# Red Hat Satellite

6.6 Update, then Hammer Time!
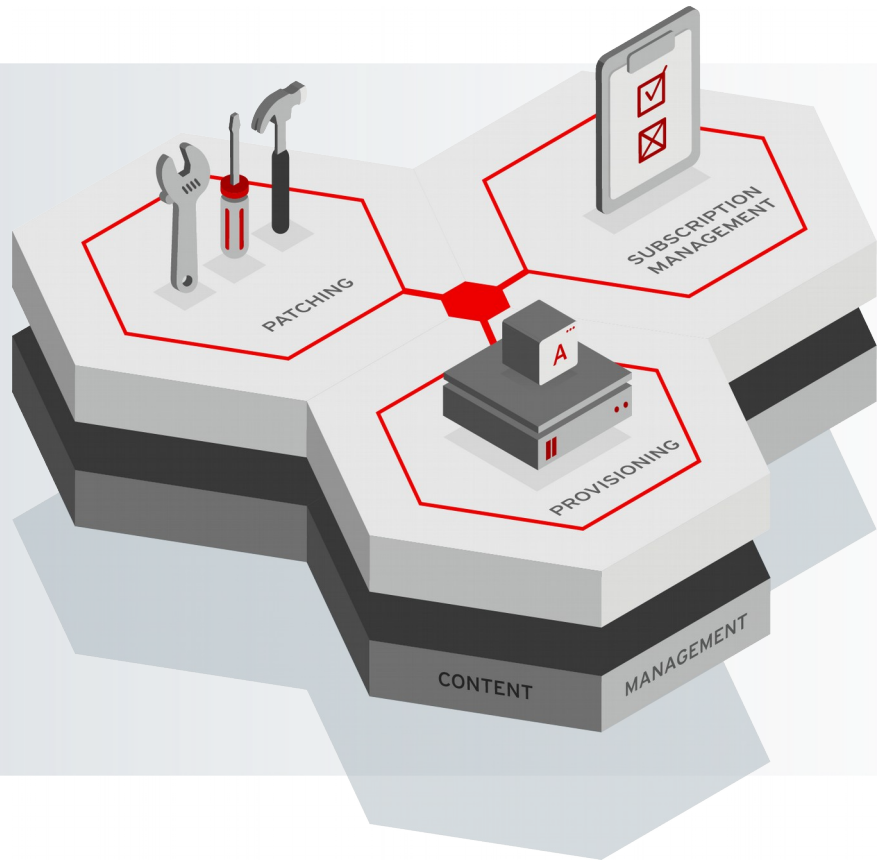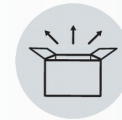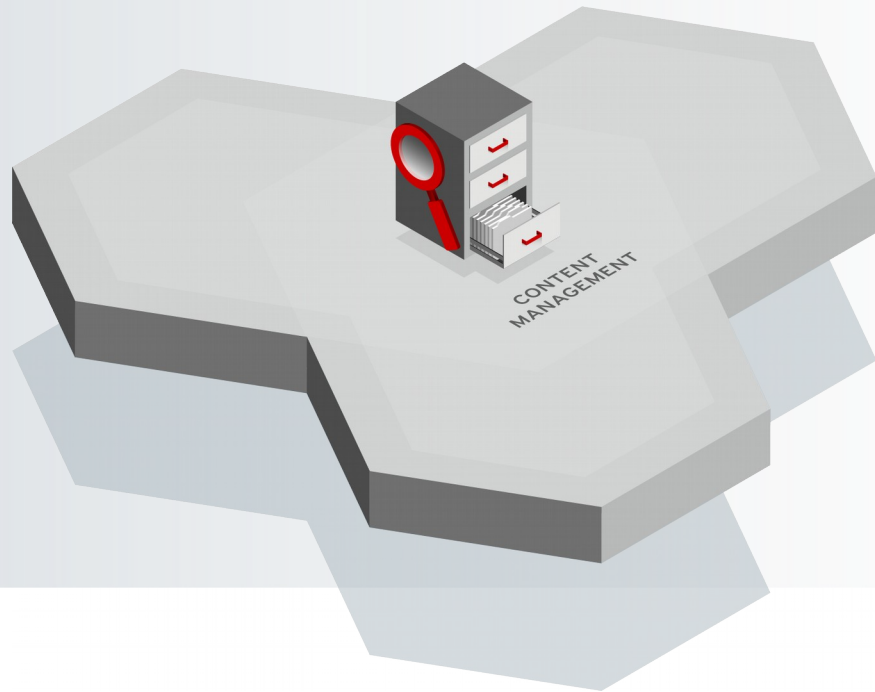
Marc Skinner

Principal Solutions Architect

Red Hat Satellite is a scalable platform to manage patching, provisioning, and subscription management of your Red Hat infrastructure, regardless of where it is running.

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# Content Management

CONTENT
MANAGEMENT

**Content Repository** any type of content made available to any host
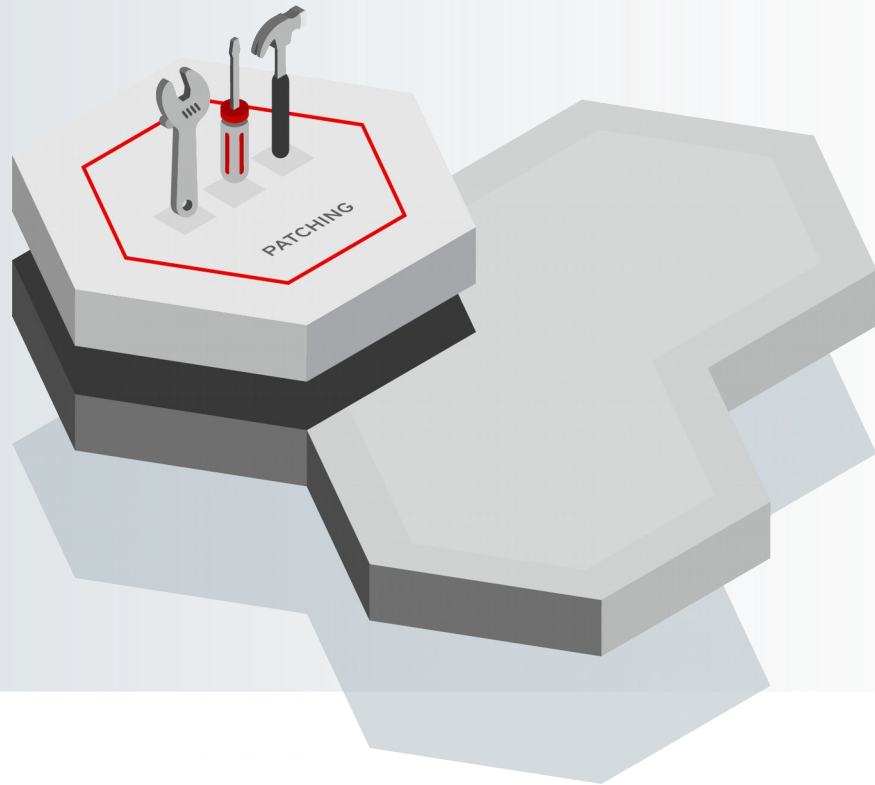
**Curation** of content prior to distribution

**Distribution** of content as close as possible to the end point.

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# Patch Management

**Report** on hosts that need updates, fixes, or enhancements

**Group** homogeneous systems so that you can easily work with them

**Respond** quickly to patching requirements using scalable automation

PATCHING

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# Provisioning Management
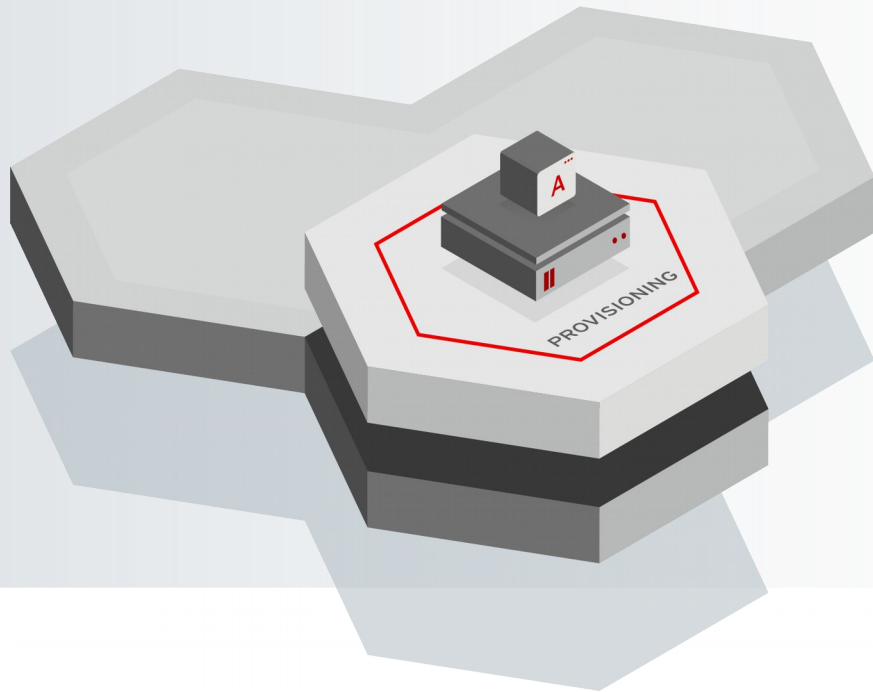


**Provision** to bare metal, virtual, private, and public clouds

**Import** non-provisioned hosts
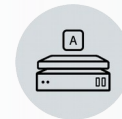
**Automate** using Ansible roles to perform post-provisioning steps

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# Subscription Management
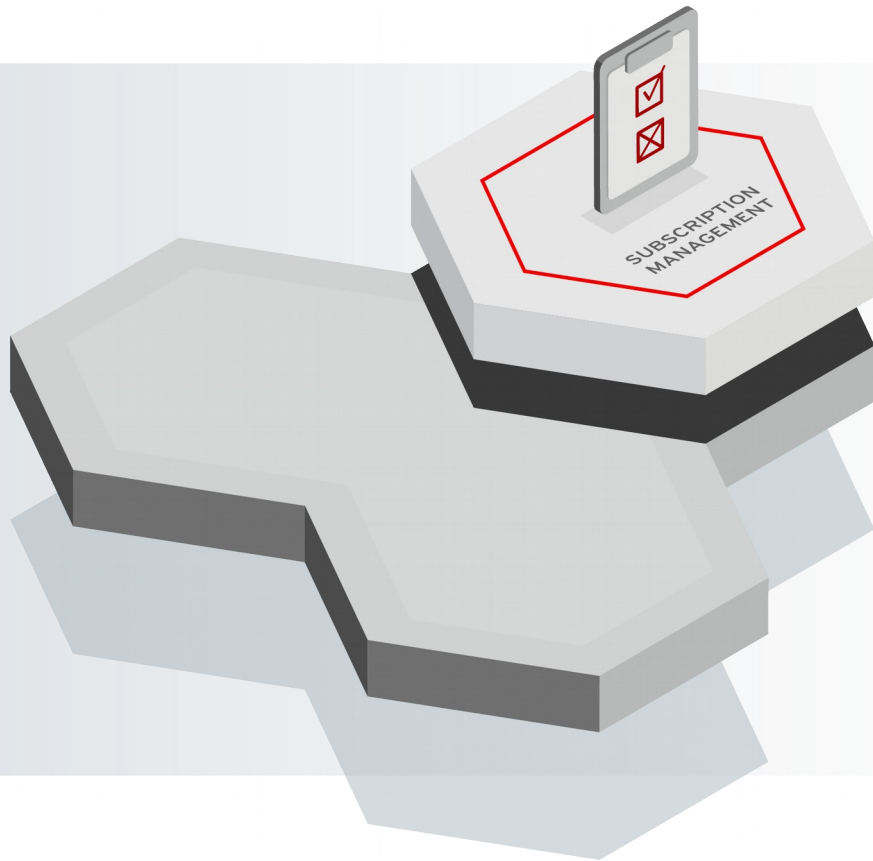
**Centrally manage** subscription usage

**Maintain** accurate inventory and utilization information

**Report** on subscription consumption

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# Additional Satellite Capabilities
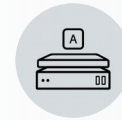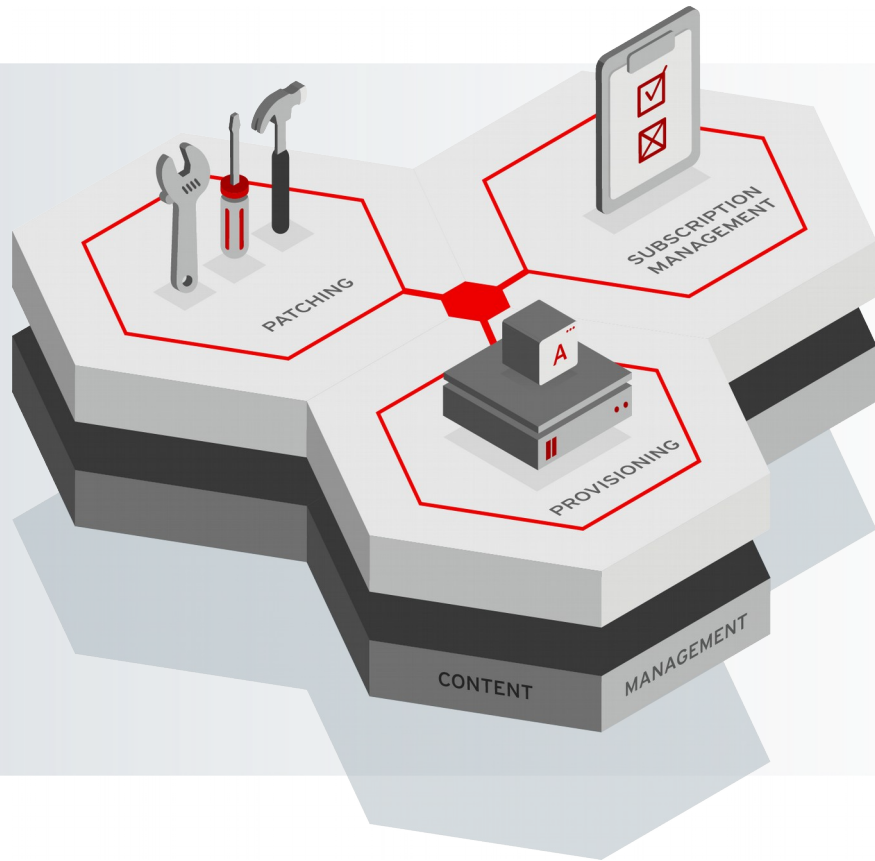


**Configuration Management** using Ansible or Puppet

**Automation** through integration with Ansible Tower

**Compliance** using OpenSCAP policies

# Satellite 6.6 New Features

# Automation enhancements

## Continuing improvements with Red Hat Ansible® Automation Platform

**Red Hat**
Ansible Automation Platform
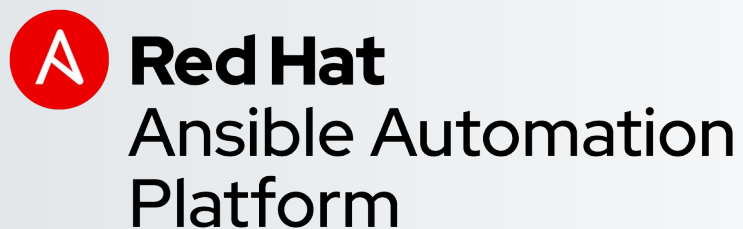
*Ansible 2.8 upgrade*
Upgrading the built-in Ansible to the latest release

*Smart class parameters*
Ability to use Ansible Automation Platform variables as smart class parameters, making Ansible  roles easier to use

*OpenSCAP deployed by Ansible*
Ability to deploy OpenSCAP using Ansible Automation Platform

# Reporting engine enhancements



*Reporting engine enhancements*
- Schedule reports
- Email reports
- Performance improvements

*Additional pre-canned report*
- Applied errata

# Security enhancements

*Red Hat Insights rules for Satellite*
Insights added more than 60 Satellite rules to help Satellite run at its best.

*Content view filters dependency resolution*
If a content view (CV) filter has a dependency on a package, it will include the dependency in the CV.

*Image builder integration*
Image Builder can pull content from Satellite and make install images that are pushed back to Satellite for the purpose of provisioning hosts

# Security enhancements

**Scale improvements and tuning parameters**
T-shirt (small, medium, large) sized-based tuning parameters, including Heira files shipped with Satellite, and also includes task database cleanup

**Improved upgrade workflows**
Satellite-maintain is used for upgrades, and Satellite is version locked so yum doesn't upgrade Satellite

**Enhanced task dashboard and notifications**
Improved task dashboard page and new notification drawer items for paused tasks or tasks that need attention

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# Hammer Time!

# What is the hammer CLI?

*Automatically Installed with Satellite 6*

• rpm -qa │ grep hammer

tfm-rubygem-hammer_cli_foreman_bootdisk-0.1.3.3-5.el7sat.noarch

tfm-rubygem-hammer_cli_foreman_ansible-0.3.2-1.el7sat.noarch

tfm-rubygem-hammer_cli_foreman_remote_execution-0.1.0-3.el7sat.noarch

tfm-rubygem-hammer_cli_foreman_tasks-0.0.13-2.el7sat.noarch

tfm-rubygem-hammer_cli_foreman_virt_who_configure-0.0.4-1.el7sat.noarch

tfm-rubygem-hammer_cli_foreman_discovery-1.0.1-1.el7sat.noarch

tfm-rubygem-hammer_cli_katello-0.18.0.6-1.el7sat.noarch

tfm-rubygem-hammer_cli_foreman-0.17.0.8-1.el7sat.noarch

tfm-rubygem-hammer_cli_foreman_openscap-0.1.7-2.el7sat.noarch

tfm-rubygem-hammer_cli_foreman_admin-0.0.8-3.el7sat.noarch

tfm-rubygem-hammer_cli_foreman_templates-0.1.2-2.el7sat.noarch

tfm-rubygem-hammer_cli_foreman_docker-0.0.6.4-1.el7sat.noarch

tfm-rubygem-hammer_cli-0.17.1-2.el7sat.noarch

# You can use the CLI or jump into a shell

```
# hammer [cmd]

# hammer shell
hammer >
```

# Check Satellite 6 Health

# hammer ping

```
candlepin:
    Status:          ok
    Server Response: Duration: 12ms
candlepin_auth:
    Status:          ok
    Server Response: Duration: 12ms
pulp:
    Status:          ok
    Server Response: Duration: 39ms
pulp_auth:
    Status:          ok
    Server Response: Duration: 18ms
foreman_tasks:
    Status:          ok
    Server Response: Duration: 3ms
```

# Use Hammer to work with Organizations

# hammer organization create --name SKINNERLABS --description "myORG"

# hammer organization list

```
---|----------------|--------------|---------------|------------
ID | TITLE          | NAME         | DESCRIPTION   | LABEL
---|----------------|--------------|---------------|------------
1  | SKINNERLABS    | SKINNERLABS  |               | SKINNERLABS
---|----------------|--------------|---------------|------------
```

# Use Hammer to add Locations

# hammer location create --name London

# hammer location add-organization --name London --organization MYORG

# Use Hammer to upload Manifest / Refresh

# hammer subscription upload --organization MYORG --file /tmp/manifest.zip

# hammer subscription list --organization MYORG

```
D | UUID                               | NAME                                                          | TYPE
--|------------------------------------|---------------------------------------------------------------|-------
1 | 4028a8a46e05d084016e1022060d0045   | Employee SKU                                                   | Guests
0 | 4028a8a46d4515c9016d45434c5f0019   | Employee SKU                                                   | Guests
9 | 4028a8a46c0ae1a2016c0b87b64f056d   | Employee SKU                                                   | Guests
6 | 4028a8a46c0ae1a2016c0b80f4ca04f9   | Employee SKU                                                   | Guests
0 | 4028a8a46c0ae1a2016c0aea925c046c   | Employee SKU                                                   | Physic
1 | 4028a8a46c0ae1a2016c0aea978204c9   | Red Hat OpenShift Container Platform Broker/Master Infrastructure | Physic
3 | 4028a8a46c0ae1a2016c0aea93e004bd   | Red Hat Satellite Infrastructure Subscription                 | Physic
2 | 4028a8a46c0ae1a2016c0aea944f04c3   | Red Hat Virtualization Manager                                | Physic
--|------------------------------------|---------------------------------------------------------------|-------
```

# hammer subscription refresh-manifest --organization MYORG --async

# Enable Repositories, Synchronize and List them



# hammer repository-set enable --organization MYORG --product "Red Hat Enterprise Linux Server" --basearch "x86_64" --releasever "7Server" --name "Red Hat Enterprise 7 Server (RPMs)"

# hammer repository synchronize --organization MYORG --product "Red Hat Enterprise Linux Server" --name "Red Hat Enterprise 7 Server (RPMs)" --async

# hammer repository list --organization MYORG

# Create and Enable a SYNC Plan

# hammer sync-plan create --organization MYORG --name "Daily Sync 3AM" --enabled=true --interval daily --sync-date "2019-11-05 03:00:00"

Must find product ID #

# hammer product list --organization MYORG

```
---|-------------------------------------------------|--------------
ID | NAME                                            | DESCRIPT
---|-------------------------------------------------|--------------
150 | dotNET on RHEL Beta (for RHEL Compute Node)    |
79  | dotNET on RHEL Beta (for RHEL Server)          |
189 | dotNET on RHEL Beta (for RHEL Workstation)     |
235 | dotNET on RHEL (for RHEL Compute Node)         |
205 | dotNET on RHEL (for RHEL Server)               |
218 | dotNET on RHEL (for RHEL Workstation)          |
140 | JBoss Enterprise Application Platform          |
```

# hammer product set-sync-plan --organization MYORG --sync-plan "Daily Sync 3AM" --id 175

# Work with Life Cycle Environments

# hammer lifecycle-environement --organization MYORG --name LAB --description "LABEnv" --prior Library

#hammer lifecycle-environment --organization MYORG

```
---|---------|---------
ID | NAME    | PRIOR
---|---------|---------
3  | DEV     | LAB
2  | LAB     | Library
1  | Library |
---|---------|---------
[root@sat6 p]# 
```

# Create a Content View / Create a Composite Content View

List repositories to find repository ID #

# hammer repository list --organization MYORG

# hammer content-view create --organization MYORG --repository-ids 125,200 --description "RHEL7 Base-Addons"

List content views to find content view ID #

# hammer content-view list --organization MYORG

# hammer content-view create --organization MYORG --description "RHEL7 VM" --composite --component-ids 2,4 --auto-publish yes

# Publish and Promote a Content View

List content views to find content view ID #

# hammer content-view list --organization MYORG

# hammer content-view publish --organization MYORG --id 23 --async

# hammer content-view version promote --organization MYORG --content-view RHEL8-BASE --to-lifecycle-environment LAB --version 4.0

# Export a  Content View

List content views to find content view ID #

# hammer content-view list --organization MYORG

# hammer content-view export --organization MYORG --id 23 --export-dir /mnt/EXPORT

# Delete a Content View

List content views to find content view ID #

# hammer content-view list --organization MYORG

# hammer content-view delete --organization MYORG --id 23 --async

# Create and List Activation Keys

```
# hammer activation-key create --organization MYORG --name AK-RHEL7-VM
--content-view CV-RHEL7 --lifecycle-environment LAB

# hammer activation-key list --organization MYORG
```

| ID | NAME | HOST LIMIT | LIFECYCLE ENVI |
|----|------|-----------|----------------|
| 2 | AK-RHEL6-NODE | 0 of Unlimited | LAB |
| 4 | AK-RHEL6-VM | 2 of Unlimited | LAB |
| 5 | AK-RHEL7-GLUSTER-NODE | 0 of Unlimited | LAB |
| 1 | AK-RHEL7-NODE | 4 of Unlimited | LAB |
| 6 | AK-RHEL7-RHV-MANAGER-VM | 0 of Unlimited | LAB |
| 3 | AK-RHEL7-VM | 4 of Unlimited | LAB |
| 9 | AK-RHEL8-NODE | 0 of Unlimited | LAB |
| 10 | AK-RHEL8-VM | 0 of Unlimited | LAB |

# List Subscriptions and Attach to Activation Key



# hammer subscription list --organization MYORG

```
---|----------------------------------------|---------------
ID | UUID                                   | NAME
---|----------------------------------------|---------------
31 | 4028a8a46e05d084016e1022060d0045       | Employee SKU
30 | 4028a8a46d4515c9016d45434c5f0019       | Employee SKU
29 | 4028a8a46c0ae1a2016c0b87b64f056d       | Employee SKU
26 | 4028a8a46c0ae1a2016c0b80f4ca04f9       | Employee SKU
20 | 4028a8a46c0ae1a2016c0aea925c046c       | Employee SKU
21 | 4028a8a46c0ae1a2016c0aea978204c9       | Red Hat OpenShif
23 | 4028a8a46c0ae1a2016c0aea93e004bd       | Red Hat Satellit
22 | 4028a8a46c0ae1a2016c0aea944f04c3       | Red Hat Virtuali
---|----------------------------------------|---------------
```

# hammer activation-key add-subscription --id 3 --subscription-id 31

# Create Satellite 6 Users and Groups

List Organization to find ID #

# hammer organization list

# hammer user create --login mskinner --password P@55worD --mail mskinner@redhat.com --auth-source-id 1 --organization-ids 1

# hammer user-group create --name LABAdmin

List Groups to find group ID #

# hammer user-group list

```
---|----------|------
ID | NAME     | ADMIN
---|----------|------
1  | LABAdmin | no
---|----------|------
```

# hammer user-group add-user --user mskinner --id 1

# Assigning Roles to Users and Groups

List users to find User ID #

# hammer user list

```
---|-----------|------------|--------------------------|--------
ID | LOGIN     | NAME       | EMAIL                    | ADMIN
---|-----------|------------|--------------------------|--------
3  | admin     | Admin User | root@i.skinnerlabs.com   | yes
9  | mskinner  |            | mskinner@redhat.com      | no
---|-----------|------------|--------------------------|--------
```

# hammer user add-role --id 9 --role "Compliance viewer"

# hammer user-group list
# hammer user-group add-role --id 1 --role "Compliance viewer"

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# View/List Errata

```
Title:            lvm2 bug fix update
Description:      The lvm2 packages include

This update fixes the following bug:

* Previously, clustered LVM caused the GFS
n fixed. (BZ#1638084)

Users of lvm2 are advised to upgrade to the
ID:               8656
Errata ID:        RHBA-2018:3344
Reboot Suggested: false
Updated:          2018-10-30
```

List hosts

# hammer host list

Search errata for specific host

# hammer erratum list --host tang1.skinnerlabs.com
# hammer erratum list --cve CVE-2014-0453

# hammer erratum info --id 8656

# Apply Errata to Host

```
------|---------------|---------------|-------------
ID    | ERRATA ID     | TYPE          | TITLE
------|---------------|---------------|-------------
11267 | RHSA-2019:3197 | security      | Important:
11254 | RHEA-2019:3091 | enhancement   | microcode_c
11249 | RHBA-2019:3062 | bugfix        | kpatch bug
11245 | RHBA-2019:3078 | bugfix        | python-requ
11242 | RHBA-2019:3054 | bugfix        | hostname bu
11241 | RHBA-2019:3077 | bugfix        | binutils bu
11240 | RHBA-2019:3066 | bugfix        | sos bug fix
11236 | RHBA-2019:3068 | bugfix        | procps-ng b
11235 | RHBA-2019:3072 | bugfix        | systemd bug
11234 | RHBA-2019:3061 | bugfix        | rsyslog bug
11230 | RHBA-2019:3081 | bugfix        | firewalld b
11225 | RHBA-2019:3075 | bugfix        | systemtap b
11224 | RHSA-2019:3055 | security      | Important:
11222 | RHBA-2019:3057 | bugfix        | lvm2 bug fi
11187 | RHBA-2019:2871 | bugfix        | tzdata enha
11183 | RHSA-2019:2829 | security      | Important:
11171 | RHBA-2019:2602 | bugfix        | sos bug fix
11168 | RHBA-2019:2599 | bugfix        | krb5 bug fi
11165 | RHBA-2019:2614 | bugfix        | firewalld b
```

List errata for host

# hammer erratum list --host tang1.skinnerlabs.com
# hammer host errata apply --host tang1.skinnerlabs.com --errata-ids 11267,11171

# List Packages

List Packages for Host

# hammer host package list --search openssh --host tang1.i.skinnerlabs.com

```
-----------------------------------------------
NVRA
-----------------------------------------------
openssh-7.4p1-16.el7.x86_64
openssh-clients-7.4p1-16.el7.x86_64
openssh-server-7.4p1-16.el7.x86_64
-----------------------------------------------
```

# Remove/Install Packages

Remove Packages for Host

# hammer host package remove --packages telnet --host tang1.i.skinnerlabs.com --async

Install Packages for Host

# hammer host package install --packages telnet --host tang1.i.skinnerlabs.com --async

# Upgrade and Upgrade All Packages

Upgrade Packages for Host

# hammer host package upgrade --packages openssh --host tang1.i.skinnerlabs.com --async

Upgrade ALL Packages for Host

# hammer host packages upgrade-all --host tang1.i.skinnerlabs.com --async

# Misc Hammer Commands

Dump all Satellite 6 settings

# hammer settings list

List GPG Keys

# hammer gpg list --organization MYORG

List Host Facts

# hammer host facts --organization MYORG --name tang1.i.skinnerlabs.com

Task List

# hammer task list

# Thank you

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