10 THINGS YOU DIDN'T KNOW ABOUT SATELLITE 6

Or did you?

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May 2018
About Me

Twitter: @MaximBurgerhout
YouTube: 100 Things to do with Red Hat Management Products

You’re right. That’s a long name. I didn’t realize that until it was too late :/

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Red Hat
Managing Puppet with Puppet

“it’s puppets all the way down!”
Managing Puppet with Puppet

● Puppet agents are mostly hands-off ... ... until they aren't

● Sometimes, you may want to
  ○ Introduce splay
  ○ Change the run interval
  ○ Change the run mode to cron or systemd.timer
  ○ Remove that ugly warning about an environment in the config not matching the ENC output
Managing Puppet with Puppet

- Unless you’re a bit of a masochist, you probably do not want to log into all of your machines to make manual changes.
- Enter Puppet to manage Puppet!
- The theforeman/puppet Puppet module manages your Puppet installations from A to Z!
- Want to switch to cron? No problem! Want to introduce splay? No problem!
- Etc. Obviously.
### Puppet class parameters

<table>
<thead>
<tr>
<th>Puppet class</th>
<th>Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ntp</td>
<td>servers</td>
<td>&quot;[&quot;0.rhel.pool.ntp.org&quot;, &quot;1.rhel.pool.ntp.org&quot;, &quot;2.rhel.pool.ntp.org&quot;]&quot;</td>
</tr>
<tr>
<td>puppet</td>
<td>runinterval</td>
<td>60</td>
</tr>
<tr>
<td>puppet</td>
<td>runmode</td>
<td>cron</td>
</tr>
</tbody>
</table>

### Global parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>kt_activation_keys</td>
<td>ak-rhel7-development-generic</td>
<td>override</td>
</tr>
</tbody>
</table>

### Host parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Value</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Add Parameter</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Puppet's clientbucket

“Because oops.....”
Puppet's clientbucket

Because oops...

- Every now and then, you or your customer will overwrite $IMPORTANT_FILE with Puppet
- For example, the Satellite installer will overwrite any custom /etc/dhcp/dhcpd.conf
- Luckily, it's relatively easy to get those files back, because Puppet stores backups locally in the 'clientbucket'.
Puppet's clientbucket
Because oops...

- Check the logs for something like
  /Stage[main]/Dhcp/File[/etc/dhcp/dhcpd.conf]: Filebucketed /etc/dhcp/dhcpd.conf to puppet
  with sum 622d9820b8e764ab124367c68f5fa3a1

- Grab that md5sum, and use it like this
  puppet filebucket restore --local --bucket /var/lib/puppet/clientbucket /etc/dhcp/dhcpd.conf
  622d9820b8e764ab124367c68f5fa3a1

- And voila, your file is back!

- Or, if you're lazy, like me, use an interactive command-line tool to do the work for you.
  Download here: https://github.com/andytinycat/puppet-clientbucket-restore
# ./clientbucket.rb /etc/ntp.conf
[0]: 913c85f0fde85f83c2d6c030ecf259e9 2017-08-29 10:24:51 +0000
[1]: c1d0e073779a9102773754cf972486be 2017-08-29 12:45:16 +0000
------------------------
Pick a file, or x to exit: 1
Restore (r), view (v), diff (d), unified diff (u), or x to go back: u
---
/var/lib/puppet/clientbucket/c/1/d/0/e/0/7/3/c1d0e073779a9102773754cf972486be/contents 2017-08-29

[... diff output ...]

Restore (r), view (v), diff (d), unified diff (u), or x to go back: r
Restore to (default is to restore to /etc/ntp.conf): y
Restoring to y
Done
Content view filters and ordering

“it's not that hard...”
Content view filters and ordering

- There are three ways to influence what content is added to a content view:
  - Add no filters
  - Add only include or only exclude filters
  - Add both include and exclude filters

- If you add no filters at all, when you publish a new version of the content view
  - All content available at that time are added to the new version of the CV
Content view filters and ordering

- When you add an include filter
  - All content is excluded, except for the included content
  - You can keep adding include filters until you reach the desired goal

- When you add an exclude filter
  - All content is included, except for the excluded content
  - You can keep adding exclude filters until you reach the desired goal

- If you use both include and exclude filters, the include filters take precedence
Content view filters and ordering

- What does that mean!?

- That means that if you use include and exclude filters both
  - All content will be first excluded
  - And only explicitly included content will be added to the content view
  - Only after that will the exclude filters exclude packages from the resulting CV
Content view filters and ordering

- **Most** sane way to create a content view
  - First include all packages without errata
  - Then include errata up until a certain date
  - If required, push out any errata that cause problems by using an exclude filter

- **Least** sane way to create a content view
  - First, create a filter to exclude all packages
  - Then, start adding filters to add “whitelisted” errata to the CV
  - This will **not work**! Why?
Speeding up MongoDB

“Wait!? NoSQL didn’t solve all the world’s problems?”
Speeding up / shrinking MongoDB

- The size of the MongoDB in Satellite can grow to a tremendous size
- This does not help for Satellite being any faster
- You can fix (part of) this by repairing the MongoDB, which also prunes empty records
  
  ```
  sudo -u mongodb mongod --dbpath /var/lib/mongodb --repair
  ```

- My database went from 14GiB to 9GiB
- Measurements at customer sites indicate a potential performance increase of >60%

- See: [https://access.redhat.com/solutions/3052771](https://access.redhat.com/solutions/3052771)
Speeding up / shrinking MongoDB

- Due to the fact that MongoDB (and databases in general) have sparser rather than contiguous memory access patterns, it's best to turn transparent huge pages off.

- The best way to do this, is by creating a custom little tuned profile, which includes the profile you want to use (e.g. virtual-guest), and disabled THP

- Run 'tuned-adm profile mycustomprofile' to execute and make permanent
Speeding up / shrinking MongoDB

[main]
summary=My custom tuned profile
include=virtual-guest

[vm]
transparent_hugepages=never
Activation keys and "auto-attach"

“But, but, this isn't what I wanted!”
Activation keys and auto-attach

- A common source of confusion
- Define what subscriptions and repositories should be attached to a machine at registration time
- They have no role whatsoever after registration!
- If you need to use multiple activation keys for a host group, the ones on the right override the ones on the left!
- So, when do I need to use multiple activation keys, eh?
Activation keys and auto-attach

- Three scenarios
  - Attach all subscriptions from a predefined list
  - Automatically attach subscriptions for installed products
  - Automatically attach the VDC subscription for the right hypervisor

- Bonus scenario
  - Attach the right VDC subscription and enable a third party repo along the way
Activation Key Type:
- Auto-Attach: Yes

When Auto Attach is enabled, registering systems will be attached to all associated custom products and only associated Red Hat subscriptions required to satisfy the system's installed products.

### Subscriptions

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
<th>Attached</th>
<th>Type</th>
<th>Starts</th>
<th>Expires</th>
<th>Support Level</th>
<th>Contract</th>
<th>Account</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Red Hat OpenStack Platform, Premium (2-sockets)</strong></td>
<td>Automatic</td>
<td>0/30</td>
<td>Physical</td>
<td>2017-05-27 04:00:00 UTC</td>
<td>2018-05-27 03:59:59 UTC</td>
<td>Premium</td>
<td>11280169</td>
<td>5770220</td>
</tr>
<tr>
<td><strong>Red Hat Enterprise Linux with Smart Virtualization and Management, Standard (2-sockets)</strong></td>
<td>Automatic</td>
<td>0/30</td>
<td>Physical</td>
<td>2017-05-27 04:00:00 UTC</td>
<td>2018-05-27 03:59:59 UTC</td>
<td>Standard</td>
<td>11280170</td>
<td>5770220</td>
</tr>
</tbody>
</table>
### Activation Key Type:

- **Auto-Attach**: Yes

**Note:** When Auto Attach is enabled, registering systems will be attached to all associated custom products and only associated Red Hat subscriptions required to satisfy the system's installed products.

### Add Subscriptions

**List/Remove**

```
| product_id = RH00001 |
```

**Add**

- **Red Hat Enterprise Linux for Virtual Datacenters, Premium**
  - **Type**: 0 out of Unlimited
  - **Starts**: 2017-05-27 04:00:00 UTC
  - **Expires**: 2018-05-27 03:59:59 UTC
  - **Support Level**: Premium
  - **Contract**: 11280164
  - **Account**: 5770220

---

#redhat #rhsummit
### ak-test-rhel-vdc

**Activation Key Type:**

**Auto-Attach:** Yes

> When Auto Attach is enabled, registering systems will be attached to all associated custom products and only associated Red Hat subscriptions required to satisfy the system's installed products.

### List/Remove Add

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Attached</th>
<th>Type</th>
<th>Starts</th>
<th>Expires</th>
<th>Support Level</th>
<th>Contract</th>
<th>Account</th>
</tr>
</thead>
</table>

You currently don't have any Subscriptions associated with this Activation Key. You can add Subscriptions after selecting the 'Add' tab.
Satellite's boot disk images
Boot disk images
All you boot disks are belong to us!

- Host images
  - No DHCP required
  - Unique per host
  - Not unique per operating system
- Full host images
  - Like host images, with embedded OS bootloader, so needs to be re-created for each operating system
- Generic images
  - Reusable, for any host
  - But requires basic DHCP and DNS services (not reservations or static IP addresses)
Using a dedicated Puppet content view

“Moar speed!!11oneone”
Using a dedicated Puppet content view

- Puppet modules can go into the same content views as RPMs
  - Good: publish, test and promote RPMs and modules together
  - Bad: Painfully slow if you are doing Puppet development
- Alternative: Puppet in r10k
- Alternative: Puppet in its own content view ← this is what we are talking about!
## cv_puppet3_modules

Content Views » cv_puppet3_modules » Puppet Modules

<table>
<thead>
<tr>
<th>Name</th>
<th>Author</th>
<th>Version</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>apache</td>
<td>puppetlabs</td>
<td>Latest (Currently 1.8.1)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>concat</td>
<td>puppetlabs</td>
<td>Latest (Currently 2.2.0)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>extlib</td>
<td>puppet</td>
<td>Latest (Currently 1.1.0)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>firewall</td>
<td>puppetlabs</td>
<td>Latest (Currently 1.7.2)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>firewalld</td>
<td>crayfishx</td>
<td>Latest (Currently 2.1.0)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>haproxy</td>
<td>puppetlabs</td>
<td>Latest (Currently 1.4.0)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>hash_resources</td>
<td>stbenjam</td>
<td>Latest (Currently 1.0.1)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>inifile</td>
<td>puppetlabs</td>
<td>Latest (Currently 1.4.3)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>java</td>
<td>puppetlabs</td>
<td>Latest (Currently 1.4.3)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>jenkins</td>
<td>rtyler</td>
<td>Latest (Currently 1.6.1)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Latest (Currently 1.1.1)</td>
<td>Select new version, Remove Module</td>
</tr>
<tr>
<td>Host Group</td>
<td>Puppet Classes</td>
<td>Network</td>
<td>Operating System</td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
<td>---------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td>asd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifecycle Environment</td>
<td>Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content View</td>
<td>CCV_RHEL7 GENERIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content Source</td>
<td>sat63cast.sat63network.lan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puppet Environment</td>
<td>KT_Red_Hat.Library_cv_puppet3_modules_3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puppet Master</td>
<td>sat63cast.sat63network.lan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puppet CA</td>
<td>sat63cast.sat63network.lan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Openscap Capsule</td>
<td>sat63cast.sat63network.lan</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hiera and r10k
Can I use Hiera with Satellite 6?

- Yes, you can.
- Hiera is an integral part of Puppet, so it will Just Work™
- If using hiera, Satellite 6 will use hiera if no smart parameters are passed in the ENC YAML output.
- Great explanation on GitHub (thanks, David!)
  https://github.com/aldavud/hiera-sat6/blob/master/docs/satellite6_hiera.md
Can I use r10k with Satellite 6?

- Yes, you can.
- r10k is a method to manage the lifecycle of Puppet modules

- It uses git and text files for configuration
- It’s easy to setup, but does require you to change puppet.conf after every update(!)

- [https://access.redhat.com/blogs/1169563/posts/2216351](https://access.redhat.com/blogs/1169563/posts/2216351)
Deploying systems

“Let me count the ways”
Deploying systems from Satellite

- Kickstart
  - With DHCP / PXE
    - The deployment method we all know and love!
  - With bootdisk w/o DHCP
    - Satellite can generate a bootdisk to set up static networking
    - More on bootdisk images later
Deploying systems from Satellite

- Templates on VMware, RHV, etc.
  - Using a finish template for customization
    - Requires Satellite to be aware of the IP and have an account
  - Using user_data templates for customization
    - cloud-init for OpenStack, RHV
    - VMware customization API for VMware*
Deploying systems from Satellite

- Discovery of new machines
  - By just network-booting new machines
    - New machines will show up as discovered hosts
  - By booting new machines from a discovery image
    - Using discovery rules for full automation
Integration with other products
Integration w/ other Red Hat products

Can you name them all?

- Red Hat Virtualization
- Red Hat CloudForms
- Ansible Tower by Red Hat
- Red Hat Insights
Configuration Profiles under Red Hat Satellite Provider "satellite.redhat.lab Configuration Manager"
# Red Hat CloudForms Management Engine

## Configured System (Red Hat Satellite)

```
Configured System (Red Hat Satellite) "infraserv.redhat.lab"
```

<table>
<thead>
<tr>
<th>Properties</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostname</td>
<td>infraserv.redhat.lab</td>
</tr>
<tr>
<td>IPMI Present</td>
<td>false</td>
</tr>
<tr>
<td>IP Address</td>
<td>192.168.100.20</td>
</tr>
<tr>
<td>MAC address</td>
<td>52:54:00:6e:68:fa5</td>
</tr>
<tr>
<td>Configuration Profile Description</td>
<td>RHEL7-Infraserv/Prod</td>
</tr>
<tr>
<td>Provider</td>
<td>satellite.redhat.lab.ConfigurationManager</td>
</tr>
<tr>
<td>Zone</td>
<td>default</td>
</tr>
<tr>
<td>Environment</td>
<td>KT_Red_Hat_Prod_CCV_RHEL7_GENERIC_4</td>
</tr>
<tr>
<td>Domain</td>
<td>redhat.lab</td>
</tr>
<tr>
<td>Realm</td>
<td></td>
</tr>
<tr>
<td>Operating System</td>
<td></td>
</tr>
<tr>
<td>Compute Profile</td>
<td>1:Small</td>
</tr>
<tr>
<td>Architecture</td>
<td>x86_64</td>
</tr>
<tr>
<td>OS Information</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>Red_Hat/Library/Red_Hat_Server/Red_Hat_EnterpriseLinux_7_Server_Kickstart_x86_64_7_3</td>
</tr>
<tr>
<td>Partition Table</td>
<td>kickstart.default</td>
</tr>
</tbody>
</table>

## Tenancy

- **Configuration Location**: REDHATLAB
- **Configuration Organization**: Red_Hat

## Smart Management

- **My Company Tags**: No My Company Tags have been assigned.
Satellite 6

**Details**

* **Name**: Satellite 6
  - **Type**: Red Hat Satellite 6

**Type Details**

* **Satellite 6 URL**: https://satellite.redhat.lab
  - **Username**: admin
  - **Password**: **********
INVENTORIES / Wordpress (Masterclass Demo) / ssa-demo.openstacklocal

ssa-demo.openstacklocal  ON

* HOST NAME  DESCRIPTION
ssa-demo.openstacklocal imported

VARIABLES  YAML  JSON
1
2  foreman:
3    comment: ''
4    build_status: 0
5    environment_id: 2
6    managed: true
7    import: false
8    ssh_public_key: none
9    ssh_private_key: none
Satellite 6

NAME
Satellite 6

DESCRIPTION
Do not enable either of the 'Overwrite' options below!

SOURCE
Red Hat Satellite 6

CLOUD CREDENTIAL
Satellite 6

UPDATE OPTIONS
- [ ] Overwrite
- [x] Overwrite Variables
- [ ] Update on Launch

CACHE TIMEOUT (SECONDS)
0

VARIABLES
- [ ] YAML
- [ ] JSON

#redhat #rhsummit
<table>
<thead>
<tr>
<th>Type</th>
<th>Severity</th>
<th>Date Issued</th>
<th>ID</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>Bug</td>
<td>Unknown</td>
<td>Jul 6, 2017</td>
<td>RHBA-2017:16...</td>
<td>vadsm-jsonrpc-java bug fix and enhancement update</td>
</tr>
<tr>
<td>Bug</td>
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<td>Aug 22, 2017</td>
<td>RHEA-2017:25...</td>
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<td>Jul 6, 2017</td>
<td>RHEA-2017:18...</td>
<td>ovirt-volume-manager bug fix update</td>
</tr>
<tr>
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<td>Red Hat Virtualization Manager (ovirt-engine)</td>
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| Bug    | Unknown  | Jul 6, 2 RED HAT VIRTUALIZATION

#redhat #rhsummit
Red Hat Insights

**Overview**

**HOT ITEMS**

**Insight into 0-days**

Our Product Security Team has been hard at work bringing you rules for the latest high profile vulnerabilities. This week one of our team members has created a blog post that gives us a peak into their process, **Insight into 0-days**. Give it a read, then check out our Security category to assess your security risks.
Integration w/ other Red Hat products
Can you name them all?

- Red Hat Virtualization
  - Integration for errata management on VMs and hosts
  - Integration for the provisioning new hypervisors
- Red Hat CloudForms
  - To assign a new host group to a host, and custom button for e.g. patching
- Ansible Tower by Red Hat
  - Call Ansible Tower to run a playbook on new machines at first boot
  - Sync inventories between Satellite and Ansible Tower
- Red Hat Insights
  - Deploy the Insights tooling automatically on new machines through Puppet
  - View Insights reports through Satellite’s UI
Moving a system to another capsule

“Yay, me?”
MOVING A SYSTEM TO ANOTHER CAPSULE

- Currently, the process is manual, but work is being done to automate it*

- Required steps:
  - Replace CA certificates
  - Reinstall katello-agent
  - Reconfigure puppet_proxy_id, puppet_ca_proxy_id, content_source_id and openscap_proxy_id on the Satellite side
  - Reconfigure Puppet
  - Restart Puppet

- However
Bulk-correcting subscriptions
BULK CORRECT SUBSCRIPTIONS

- Remember how you needed to attach subscriptions to individual systems when your subscriptions expired?
- No more!
- Satellite now has bulk-actions to assign your new subscriptions to existing machines

- This gets interesting when Satellite 6.3 is released, which will introduce future dated subscriptions!
### Content Host Bulk Subscriptions

Auto-Attach uses all available subscriptions, not a selected subset.

This action will affect only those Content Hosts that require a change. If the Content Host does not have the selected Subscription no action will take place.

---

**Red Hat Cluster Storage, Premium (4 Nodes)**
- Quantity: 1
- Attached: 0 out of 25
- Type: Physical
- Starts: 2017-05-27 04:00:00 UTC
- Expires: 2018-05-27 03:59:59 UTC
- Support Level: Premium
- Contract: 11280165
- Account: 5770220

---

**Red Hat Directory Server**
- Quantity: 1
- Attached: 0 out of 5
- Type: Physical
- Starts: 2017-05-27 04:00:00 UTC
- Expires: 2018-05-27 03:59:59 UTC
- Support Level: Layered
- Contract: 11280168
- Account: 5770220

---

**Load Balancer**
- Quantity: 1
- Attached: 0 out of 60
- Type: Physical
- Starts: 2017-05-27 04:00:00 UTC
- Expires: 2018-05-27 03:59:59 UTC
- Support Level: Layered
- Contract: 11280157
- Account: 5770220

---

**Red Hat JBoss Enterprise Application Platform, 16-Core Premium**
- Quantity: 1
- Attached: 0 out of 100
- Type: Physical
- Starts: 2017-05-27 04:00:00 UTC
- Expires: 2018-05-27 03:59:59 UTC
- Support Level: Premium
- Contract: 11280176
- Account: 5770220

---

**Red Hat Satellite**
- Quantity: 1
- Attached: 0 out of 5
- Type: Physical
- Starts: 2017-05-27 04:00:00 UTC
- Expires: 2018-05-27 03:59:59 UTC
- Support Level: Premium
- Contract: 11280166
- Account: 5770220

---

**Red Hat Enterprise Virtualization (2-sockets), Premium**
- Quantity: 1
- Attached: 0 out of 30
- Type: Physical
- Starts: 2017-05-27 04:00:00 UTC
- Expires: 2018-05-27 03:59:59 UTC
- Support Level: Premium
- Contract: 11280161
- Account: 5770220

---

**Check Engine**
- Volume: 0 out of 30
- Physical
- Starts: 2017-05-27 04:00:00 UTC
- Expires: 2018-05-27 03:59:59 UTC
- Support Level: Standard
- Contract: 11280156
- Account: 5770220

---

**Resilient Storage**
- Volume: 0 out of 30
- Physical
- Starts: 2017-05-27 04:00:00 UTC
- Expires: 2018-05-27 03:59:59 UTC
- Support Level: Standard
- Contract: 11280156
- Account: 5770220

---

**Done**
Switching to lazy sync

"Don't try this at home!"
SWITCHING TO LAZY SYNC

Unsupported, so YMMV, but WFM

- “Lazy sync” is a Satellite 6 feature that allows you to sync just the metadata of a repository
- RPMs are only downloaded as they are requested by clients
- It was introduced in a minor update of Satellite 6.2
- The default is still to sync all content (this is called “immediate” sync)
- But as you can imagine, lazy sync saves a tonne of disk space
SWITCHING TO LAZY SYNC

Unsupported, so YMMV, but WFM

THE FOLLOWING IS UNSUPPORTED AND MIGHT KILL ALL LIFE ON THE PLANET

- delete the contents of /var/lib/pulp/content/units/rpm
- Switch all the repos to on_demand (hammer repository update)
- Sync all the repos (hammer repository sync) to generate the on-demand catalog

Should you do this in a customer production environment? No.
Is it nice to save some space on your test Satellite on your laptop? Sure!
Using custom DHCP / DNS settings
USING CUSTOM DNS / DHCP SETTINGS

- Sometimes, you need to manually alter `/etc/dhcp/dhcpd.conf` or the BIND configuration on the Satellite or Capsule server(s)

- Rerunning the installer will mercilessly overwrite those changes, resulting in shock, horror and pain for those unprepared

- Not for us though, because we know how to circumvent the installer’s tendency to ruthlessly change our configuration changes!
USING CUSTOM DNS / DHCP SETTINGS

- If you need to rerun the installer (e.g. during upgrades), use
  
  --foreman-proxy-dns-managed=false
  
or
  --foreman-proxy-dhcp-managed=false
USING CUSTOM DNS / DHCP SETTINGS

- Or, you can feed custom hiera variables to the installer, by adding them to 
  /etc/foreman-installer/custom-hiera.yaml
- Some examples:
  - add this to tweak the default lease time for DHCP
    dhcp::max_lease_time: 3600
  - Add this to disable recursion for DNS
    dns::recursion: no
The Satellite Organization on Github
THE SATELLITE ORG ON GITHUB

- Over the past three years, quite a community has grown around Satellite
- Several customers, consultants and contractors are working together, and share scripts in an organization on Github
- The RedHatSatellite organization is home to satellite-clone, katello-cvmanager, and satellite-sanity, among others
- RedHatSatellite welcomes YOU! Go to: https://github.com/RedHatSatellite
Cloning a Satellite server

“And now we have two!”
CLONING A SATELLITE SERVER

- We have dropped support for RHEL 6 as the host operating system under Satellite 6.
- Sometimes, you want to use an exact copy of your Satellite deployment on a new machine to try some things out, like an update.
- Enter satellite-clone, a set of Ansible playbooks to create a Satellite 6.1 or 6.2 server on an empty RHEL 7 machine, based on a previously created backup.
CLONING A SATELLITE SERVER

- The tools are shipped with Satellite 6.3!
- Does require a Satellite subscription for the cloned system, so you might need to be creative
Using the foreman Puppet function

“No, we do not ship PuppetDB”
The foreman Puppet function

- “Hey, do you guys ship PuppetDB, so I can use exported resources in Puppet?”
- No, we do not. But we do have the foreman Puppet function, which can help solve some of the use-cases of PuppetDB.
- It’s basically a function you can use in your own Puppet modules to search for items in the foreman / Satellite database
$hosts = foreman(item => 'hosts',
    search => 'last_report > "1 week ago",
    per_page => 1000)

vpn_access{$hosts: ensure => enabled}
Hostgroup layering

“This should be an easy one, right? Right?”
HOSTGROUP LAYERING

- Host groups can inherit from each other, so you can set defaults
  - For content source, Puppet modules, content view, life cycle environment, Puppet variables, activation keys, and much more

- The question is: what is the most sane way of layering those host groups?
- The answer is not simple
  - It will differ from customer to customer, and depends on the organization structure at that customer.
HOSTGROUP LAYERING

Flat Structure

LC ENV Focus

App Focus

Location View
One socket, two sockets...
One socket, two sockets...

- If only I would get 10 cents for every time a customer asks me: “Why is this physical machine consuming two subscriptions in Satellite?”

- A plain RHEL subscription is valid for *either* two virtual machines, *or* a physical machine with up to two sockets

- In Satellite, this subscription is show as *two* subscriptions, so a virtual machine can use a single one, *or* one physical machine with up to two sockets can use them **both**
Foreman hooks
FOREMAN HOOKS

- You can have Satellite execute an arbitrary script during the provisioning workflow
- You can:
  - Make Satellite reach out to a CMDB to register a new system
  - Log a message when a new system is deployed
  - Whatever else you can think of

- Relatively easy way to automate things that are outside of the ‘normal’ Satellite scope
FOREMAN HOOKS

- Assuming you want a hook to run upon host creation,
  - you create `/usr/share/foreman/config/hooks/host/managed/create`
  - you drop an executable script into that directory

- Assuming you want a hook to run upon host deletion,
  - you create `/usr/share/foreman/config/hooks/host/managed/destroy`
  - you drop an executable script into that directory

- Examples: [https://github.com/theforeman/foreman_hooks](https://github.com/theforeman/foreman_hooks)
THANK YOU