Red Hat Satellite 6.5

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How to Buy Satellite
Red Hat Insights
Now included with all Red Hat Enterprise Linux subscriptions
Red Hat Smart Management

Cloud management services for Red Hat Enterprise Linux

- Vulnerability
- Compliance
- System comparison
What do I get for Satellite with Smart Management?

Quantity 50 of MCT3718 - Satellite Infrastructure Subscription

Enabling you to Scale out your Satellite deployment to best suit your needs.

- Need a Satellite for Test/Dev?
- Need a Capsule in the cloud?
- Need load-balanced Capsules?
- Need an air-gapped synchronization host?

No Problem.
Satellite 6.5 New Features
Satellite 6.5 Theme

Red Hat Enterprise Linux 8

- You can do all the things with RHEL 8 that you can do with RHEL 7 and earlier versions

Enhanced Security

- Install Satellite on a FIPS enabled RHEL 7 host
Key Focus Areas

- Red Hat Enterprise Linux 8
- Security
- Content Management
- Support
- Usability
- Reporting
Red Hat Enterprise Linux 8

Satellite 6.5 supports Red Hat Enterprise Linux 8 hosts
Red Hat Satellite 6.5
System management for Red Hat Enterprise Linux 8 hosts

Patching
Patch Red Hat Enterprise Linux 8 hosts with Satellite

Provisioning
Provision Red Hat Enterprise Linux 8 hosts with Satellite

Application streams
Basic module visibility and management with Red Hat Enterprise Linux 8

System purpose
State the intended use of a Red Hat Enterprise Linux 8 system

System roles
Run system roles on Red Hat Enterprise Linux hosts

If you want to manage Red Hat Enterprise Linux 8 clients, you must be running Satellite 6.5.

*NOTE: Satellite and Capsules must be installed on a Red Hat Enterprise Linux 7 Host
Found 83 reports from the last 7 days

System Purpose: Matched
Operating System: Red Hat 8.0

RED HAT ENTERPRISE LINUX 8 SUPPORT
<table>
<thead>
<tr>
<th>Name</th>
<th>Subscription Status</th>
<th>Installable Updates</th>
<th>OS</th>
<th>Lifecycle Environment</th>
<th>Content View</th>
<th>Registered</th>
<th>Last Checkin</th>
</tr>
</thead>
<tbody>
<tr>
<td>aqua.example.com</td>
<td></td>
<td></td>
<td>RedHat 8.0</td>
<td>Production</td>
<td>RHEL8 with errata</td>
<td>2019-04-03 11:08:13</td>
<td>2019-04-16 07:49:05</td>
</tr>
<tr>
<td>rdu-db01.example.com</td>
<td></td>
<td></td>
<td>RedHat 8.0</td>
<td>Library</td>
<td>Default Organization View</td>
<td>2019-04-16 07:59:40</td>
<td>2019-04-16 08:06:09</td>
</tr>
<tr>
<td>skylab.example.com</td>
<td></td>
<td></td>
<td>RedHat 8.0</td>
<td>Production</td>
<td>RHEL8 container tags</td>
<td>2019-04-02 20:35:17</td>
<td>2019-04-16 07:53:32</td>
</tr>
</tbody>
</table>

RED HAT ENTERPRISE LINUX 8 PATCHING
<table>
<thead>
<tr>
<th>Host</th>
<th>Ansible Roles</th>
<th>Virtual Machine</th>
<th>Operating System</th>
<th>Interfaces</th>
<th>Puppet Classes</th>
<th>Parameters</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Architecture *</td>
<td>x86_64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operating System *</td>
<td>No options available for selected Architecture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provisioning Method *</td>
<td>Boot disk based</td>
<td>Network Based</td>
<td>Image Based</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Build</td>
<td>Enable this host for provisioning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Media Selection</td>
<td>Synced Content</td>
<td>All Media</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Synced Content</td>
<td>Red_Hat_Enterprise_Linux_8_for_x86_64_baseOS...</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partition Table *</td>
<td>No options available for selected Operating System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RED HAT ENTERPRISE LINUX 8 PROVISIONING**

What ever text or the templates you put here, will be added as your boot layout options. If you want to use the partition table option, delete all of the text from this field.

**Root Pass** *Password must be 8 characters or more**

**Provisioning Templates** *Resolve* Display the templates that will be used to provision this host.
## RED HAT ENTERPRISE LINUX 8 MODULE STREAMS

### Available Module Streams

<table>
<thead>
<tr>
<th>Name</th>
<th>Stream</th>
<th>Status</th>
<th>Installed Profile</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>389-ds</td>
<td>1.4</td>
<td></td>
<td></td>
<td>Actions</td>
</tr>
<tr>
<td>ant</td>
<td>1.10</td>
<td></td>
<td></td>
<td>Actions</td>
</tr>
<tr>
<td>App-cpanminus</td>
<td>1.7044</td>
<td>Enabled</td>
<td></td>
<td>Actions</td>
</tr>
<tr>
<td>container-tools</td>
<td>1.0</td>
<td></td>
<td></td>
<td>Actions</td>
</tr>
<tr>
<td>DBD-MySQL</td>
<td>4.046</td>
<td></td>
<td></td>
<td>Actions</td>
</tr>
<tr>
<td>DBD-Pg</td>
<td>3.7</td>
<td></td>
<td></td>
<td>Actions</td>
</tr>
<tr>
<td>gimp</td>
<td>2.8</td>
<td></td>
<td></td>
<td>Actions</td>
</tr>
<tr>
<td>go-toolset</td>
<td>rhel8</td>
<td></td>
<td></td>
<td>Actions</td>
</tr>
<tr>
<td>httpd</td>
<td>2.4</td>
<td></td>
<td></td>
<td>Actions</td>
</tr>
<tr>
<td>idm</td>
<td>DL1</td>
<td></td>
<td></td>
<td>Actions</td>
</tr>
</tbody>
</table>

---

*Filter: all*
RED HAT ENTERPRISE LINUX 8 SYSTEM PURPOSE
<table>
<thead>
<tr>
<th>Name</th>
<th>Hostgroups</th>
<th>Hosts</th>
<th>Imported at</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>fix-selinux</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>linux-system-roles.kdump</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>linux-system-roles.network</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>linux-system-roles.postfix</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>linux-system-roles.selinux</td>
<td>0</td>
<td>1</td>
<td>8 days ago</td>
<td>Delete</td>
</tr>
<tr>
<td>linux-system-roles.timesync</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>RedHatInsights.Insights-client</td>
<td>0</td>
<td>1</td>
<td>8 days ago</td>
<td>Delete</td>
</tr>
<tr>
<td>rhel-system-roles.kdump</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>rhel-system-roles.network</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>rhel-system-roles.postfix</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>rhel-system-roles.selinux</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>rhel-system-roles.timesync</td>
<td>0</td>
<td>0</td>
<td>less than a minute ago</td>
<td>Delete</td>
</tr>
<tr>
<td>tomcat_role</td>
<td>0</td>
<td>1</td>
<td>4 days ago</td>
<td>Delete</td>
</tr>
</tbody>
</table>
Satellite and Red Hat Enterprise Linux 8

- Sat 6.5 supports RHEL 8 clients
- Sat 6.6 will allow you to run Satellite on RHEL 8
  - Post 6.6, some new features will only work on RHEL 8
  - Post 6.6 will help migrate your Satellite from RHEL 7 to RHEL 8
  - Eventually Satellite will only run on RHEL 8
Security

Security changes in Satellite 6.5
Security Enhancements

FIPS Support and OpenSCAP Enhancements

Install Satellite on a FIPS Enabled RHEL 7 Host
Satellite inherits the FIPS level of RHEL

OpenSCAP enhancements
Show hosts that fail a certain OpenSCAP rule

Satellite Admin Role
A new user type that can manage the Satellite infrastructure, create new organizations, but can't manage the hosts.
Support

Supportability changes in Satellite 6.5
Support

Infoblox IPAM Support
Support for Infoblox IPAM

Run Satellite or Capsules in major cloud providers
Customers who are using Cloud Access can now deploy Satellite or Capsules without a support exception on the following cloud providers:
- AWS
- Azure
- Google
- Alibaba
- IBM

To deploy Satellite/Capsule on other cloud providers still requires a support exception.

Note this functionality is separate from provisioning of hosts which is only supported on AWS and Google.
<table>
<thead>
<tr>
<th>Cloud Provider</th>
<th>Can Run Satellite*?</th>
<th>Can Manage Hosts In this Cloud Provider?</th>
<th>Can Provision Hosts In this Cloud Provider?</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWS</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Azure</td>
<td>✔️</td>
<td>✔️</td>
<td>✗</td>
</tr>
<tr>
<td>Compute Engine</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Alibaba Cloud</td>
<td>✔️</td>
<td>✔️</td>
<td>✗</td>
</tr>
<tr>
<td>IBM Cloud</td>
<td>✔️</td>
<td>✔️</td>
<td>✗</td>
</tr>
</tbody>
</table>

AWS includes AWS Cloud for Government
Azure includes Microsoft Azure for Government

*Cloud Providers not listed require a support exception
Content Management

changes in Satellite 6.5
Content Management

Enhanced Architectural Flexibility

Export Content Views
Export content from a Satellite and import them on a different Satellite

Container Admin
Manage container images for use by end users
RED HAT SATELLITE IN AN AIR GAPPED ENVIRONMENT

EXPORT FROM RED HAT SATELLITE

ISOLATED DATACENTER

CONTENT

ATLANTA DATACENTER
Reporting

All new reporting engine in Satellite 6.5
Reporting Engine
Pre-canned, customizable, and newly created reports

Pre-canned reports
- Host Statuses
- Subscriptions
- Registered Hosts
- Applicable Errata

Customize any of the above reports or create your own
### Report Templates

<table>
<thead>
<tr>
<th>Name</th>
<th>Snippet</th>
<th>Locked</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable errata</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community - Host statuses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Host statuses CSV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered hosts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscriptions</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

New Report Templates
CUSTOMIZE A TEMPLATE, OR MAKE YOUR OWN
Little Bites

Small things that can make a big difference
Little Bites

Little things that make a big difference

**Easier Searching for repositories**
Provide a package name and you can see all repositories (repos) in which the package exists

**Simplification of repository selection**
Repo selection page is more prescriptive on what you can use vs what is preferred

**Preserve VMs when deleting compute resources**
When deleting a compute resource you won't accidentally delete associated virtual machines.

**Bootstrap script updates**
Bootstrap script now ships as an Ansible playbook

**Updated to latest version of Puppet**
Puppet 5 latest version
Satellite & Ansible
More info

How Satellite and Ansible work together
SATELLITE AND ANSIBLE TOWER INTEGRATION

Documented best practices to help optimize use of both products

By integrating Red Hat Satellite with Red Hat Ansible® Tower, administrators can now perform the following functions:

**Dynamic inventory**
Allowing Ansible Tower to use Satellite as a dynamic inventory source.

**Provisioning callbacks**
Allows systems provisioned via Satellite to “callback” to Ansible Tower so that playbook runs can happen post-provisioning.
Basic Ansible capabilities are now part of Satellite

Satellite has integration with Ansible for the purposes of remote execution and desired state management

Remote Execution
Run Ansible Playbooks inside of Satellite

Deploy Insights using Ansible
Install Insights on all your hosts

RHEL System Roles
Deploy RHEL System Roles to hosts managed by Satellite
How to use Red Hat Insights
Installation and registration

Simple and Straightforward

Step #1: Run (as root) # yum install insights-client
   ○ Red Hat Enterprise Linux 8 customers will not need to perform this step - the Insights client is pre-installed.

Step #2: Run (as root) # insights-client --register

More information including automation playbooks are available at:
   ○ https://access.redhat.com/insights/getting-started

Man page available via $ man insights-client
Data collection

Very small amount of data and only data that is needed for rule analysis

Example files:
- /etc/redhat-release
- /proc/meminfo
- /var/log/messages
- /boot/grub/grub.conf
- /boot/grub2/grub.cfg
- /etc/modprobe.conf

We do not collect logs files, but rather the lines that match a potential rule (i.e. page allocation failure)

Commands:
- /bin/rpm -qa
- /bin/uname -a
- /usr/sbin/dmidecode
- /bin/netstat -i
- /bin/ps auxcww
Find it, Fix it, Before it Breaks
Basic Communication Flow

USER → SATELLITE SERVER → CAPSULE SERVER(S) → HOSTS
Data Sent to Insights for examination

Insights does this daily, automatically.
Satellite does not store any information from Insights in the database. It is all real time.
Create a Remediation Plan

A user creates the remediation plan through Satellite.

I can fix it!
Plan Executes

1) Playbook is downloaded from Insights.
2) Satellite parses playbook per host
3) Satellite schedules the remote execution job(s)
Plan Executes

1) Playbook is downloaded from Insights.
2) Satellite parses playbook per host
3) Satellite schedules the remote execution job(s)
4) Capsule runs playbooks using Ansible against each host.
Data Sent to Insights for examination

Please work...
Data Sent to Insights for examination

The dashboard will pull updated info from Insights, showing the risk was resolved.

Back to reddit!
ANSIBLE & SATELLITE

While Satellite has Ansible capabilities built in, Ansible Tower is still critical for enterprise automation.

Satellite’s use of Ansible is for RHEL-specific purposes
- Ansible Playbooks can be executed against managed RHEL hosts
- Ansible Roles provide desired state
- Automation will be limited to RHEL use cases only

Satellite connected to Ansible Tower
- For enterprise-wide, open-ended IT orchestration and automation
- Management of non-RHEL systems alongside RHEL systems
- Automate Satellite actions alongside other enterprise requirements
Next Steps & Resources

Where to go to learn more
Next steps

Use the Upgrade Helper to plan your upgrade-
https://access.redhat.com/labs/satelliteupgradehelper/

<table>
<thead>
<tr>
<th>Using Satellite 5.8 or earlier?</th>
<th>Satellite 5.8 goes EOL May 2020. Older versions are already EOL</th>
<th>Move to the latest version of Satellite 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Satellite 6.2 or earlier?</td>
<td>Satellite 6.2 and older versions are EOL</td>
<td>Move to the latest version of Satellite 6</td>
</tr>
</tbody>
</table>
Satellite 6.5 Resources

- Red Hat Satellite Product page
- Red Hat Satellite Customer Portal
- Red Hat Satellite Documentation
- Red Hat Consulting offering: Transition to Red Hat Satellite 6

Satellite Training and Videos

- NEW COURSE - RH053: Satellite Technical Overview also available on Udemy
- RH403: Red Hat Satellite 6 Administration
- Satellite 6.5 Reporting Engine Video: https://www.youtube.com/watch?v=sBciejh1G80
Thank you

Red Hat is the world’s leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.