Transitioning from Red Hat Satellite 5 to Red Hat Satellite 6

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MACRO TRENDS DRIVING NEW SOLUTIONS

• Datacenters are rapidly trending towards hyperscale
• Transition to hybrid cloud is forcing legacy approaches into obsolescence
• DevOps model mandates agile deployment and configuration of application stacks
• Complexity is on the rise while governance, security, and cost control remain top of mind
• Onslaught of open source innovation has outpaced commercial solutions, but adds risk & complexity for IT
## RED HAT® SATELLITE 5 & 6 CORE CAPABILITIES

<table>
<thead>
<tr>
<th>RED HAT SATELLITE 5</th>
<th>RED HAT SATELLITE 6</th>
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<tbody>
<tr>
<td><img src="image" alt="Spacewalk Icon" /></td>
<td><img src="image" alt="Puppet Icon" /> <img src="image" alt="Foreman Icon" /> <img src="image" alt="Pulp Icon" /> <img src="image" alt="Satellite Icon" /> <img src="image" alt="Candlepin Icon" /></td>
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- Provision systems
- Configuration management
- Automated software distribution
- Life cycle management*
- Drift reporting

- Provision to bare metal, private, and public clouds
- Declarative configuration management
- Automated software distribution
- Life cycle management
- Drift remediation
- Simplified content management
- Federated services and management
- Red Hat® subscription management
- Localization

* Satellite 5 provided life cycle management via channel-cloning.
WHAT IS RED HAT® SATELLITE 6?

- New modern design, cutting-edge open source software
- Designed for software life cycle (SLC) management
- Bare metal, virtual machine (VM), and cloud deployment

Configuration management
Provisioning
Repository management
Content/life cycle management
Subscription management
Red Hat Satellite Roadmap & Timeline

We Are Here

<table>
<thead>
<tr>
<th>Year</th>
<th>Version 5</th>
<th>Version 6</th>
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<tbody>
<tr>
<td>2013</td>
<td>5.6</td>
<td>6.0</td>
</tr>
<tr>
<td>2014</td>
<td>5.7</td>
<td>6.1</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td>6.2</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td>6.X</td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td>...........</td>
</tr>
<tr>
<td>2018</td>
<td></td>
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<tr>
<td>2019</td>
<td></td>
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<tr>
<td>2020</td>
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- Version 5
  - 5.6
  - 5.7
  - Fixes & Security Updates
  - Satellite 5 End-Of-Life

- Version 6
  - 6.0
  - 6.1
  - 6.2
  - 6.X
Extended Lifecycle Support (ELS) for Satellite 5

- Satellite 5 will have an Extended Life Cycle Program
  - Begins at the end of Production Phase 3 (March 31, 2017)
  - Will be an additional subscription
  - Pricing and Availability TBD
  - Will provide support from 2017 to 2019

- More Details - https://access.redhat.com/support/policy/updates/satellite/
Transitioning to Satellite 6

Satellite 5 to Satellite 6

- Dramatic update of technologies requires more care upon upgrade
- `./install.pl -upgrade` will not take you there.
- The process is more of **transition** than a traditional upgrade
  
  1. **Stand up**
  2. **Duplicate**
  3. **Migrate**
  4. **Decommission and Archive**

- Relaxed pace: Process may take days, weeks, or even months
Things we must consider

Architecture

- Satellite & Satellite Proxy servers
  - Satellite Capsules do more than Satellite Proxies did. Let's whiteboard this.
  - Just because you had 1 Satellite 5.x and 4 Proxies doesn't mean that you should deploy 1 Satellite 6.x and 4 Capsules
    - You may need more
    - You may need less
  - Let's discuss
Things we must consider

Your Satellite Components (what's in your Satellite?)

- Is it worth transitioning in full or in part?
- How do you like the setup of your:
  - Orgs
  - Users,
  - Content,
  - Kickstarts
  - System groups, etc.
- This is a great time to revisit that.
Things we must consider

The Managed Systems

- Can they make the jump to Satellite 6? (e.g. RHEL <= 4 is unsupported on Sat 6)
- Does your organization's change management allow you to migrate those systems?
  - Will existing systems 'die on the vine' or will we actively migrate them?
Enabling Resources

Documentation
- Traditional Documentation
- Knowledgebase Articles
- Recommended practice documentation

Tooling
- Modeling your Satellite 6 instance with minimal errors
- Migrating systems from Satellite 5 to Satellite 6

People
- Support and Consulting services
- Red Hat Training
Prerequisites

Business

- Visit the Transition Landing page linked off of
  https://access.redhat.com/products/red-hat-satellite/

- An Organizational Admin can request transition subscriptions to help facilitate the migration:

- Upon selecting [Request Transition Subscriptions], we
  - Validates the account has valid Satellite & Proxy subscriptions
  - For each valid Satellite & Proxy subscription, we grant a Satellite and Capsule Transition subscription for a period of time of 1 year from the initial request.
Prerequisites

Business

- These transition subscriptions have a 1 year expiration (from date the [Request Transition Subscription] link is selected)
  - This allows enough time to evaluate Satellite 6, architect a solution, deploy into production and migrate systems.
- Account now has twice the subscriptions for Satellites and Proxies. Customers are to use these "free" subs to transition and transition only.
- Customer can now continue our transition instruction without being blocked by lack of Satellite and Proxy subs.
- Want to evaluate Satellite 6 before committing? Reach out to your Account Team.
Transition Strategies
Three Methodologies
- Passive
- Active (with Server Side Components)
- Active (without Server Side Components)

More in 'Planning Your Satellite 5 to Satellite 6 Migration' -
https://access.redhat.com/articles/1482733
Passive

- The goal is to leave existing systems on Satellite 5 until they are retired and deploy new systems on Satellite 6 with the understanding that there are two Satellites for the foreseeable future
  - Either they can't be transitioned (RHEL <= 4) or
  - They are known good (If it isn't broke, don't fix it)
- New systems are deployed on Satellite 6
- Systems aren't migrated from Satellite 5 to 6.
**Transition Strategy**

**Active**
- The goal is to actively move workloads from Satellite 5 to Satellite 6, with the goal of keeping a single Satellite.
- With Server Side Components
  - I like what's in Satellite 5 and I wish to model my Satellite 6 based upon it and move my systems to it.
- Without Server Side Components
  - Satellite 6 is new tech, so I'll build new and move just the systems from Satellite 5 to 6
Transition Flowchart

1. Acquire Subs [1]
3. Configure Sat6 Deploy new workloads on Sat6. [3]
5. Migrate Clients via bootstrap [9]
8. Do You Like them? [8]
9. Running Sat >= 5.6 [9]
10. Run Transition Tooling [10]
12. Retire Satellite 5 [12]
13. End

Customer states readiness for Satellite 6.x [0]
Transition Tools
Transition Tools

Minimal Requirements
- Satellite 5.6 + RHEA-2014:0822-1 (on your existing Satellite)
- Satellite >= 6.0
- Completion of the transition SKU process
What can we export?

- The Satellite transition tools do not migrate entire kickstart profiles. Due to significant differences between the Satellite 5 and Satellite 6 infrastructures, there is no suitable migration path between the two versions.

- The transition tools can migrate kickstart scripts, and these can be used in Satellite 6 Provisioning Templates, which are an approximation of kickstart profiles.

```
$ spacewalk-export --list-entities
INFO: Currently-supported entities include:
INFO:   channels : Custom/cloned channels and repositories for all organizations
INFO:     activation-keys : Activation keys
INFO:    kickstart-scripts : Kickstart scripts for all organizations [CAVEATS]
INFO:       users : Users and Organizations
INFO:     system-groups : System-groups for all organizations
INFO: config-files-latest : Latest revision of all configuration files
INFO:      repositories : Defined repositories
INFO:  system-profiles : System profiles for all organizations
```
What can't we export

- Activation-keys that use "Red Hat default"
- Anything history- or audit-related (events, osca runs, and so on)
- Anything monitoring-related
- Configuration-channel ordering
- Distribution-channel mapping
- Kickstart data (other than snippets)
- Organization entitlement-distribution (users need to create their own manifests)
- Organization-trusts settings
- Snapshots
- Stored package-profiles
- Custom system information, such as key/value pairs, system notes, and system properties in general.
- User preferences
Importing

- Import organizations. This includes importing a manifest if one exists.
- Import users.
- Import system groups as host collections.
- Enable and synchronize repositories.
- Import repositories.
- Import custom channels and cloned channels as content views.
- Import activation keys.
- Import kickstart snippets as template snippets.
- Import configuration files to puppet modules.
- Import system profiles as content hosts.
Satellite-Related Sessions

**Wednesday**
1:20pm – 2:20pm  
Satellite 6 Roadmap

2:30pm – 3:30pm  
IKEA vs Shellshock: 1-0

3:40pm – 4:40pm  
Real-World Perspectives: Managing Infrastructures with Satellite (Panel)

4:50pm – 5:50pm  
Transitioning From Satellite 5 to 6

**Thursday** (continued)
1:20pm – 2:20pm  
Shellshock, Heartbleed -- What's The Next Headache for Compliance

1:20pm – 2:20pm  
CloudForms, Satellite 6 and Puppet for Automating JBoss EAP 6

3:40pm – 4:40pm  
10 Steps To Build A Standard Operating Environment

4:50pm – 5:50pm  
Puppet Enterprise and Satellite 6

**Friday**
9:45am – 10:45am  
Satellite 6 Power User Tips and Tricks
Satellite Labs, Training and More

Labs
Thursday
3:30pm-5:30pm
Security Compliance Made Easy With OpenSCAP

Friday
9am-11am
Migrate From Red Hat Satellite 5 To Satellite 6
11:30am-1:30pm
Hands-On With Satellite 6.1

Taste Of Training
Wednesday
3:40pm – 4:40pm
Managing Software & Errata Deployment With Satellite 6

Come See Us!
Visit the Satellite team in the Infrastructure Booth (306)!
Visit the Foreman team in the Community Booth!
LEARN. NETWORK.
EXPERIENCE OPEN SOURCE.

#redhat #rhsummit