when you registered a host, Satellite set the host owner to **Anonymous Admin**. With this release, Satellite sets the host owner to the user who generated the registration command.

[Jira:SAT-21682](#)

Satellite uses the **Default location subscribed hosts** setting as the default location for registered hosts

Previously, if you did not specify the location to which you were registering the host, Satellite ignored the **Default location subscribed hosts** setting. With this fix, Satellite uses the value of that setting as the default location.

[Jira:SAT-23047](#)

CloudInit default no longer generates invalid YAML output

Previously, when you generated the **CloudInit default** provisioning template, the YAML output was

incorrectly indented. The incorrect indentation caused the output to be invalid. The **subscription_manager_setup** snippet has been fixed to produce correct indentation. As a result, the generated YAML output is valid.

[Jira:SAT-25042](#)

Path to Red Hat Image Builder image renders correctly

Previously, when you provisioned a host by using a Red Hat Image Builder image and provided a relative path to the image in the **kickstart_liveimg** parameter, the **Kickstart default** provisioning template failed to render. The Katello component has been fixed to render the absolute path of the image correctly. As a result, the **Kickstart default** template renders successfully and you can provision hosts by using the image.

[Jira:SAT-23943](#)

Discovery image updated with the latest RHEL 8

Previously, the Foreman Discovery image was based on Red Hat Enterprise Linux 8.6, which was limiting discovery of systems that require a later RHEL version. The Foreman Discovery image has been updated with the Red Hat Enterprise Linux 8.10.0 base. As a result, you can discover newer systems.

[Jira:SAT-24197](#)

6.5. BACKUP AND RESTORE

The certificate .tar file is now collected when using **satellite-maintain backup** on Capsule Server

Previously, the **satellite-maintain backup** command did not collect the certificate **.tar** file of the Capsule Server when creating a backup. As a consequence, restoring the archive failed. With this update, restoring the archive completes successfully in this situation.

[Jira:SAT-23093](#)

CHAPTER 7. TECHNOLOGY PREVIEWS

This part provides a list of all Technology Previews available in Red Hat Satellite 6.16.

For information on Red Hat scope of support for Technology Preview features, see [Technology Preview Features Support Scope](#).

7.1. WEB UI

All Hosts page

The new **All Hosts** page has the following features:

- Bulk actions: You can now select one or more hosts and use the options menu to perform actions such as Build management, Change host group, Delete, Manage content, Packages (install/remove/upgrade), Errata, Content source, and Content view environments to change the content view and lifecycle environment of hosts.
- Single-host actions: You can perform actions on a single host by using the options menu to Edit, Clone, Delete, and Change content view environments.

To use the new page by default, navigate to **Administer > Settings** and set **Show new host overview page** to **Yes**. The legacy and the new **All Hosts** pages are linked so that you can switch between them.

Jira:SAT-20041

Job details page

The **Job details** page is redesigned for enhanced user experience.

By default, the web UI displays the previous design. To view the new design, navigate to **Monitor > Jobs**, click a job name in the **Description** column and then click **New UI**. To enable the **Show Experimental Labs** setting, navigate to **Administer > Settings**.

Jira:SAT-18427

7.2. HOST PROVISIONING AND MANAGEMENT

OpenShift Virtualization plugin

You can provision virtual machines by using the OpenShift Virtualization plugin.

Jira:SAT-18663

Kernel execution template

You can use the kernel execution (kexec) provisioning template for PXE-less boot methods.

Jira:SAT-21012

APPENDIX A. PROVIDING FEEDBACK ON RED HAT DOCUMENTATION

We appreciate your feedback on our documentation. Let us know how we can improve it.

Use the **Create Issue** form in Red Hat Jira to provide your feedback. The Jira issue is created in the Red Hat Satellite Jira project, where you can track its progress.

Prerequisites

- Ensure you have registered a [Red Hat account](#).

Procedure

1. Click the following link: [Create Issue](#). If Jira displays a login error, log in and proceed after you are redirected to the form.
2. Complete the **Summary** and **Description** fields. In the **Description** field, include the documentation URL, chapter or section number, and a detailed description of the issue. Do not modify any other fields in the form.
3. Click **Create**.

APPENDIX B. LIST OF TICKETS BY COMPONENT

Bugzilla and JIRA tickets are listed in this document for reference. The links lead to the release notes in this document that describe the tickets.

Component	Tickets
API	Jira:SAT-28134 , Jira:SAT-28135
Authentication	Jira:SAT-18360
Backup & Restore	Jira:SAT-20955 , Jira:SAT-23093
Capsule - Content	Jira:SAT-16330
Compute Resources - VMWare	Jira:SAT-21075 , Jira:SAT-23052
Container Management - Content	Jira:SAT-20280 , Jira:SAT-23852
Content Views	Jira:SAT-20281
Content management	Jira:SAT-27936
Discovery Image	Jira:SAT-24197
Hammer	Jira:SAT-28136 , Jira:SAT-28141 , Jira:SAT-28367
Host management	Jira:SAT-16036 , Jira:SAT-24522 , Jira:SAT-28820 , Jira:SAT-21137 , Jira:SAT-21372
Installation	Jira:SAT-24140 , Jira:SAT-24414
Provisioning	Jira:SAT-26071 , Jira:SAT-23034 , Jira:SAT-21075 , Jira:SAT-24654 , Jira:SAT-18663 , Jira:SAT-21012
Provisioning Templates	Jira:SAT-23053 , Jira:SAT-25042 , Jira:SAT-23943
Pulp	Jira:SAT-27979
Registration	Jira:SAT-18615 , Jira:SAT-23536 , Jira:SAT-21682 , Jira:SAT-23047
Repositories	Jira:SAT-25511 , Jira:SAT-29303 , Jira:SAT-28387 , Jira:SAT-27979
SCAP Plugin	Jira:SAT-22421 , Jira:SAT-28297
Satellite Maintain	Jira:SAT-21970

Component	Tickets
Security	Jira:SAT-23806
Upgrades	Jira:SAT-21970 , Jira:SAT-23369 , Jira:SAT-24414
Users & Roles	Jira:SAT-28731
Web UI	Jira:SAT-23240 , Jira:SAT-11630 , Jira:SAT-21815 , Jira:SAT-17785 , Jira:SAT-23211 , Jira:SAT-21887 , Jira:SAT-18270 , Jira:SAT-23947 , Jira:SAT-20041 , Jira:SAT-18427 , Jira:SAT-27578 , Jira:SAT-27703
other	Jira:SAT-23536 , Jira:SAT-28136 , Jira:SAT-28134 , Jira:SAT-28141 , Jira:SAT-28135 , Jira:SAT-28367 , Jira:SAT-28297