

# SATELLITE 6 OVERVIEW AND ROADMAP

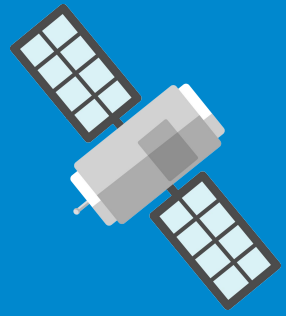
**Michael Lessard**

Senior Solutions Architect

[mlessard@redhat.com](mailto:mlessard@redhat.com)

 [michaellessard](#)

# What is Satellite ?



# RED HAT® SATELLITE

LIFECYCLE MANAGEMENT

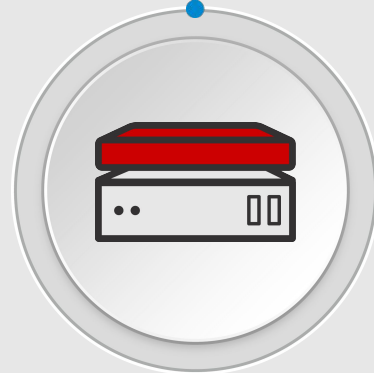
RED HAT®  
ENTERPRISE  
LINUX®

RED HAT®  
ENTERPRISE  
VIRTUALIZATION

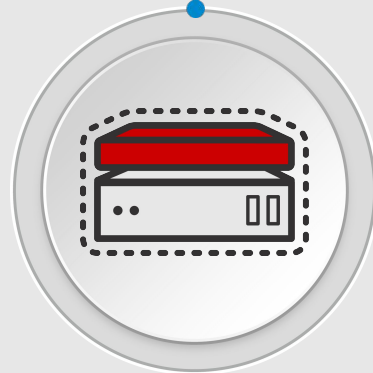
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PHYSICAL



VIRTUAL

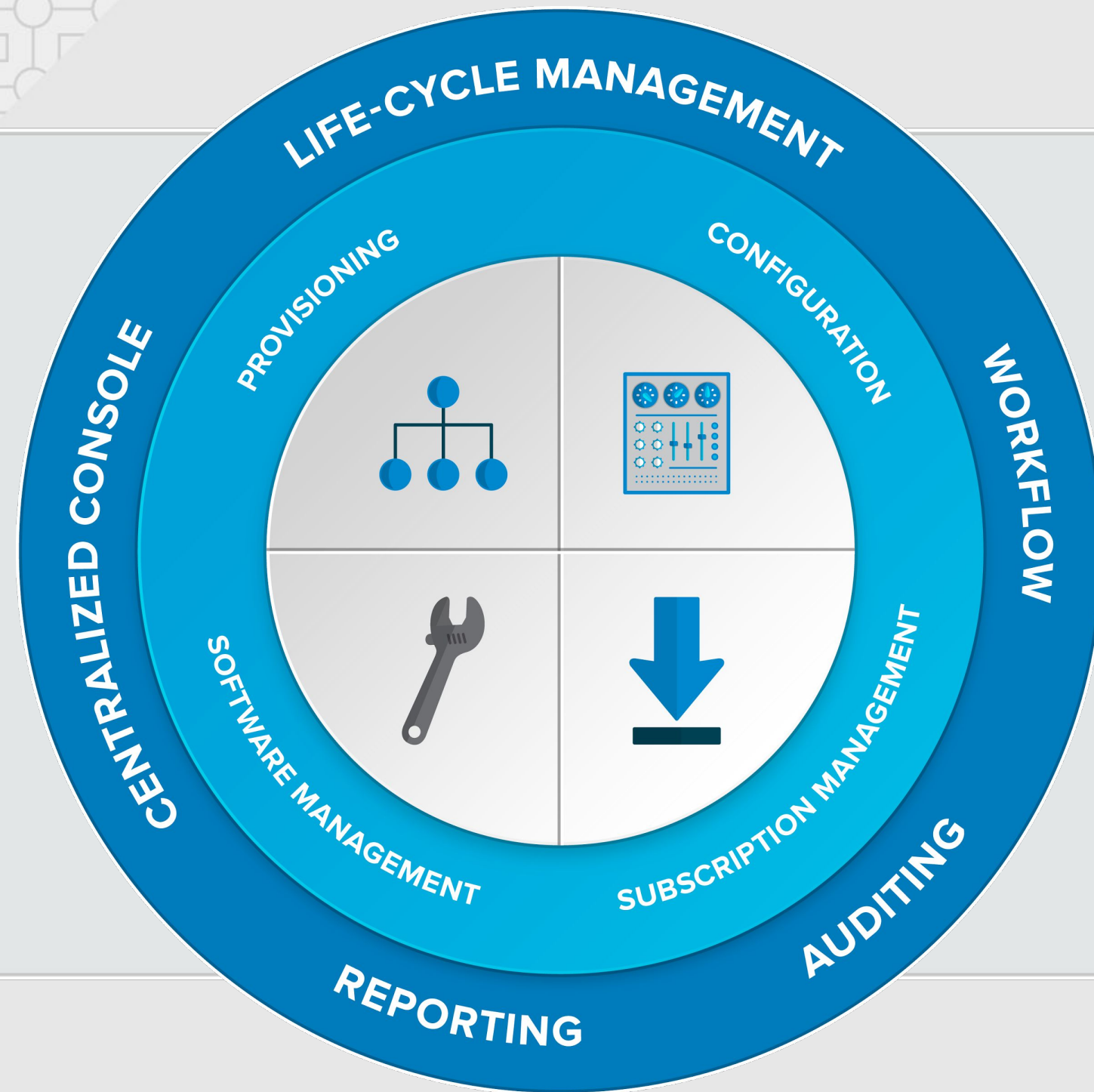


PRIVATE CLOUD



PUBLIC CLOUD

# EFFICIENT SYSTEMS MANAGEMENT

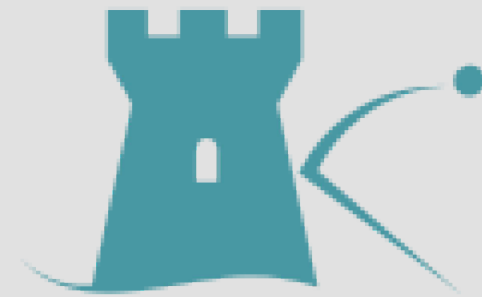


- Provides **life-cycle** management for Red Hat infrastructure
- Enables **provisioning** on bare metal, virtualized and cloud-based infrastructures
- Provides centralized **configuration** and **drift management**
- Simplifies management of **content**, including **security errata** and **containers**
- Makes it easy to manage and track **subscriptions**
- Allows large scale **remote command and control** for managed hosts

# SATELLITE COMPONENTS



**FOREMAN**



**KATELLO™**



**Puppet**



**ANSIBLE** <sup>\*\*6.3+</sup>



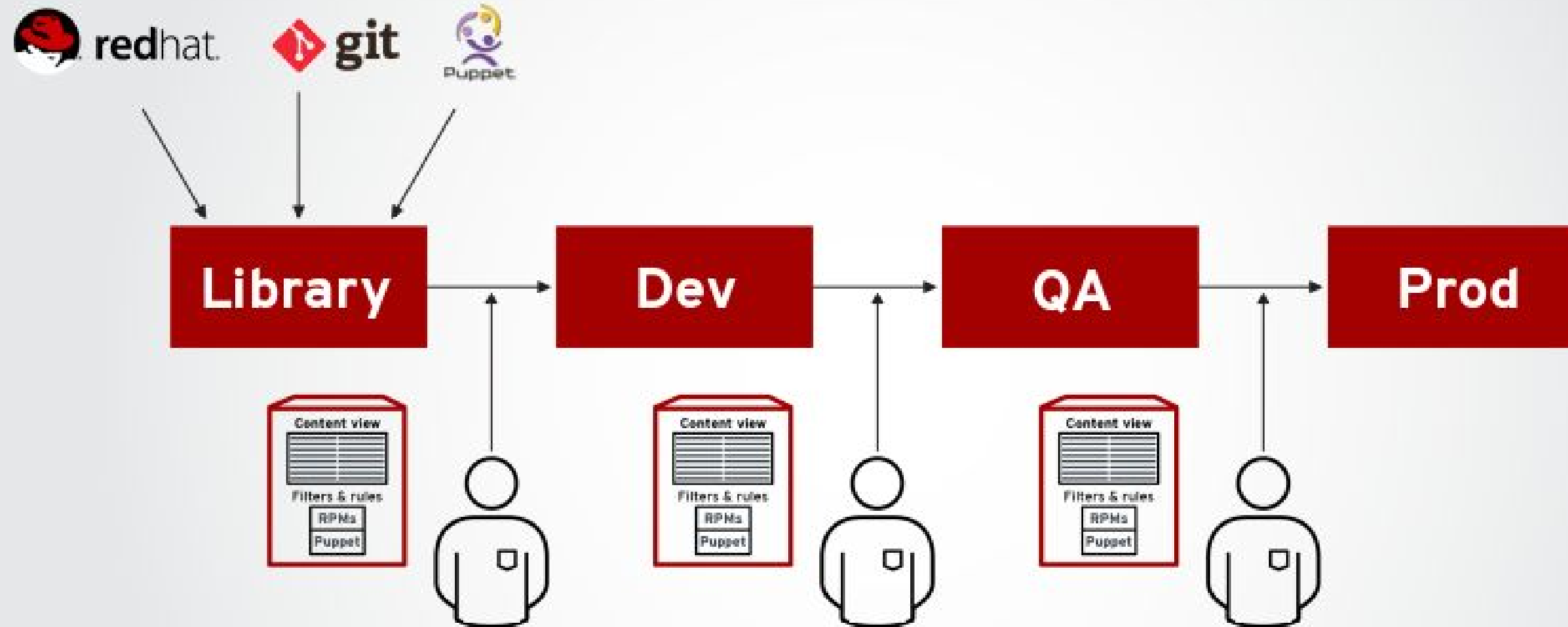
**CANDLEPIN**

# SOFTWARE/CONTENT MANAGEMENT

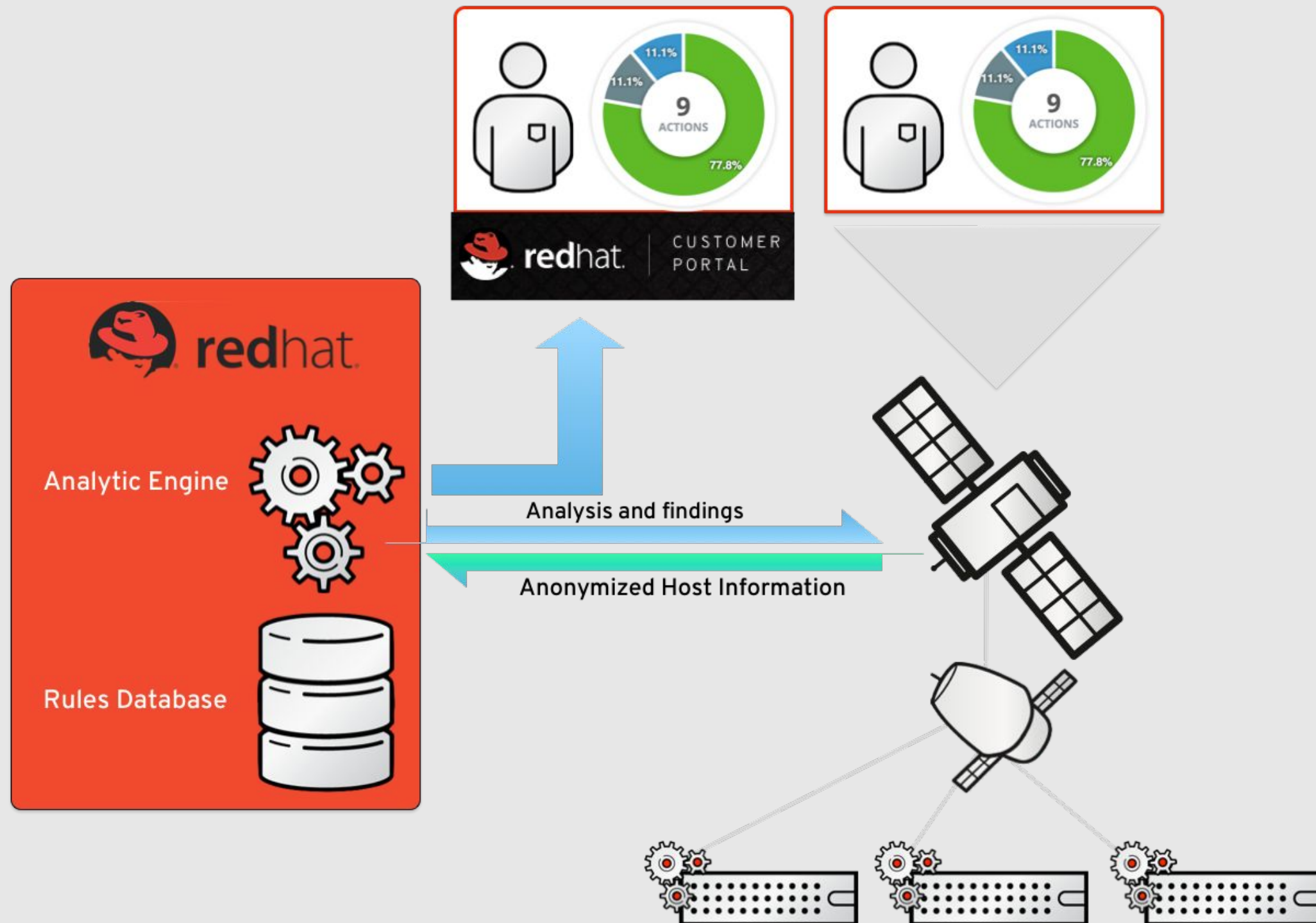


- Define & manage Standard Operating Environments
- Quickly respond to security vulnerabilities (Heartbleed/ShellShock)
- Comply with your organization's security policies (Openscap)
- Deploy all Red Hat Infrastructure as well as third-party software

# LIFECYCLE MANAGEMENT



# ACCESS INSIGHTS



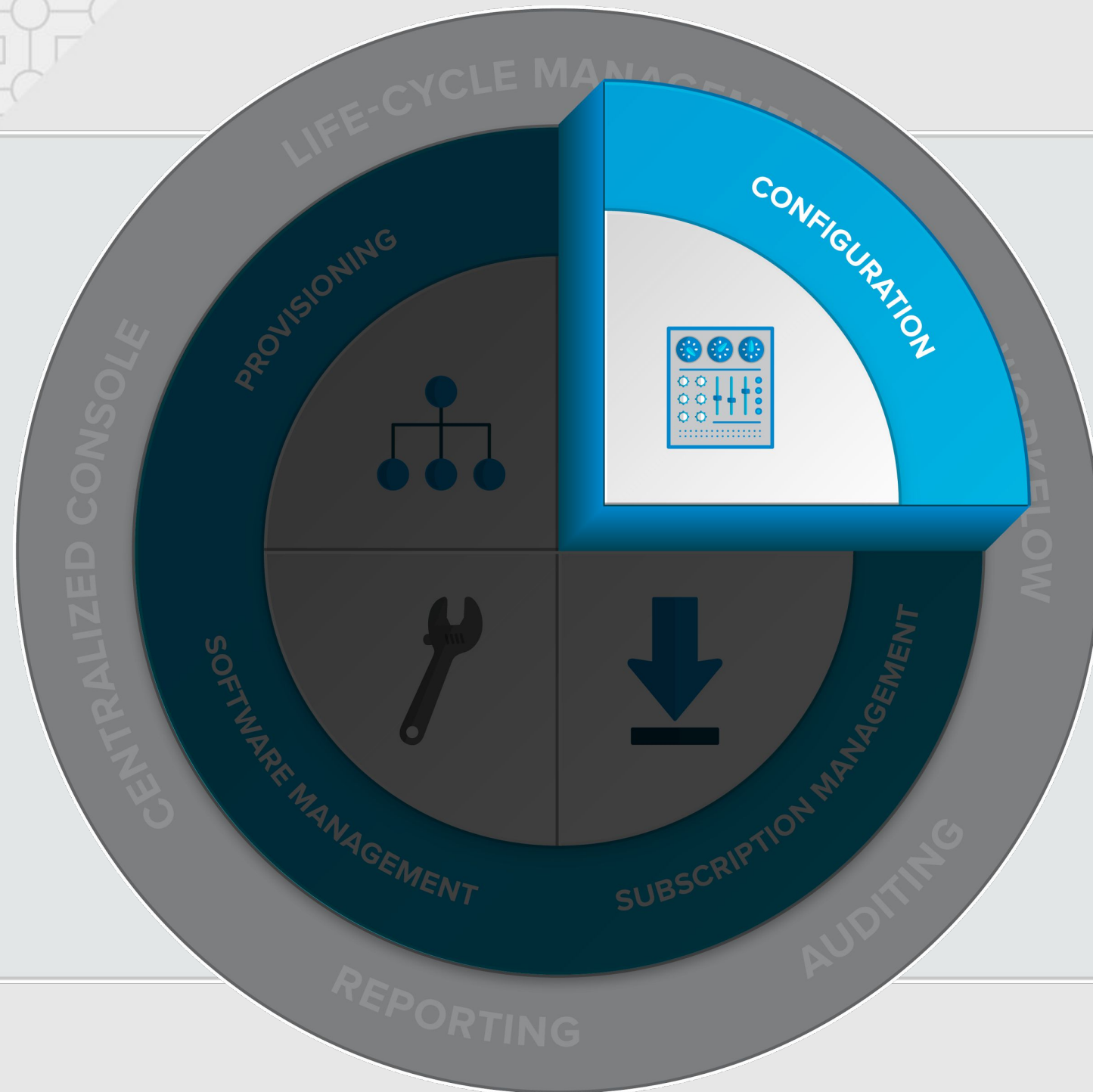


# SOFTWARE/CONTENT MANAGEMENT

:: DEMONSTRATION #1

Dashboard/Red Hat Content/Errata/Insights

# CONFIGURATION MANAGEMENT

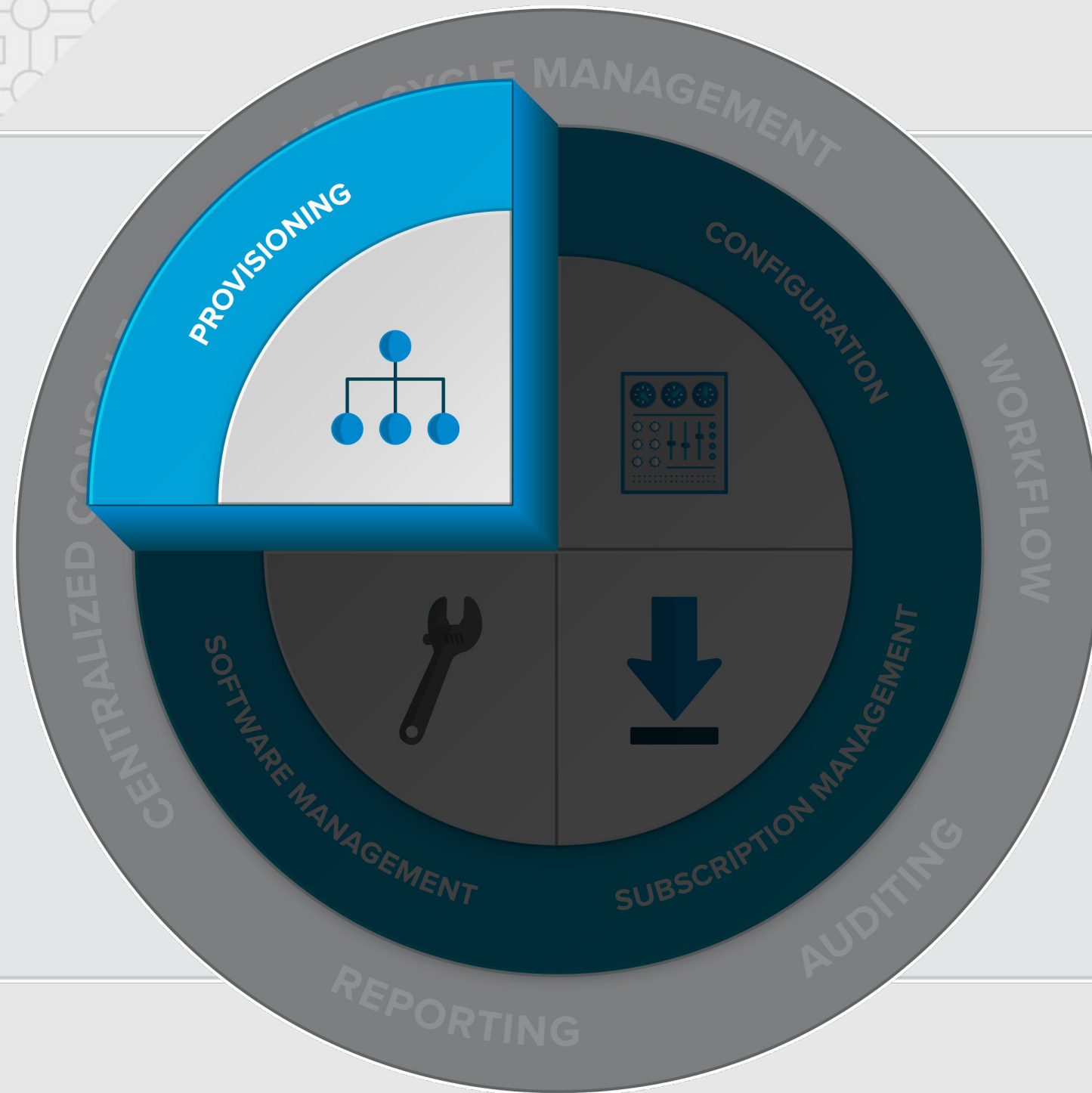


- Define desired state of systems
  - Manage and remediate drift
  - Audit & report when changes are made
  - Use remote commands on many systems (6.1.5)
- <https://access.redhat.com/blogs/1169563/posts/2482081>

# CONFIGURATION MANAGEMENT

:: DEMONSTRATION #2  
Puppet/Remote execution

# PROVISIONING



- Provision to bare metal, virtual (VMware, libvirt, RHEV), private (Openstack, Docker), and public clouds (Openstack, Amazon, Rackspace and Google)
- Support build-based and image-based deployments
- Discover non-provisioned hosts

# PROVISIONNING

:: DEMONSTRATION #3

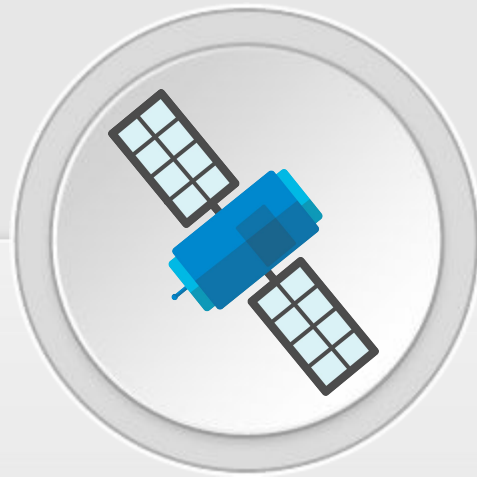
Provisioning/Compute Resources/Discovered hosts

# SUBSCRIPTION MANAGEMENT



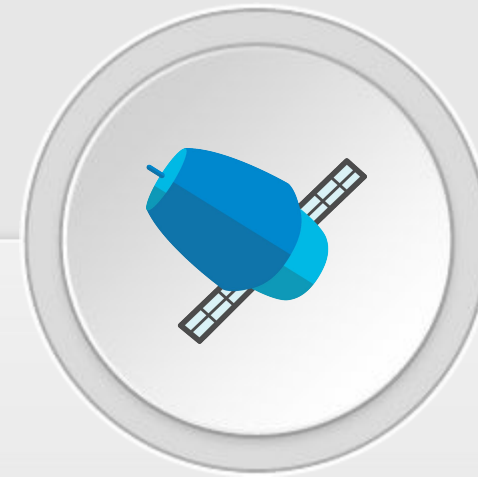
- Centrally manage subscription usage
- Maintain accurate inventory and utilization information
- Report on subscription consumption on a group-by-group basis
- 6.2.2: Improved bulk management of subscriptions (<https://access.redhat.com/blogs/1169563/posts/2632781>)

# SATELLITE 6 PRODUCTS



## SATELLITE SERVER

Multi-tenant  
On-premise repository management  
User and group role-based access control (RBAC)  
Powerful user interfaces (GUI, API & CLI)  
Advanced subscription management



## SATELLITE CAPSULE SERVER (evolution of Satellite Proxy)

Federated services  
Automated provisioning  
Discovery of new physical & virtual machines

# SATELLITE 6.2



# RELEASE THEMES

## **6.0 THEMES** - *“a more modern Satellite 5”*

- New content workflow – Products/Repositories, Content Views
- New Life Cycle workflow – Environments and life cycle paths
- Recipe-based configuration management (Puppet)
- Smartly build “Classes” of systems with a new pluggable framework (The Foreman)
- REST-based APIs

## **6.1 THEMES** - *“satellite 5 gap closure / scaling and polish / MaaS”*

- UI cleanup and unified content (e.g. RPMs and Config managed together)
- Disconnected Satellite Support
- Improved federation and scale
- OpenSCAP integration (policy and compliance)
- Network configuration
- Discovery and Deployment – Metal-as-a-Service
- Red Hat Insights integration

# SATELLITE 6.2 AT A GLANCE



## AUTOMATED WORKFLOWS

Remote execution  
Scheduling  
Expanded bootstrap  
and provisioning  
options



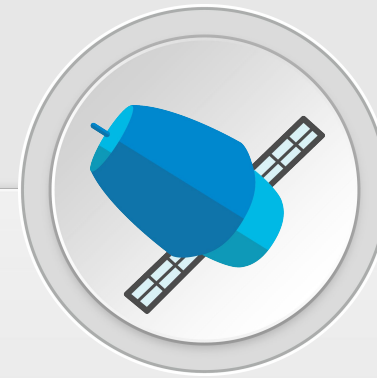
## AIR-GAPPED SECURITY & FEDERATION

Inter-Satellite  
Sync for fully  
connected and  
disconnected  
Satellites



## SOFTWARE MANAGEMENT IMPROVEMENTS

Streamlined content  
synchronization\*  
Simplified Puppet  
smart variable  
management  
Arbitrary File based  
repositories



## CAPSULE IMPROVEMENTS

Deeper insights into  
Capsule health and  
overall performance  
Lighter-weight  
Capsules  
Highly available  
Capsule



## ATOMIC OSTREE AND CONTAINERS

Complete  
management of RHEL  
Atomic hosts  
Mirror container  
repositories



## ENHANCED DOCUMENTATION

New Documentation  
Guides Available  
More user-friendly  
documentation

# AUTOMATED WORKFLOWS



## AUTOMATED WORKFLOWS

Remote execution  
Scheduling  
Expanded bootstrap &  
provisioning options

## Remote Execution

- Automate workflows and enable users to take multiple actions against groups of systems
- Create a library of job templates, allowing easy & secure reuse of common commands

## Scheduling

- Remote Execution jobs such as patch installation, remote commands or puppet runs can be scheduled to run immediately, at some future time, or on a recurring basis

<http://red.ht/2jxNjf2>

## Expanded Bootstrap & Provisioning Options

- Simplify the process of migrating and registering systems to Satellite via an automated script
- Allow end users to more efficiently provision systems in secured environments where DHCP and PXE may not be available

# AIR-GAPPED SECURITY & FEDERATION



## AIR-GAPPED SECURITY & FEDERATION

Inter-Satellite Sync

## Inter-Satellite Sync

- Synchronize and export content from one Satellite to another, especially useful for Satellites running in air-gapped environments
- Allows export (full or incremental) of a repository, content view or a repository within a content view
- Exported content can be used by another Satellite as their upstream source of content (CDN)

# SOFTWARE MANAGEMENT IMPROVEMENTS



## SOFTWARE MANAGEMENT IMPROVEMENTS

Streamlined content synchronization\*  
Simplified Puppet smart variable management

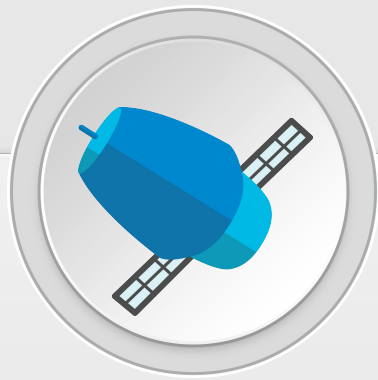
## Streamlined content synchronization (Lazy sync 6.2.3)

- Build systems almost immediately after install
- Speeds backup and restore process because software packages are no longer required to be backed up
- Drastically reduces the amount of time a Satellite needs to be offline for backup
- <https://access.redhat.com/articles/2695861>

## Simplified Puppet Smart Variable Management

Improved UI/UX for Smart Variable Management making configuration management simpler and less error prone

# CAPSULE IMPROVEMENTS



## CAPSULE IMPROVEMENTS

Deeper insights into Capsule health and overall performance  
Lighter-weight Capsules  
Highly available Capsule

## Deeper insights into Capsule health and overall performance

- Improved Capsule visibility, such as what services are running and their status, from the centralized Satellite console

## Lighter-weight Capsules

- Red Hat Satellite Capsule Server can be configured to store only the content that has been requested by its clients, reducing the storage needed by the Satellite Capsule Server

## Highly available Capsule

- New Reference Architecture including deploying a Highly Available Satellite Capsule

# ATOMIC HOSTS AND CONTAINERS



## ATOMIC HOSTS AND CONTAINERS

Complete management  
of RHEL Atomic hosts  
Mirror container  
repositories

## Complete management of RHEL Atomic hosts

- Mirror, provision and manage RHEL Atomic hosts and content
- Satellite treats RHEL Atomic as a compute resource
- Satellite can be configured to deploy containers on a RHEL Atomic host

## Mirror container repositories

- Satellite supports mirroring container repositories such as the Red Hat Registry, DockerHub™ and other 3rd-party sources
- Provides a secure & curated point of entry for container content

# ENHANCED DOCUMENTATION



## ENHANCED DOCUMENTATION

New Documentation  
Guides Available  
More User-Friendly  
documentation

## New Documentation Guides Available

- Architecture Guide. (How to plan your Satellite 6 deployment)
- Virtual Instance Guide (How to configure virt-who)
- Hammer CLI Guide (How to use Satellite's CLI)
- Content Management Guide (How to easily manage Satellite's content )
- Quickstart Guide (How to get up and running quickly)

## More User-Friendly documentation

- User Guide split to make more topical and easier to follow:
  - Server Administration Guide
  - Host Configuration Guide
- “Cheat Sheets” available for specific topics (Hammer)  
<https://access.redhat.com/articles/2258471>
- Updated Feature Overviews



# NEW TOOL - Satellite-Clone

## February 3rd 2017

### How to clone your Satellite 6

Satellite-clone contains simple Ansible playbooks that can be used to perform any of the following tasks:

- Setup Satellite 6.1 or 6.2 install with the Satellite backup data
- Change the hostname on an existing Satellite install
- Perform a minor upgrade of an existing Satellite
- <https://access.redhat.com/solutions/2755881>
- <https://github.com/RedHatSatellite/satellite-clone>

**This tool is not supported for production environments and is intended to be used for development/testing purposes**

# Red Hat Satellite blog

<https://access.redhat.com/blogs/1169563>

SUBSCRIPTIONS DOWNLOADS SUPPORT CASES

Michael Lessard

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## Red Hat Satellite Blog

Community > Blogs > Red Hat Satellite Blog

The Satellite Blog is a place for the Engineering team to publish tips and tricks about how to use our products, videos which showcase new features, and to point users at new content on the Customer Portal.

### LATEST POSTS

#### Questions and Answers from the January 2017 Satellite Ask-Me-Anything session

Authored by: [Rich Jerrido](#)

Satellite 6 Ask Me Anything FAQ

As promised, listed below are the responses to the questions we received in our Jan 2017 Satellite Ask Me Anything session. We are running another Ask Me Anything on [14 Feb](#), so feel free to join us again.

#### SUBSCRIPTIONS

**Question:** On the subscription comments... you have to give it a subscription id with hammer. I have a bunch of VMs that came in with the wrong license that should be under the datacenter model. The only way I've found to fix this through the UI remove the subscription and then run auto attach. Shouldn't auto attach fix this on it's own? Or virt who fix it? Is there a way for me to do this in bulk?

**Answer:** Generally speaking, once a system has a valid subscription, the tools do not modify it. You can solve this in one of two manners:

Remove the subscription from the guest and do nothing. Within the rhsmcertd checkin interval, the guest will consume its hypervisors subscription. (Assuming it has been reported via virt-who)

Remove the subscription from the guest, and run auto-attach. With Satellite 6.2.2 and newer, you can do this 'en masse' for large numbers of hosts if needed.

**Question:** How have subscriptions been remedied in 6.2? I'm currently looking into the upgrade as I have clients losing repo subscriptions.

**Answer:** With Satellite 6.2.2 and newer, a number of tools were added to improve the subscription experience:

- New CLI tooling to attach subscriptions to hosts (via hammer host)

- New GUI tooling to perform subscription actions (run auto-attach, attach a specific subscription) on large numbers of hosts

Blog

[Red Hat Satellite Blog](#)

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#### Most Recent Posts

[Questions and Answers from the January 2017 Satellite Ask-Me-Anything session](#)  
Thursday at 5:49 PM

[Satellite 6.2.7 is released](#)  
January 26 2017 at 8:40 AM

[Subscription-manager for the former Red Hat Network User: Part 11 - Identity Certificates](#)  
January 20 2017 at 8:24 AM

[Subscription-manager for the former Red Hat Network User: Part 10 - Instance Based](#)

# LOOKING TOWARDS THE FUTURE

**\*\*\* Subject to change !!! \*\*\***

# SATELLITE RELEASE TIMING

## Regular cadence for “z-stream” releases to improve predictability

- Asynchronous releases (6.2.z) every ~30 days
  - High-impact security fixes
  - High-impact bug fixes

## More frequent major releases to improve predictability

- Goal is 6-month cadence
- Releases will be smaller, but more predictable
- More alignment to upstream releases in order to reduce inconsistencies

## 6.3 THEMES - “polish, updated tooling, easier to support, integrations”

Updated Tooling	<ul style="list-style-type: none"><li>● Puppet 4 and Puppet 3.8 – You choose</li><li>● Hammer CLI and API Call: Listing &amp; Download of Content from Content View</li><li>● Hammer CLI and API Call: List all hosts for errata</li></ul>
Organizational Management	<ul style="list-style-type: none"><li>● Org-Admin role formalized</li></ul>
Troubleshooting and Supportability	<ul style="list-style-type: none"><li>● Logging improvements</li><li>● Hot Backups</li></ul>
Polish and rounding-out features	<ul style="list-style-type: none"><li>● Container content-flow cleanup</li><li>● <b>UEFI support</b></li><li>● Infoblox support</li></ul>
Management Integrations	<ul style="list-style-type: none"><li>● <b>Ansible and Ansible Tower</b> – Automation and configuration</li><li>● Openshift – Prod-Ops/Dev-Ops (Satellite / Openshift) improved coordination</li></ul>
Client platform support expansion	<ul style="list-style-type: none"><li>● Azure Cloud Clients</li></ul>



# THANK YOU



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