SATellite 6 overview and roadmap

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What is Satellite?
RED HAT SATELLITE OVERVIEW

LIFECYCLE MANAGEMENT

PHYSICAL

VIRTUAL

PRIVATE CLOUD

PUBLIC CLOUD

RED HAT ENTERPRISE LINUX

RED HAT ENTERPRISE VIRTUALIZATION

RED HAT STORAGE

RED HAT ENTERPRISE LINUX

OPENSTACK PLATFORM

RED HAT JBOSS MIDDLEWARE

OPENSHIFT
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™ 6.3+

Pulp

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
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
• 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

- Federated services
- Automated provisioning
- Discovery of new physical & virtual machines

SATELLITE 6 PRODUCTS

SATELLITE
SERVER

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

SATELLITE 6 PRODUCTS

SATELLITE
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Federated services
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CAPSULE SERVER

Federated services
Automated provisioning
Discovery of new physical & virtual machines
SATELLITE 6.2
RELEASING 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

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
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

Streamlined content synchronization (Lazzy 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](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

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
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

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](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://access.redhat.com/solutions/2755881)
- [https://github.com/RedHatSatellite/satellite-clone](https://github.com/RedHatSatellite/satellite-clone)

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

Author:⋄red Rojo

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 look out for more.

SUBSCRIPTIONS

Question: I have subscription comments, do I have to give a subscription isn with a comment? I have a bunch of VMs that came in with the wrong license key. Should I be using the comment for that? Or is it okay to use the license key?

Answer: Generally speaking, if you have a valid subscription, the tools do not modify it. You can solve this in one of two ways:

- Remove the subscription from the guest and do nothing. Within the moment the subscription is removed, the guest will consume its subscription via the hardware subscription, saving you any further work.
- Remove the subscription from the guest and run sudo dtrmt. In Satellite 6.2, the dtrmt tool will automatically request a reimage for large numbers of hosts if needed.

Question: How often are subscriptions re-released? I'm currently looking into the upgrade as I have clients losing their subscriptions.

Answer: With Satellite 6.2 users now, a number of tools were added to improve the subscription experience:

- New CLI looking to attach subscriptions to hosts via hmc
- New CLI looking to perform subscription edits (run as sudo, attach a specific subscription) on large numbers of hosts
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 | • Puppet 4 and Puppet 3.8 – You choose  
|                | • Hammer CLI and API Call: Listing & Download of Content from Content View  
|                | • Hammer CLI and API Call: List all hosts for errata  
| Organizational Management | • Org-Admin role formalized  
| Troubleshooting and Supportability | • Logging improvements  
| | • Hot Backups  
| Polish and rounding-out features | • Container content-flow cleanup  
| | • **UEFI support**  
| | • Infobloxx support  
| Management Integrations | • **Ansible and Ansible Tower** – Automation and configuration  
| | • Openshift – Prod-Ops/Dev-Ops (Satellite / Openshift) improved coordination  
| Client platform support expansion | • Azure Cloud Clients |