RED HAT SATELLITE 6
transitioning from 5 to 6

Todd Warner – Red Hat
Rich Jerrido – Red Hat
Will Darton – Navy Federal Credit Union

June 29th, 2016
Red Hat Management...

At Red Hat, “management” is no longer simply Satellite systems management!
Digital Transformation

**APPLICATIONS**
New architectures and ways to integrate

**INFRASTRUCTURE**
New cloud-based infrastructure and ways to serve applications

**DEV**
New ways of developing and delivering applications

**OPS**
More agile process to support both IT and the business

**RED HAT MANAGEMENT**
<table>
<thead>
<tr>
<th>TOOL</th>
<th>Feature</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>SATELLITE</td>
<td>Build a trusted &amp; secure Red Hat environment</td>
<td>Manage the Red Hat Lifecycle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provision &amp; Configure at Scale</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standardize Your Environment</td>
</tr>
<tr>
<td>CLOUDFORMS</td>
<td>Deliver services across your hybrid cloud</td>
<td>Hybrid Cloud Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-Service Provisioning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Policy-driven Compliance</td>
</tr>
<tr>
<td>ANSIBLE</td>
<td>Automate your IT processes &amp; deployments</td>
<td>Simple &amp; powerful language</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No agents to install</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scale with Ansible Tower</td>
</tr>
<tr>
<td>INSIGHTS</td>
<td>Prevent critical issues before they occur</td>
<td>Continuous Insights</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verified Knowledge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proactive Resolution</td>
</tr>
</tbody>
</table>
What is Satellite today?
Define → Deploy → Manage
MANAGE RED HAT INFRASTRUCTURE

BUILT TO SCALE

STREAMLINED CONTENT MANAGEMENT

CENTRALIZED CONSOLE

LIFE-CYCLE MANAGEMENT

PROVISIONING

SOFTWARE MANAGEMENT

REPORTING

CONFIGURATION

ENHANCED DRIFT & CONFIGURATION MANAGEMENT

WORKFLOW

SUBSCRIPTION MANAGEMENT

AUDITING

Simplified System Integration

Manage Multiple RED HAT Accounts

Manage RED HAT Infrastructure
...upstream
...upstream
COMING IN SATELLITE 6.2

- **GENERAL IMPROVEMENTS**
  - Remote execution
  - Scheduling
  - Inter-Satellite Sync
  - Unified hosts
  - Discovery w/o PXE

- **ATOMIC HOSTS AND CONTAINERS**
  - Complete management of RHEL Atomic hosts
  - Mirror container repositories

- **SOFTWARE MANAGEMENT IMPROVEMENTS**
  - Streamlined content synchronization
  - Simplified Puppet smart variable management

- **CAPSULE IMPROVEMENTS**
  - Observability
  - Greater resiliency
  - Improved command and control

- **ENHANCED DOCUMENTATION**
  - New Documentation Guides Available
  - More User-Friendly documentation

#redhat #rhsummit
Version 5

- 2013: 5.6
- 2014: 5.7
- 2015: 5.7
- 2016: 5.8
- 2017: 5.8
- 2018: 5.8
- 2019: 5.8
- 2020: 5.8

Version 6

- 2013: 6.0
- 2014: 6.1
- 2015: 6.2
- 2016: 6.3
- 2017: 6.3
- 2018: 6.3
- 2019: 6.3
- 2020: 6.3

Satellite 5
- End-Of-Life
Migration Strategies
Two Methodologies
Methodology 1:
Migrate both clients and content
Methodology 1: Migrate both clients and content

Why maybe this method?
- Quickest and most familiar mapping of what you have from Satellite 5

Why maybe not?
- Forces Satellite 6 to look and act like legacy Satellite 5
- Still not really an in-place upgrade
- Ignores best practices around Content Views and Lifecycle Environments
- Obfuscates some of the benefits of Satellite 6
- Requires more admin time to “make things work the way they used to”
Methodology 2:
Migrate clients + build new content and workflow
Methodology 2:
Migrate clients + build new content and workflow

*Why maybe this method?*
- Migrate clients + build new content and workflow
- Improved workflow paradigm
- Allows full use of Satellite 6

*Why maybe not?*
- More time to implement
- More planning
Transition Flowchart

Planning your Satellite

1. Identify workload order to transition
2. Run **bootstrap** to migrate
3. **Verify** that the migration was successful
4. **Build** new Satellite 6
5. **Active / Passive**
6. **Deploy new workloads** registered to Satellite 6
7. **Retire** Satellite 5
8. **Celebrate!**
Content Views and Promotions
Content Views and Promotions

Content Views are the new “cloned channel”
Lifecycle Environments are promoted through a Content View to change what products can be seen

Are you confused? Demo time!
Migrating Clients with bootstrap
Migrating Clients with bootstrap

What does it do?

- Installing subscription-manager and its pre-reqs
- Make an API to Satellite to create the Host associated with the user specified Org/Location
- Install the candlepin consumer RPM
- Running rhn-migrate-classic-to-rhsm (with the user provided activation key) to get product certs on a system
- Registering the system to Satellite 6 using a Satellite Capsule if needed.
- Configuring the system with a proper puppet configuration.
- Removing/disabling old RHN Classic packages/daemons (rhnsd, osad, etc)
- ...and a whole bunch of other tasks, which I’ll show you
Migrating Clients with bootstrap

Where can I find it?

• In Satellite 6.2 Beta (or GA)
• Installed via the *katello-client-bootstrap* package
• Installed by default on Satellites and Capsules
• Found in `/var/www/html/pub/bootstrap.py`
• Download → make executable → run
Real World Experience

Navy Federal Credit Union

Will Darton
IT Operations/Information Services
NFCU's Red Hat Environment

Bigger than a bread box but smaller than a Prime Pantry box

Explosive growth

Largely homogeneous

Applications are Operating System agnostic
Transition Strategy

Active approach (moving all systems), but without server side components

Extensive testing
- Functionality
- API
- Feature

Cultural Shift
- New Tools (git, dedicated config management)
- New Processes
What we've learned....

Red Hat Satellite 6 is a whole new animal

The documentation is actually pretty good

   Thanks, Doc folks!

   Take you're time

   Learn something new!

   Have fun with it!
Resources
Resources

All things transition: https://access.redhat.com/articles/1187643

Satellite 6.2 Overview: https://access.redhat.com/articles/2280691
Importing Existing Hosts via the Bootstrap Script

Planning your Satellite: https://access.redhat.com/articles/1482733

10 Steps to Build an SOE: https://access.redhat.com/articles/1585273
How Red Hat Satellite 6 Supports Setting up a Standard Operating Environment

More Satellite Knowledge Content:
https://access.redhat.com/products/red-hat-satellite/#knowledge
SATellite-Related Sessions/Labs

Tuesday
10:15 am SS45625 Enabling Digital Transformation via the Red Hat Management Portfolio | Joe Fitzgerald, Chris Wells, William Nix
10:15 am SL42712 Hands on with Satellite 6.2 (LAB) | Bryan Kearney, Ohad Levy, Mike Mccune
11:30 am SS45594 Red Hat Satellite, Ansible Tower and CloudForms: Doing more together | Justin Nemmers, Chris Wells
4:45 pm SS43270 Migrating an existing Puppet deployment into Satellite 6 | Maxim Burgerhout, Rich Jerrido, Chris Milsted
4:45 pm SS44330 Bringing host lifecycle and content management into RHEV | Yaniv Kaul, Simon Alcott

Wednesday
10:15 am SL42712 Hands on with Satellite 6.2 (LAB) | Bryan Kearney, Ohad Levy, Mike Mccune
11:30 am SS44800 Practical Satellite deployments: from box to orbit in 60 minutes | David Caplan, Rich Jerrido
3:30 pm SS44812 Transitioning from Red Hat Satellite 5 to 6 | Todd Warner, Rich Jerrido, Will Darton (Navy Federal CU)

Thursday
10:15 am SS45622 Satellite 6 Power User tips and tricks | Thomas Cameron
11:30 am SS42713 Red Hat Satellite 6 roadmap & demonstration | Todd Warner, Bryan Kearney, Rich Jerrido
3:30 pm SS42731 Achieving compliance, security automation & remediation with Red Hat CloudForms, Satellite & Ansible | Lucy Kerner, Matthew Micene (DLT)
4:45 pm Satellite birds of a feather | Rich Jerrido
Come See Us!

Satellite Team
In the Red Hat Infrastructure Booth #508 (A-J)

The Foreman Team
In the Community Booth #508
LEARN. NETWORK.
EXPERIENCE OPEN SOURCE.

#redhat #rhsummit