Red Hat Satellite

6.5 Update

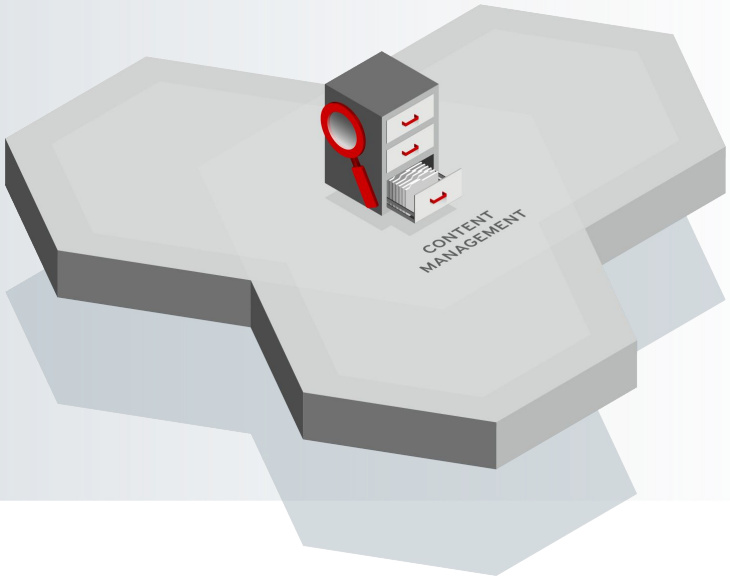
Paul Scolieri
Solutions Architect

Red Hat Satellite is a scalable platform to manage patching, provisioning, and subscription management of your Red Hat infrastructure, regardless of where it is running.

Introduction to Satellite

Red Hat

Content Management



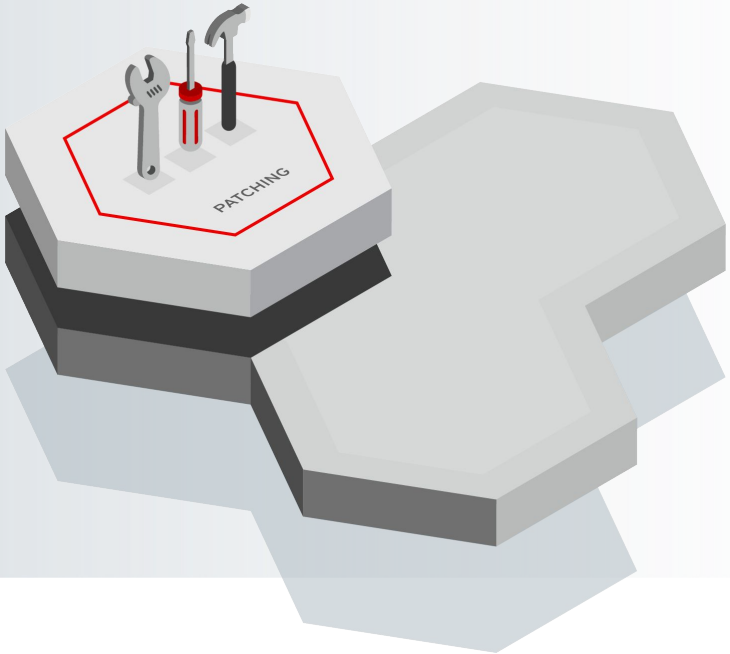
Content Repository any type of content made available to any host

Curation of content prior to distribution

Distribution of content as close as possible to the end point.

Red Hat

Patch Management



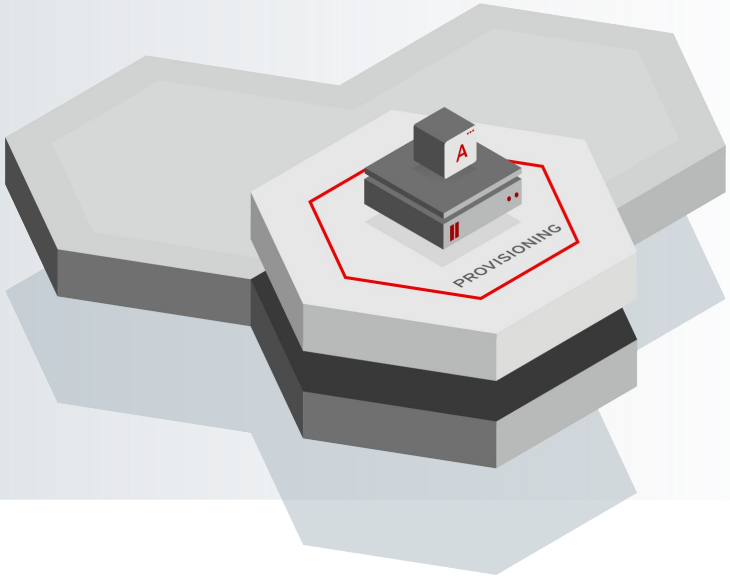
Report on hosts that need updates, fixes, or enhancements

Group homogeneous systems so that you can easily work with them

Respond quickly to patching requirements using scalable automation

Red Hat

Provisioning Management



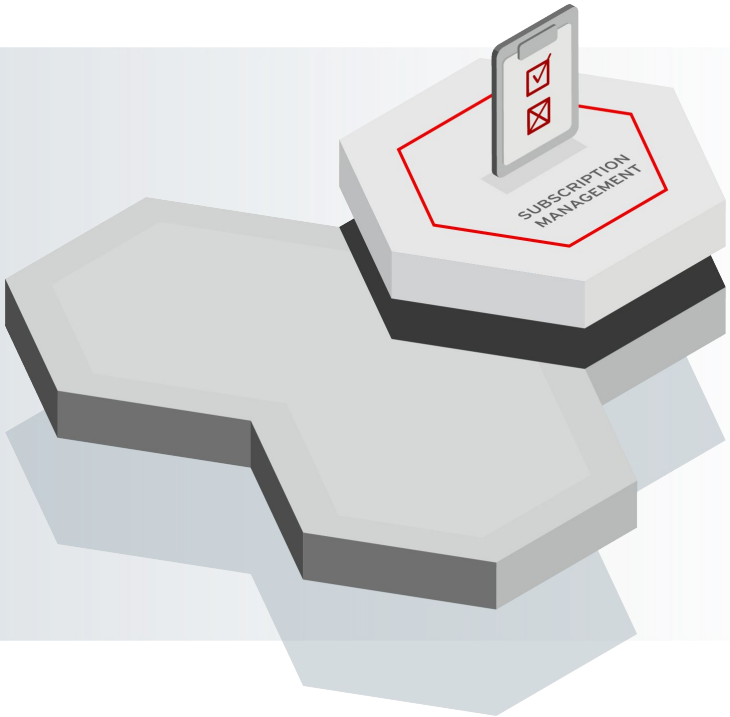
Provision to bare metal, virtual, private, and public clouds

Import non-provisioned hosts

Automate using Ansible roles to perform post-provisioning steps

Red Hat

Subscription Management



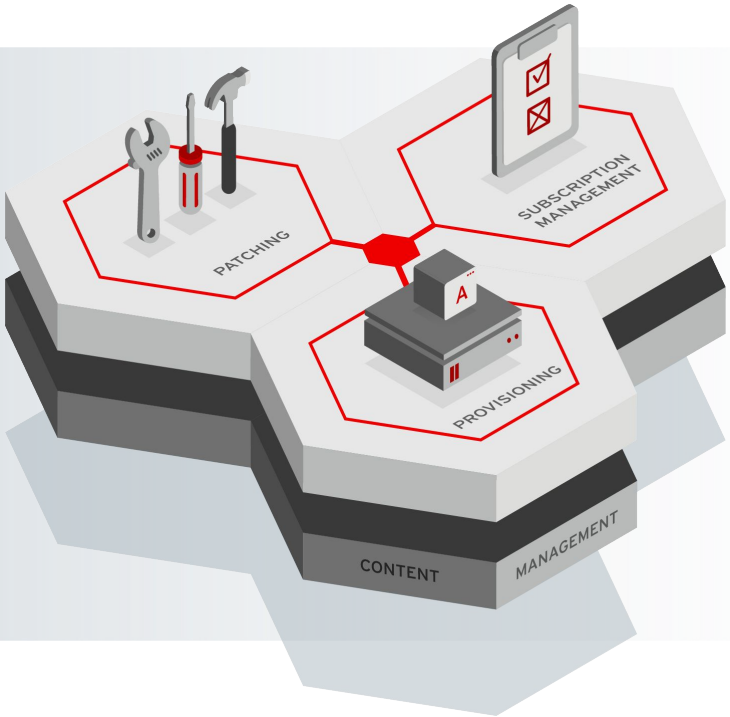
Centrally manage subscription usage

Maintain accurate inventory and utilization information

Report on subscription consumption

Red Hat

Additional Satellite Capabilities



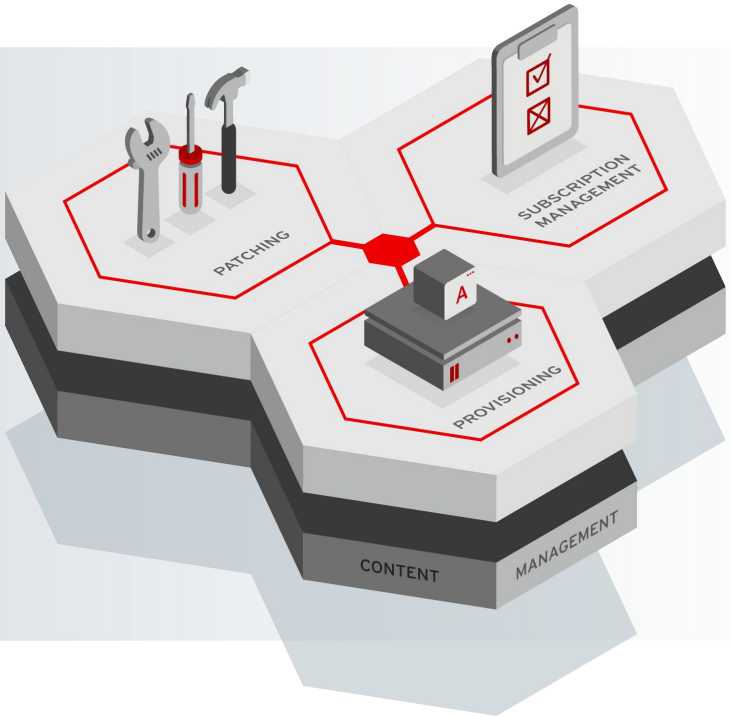
Configuration Management using Ansible or Puppet

Automation through integration with Ansible Tower

Compliance using OpenSCAP policies

Red Hat

Red Hat Satellite



Standard Operating Environment hosts are the same across your environment

Reliable and Resilient Using Red Hat Insights

Secure your systems are patched, up to date, and compliant with security policies

Confidence in your subscription utilization

Red Hat

How to Buy Satellite

Red Hat

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.

Red Hat

Red Hat Insights

Now included with all Red Hat Enterprise Linux subscriptions

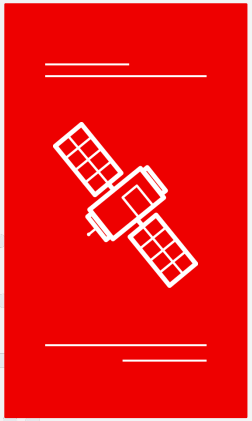
Buy

Get

Red Hat

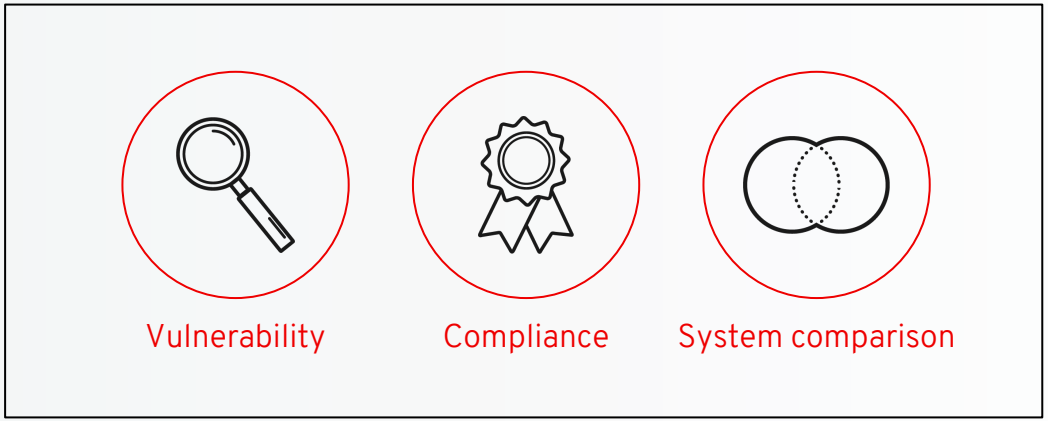
Red Hat Smart Management

Red Hat Satellite



+

Cloud management services for Red Hat Enterprise Linux



Red Hat

Management Flexibility

Offering Red Hat Management on-premises or in the cloud

Red Hat Satellite

Full configuration control operating on premise

Addresses on-prem or disconnected environment

View hosts registered to the individual Satellite services

Use cases:
Content management, patching, configuration, subscription management, provisioning

Cloud Management Services

No requirements for resource set up and maintenance

Adopt new features faster with a software-as-a-service preference

Single view of all hosts across your RH infrastructure

Use cases:
Vulnerability, Compliance, System Comparison

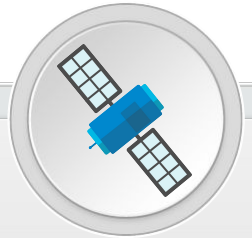
Smart Management Packaging gives access to both Satellite AND cloud management services

Red Hat

How Satellite Works

Deployment Models

Red Hat Satellite Components



Satellite Server

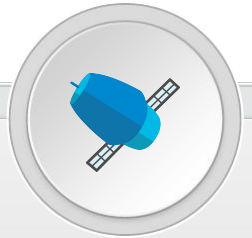
Multi-tenant

On-premise repository management

User and group role-based access control (RBAC)

Powerful user interfaces (GUI, API & CLI)

Export of content to other Satellite Servers



Capsule Server

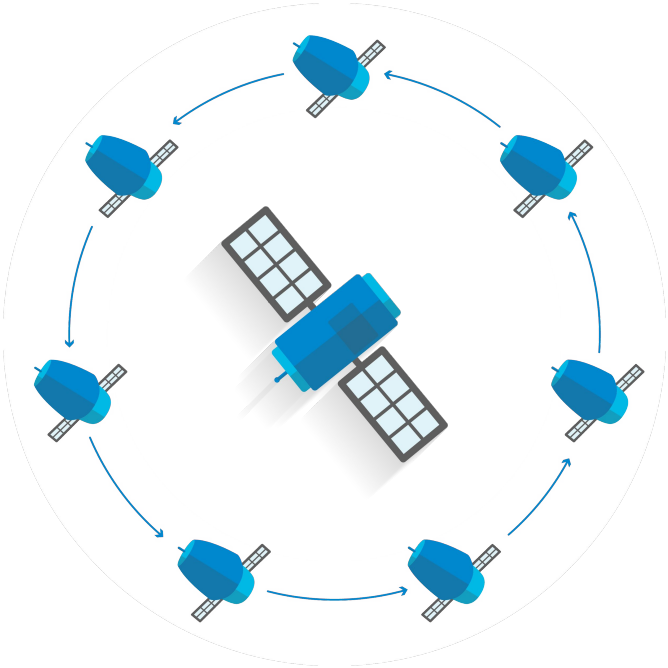
Enables scaling of your Satellite environment

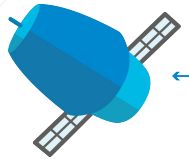
Provides local content, provisioning, and integration services

Discovers new physical & virtual machines

Red Hat

Improve scalability and automation with Capsule Servers

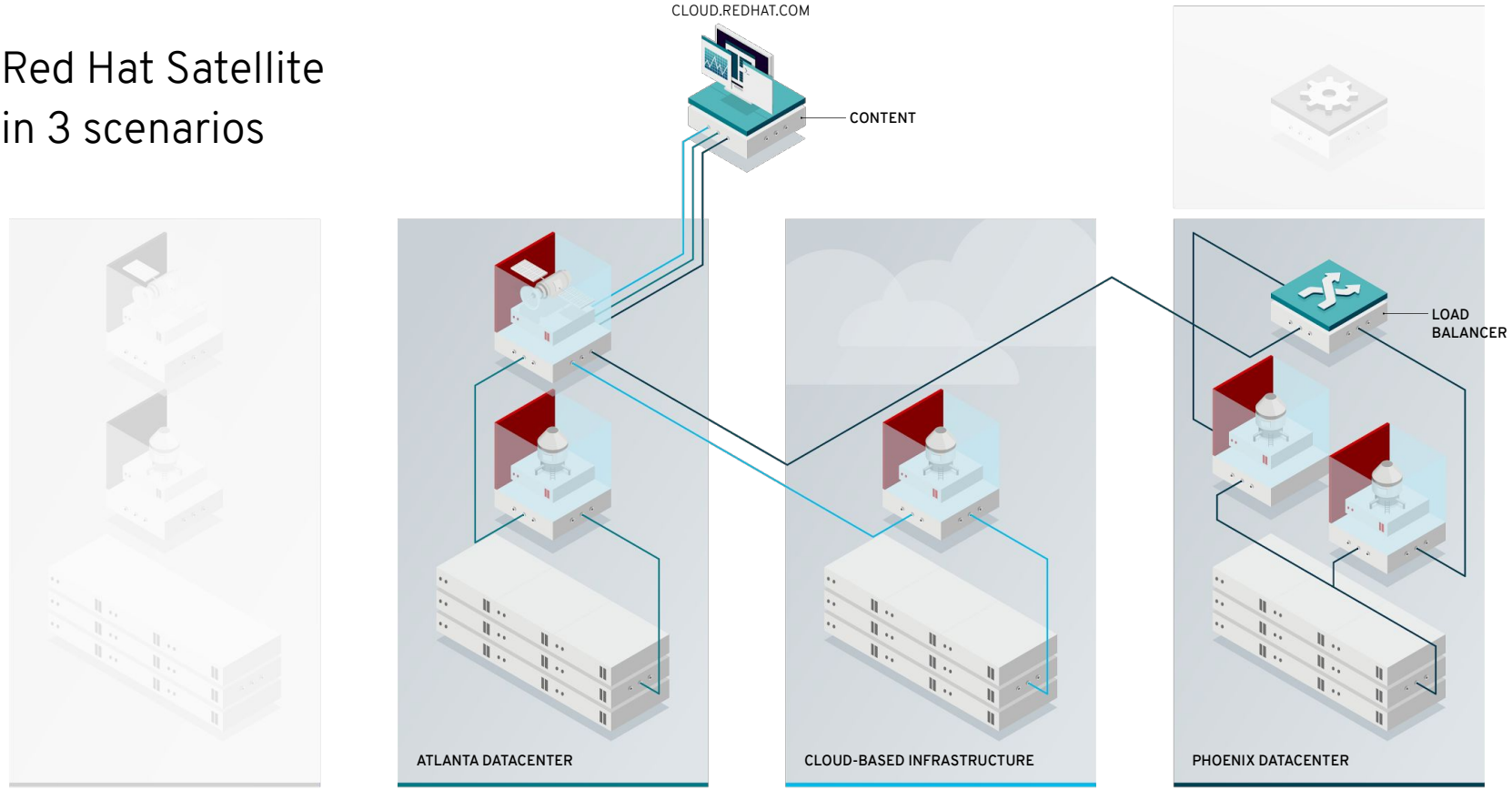




- Ansible
- Puppet master
- Content mirror
- Provision, discover, configure
- Vulnerability scanner
- Enrollment in identity
- Remote execution
- SSH engine
- Power on/off

Red Hat

Red Hat Satellite in 3 scenarios



Red Hat

Red Hat Satellite Upgrade

Red Hat

Red Hat Satellite Upgrade Information

Satellite 6.x to 6.5

- Follow the Upgrading and Updating Red Hat Satellite Guide

Satellite 5.x to 6.5

- Read the Transitioning Guide and FAQ to help plan the migration from Satellite 5 to Satellite 6
- Reach out to your account manager to discuss consulting options

Product docs page: https://access.redhat.com/documentation/en-us/red_hat_satellite/

Red Hat

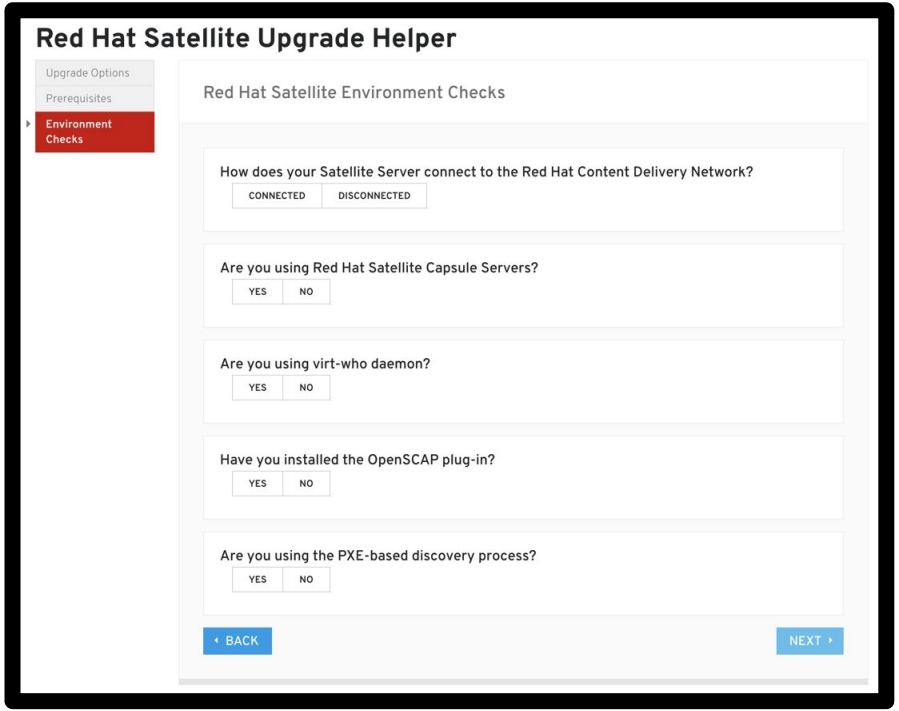
Red Hat Satellite Upgrade Helper

https://access.redhat.com/labsinfo/satelliteupgradehelper

Tool designed to help you upgrade from:

- 6.0 to 6.1
- 6.1 to 6.2
- 6.2 to 6.3
- 6.3 to 6.4
- 6.4 to 6.5

Upgrade helper presents upgrade steps and includes extra steps to help prevent any known issues.



Red Hat

Red Hat Satellite 6 Life-Cycle Dates

Satellite Version	General Availability	End of Full Support	End of Maintenance Support	End of Maintenance Support 2
6.0	September 10, 2014	August 12, 2015	July 27, 2016	February 21, 2018
6.1	August 12, 2015	July 27, 2016	February 21, 2018	October 30, 2018
6.2	July 27, 2016	February 21, 2018	October 30, 2018	May 31, 2019
6.3	February 21, 2018	October 30, 2018	May 31, 2019	Estimated Fall 2019
6.4	October 16, 2018	May 31, 2019	Estimated Fall 2019	Estimated Spring 2020
6.5	May 14, 2019	Estimated Fall 2019	Estimated Spring 2020	Estimated Fall 2020

Source: https://access.redhat.com/support/policy/updates/satellite

Red Hat

Next steps

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

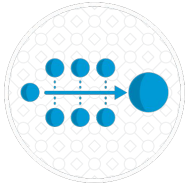
Using Satellite 5.8 or earlier?	Satellite 5.8 goes EOL May 2020. Older versions are already EOL	Move to the latest version of Satellite 6
Using Satellite 6.2 or earlier?	Satellite 6.2 and older versions are EOL	Move to the latest version of Satellite 6

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

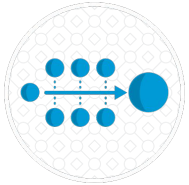
- Install Satellite on a FIPS enabled RHEL 7 host

Red Hat

Key Focus Areas

Red Hat Enterprise Linux 8

Security



Content Management

Support

Usability

Reporting

Red Hat

Red Hat Enterprise Linux 8

Satellite 6.5 supports

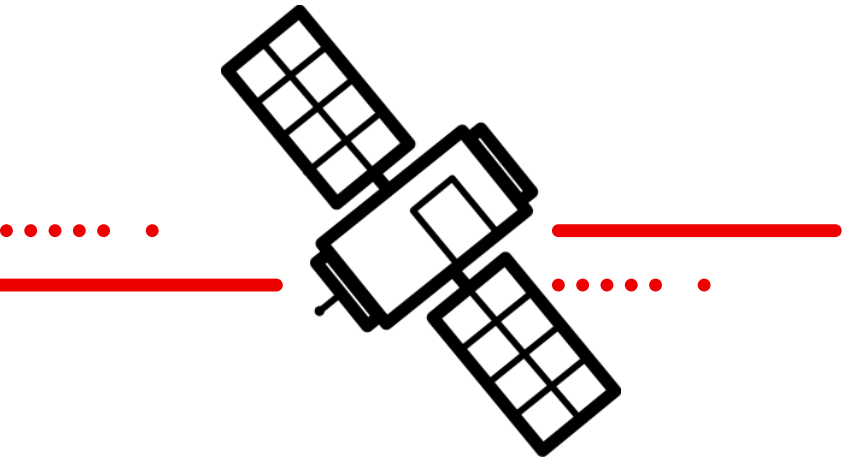
Red Hat Enterprise Linux

8 hosts

Red Hat

Red Hat Satellite 6.5

System management for Red Hat Enterprise Linux 8 hosts



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

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

*NOTE: Satellite and Capsules must be installed on a Red Hat Enterprise Linux 7 Host

Red Hat

Red Hat Satellite | Default Organization | Any Location | Admin User

- Monitor
- Content
- Containers
- Hosts
- Configure
- Infrastructure
- Insights
- Access
- Administer

All Hosts » skylab.example.com

Found 83 reports from the last 7 days

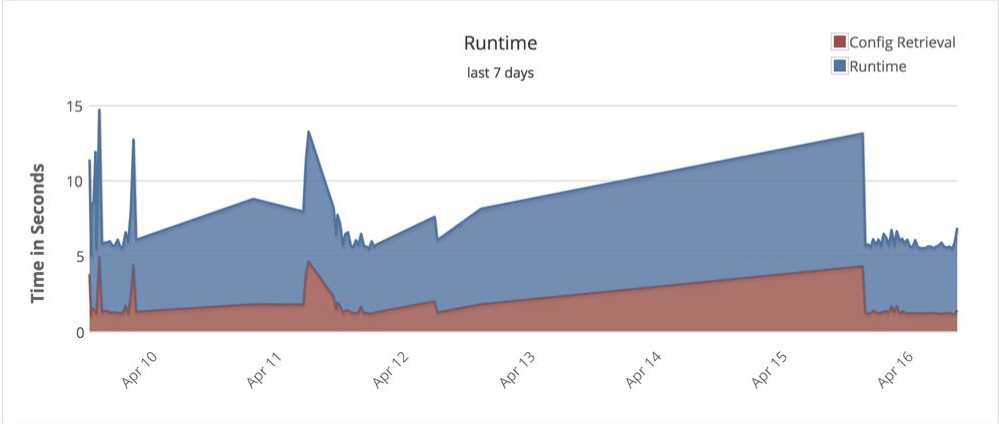
Boot disk | Run Ansible roles | Schedule Remote Job | Back | Edit | Clone | Build | Run puppet | Delete

Details

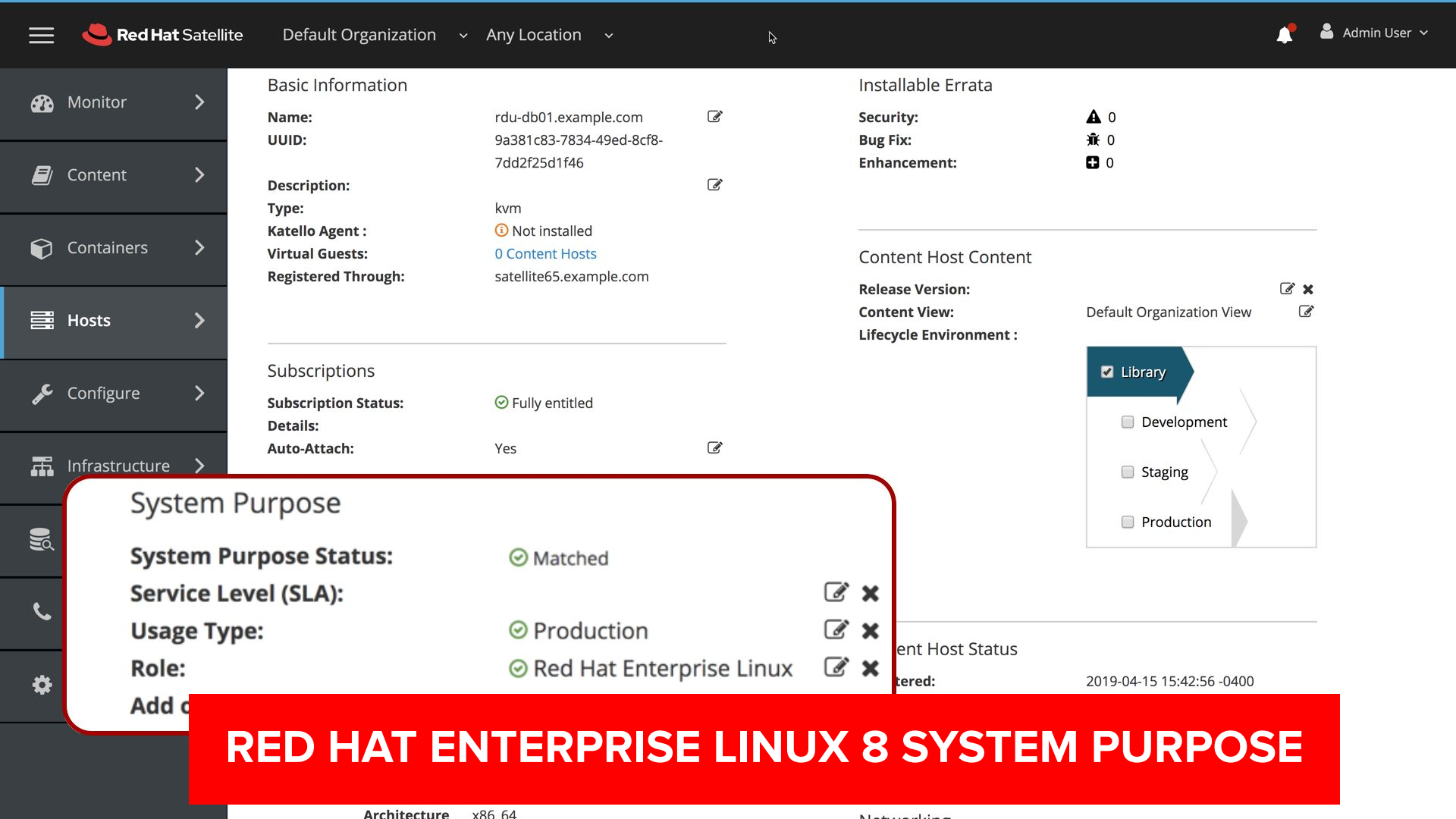
Audits | Facts | Reports | YAML | Content | Compliance

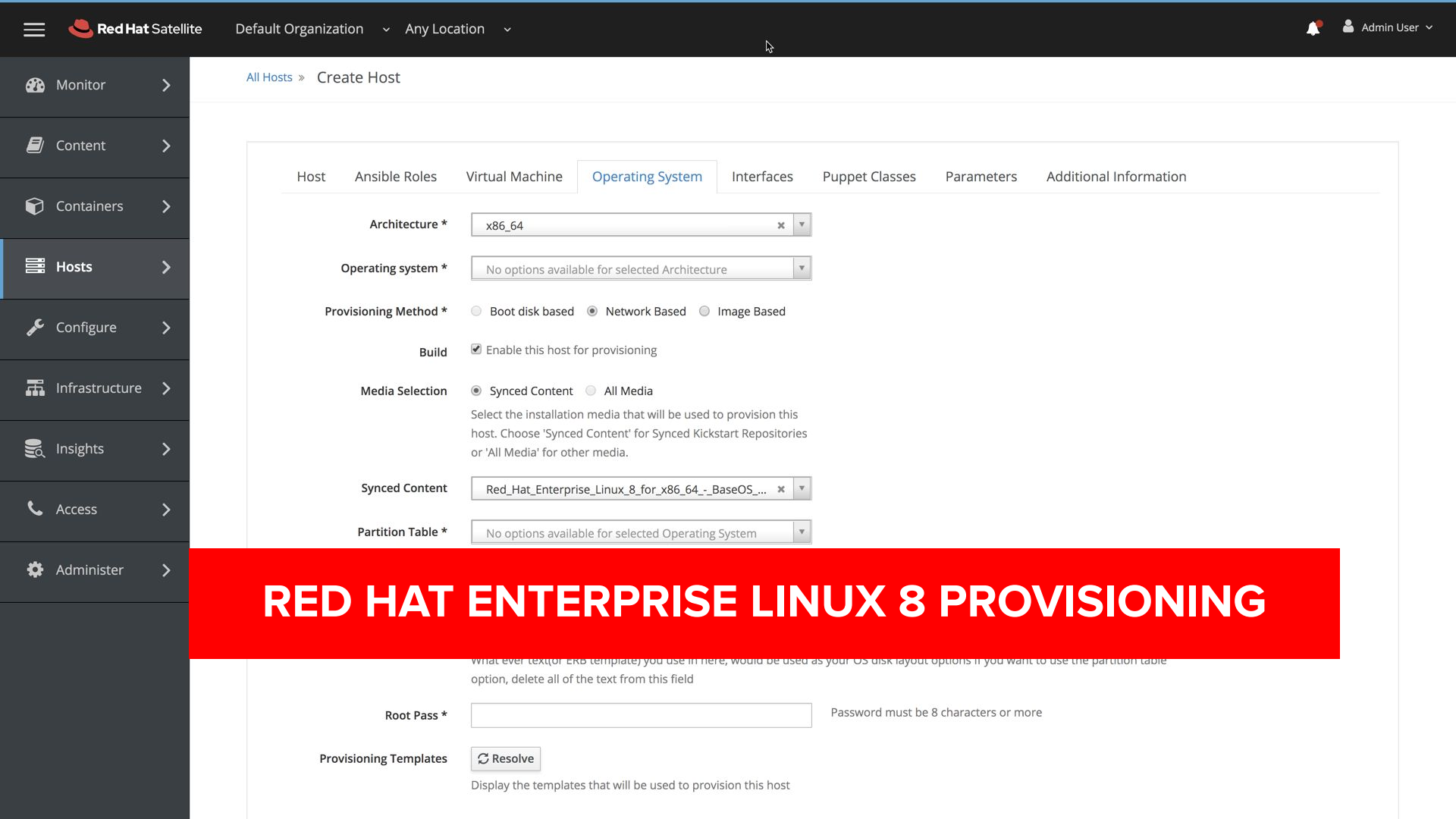
Properties | Metrics | NICs

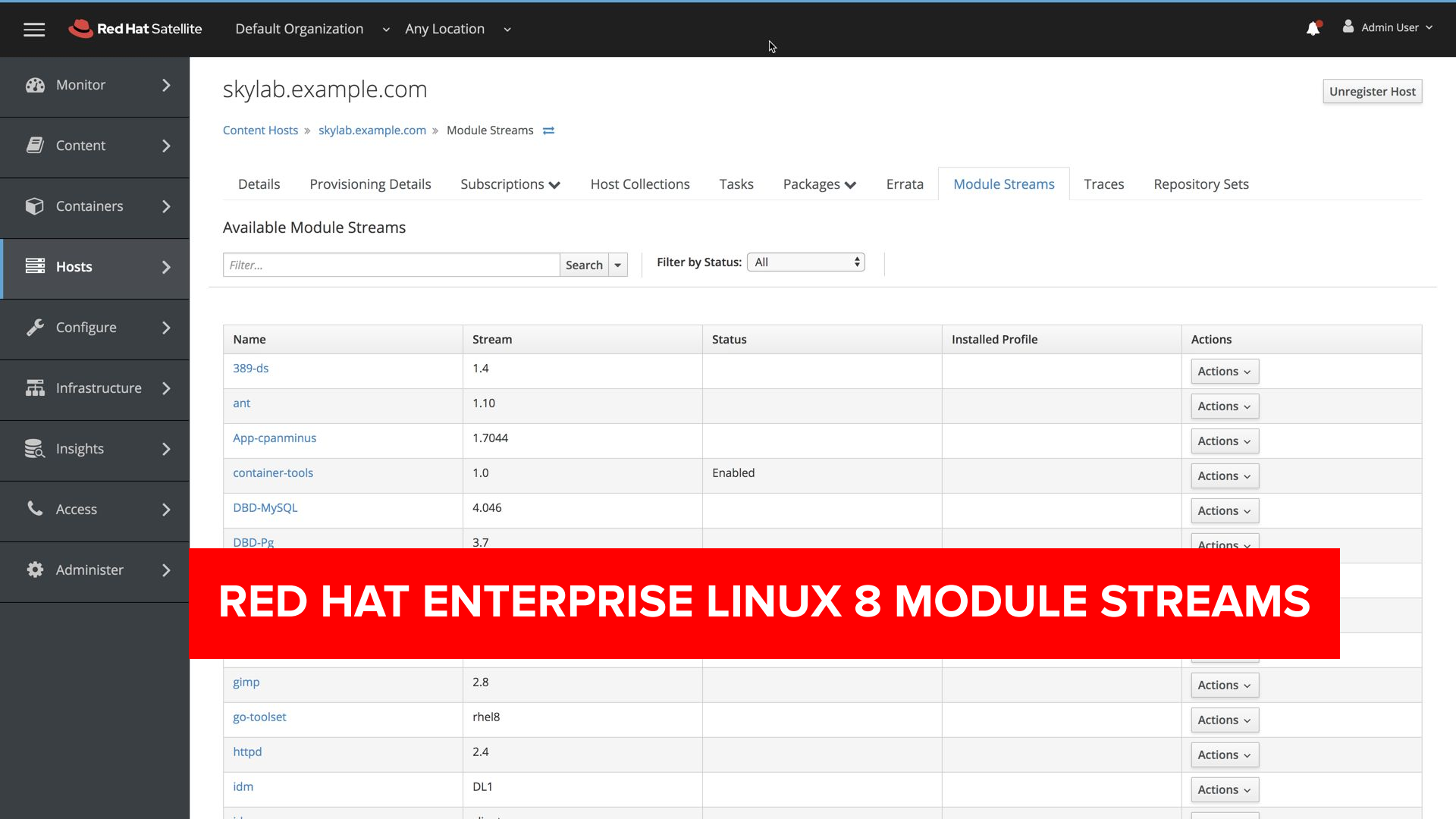
Properties	
Status	OK
Compliance	Compliant
Configuration	No changes
Execution	Last execution succeeded
Errata	All errata applied
System Purpose	Matched
Subscription	Fully entitled
Build duration	N/A
Token	N/A
Domain	example.com
IP Address	10.0.180.180
MAC Address	2c:c2:60:49:a3:25
Puppet Environment	production
Architecture	x86_64
Operating System	RedHat 8.0
PXE Loader	
Location	Default Location

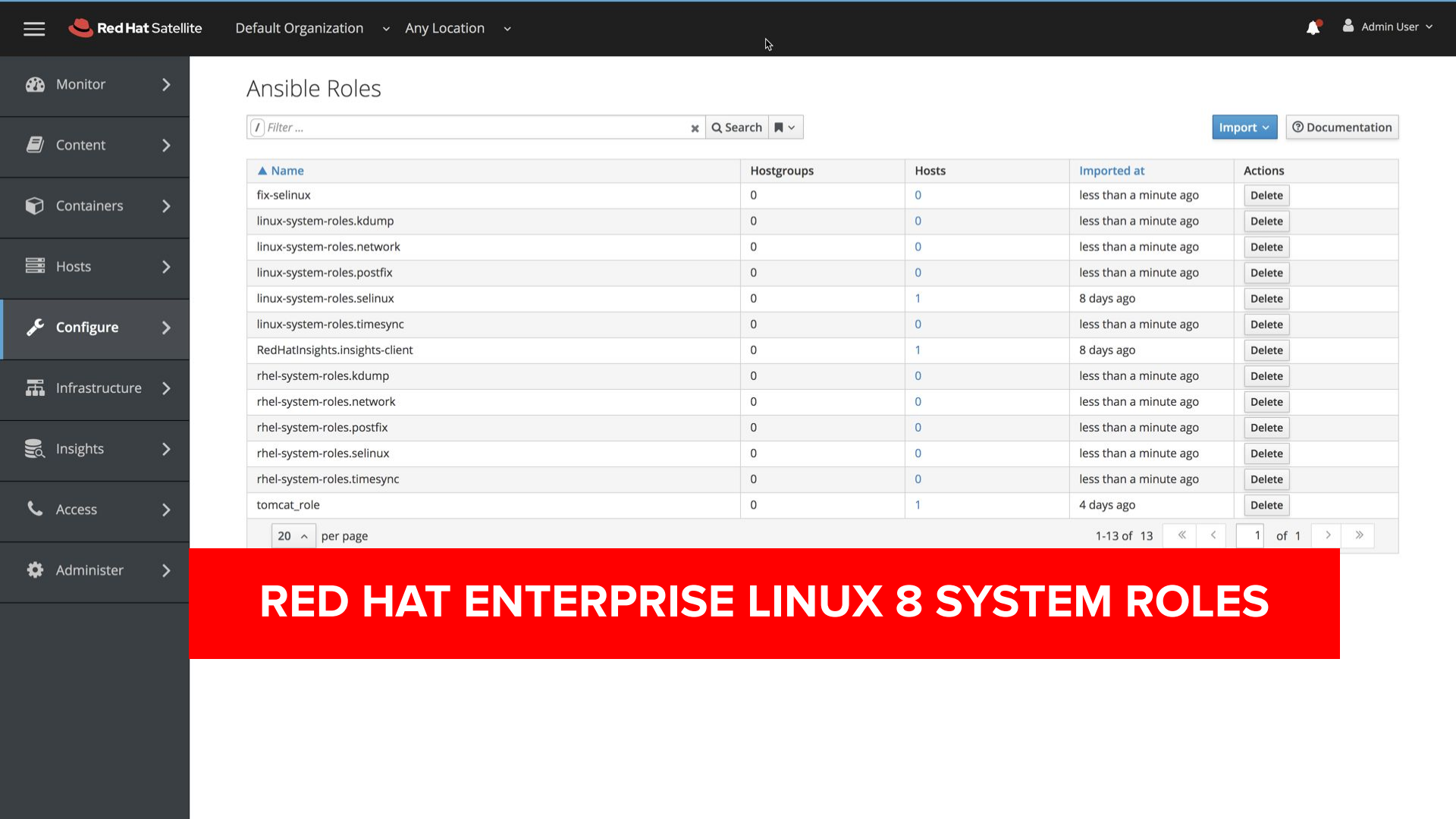


RED HAT ENTERPRISE LINUX 8 SUPPORT


Red Hat Satellite
Default Organization
Any Location
Admin User
Monitor
Content
Containers
Hosts
Configure
Infrastructure
Basic Information
Name: rdu-db01.example.com
UUID: 9a381c83-7834-49ed-8cf8-7dd2f25d1f46
Description:
Type: kvm
Katello Agent : Not installed
Virtual Guests: 0 Content Hosts
Registered Through: satellite65.example.com
Subscriptions
Subscription Status: Fully entitled
Details:
Auto-Attach: Yes
Installable Errata
Security: 0
Bug Fix: 0
Enhancement: 0
Content Host Content
Release Version:
Content View: Default Organization View
Lifecycle Environment :
Library
Development
Staging
Production
ent Host Status
tered: 2019-04-15 15:42:56 -0400
System Purpose
System Purpose Status: Matched
Service Level (SLA):
Usage Type: Production
Role: Red Hat Enterprise Linux
Add c
RED HAT ENTERPRISE LINUX 8 SYSTEM PURPOSE
Architecture x86_64


Red Hat Satellite
Default Organization
Any Location
Admin User
Monitor
Content
Containers
Hosts
Configure
Infrastructure
Insights
Access
Administer
All Hosts » Create Host
Host
Ansible Roles
Virtual Machine
Operating System
Interfaces
Puppet Classes
Parameters
Additional Information
Architecture *
x86_64
Operating system *
No options available for selected Architecture
Provisioning Method *
Boot disk based
Network Based
Image Based
Build
Enable this host for provisioning
Media Selection
Synced Content
All Media
Select the installation media that will be used to provision this host. Choose 'Synced Content' for Synced Kickstart Repositories or 'All Media' for other media.
Synced Content
Red_Hat_Enterprise_Linux_8_for_x86_64_-_BaseOS_...
Partition Table *
No options available for selected Operating System
RED HAT ENTERPRISE LINUX 8 PROVISIONING
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 Satellite
Default Organization
Any Location
Admin User
Monitor
Content
Containers
Hosts
Configure
Infrastructure
Insights
Access
Administer
skylab.example.com
Unregister Host
Content Hosts » skylab.example.com » Module Streams
Details
Provisioning Details
Subscriptions
Host Collections
Tasks
Packages
Errata
Module Streams
Traces
Repository Sets
Available Module Streams
Filter...
Search
Filter by Status:
All
Name
Stream
Status
Installed Profile
Actions
389-ds
1.4
ant
1.10
App-cpanminus
1.7044
container-tools
1.0
Enabled
DBD-MySQL
4.046
DBD-Pg
3.7
gimp
2.8
go-toolset
rhel8
httpd
2.4
idm
DL1
RED HAT ENTERPRISE LINUX 8 MODULE STREAMS


Red Hat Satellite
Default Organization
Any Location
Admin User
Monitor
Content
Containers
Hosts
Configure
Infrastructure
Insights
Access
Administer
Ansible Roles
Filter ...
Search
Import
Documentation
Name
Hostgroups
Hosts
Imported at
Actions
fix-selinux 0 0 less than a minute ago Delete
linux-system-roles.kdump 0 0 less than a minute ago Delete
linux-system-roles.network 0 0 less than a minute ago Delete
linux-system-roles.postfix 0 0 less than a minute ago Delete
linux-system-roles.selinux 0 1 8 days ago Delete
linux-system-roles.timesync 0 0 less than a minute ago Delete
RedHatInsights.insights-client 0 1 8 days ago Delete
rhel-system-roles.kdump 0 0 less than a minute ago Delete
rhel-system-roles.network 0 0 less than a minute ago Delete
rhel-system-roles.postfix 0 0 less than a minute ago Delete
rhel-system-roles.selinux 0 0 less than a minute ago Delete
rhel-system-roles.timesync 0 0 less than a minute ago Delete
tomcat_role 0 1 4 days ago Delete
20 per page
1-13 of 13
1 of 1
RED HAT ENTERPRISE LINUX 8 SYSTEM ROLES

Satellite and Red Hat Enterprise Linux 8

- Sat 6.5 supports RHEL 8 clients
- A future release will allow you to run Satellite on RHEL 8
  - Some new features will only work on RHEL 8
  - Eventually Satellite will only run on RHEL 8

What does the future hold for Satellite and RHEL 8?

Security

Security changes in

Satellite 6.5

Red Hat

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.

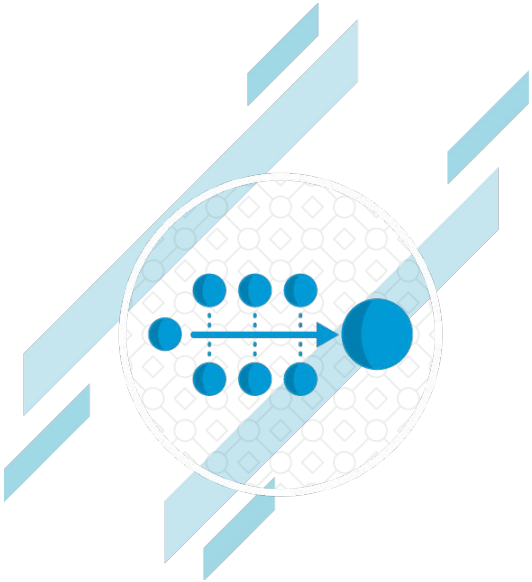
Content Management

Content Management changes in Satellite 6.5

Red Hat

Content Management

Enhanced Architectural Flexibility

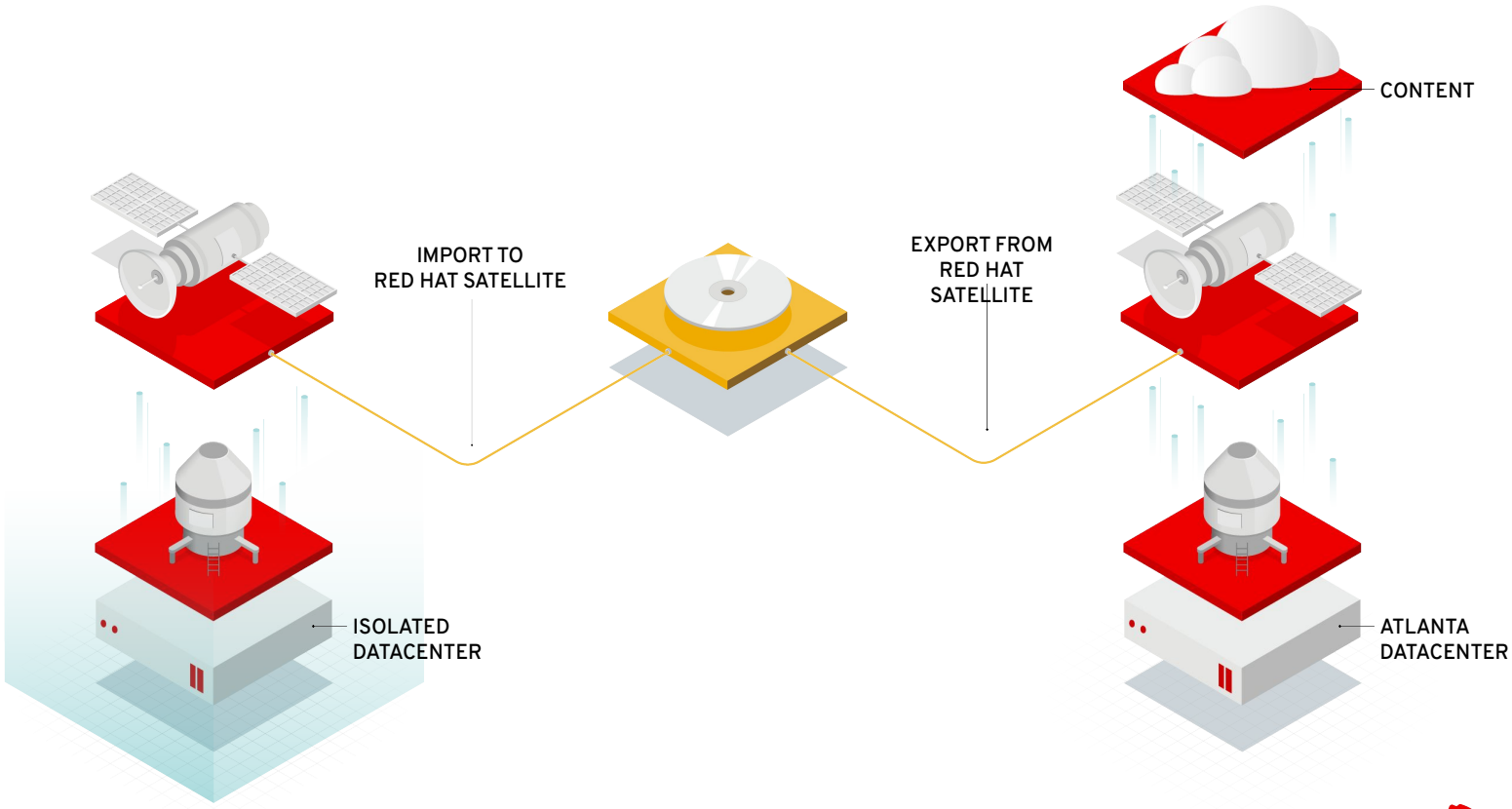


Export Content Views
Export content from a Satellite and import them on a different Satellite

Container Admin
Manage container images for use by end users

Red Hat

RED HAT SATELLITE IN AN AIR GAPPED ENVIRONMENT



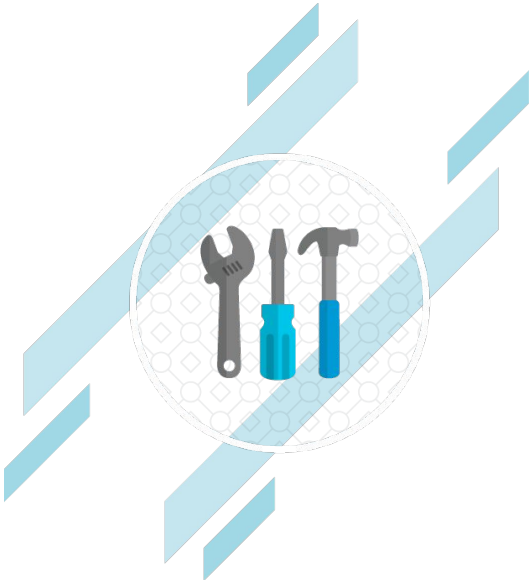
Red Hat

Support

Supportability changes in Satellite 6.5

Red Hat

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 seperate from provisioning of hosts which is only supported on AWS and Google.

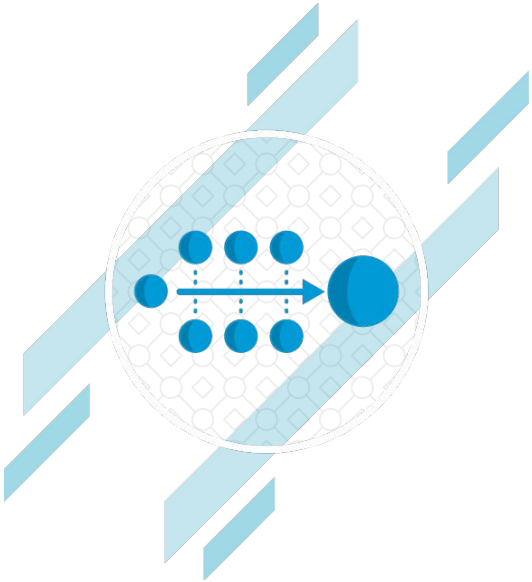
Reporting

All new reporting engine

in Satellite 6.5

Red Hat

Reporting Engine

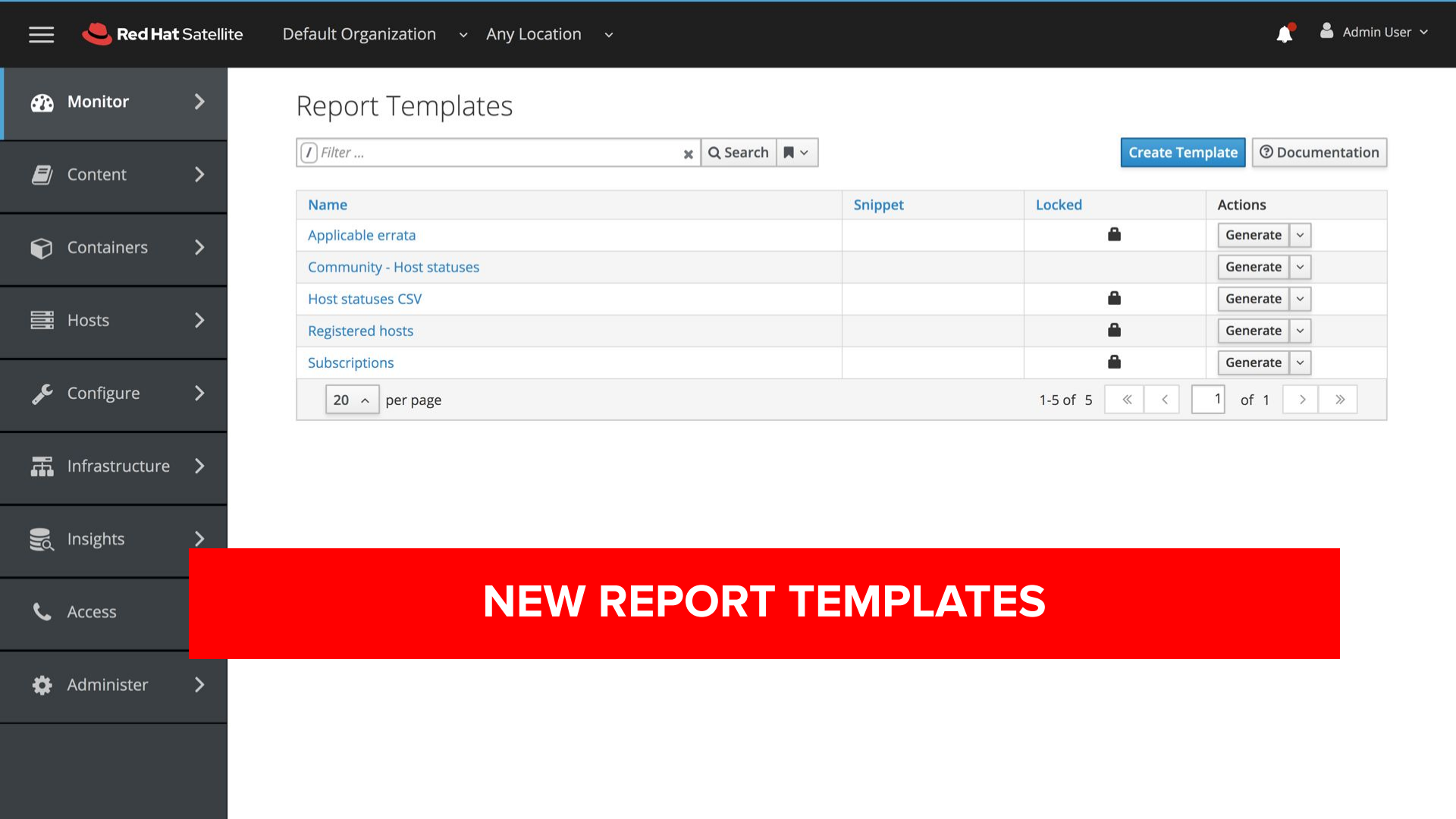


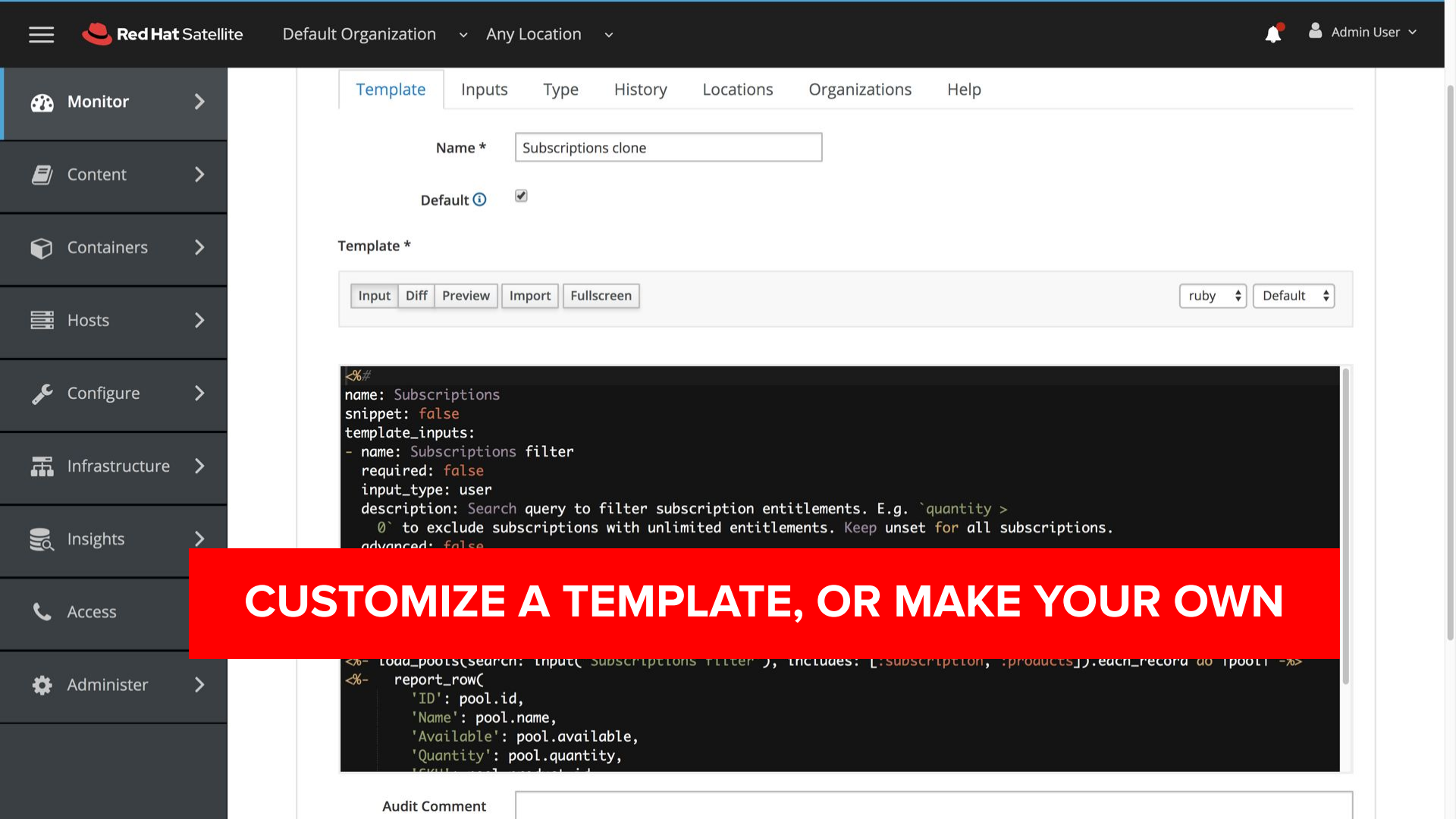
Reporting Engine
Pre-canned, customizable, and newly created reports

Pre-canned reports

- Host Statuses
- Subscriptions
- Registered Hosts
- Applicable Errata

Customize any of the above reports or create your own


Red Hat Satellite
Default Organization
Any Location
Admin User
Monitor
Content
Containers
Hosts
Configure
Infrastructure
Insights
Access
Administer
Report Templates
Filter ...
Search
Create Template
Documentation
Name
Snippet
Locked
Actions
Applicable errata
Community - Host statuses
Host statuses CSV
Registered hosts
Subscriptions
Generate
20
per page
1-5 of 5
1
of 1
NEW REPORT TEMPLATES


Red Hat Satellite
Default Organization
Any Location
Admin User
Monitor
Content
Containers
Hosts
Configure
Infrastructure
Insights
Access
Administer
Template
Inputs
Type
History
Locations
Organizations
Help
Name *
Subscriptions clone
Default
Template *
Input
Diff
Preview
Import
Fullscreen
ruby
Default
<%#
name: Subscriptions
snippet: false
template_inputs:
- name: Subscriptions filter
required: false
input_type: user
description: Search query to filter subscription entitlements. E.g. `quantity >
0` to exclude subscriptions with unlimited entitlements. Keep unset for all subscriptions.
advanced: false
CUSTOMIZE A TEMPLATE, OR MAKE YOUR OWN
<%- load_pools(search: input('Subscriptions filter'), includes: [:subscription, :products]).each_record do |pool| -%>
<%- report_row(
'ID': pool.id,
'Name': pool.name,
'Available': pool.available,
'Quantity': pool.quantity,
Audit Comment

Satellite & Ansible More info

How Satellite and Ansible work together

Red Hat

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
Allows 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.

Red Hat

SATELLITE - ANSIBLE INTEGRATION

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

Red Hat

Next Steps & Resources

Where to go to learn more

Red Hat

Next steps

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

Using Satellite 5.8 or earlier?	Satellite 5.8 goes EOL May 2020. Older versions are already EOL	Move to the latest version of Satellite 6
Using Satellite 6.2 or earlier?	Satellite 6.2 and older versions are EOL	Move to the latest version of Satellite 6

Satellite Resources

- Red Hat Satellite Blog - https://satelliteblog.redhat.com/
- 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.

linkedin.com/company/red-hat

youtube.com/user/RedHatVideos

facebook.com/redhatinc

twitter.com/RedHat

Red Hat