

RED HAT SATELLITE POWER USER TIPS AND TRICKS

Getting Satellite Up and Running Quickly and Sanely

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AGENDA

What we're going to cover (quickly)

We're going to be moving FAST!

- A little background/history
- Installation
- The Manifest
- Syncing content
- Tell Satellite about your world!
- Locations
- Lifecycle environments
- Content Views
- Puppet



AGENDA

What we're going to cover (quickly)

Tell Satellite about your world

- Subnets
- Host Collections
- Domains
- Installation Media
- Provisioning Templates
- Operating Systems
- Activation Keys
- Host Groups
- Compute Resources
- Build a New Host



BACKGROUND/HISTORY



ABOUT US

Who are we, and why should you care?

- Rich Jerrido
- rjerrido@redhat.com, @sideangleside on Twitter
- 8 years at Red Hat, from sales engineer to technical leader for systems management
- Live in Philly, work globally
- Former United States Marine

Thomas Cameron

- thomas@redhat.com, @thomasdcameron on Twitter
- 12 years at Red Hat, from sales engineer to cross-portfolio technology guy
- Live in Austin, work globally
- Former police officer



Where Did It Come From? Where is it Going?

Initially designed re-using code from rhn.redhat.com (RHAS 2.1)

First released as a set of perl scripts and tarballs

 Required in depth experience, close work with the RHN engineering team, and the bottled tears of Isidore of Seville, the patron saint of software engineers

Initially closed source due to inclusion of proprietary database from The Vendor Who Shall Not Be Named

But OSS DB tech caught up, and v. 5 was fully Open Source



Where Did It Come From? Where is it Going?

Relatively monolithic design, new features (monitoring, API support, etc.) were bolted on over time



Where Did It Come From? Where is it Going?

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over time



Where Did It Come From? Where is it Going?

Version 5 is very full featured, supporting physical and virtual machine provisioning. Not designed for cloud scale, though. Build/config one system then replicate it. Upstream is the Spacewalk project.





Where Did It Come From? Where is it Going?

Version 6 is a COMPLETE REWRITE. There is no code shared between the products.

Based on a number of upstream projects:

- katello content management
- the foreman lifecycle management
- candlepin subscription management
- pulp content repository management
- Postgresql database backend
- mongoDB noSQL















Where Did It Come From? Where is it Going?

Designed for cloud scale and ease of use in large, distributed environments

100% Open Source

IMHO, one of the (if not the) most ambitious project Red Hat has ever started.





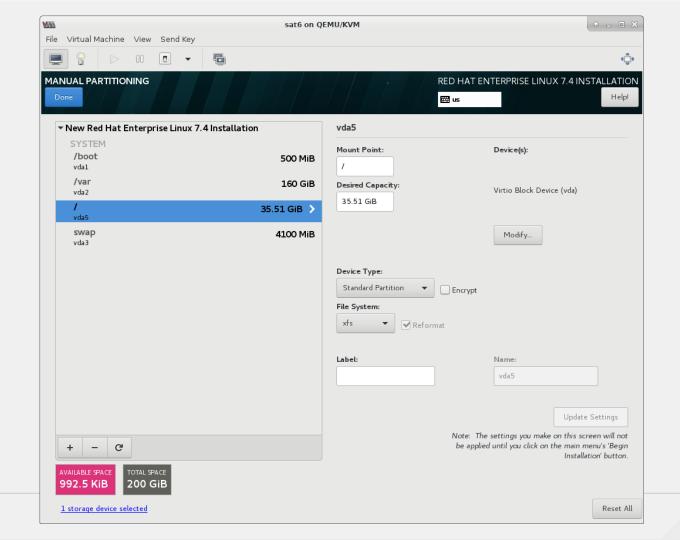
Super simple installation

36GB for root and 160GB for /var

At least 16GB memory (more is better) and at least 4GB swap.

- It takes 40-50GB for RHEL7 and associated channels (clustering, Optional, Supplementary, Extras, etc.). I made my Satellite server 200GB for growth.
- On my system, fully synced RHEL7 is about 100GB in /var/lib/pulp and about 16GB for /var/lib/mongodb







DNS Resolution

Forward and reverse must work.

• You will have problems if they do not.



#version=DEVEL # System authorization information auth --enableshadow --passalgo=sha512 # Use network installation url --url="http://172.31.100.29/rhel7.4" repo --name="Server-HighAvailability" --baseurl=http://172.31.100.29/rhel7.4/addons/HighAvailability repo --name="Server-ResilientStorage" --baseurl=http://172.31.100.29/rhel7.4/addons/ResilientStorage # Use graphical install graphical # Run the Setup Agent on first boot firstboot --enable ignoredisk --only-use=vda # Kevboard lavouts keyboard --vckeymap=us --xlayouts='us' # System language lang en US.UTF-8 # Network information network --bootproto=dhcp --device=eth0 --ipv6=auto --activate network --hostname=localhost.localdomain # Root password rootpw --iscrypted \$6\$3BSBGcIxMzqGpCqt\$fwqKTCxMlTUR5nKLERA3AulaWuxXYGaPNM6Mu5hDhV1czzb3ia6NhPWXSTngn1iVSI4F26fZ00LfeyWz5UKhi0 # System services services --enabled="chronyd" # System timezone timezone America/Chicago --isUtc --ntpservers=this.has.not.been.ntp.server.time.nist.gov.since.2012 # System bootloader configuration bootloader --location=mbr --boot-drive=vda # Partition clearing information clearpart --none --initlabel # Disk partitioning information part /boot --fstype="xfs" --ondisk=vda --size=500 part swap --fstvpe="swap" --ondisk=vda --size=4100 part /var --fstype="xfs" --ondisk=vda --size=163840 part / --fstype="xfs" --ondisk=vda --size=36358 %packages @^minimal @core chrony %end %addon com redhat kdump --disable --reserve-mb='auto' %end %anaconda pwpolicy root --minlen=6 --minquality=1 --notstrict --nochanges --notempty pwpolicy user --minlen=6 --minguality=1 --notstrict --nochanges --emptyok pwpolicy luks --minlen=6 --minquality=1 --notstrict --nochanges --notempty

%end

Register to Red Hat

Use subscription-manager





File Edit View Terminal Tabs Help

[root@sat6 ~]# subscription-manager register --username tcameron@redhat.com --au to-attach

Registering to: subscription.rhsm.redhat.com:443/subscription

Password:

The system has been registered with ID: 59bc42a0-5846-4eb0-bae3-0e0058edb118

Installed Product Current Status:

Product Name: Red Hat Enterprise Linux Server

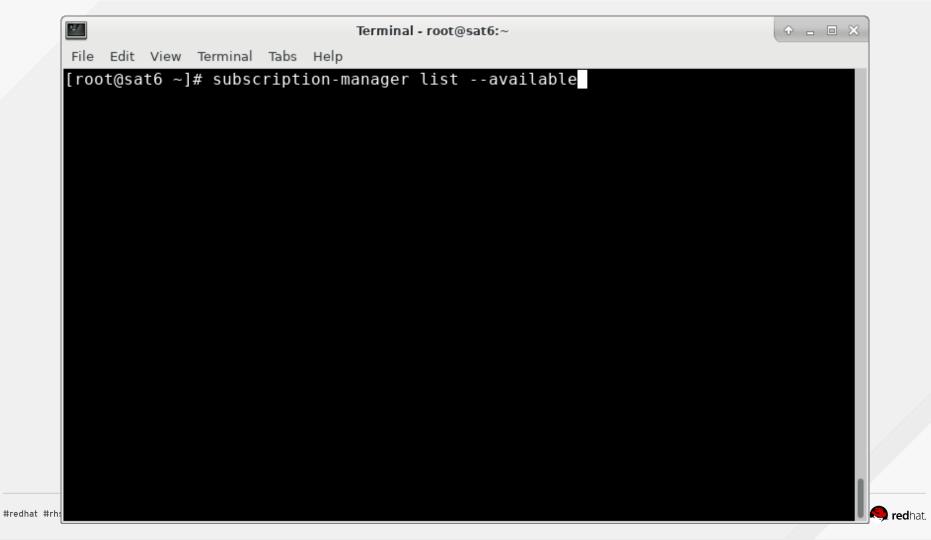
Status: Subscribed

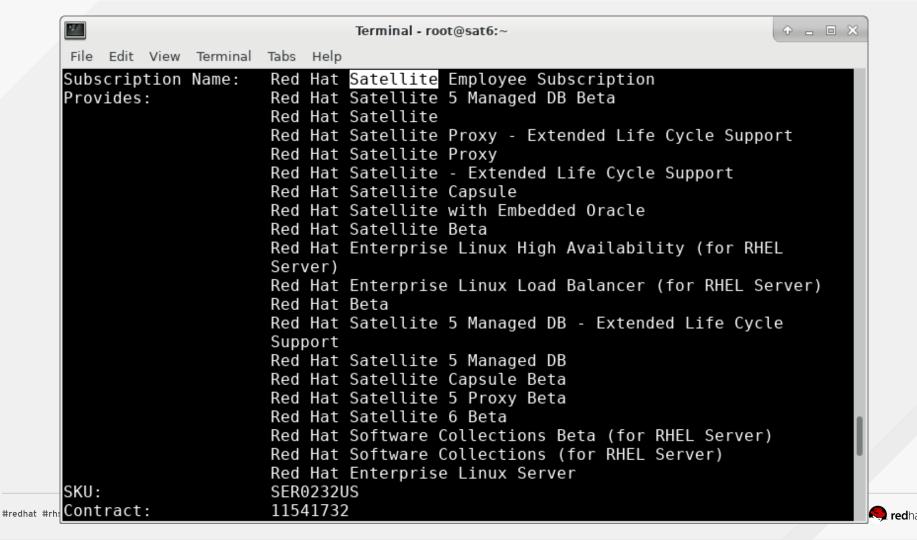
[root@sat6 ~]#

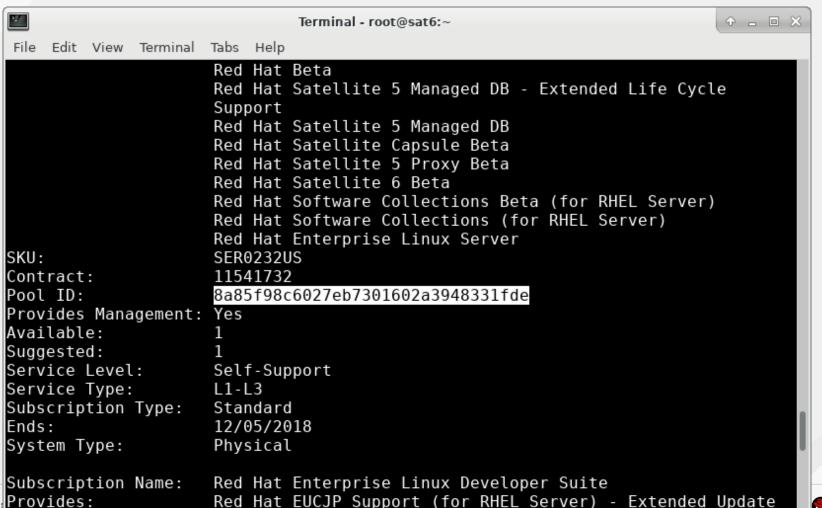
Register to Red Hat

Attach to the Satellite pool











Terminal - root@sat6:~



File Edit View Terminal Tabs Help

[root@sat6 ~]# subscription-manager attach --pool 8a85f98c6027eb7301602a3948331f de

Successfully attached a subscription for: Red Hat Satellite Employee Subscriptio

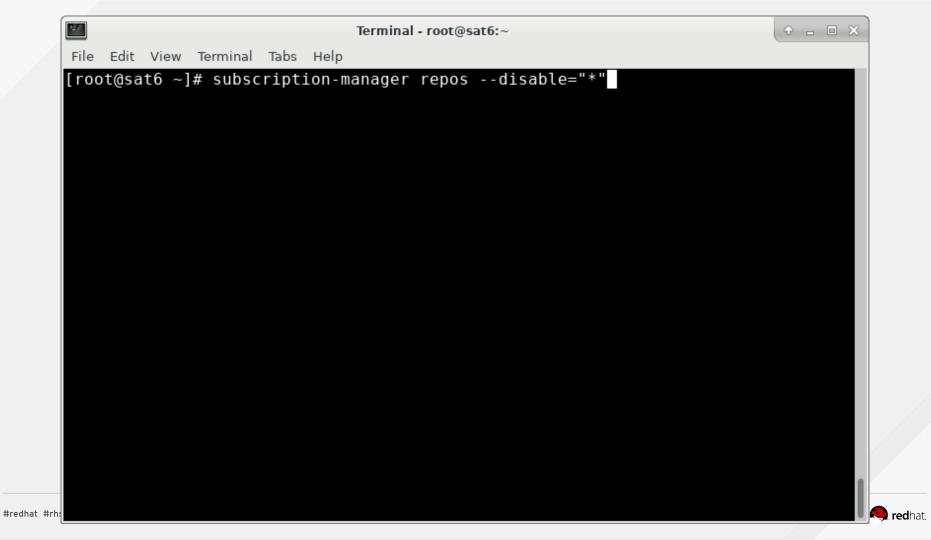
1 local certificate has been deleted.

[root@sat6 ~]#

Attach to correct repos

Disable all, then enable Server, Satellite, and Software Collections







File Edit View Terminal Tabs Help

Repository 'rhel-7-server-rhmap-4.2-source-rpms' is disabled for this system. Repository 'rhel-7-server-openstack-11-tools-source-rpms' is disabled for this s ystem.

Repository 'rhel-7-server-rhev-mgmt-agent-els-rpms' is disabled for this system. Repository 'rhel-7-server-satellite-tools-6-beta-rpms' is disabled for this syst em.

Repository 'rhel-7-server-rhceph-1.2-osd-debug-rpms' is disabled for this system

Repository 'rhel-7-server-openstack-6.0-source-rpms' is disabled for this system

Repository 'amq-clients-2-for-rhel-7-server-source-rpms' is disabled for this sy stem.

Repository 'rhel-7-server-ansible-2.4-source-rpms' is disabled for this system.

Repository 'rhel-7-server-rhn-tools-source-rpms' is disabled for this system.

Repository 'rhel-7-server-openstack-12-optools-rpms' is disabled for this system

Repository 'rhel-sjis-for-rhel-7-server-eus-rpms' is disabled for this system. Repository 'rhel-7-fast-datapath-source-rpms' is disabled for this system.

Repository 'rhel-7-server-rhscon-2-installer-rpms' is disabled for this system.

Repository 'rhel-7-server-openstack-7.0-tools-source-rpms' is disabled for this system.

Repository 'rhel-7-server-openstack-6.0-installer-rpms' is disabled for this sys tem.

#redhat #rhs [root@sat6 ~]#





File Edit View Terminal Tabs Help

```
[root@sat6 ~]# subscription-manager repos --enable=rhel-7-server-rpms --enable=r
hel-server-rhscl-7-rpms --enable=rhel-7-server-satellite-6.3-rpms
Repository 'rhel-7-server-rpms' is enabled for this system.
Repository 'rhel-7-server-satellite-6.3-rpms' is enabled for this system.
Repository 'rhel-server-rhscl-7-rpms' is enabled for this system.
[root@sat6 ~]#
```

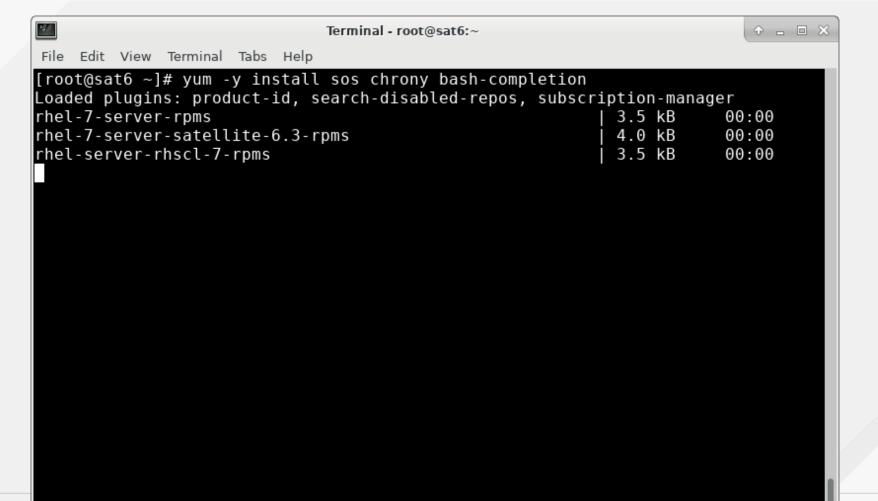


Install additional software

Install sos, chrony, and anything else you need.

I usually install bash-completion, too





```
Terminal - root@sat6:~
File Edit View Terminal Tabs Help
  Updating : chrony-3.2-2.el/.xxb b4
                                                                           4/b
  Installing: 1:bash-completion-2.1-6.el7.noarch
                                                                           5/6
  Cleanup : chrony-3.1-2.el7.x86 64
                                                                           6/6
rhel-7-server-rpms/7Server/x86 64/productid
                                                                     00:00
rhel-7-server-satellite-6.3-rpms/x86 64/productid
                                                          2.1 kB
                                                                     00:00
rhel-server-rhscl-7-rpms/7Server/x86 64/productid
                                                          2.1 kB
                                                                     00:00
  Verifying: 1:bash-completion-2.1-6.el7.noarch
                                                                           1/6
  Verifying : bzip2-1.0.6-13.el7.x86 64
                                                                           2/6
  Verifying: chrony-3.2-2.el7.x86 64
                                                                           3/6
  Verifying : sos-3.5-6.el7.noarch
                                                                           4/6
  Verifying : python-six-1.9.0-2.el7.noarch
                                                                           5/6
  Verifying: chrony-3.1-2.el7.x86 64
                                                                           6/6
Installed:
  bash-completion.noarch 1:2.1-6.el7 sos.noarch 0:3.5-6.el7
Dependency Installed:
                                      python-six.noarch 0:1.9.0-2.el7
  bzip2.x86 64 0:1.0.6-13.el7
Updated:
  chrony.x86 64 0:3.2-2.el7
Complete!
[root@sat6 ~]#
```

#redhat #rh

Enable chrony

systemctl enable chronyd systemctl start chronyd systemctl status chronyd



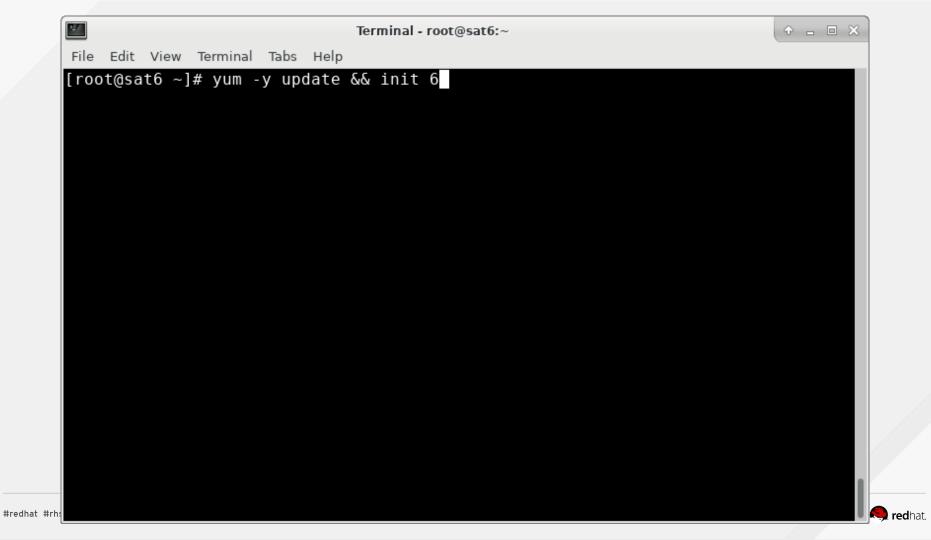


```
File Edit View Terminal Tabs Help
[root@sat6 ~]# systemctl enable chronyd
[root@sat6 ~]# systemctl start chronyd
[root@sat6 ~]# systemctl status chronyd
chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled; vendor pres
et: enabled)
   Active: active (running) since Thu 2018-04-26 19:17:44 CDT; 1min 26s ago
     Docs: man:chronyd(8)
           man:chrony.conf(5)
 Main PID: 1701 (chronyd)
   CGroup: /system.slice/chronyd.service
           └1701 /usr/sbin/chronyd
Apr 26 19:17:44 sat6.tc.redhat.com systemd[1]: Starting NTP client/server...
Apr 26 19:17:44 sat6.tc.redhat.com chronyd[1701]: chronyd version 3.2 startin...
Apr 26 19:17:44 sat6.tc.redhat.com chronyd[1701]: Frequency 0.000 +/- 1000000...
Apr 26 19:17:44 sat6.tc.redhat.com systemd[1]: Started NTP client/server.
Hint: Some lines were ellipsized, use -l to show in full.
[root@sat6 ~]#
```

Update and reboot

yum -y update && init 6





```
Terminal - tcameron@case:~
File Edit View Terminal Tabs Help
  systemd-libs.x86 64 0:219-57.el7
  systemd-sysv.x86 64 0:219-57.el7
  tar.x86 64 2:1.26-34.el7
  teamd.x86 64 0:1.27-4.el7
  tuned.noarch 0:2.9.0-1.el7
  tzdata.noarch 0:2018d-1.el7
  util-linux.x86 64 0:2.23.2-52.el7
  vim-minimal.x86 64 2:7.4.160-4.el7
  virt-what.x86 6\overline{4} 0:1.18-4.el7
  wpa supplicant.x86 64 1:2.6-9.el7
  xfsprogs.x86 64 0:4.5.0-15.el7
  yum.noarch 0:3.4.3-158.el7
  yum-rhn-plugin.noarch 0:2.0.1-10.el7
Replaced:
  grub2.x86 64 1:2.02-0.64.el7
  grub2-tools.x86 64 1:2.02-0.64.el7
  python-rhsm.x86 64 0:1.19.9-1.el7
  python-rhsm-certificates.x86 64 0:1.19.9-1.el7
Complete!
Connection to sat6 closed by remote host.
```

Connection to sat6 closed. #redhat #rhs [tcameron@case ~]\$



Open the firewall up

```
firewall-cmd --add-service=RH-Satellite-6
```

firewall-cmd --permanent --add-service=RH-Satellite-6

firewall-cmd --add-service=tftp

firewall-cmd --permanent --add-service=tftp

firewall-cmd --add-service=dhcp

firewall-cmd --permanent --add-service=dhcp



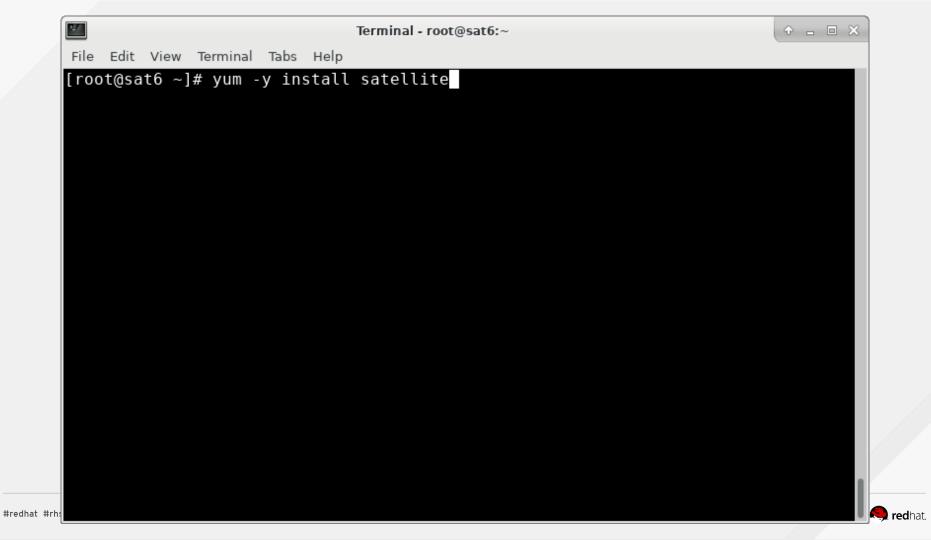
```
File Edit View Terminal Tabs Help
```

```
[root@sat6 ~]# firewall-cmd --add-service=RH-Satellite-6
success
[root@sat6 ~]# firewall-cmd --permanent --add-service=RH-Satellite-6
success
[root@sat6 ~]# firewall-cmd --add-service=tftp
success
[root@sat6 ~]# firewall-cmd --permanent --add-service=tftp
success
[root@sat6 ~]# firewall-cmd --add-service=dhcp
success
[root@sat6 ~]# firewall-cmd --permanent --add-service=dhcp
success
[root@sat6 ~]# firewall-cmd --permanent --add-service=dhcp
success
[root@sat6 ~]# firewall-cmd --permanent --add-service=dhcp
```

Install the Satellite RPM and run the installer

yum -y install satellite







File Edit View Terminal Tabs Help

```
tftp-server.x86 64 0:5.2-22.el7
tomcat.noarch 0:7.0.76-6.el7
tomcat-el-2.2-api.noarch 0:7.0.76-6.el7
tomcat-jsp-2.2-api.noarch 0:7.0.76-6.el7
tomcat-lib.noarch 0:7.0.76-6.el7
tomcat-servlet-3.0-api.noarch 0:7.0.76-6.el7
trousers.x86 64 0:0.3.14-2.el7
ttmkfdir.x86 64 0:3.0.9-42.el7
tzdata-java.noarch 0:2018d-1.el7
unzip.x86 64 0:6.0-19.el7
v8.x86 64 1:3.14.5.10-19.el7sat
wget.x86 64 0:1.14-15.el7 4.1
xalan-j2.noarch 0:2.7.1-23.el7
xerces-j2.noarch 0:2.11.0-17.el7 0
xml-commons-apis.noarch 0:1.4.01-16.el7
xml-commons-resolver.noarch 0:1.2-15.el7
xorg-x11-font-utils.x86 64 1:7.5-20.el7
xorg-x11-fonts-Type1.noarch 0:7.5-9.el7
yajl.x86 64 0:2.0.4-4.el7
yaml-cpp.x86 64 0:0.5.1-7.el7sat
zip.x86 64 0:3.0-11.el7
```

Complete!

#redhat #rhs [root@sat6 ~]#



Install the Satellite RPM and run the installer

```
satellite-installer --scenario satellite \
```

- --foreman-initial-organization "Red Hat" \
- --foreman-initial-location Austin \
- --foreman-admin-username administrator \
- --foreman-admin-password red22hat \
- --foreman-proxy-dns true \
- --foreman-proxy-dns-interface eth0 \
- --foreman-proxy-dns-zone tc.redhat.com \
- --foreman-proxy-dns-forwarders 8.8.8.8 \



Install the Satellite RPM and run the installer

- --foreman-proxy-dns-reverse 100.31.172.in-addr.arpa \
- --foreman-proxy-dhcp true \
- --foreman-proxy-dhcp-interface eth0 \
- --foreman-proxy-dhcp-range "172.31.100.128 172.31.100.254" \
- --foreman-proxy-dhcp-gateway 172.31.100.29 \
- --foreman-proxy-dhcp-nameservers 172.31.100.56 \
- --foreman-proxy-tftp true \
- --foreman-proxy-tftp-servername \$(hostname) \
- --foreman-proxy-puppetca true



Install the Satellite RPM and run the installer

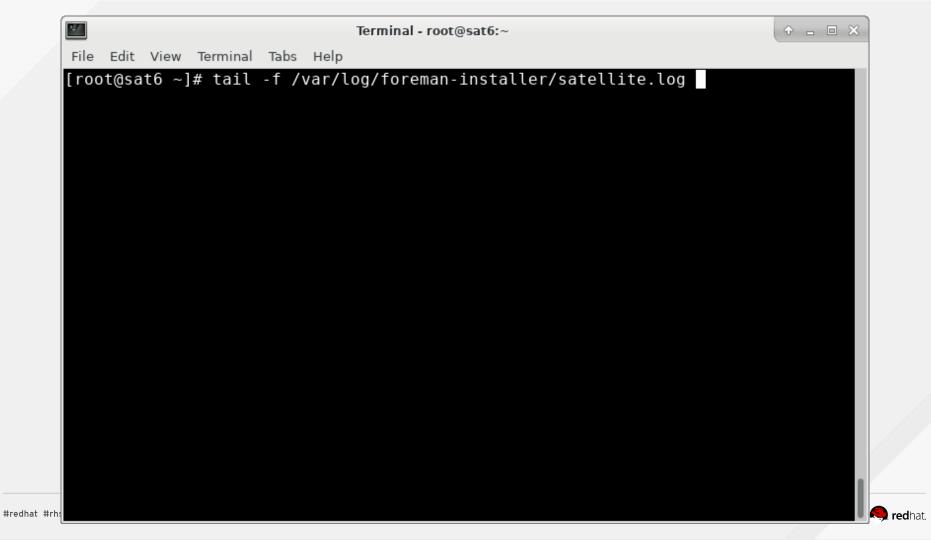
Note that if you copy and paste from this slide deck, Google slides changes the quotes to curly quotes. You'll need to make sure you're using console quotation marks when you paste and not the curly quotes.



File Edit View Terminal Tabs Help

```
[root@sat6 ~]# satellite-installer --scenario satellite \
> --foreman-initial-organization "Red Hat" \
> --foreman-initial-location Austin \
> --foreman-admin-username administrator \
 --foreman-admin-password red22hat \
 --foreman-proxy-dns true \
 --foreman-proxy-dns-interface eth0 \
> --foreman-proxy-dns-zone tc.redhat.com \
 --foreman-proxy-dns-forwarders 8.8.8.8 \
 --foreman-proxy-dns-reverse 100.31.172.in-addr.arpa \
 --foreman-proxy-dhcp true \
 --foreman-proxy-dhcp-interface eth0 \
 --foreman-proxy-dhcp-range "172.31.100.128 172.31.100.254" \
 --foreman-proxy-dhcp-gateway 172.31.100.29 \
 --foreman-proxy-dhcp-nameservers 172.31.100.56 \
 --foreman-proxy-tftp true \
 --foreman-proxy-tftp-servername $(hostname) \
 --foreman-proxy-puppetca true
```



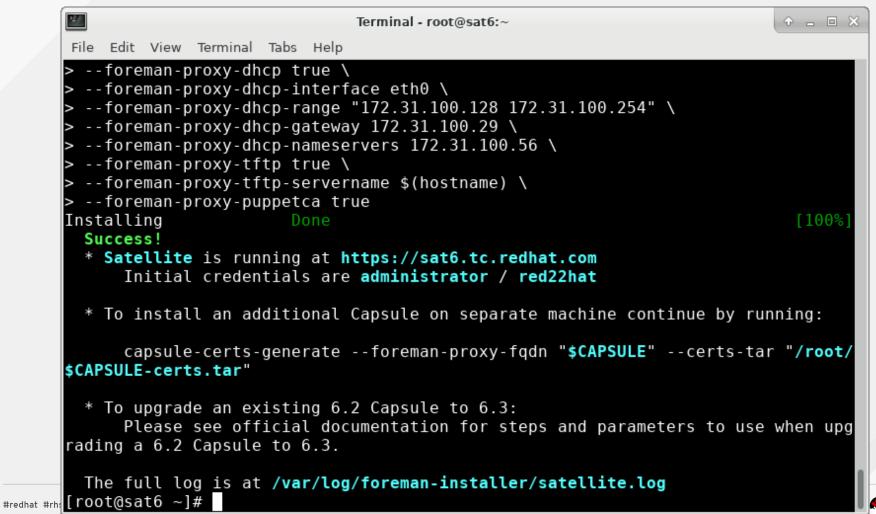




File Edit View Terminal Tabs Help

```
[root@sat6 ~]# tail -f /var/log/foreman-installer/satellite.log
 INFO 2018-04-27 10:15:34 main]
                                  Class[Tftp::Params]: Evaluated in 0.00 seconds
 INFO 2018-04-27 10:15:34 main]
                                  Concat::Fragment[foreman-serversignature]: Sta
rting to evaluate the resource
 INFO 2018-04-27 10:15:34 main]
                                  Concat::Fragment[foreman-serversignature]: Eva
luated in 0.00 seconds
[ INFO 2018-04-27 10:15:34 main] /Stage[main]/Foreman::Config::Passenger/Apache
::Vhost[foreman]/Concat::Fragment[foreman-serversignature]/Concat fragment[forem
an-serversignature]: Starting to evaluate the resource
[ INFO 2018-04-27 10:15:34 main] /Stage[main]/Foreman::Config::Passenger/Apache
::Vhost[foreman]/Concat::Fragment[foreman-serversignature]/Concat fragment[forem
an-serversignature]: Evaluated in 0.00 seconds
 INFO 2018-04-27 10:15:34 main] /Stage[main]/Foreman proxy::Tftp/Package[grub2
-efi-x64]: Starting to evaluate the resource
[DEBUG 2018-04-27 10:15:34 main] Executing '/usr/bin/rpm -q grub2-efi-x64 --nos
ignature --nodigest --qf %{NAME} %|EPOCH?{%{EPOCH}}:{0}| %{VERSION} %{RELEASE} %
{ARCH}\n'
[DEBUG 2018-04-27 10:15:34 main]
                                 Executing '/usr/bin/yum -d 0 -e 0 -y list grub
2-efi-x64'
[DEBUG 2018-04-27 10:15:41 main]
                                  Package[grub2-efi-x64](provider=yum): Ensuring
 => present
[DEBUG 2018-04-27 10:15:41 main] Executing '/usr/bin/yum -d 0 -e 0 -y install g
rub2-efi-x64'
```







What is the manifest?

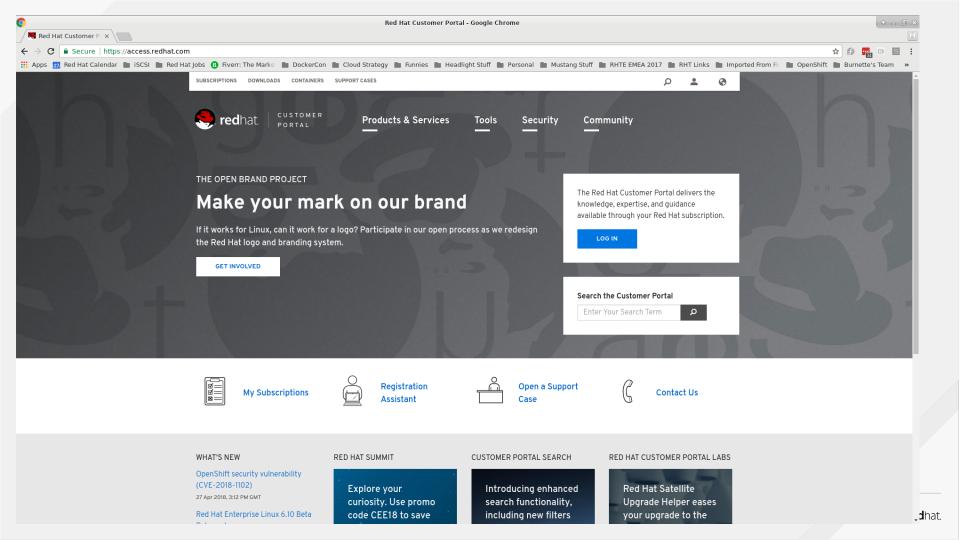
A manifest is a zip archive with gpg-signed XML documents inside which allow you to allocate your subscriptions to the Satellite server. You can allocate all or a subset of your subscriptions on a per-organization basis.

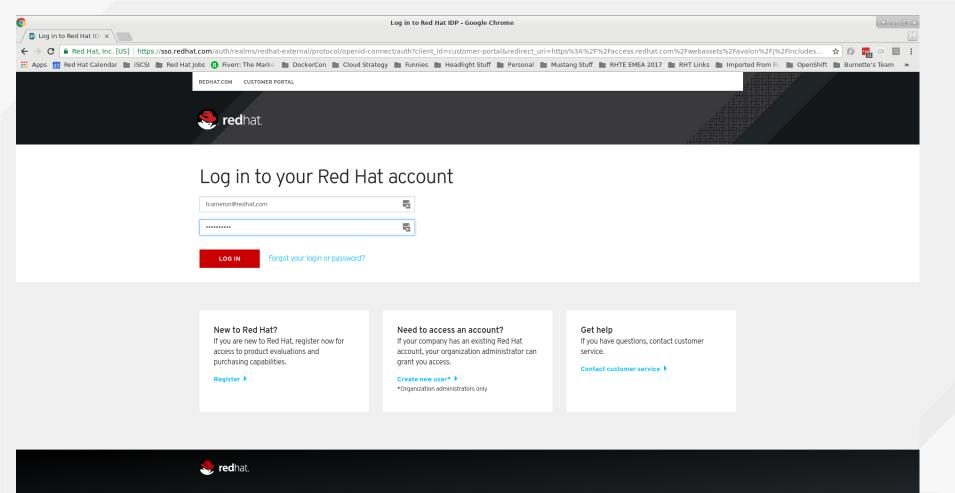


Create the manifest

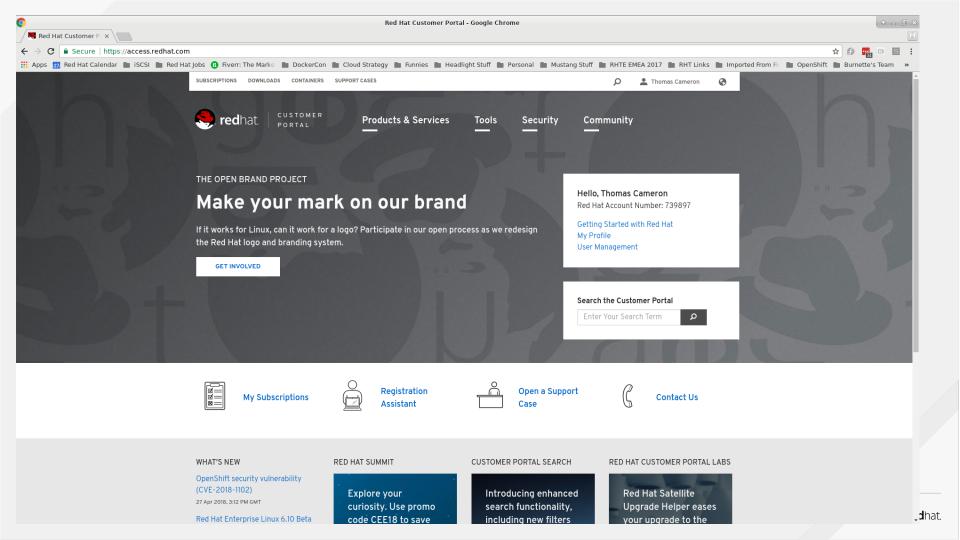
Go to http://access.redhat.com, log in, and choose "My Subscriptions."

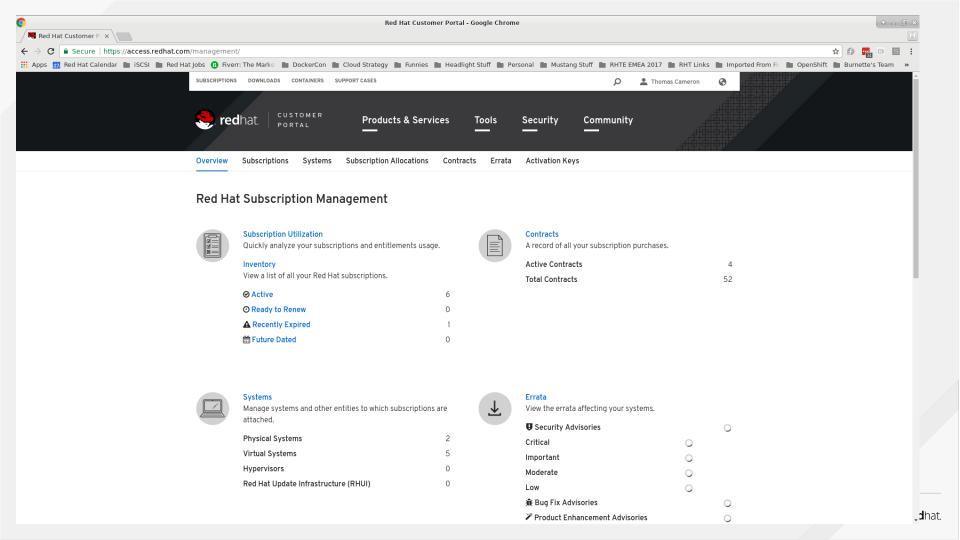












Create the manifest

Scroll down and choose "Subscription Allocations"

In my lab, I already have a production Satellite server called satellite.tc.redhat.com - you can ignore that.





Red Hat Customer Pox

Systems

Manage systems and other entities to which subscriptions are attached.

| Physical Systems | 2 |
|--------------------------------------|---|
| Virtual Systems | 5 |
| Hypervisors | 0 |
| Red Hat Update Infrastructure (RHUI) | 0 |



Errata

View the errata affecting your systems.

| Security Advisories | | 31 |
|--------------------------------|----|-----|
| Critical | 4 | |
| Important | 11 | |
| Moderate | 13 | |
| Low | 3 | |
| 棄 Bug Fix Advisories | | 166 |
| Product Enhancement Advisories | | 50 |



Subscription Allocations

Allocate subscriptions for export to an on-premise management application such as Red Hat Satellite.

| Red Hat Satellite | 1 |
|----------------------------|---|
| Subscription Asset Manager | 0 |



Activation Keys

Use to pre-define subscriptions and auto-attach preferences during registration.

Activation Keys

Red Hat Subscription Management

Find out what's new and discover how to optimize the management of your subscriptions

Learn more about RHSM

Purchase Subscriptions

Purchase subscriptions online Contact Sales

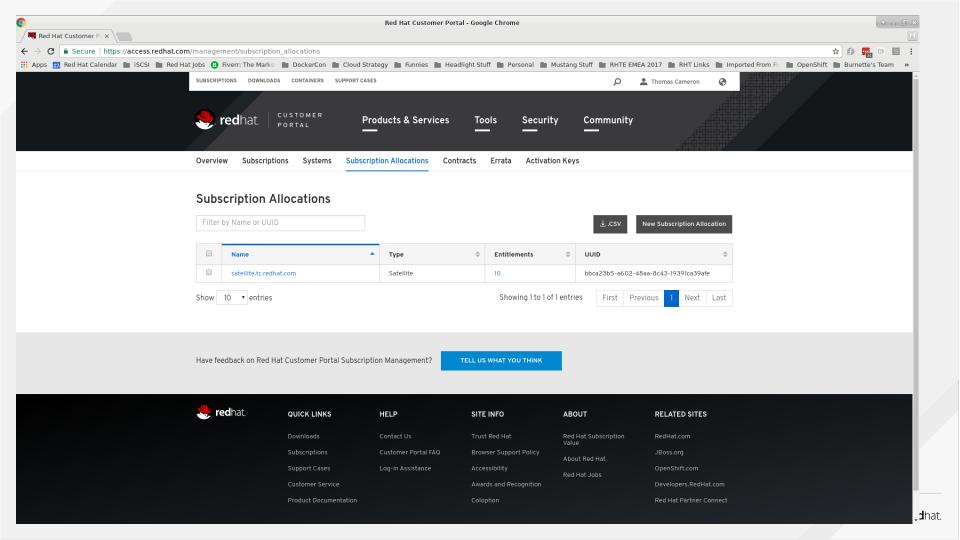
If you have purchased a subscription from a third party, you may need to activate your subscription.

Help with registering systems

If you are having trouble registering a system, try our Registration Assistant in Access Labs.

Go to Registration Assistant



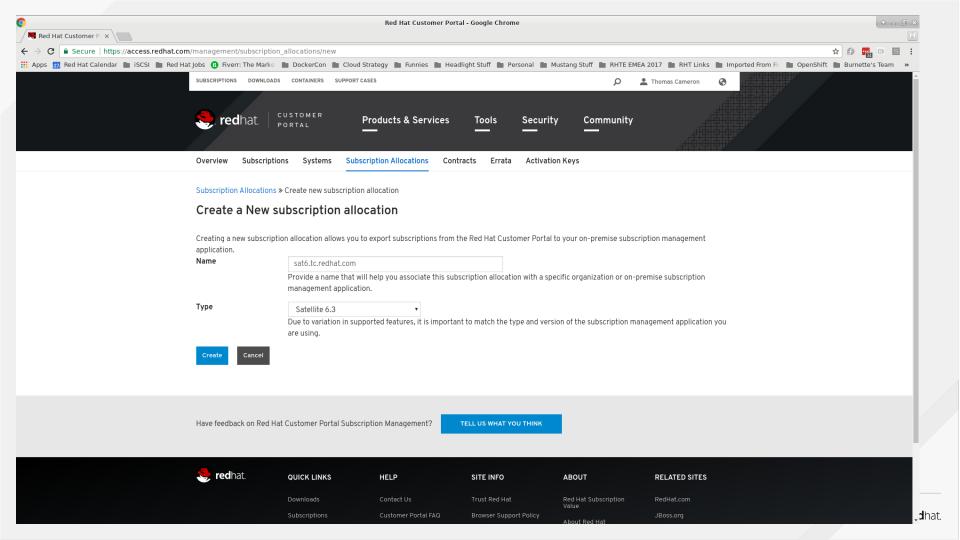


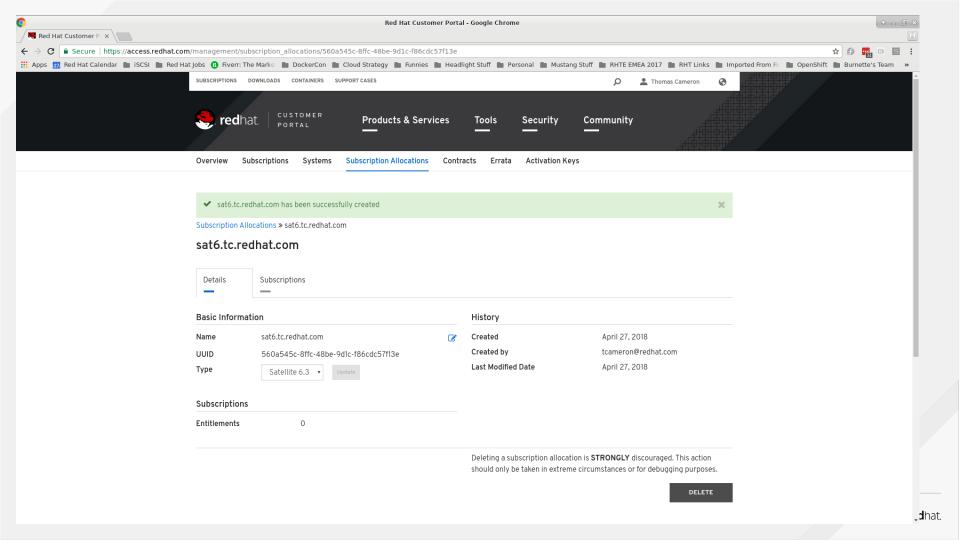
Create the manifest

We'll define a new Satellite server called sat6.tc.redhat.com for use for the rest of this demo.

Click "New Subscription Allocation," set the Satellite name, the version, and click "Create."







Create the manifest

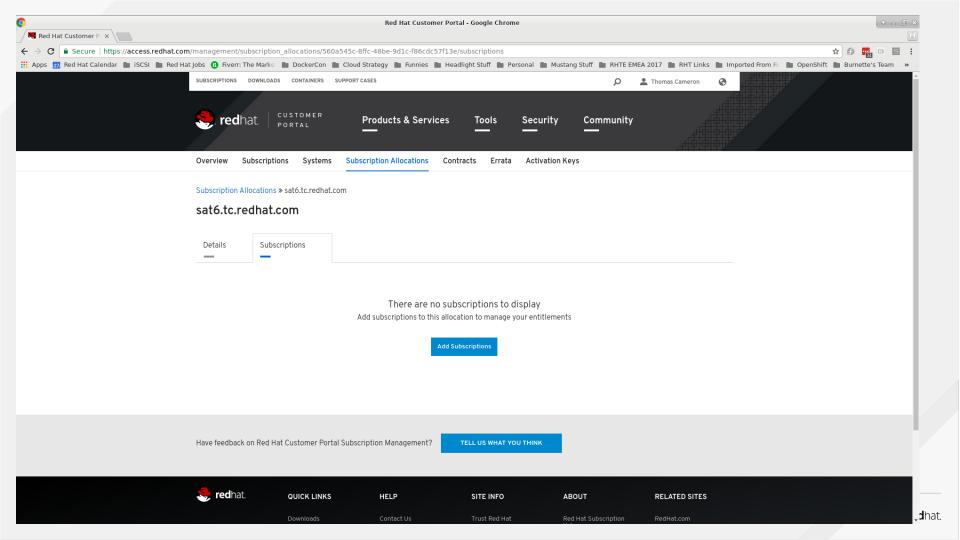
Go to the "Subscriptions" tab and allocate the subscriptions your organization has paid for to the Satellite.

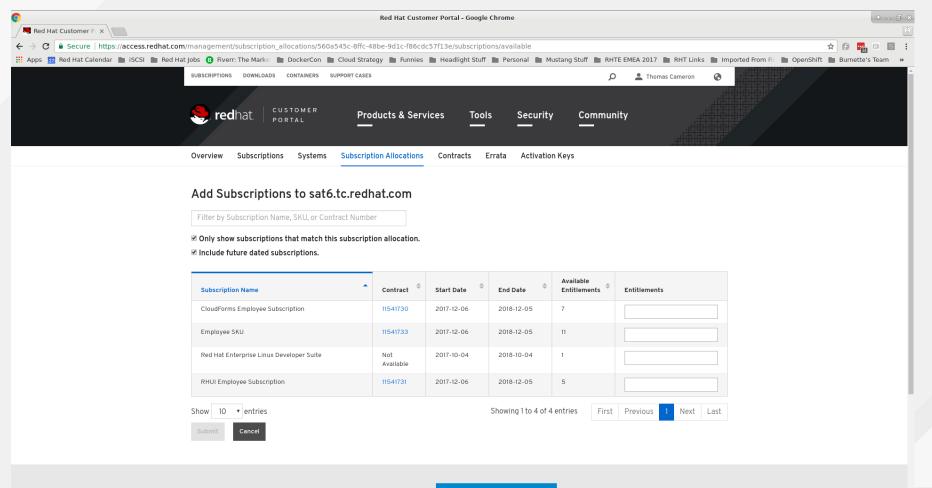
- You can keep some on the CDN so that systems can attach directly
- You can allocate some to the Satellite server(s) in your organization

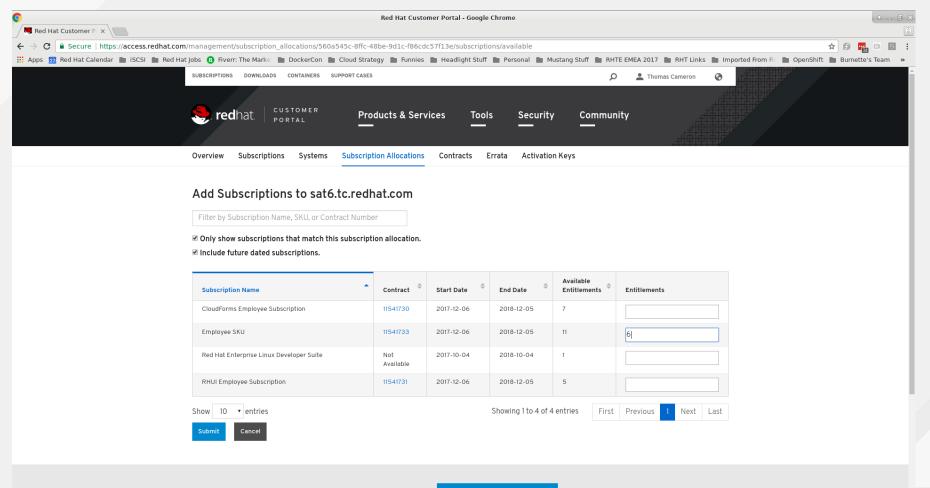
In this example, I assign 6 of my remaining 11 subscriptions to this new Satellite.

This means I can connect 6 systems to this satellite for management.







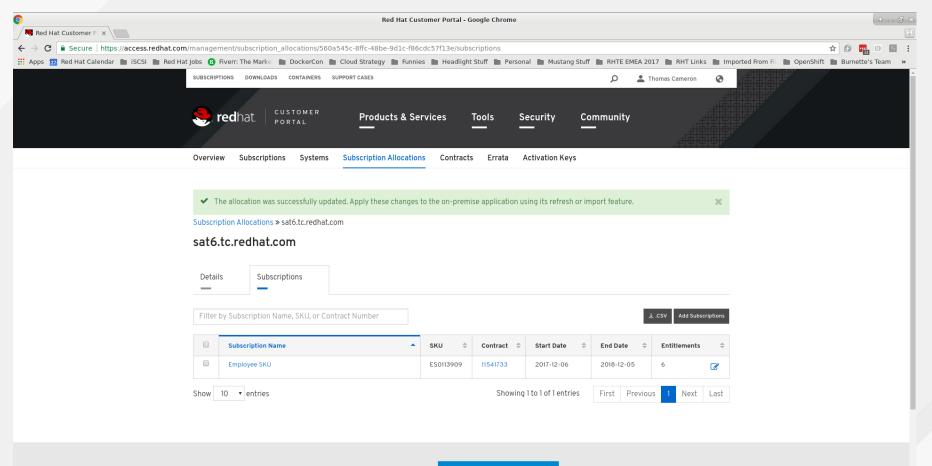


Create the manifest

After a few moments, you can refresh the screen and you'll see the "Export Manifest" button appear.

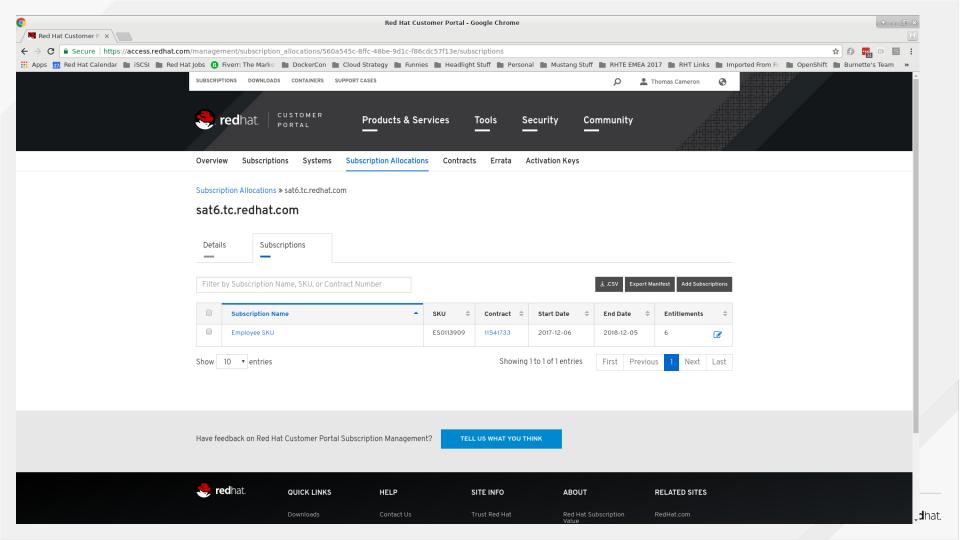
Click it, and download the zip file. It is generated with the Satellite server's name and a date stamp.

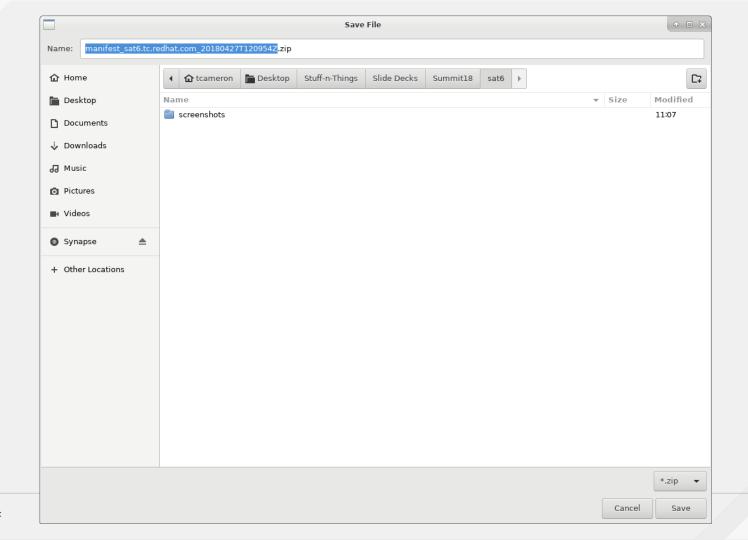




Have feedback on Red Hat Customer Portal Subscription Management?

TELL US WHAT YOU THINK



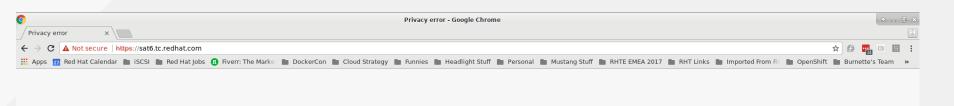


redhat

Install the manifest

Log into your Satellite server through the web UI. It uses a self-signed certificate, so you'll have to go through the security dance.







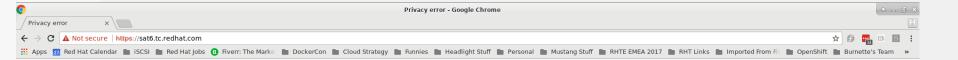
Your connection is not private

Attackers might be trying to steal your information from **sat6.tc.redhat.com** (for example, passwords, messages, or credit cards). <u>Learn more</u>
NET::ERR_CERT_AUTHORITY_INVALID

Automatically send some <u>system information and page content</u> to Google to help detect dangerous apps and sites. <u>Privacy policy</u>

ADVANCED

Back to safet





Your connection is not private

Attackers might be trying to steal your information from **sat6.tc.redhat.com** (for example, passwords, messages, or credit cards). <u>Learn more</u>
NET::ERR_CERT_AUTHORITY_INVALID

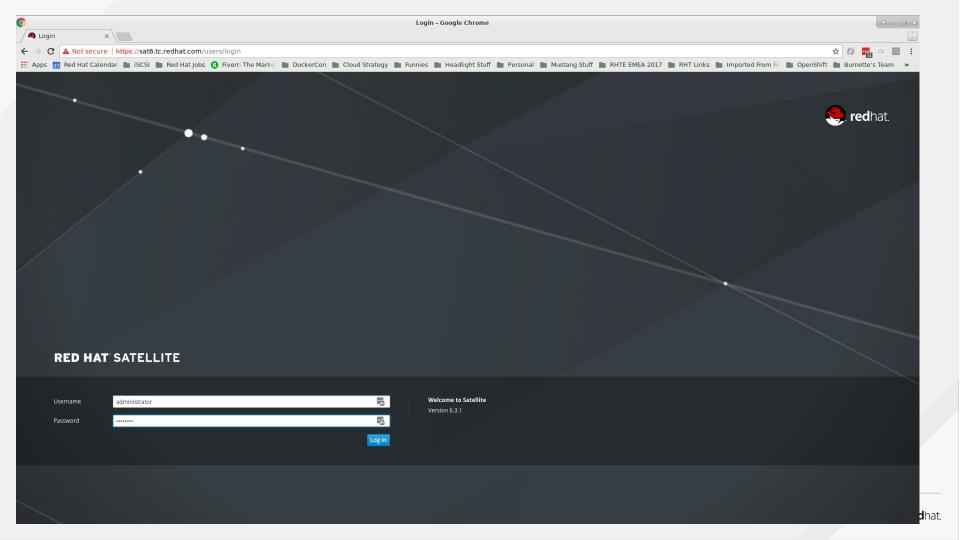
Automatically send some <u>system information and page content</u> to Google to help detect dangerous apps and sites. <u>Privacy policy</u>

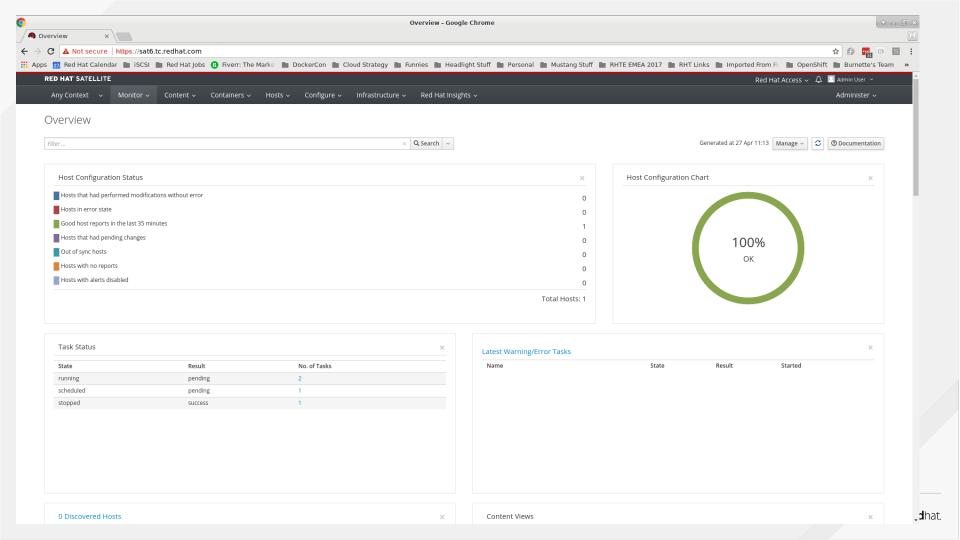
HIDE ADVANCED

Back to safet

This server could not prove that it is **sat6.tc.redhat.com**; its security certificate is not trusted by your computer's operating system. This may be caused by a misconfiguration or an attacker intercepting your connection.

Proceed to sat6.tc.redhat.com (unsafe)



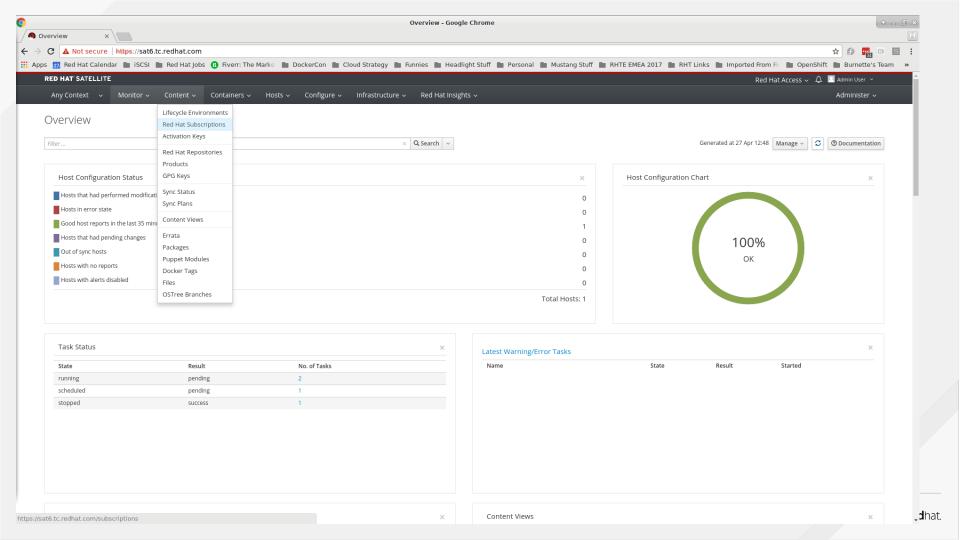


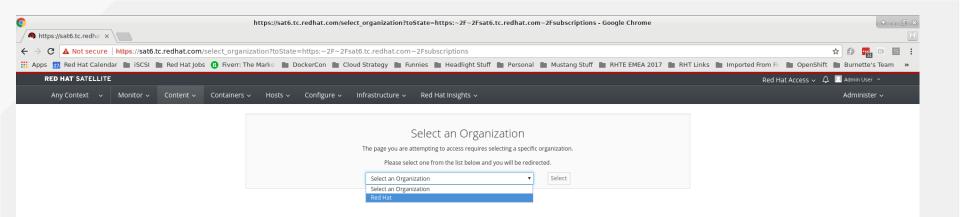
MANIFEST

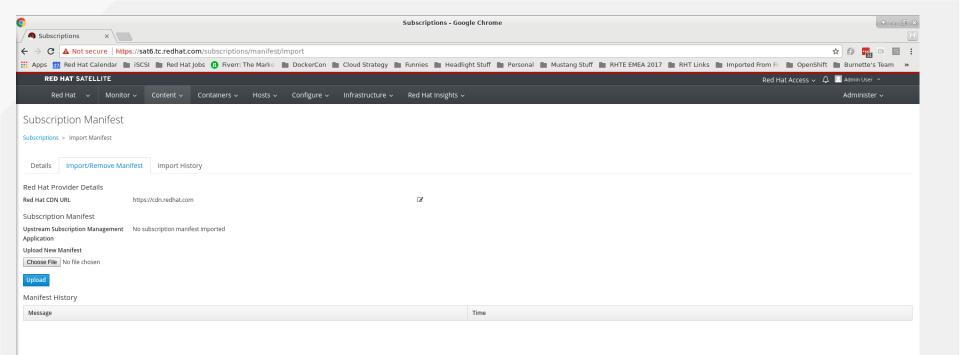
Install the manifest

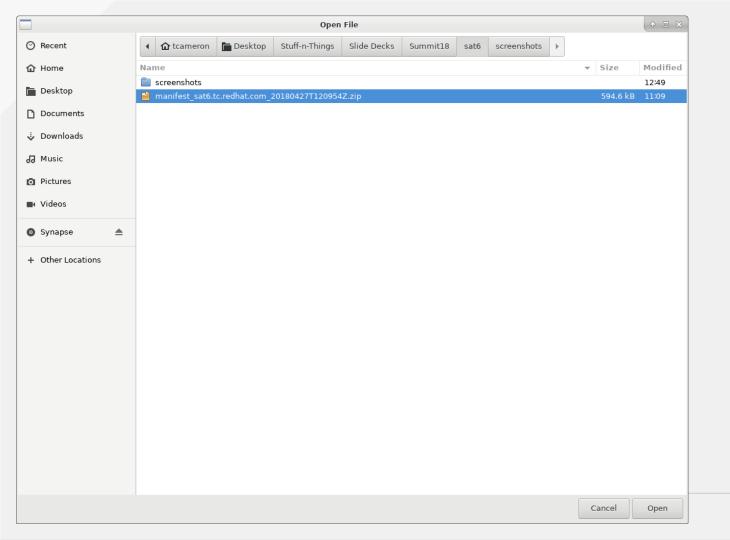
Got to the Content menu, and choose Red Hat Subscriptions

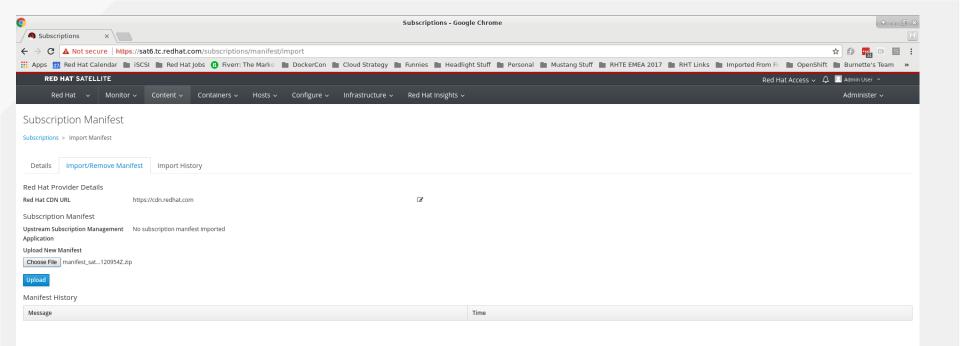


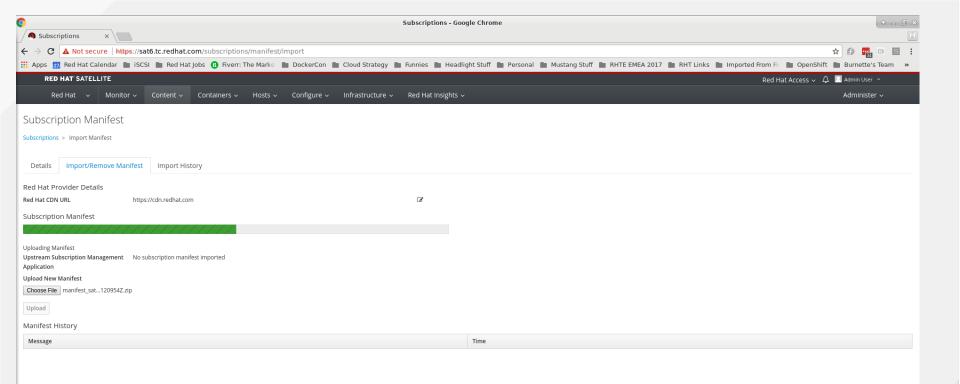


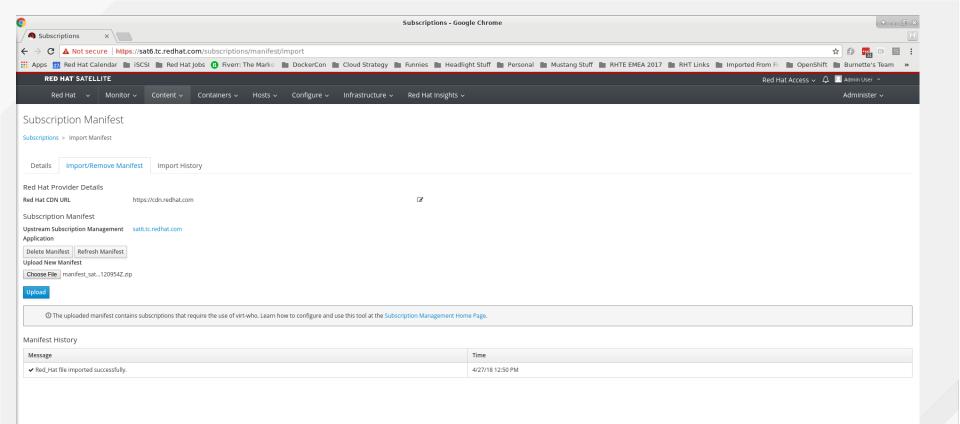














Definition

In Satellite, we use the concept of a **Product** as an organizational unit to group multiple repositories together. Such repository collections are analogous to the concept of real life products. For example, if we view Red Hat Enterprise Linux Server as a Product in Satellite, the repositories for that product might consist of different versions (6.0, 6.1, 7.0), different architectures (i386, x86_64, s390x, arm), and different add-ons (Optional repositories, Supplementary repositories, Virt V2V tools). This unifies all related repositories within the Definitive Media Library (DML). Using Products ensures repositories that depend on each other are synchronized together. For Red Hat repositories, products are created automatically after enabling the repository.

https://access.redhat.com/documentation/en-us/red_hat_satellite/6.3/html/content_management_guide/importing_red_hat_content



Creating a new product

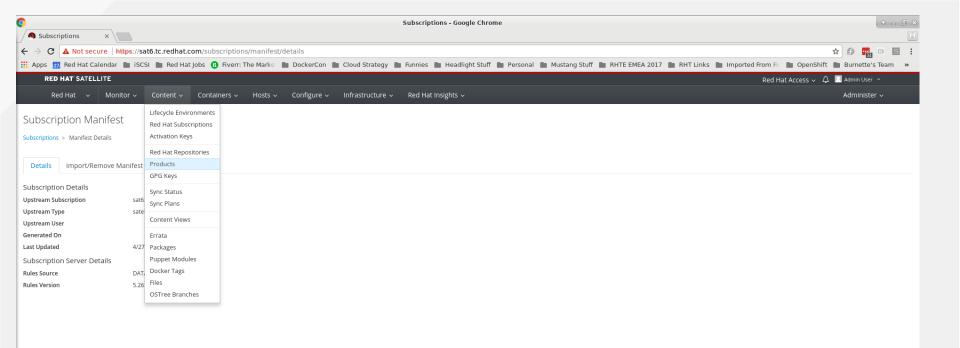
In this case, we want to make the packages from the Extra Packages for Enterprise Linux (EPEL) available in the enterprise, so we'll define a new product for use for our distributions.

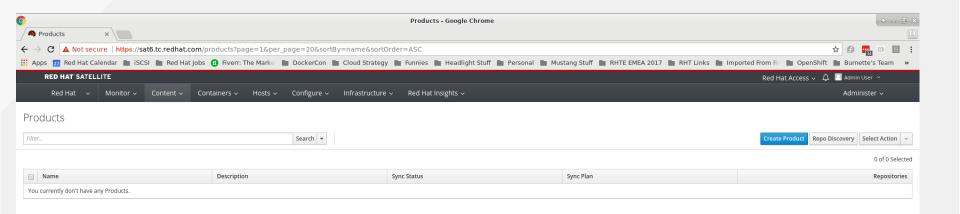


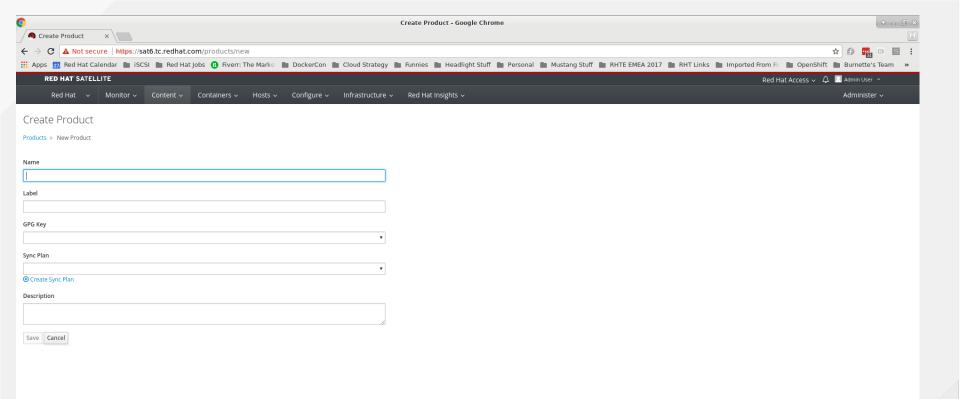
Creating a new product

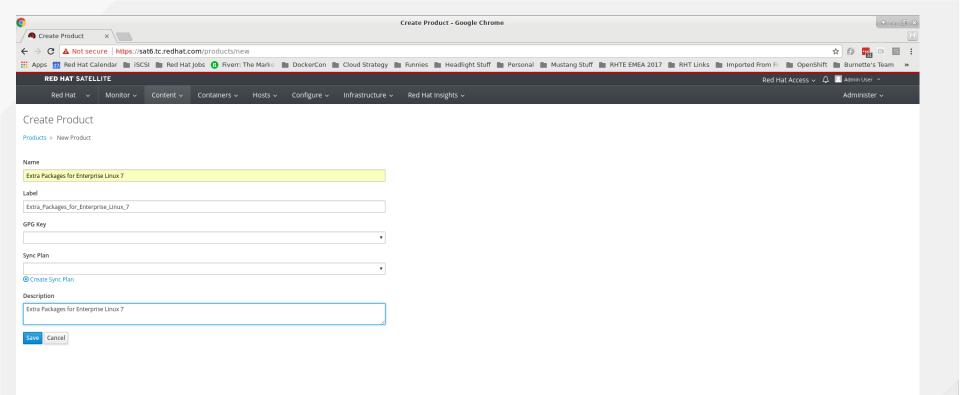
Navigate to Content, then to Products, and create a new product











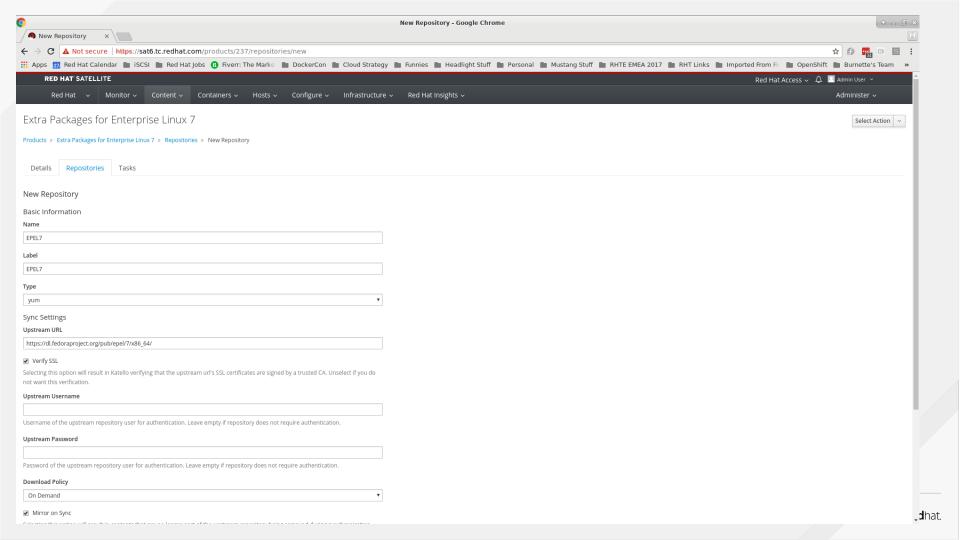
Creating a new product

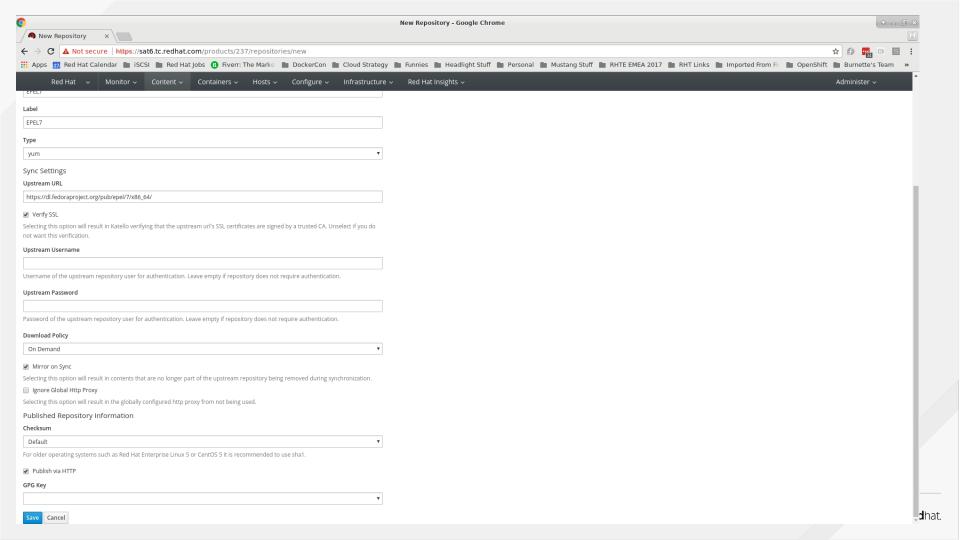
Now we define the repository for the product. It can be either the Red Hat content delivery network (CDN), which we'll see later, or a third party repo.

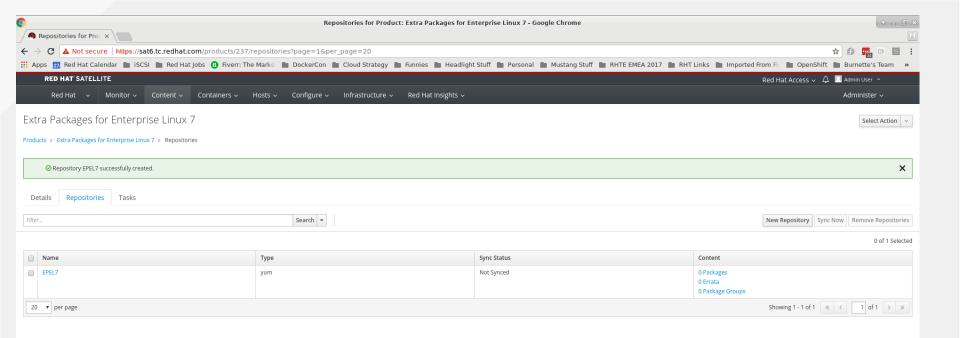
Note the Download Policy now includes three options:

- Immediate: The default download policy for repositories. When using this policy, all content is downloaded before publishing the repository.
- Background: A download policy that actively retrieves content units in the background after a publish has been performed.
- On-Demand: A download policy that only saves a content unit locally after a client has requested that content unit.





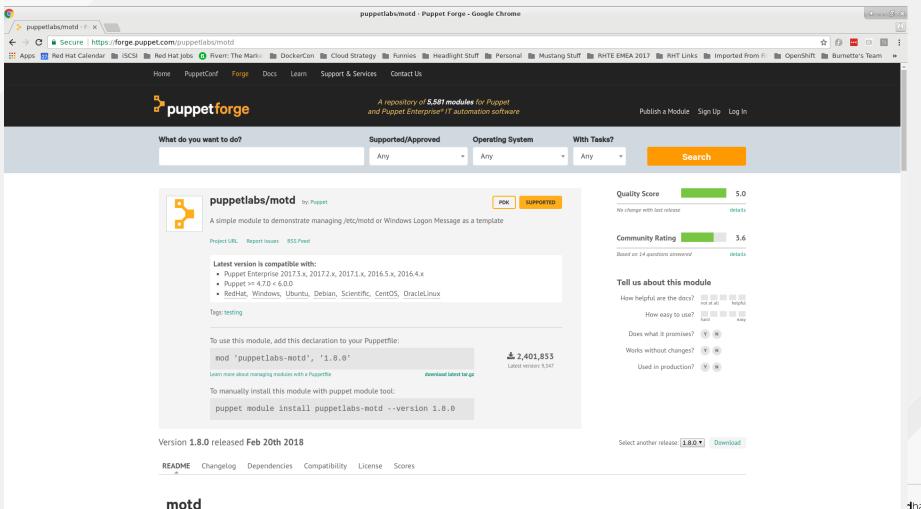




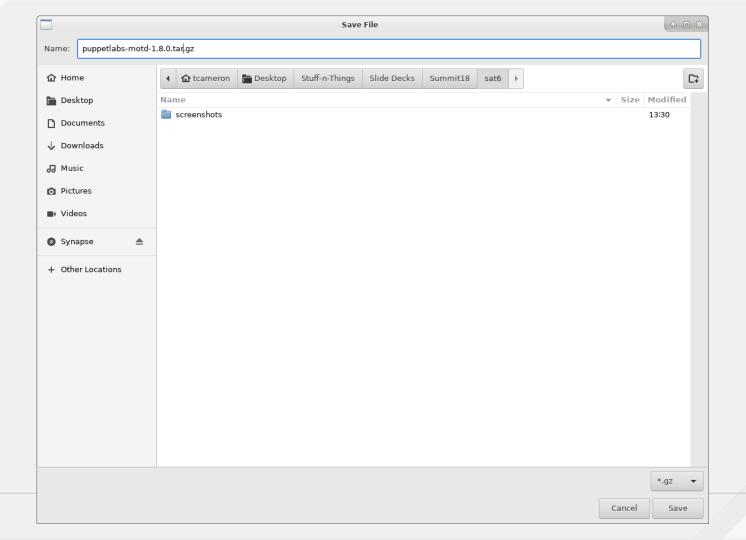
Adding Puppet module(s)

Satellite 6 currently uses Puppet for configuration management. In this example, I'll set up a simple message of the day (MOTD) Puppet module





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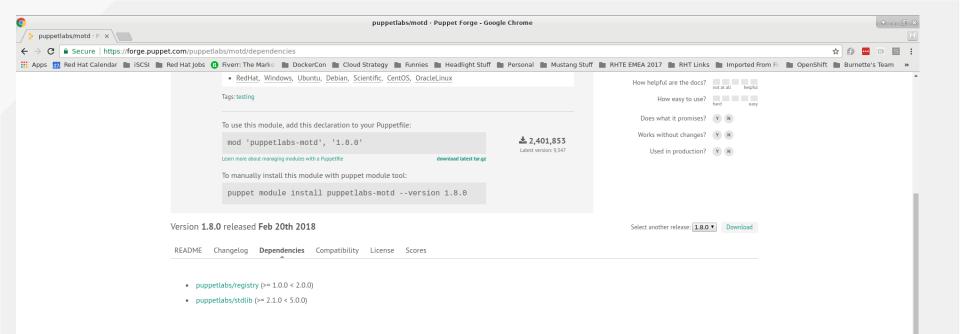
#redhat #rhsummit

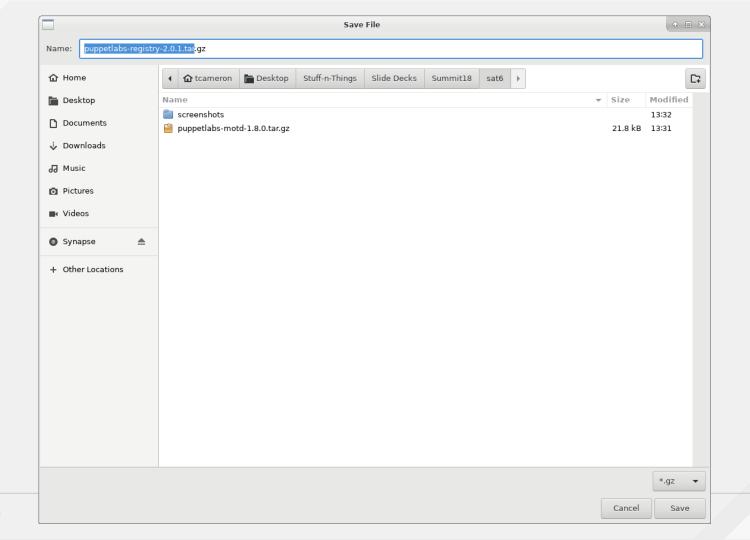
redhat

Adding Puppet module(s)

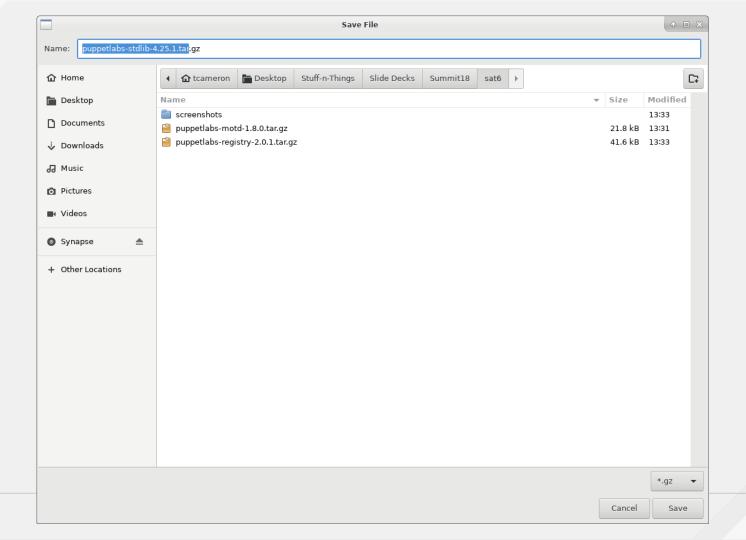
Note that you need additional Puppet modules for the MOTD module to work!



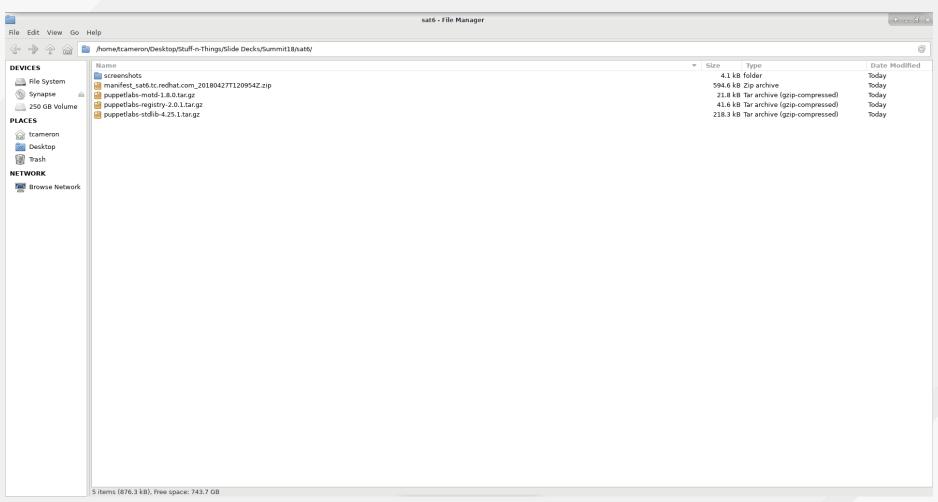




nedhat



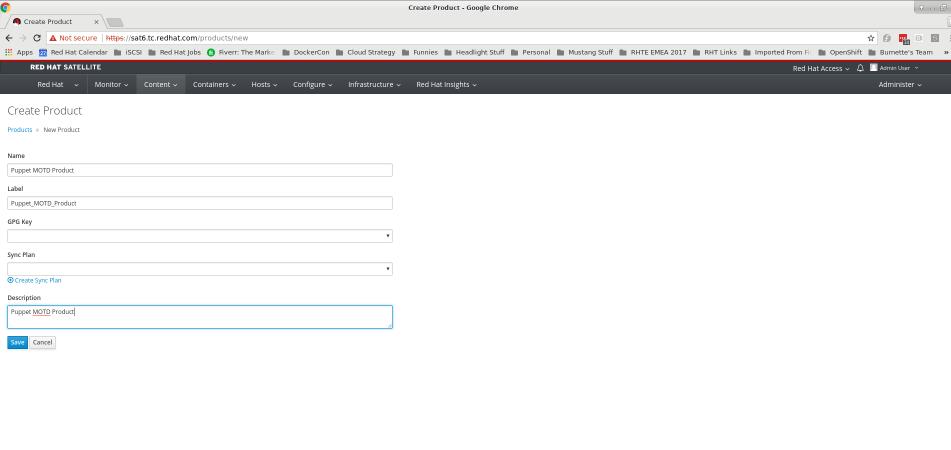
redhat



Adding Puppet module(s)

Add the Puppet product to your Satellite server





0 - 8 ×

☆ ● ■ □ □ :

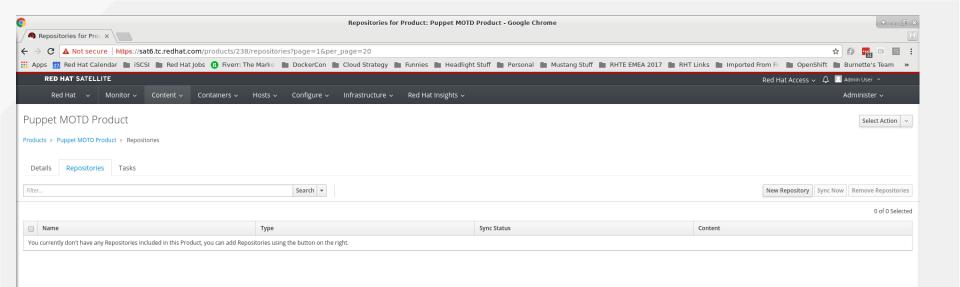
Administer v

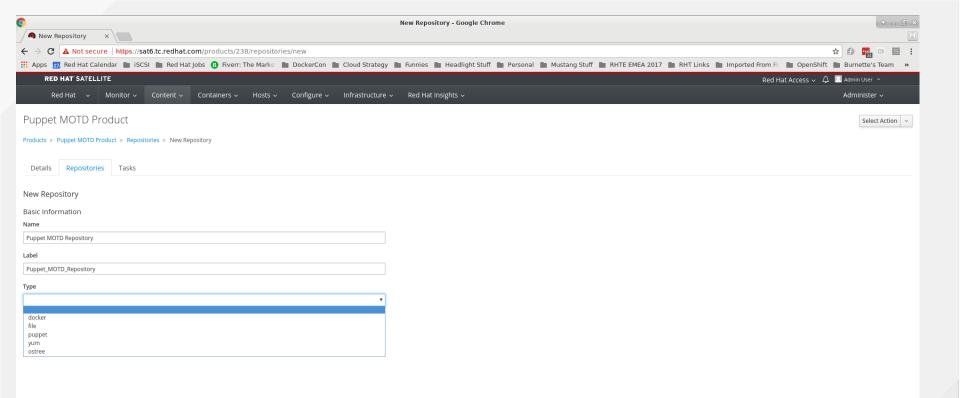
Red Hat Access 🗸 🗘 🔲 Admin User 🔻

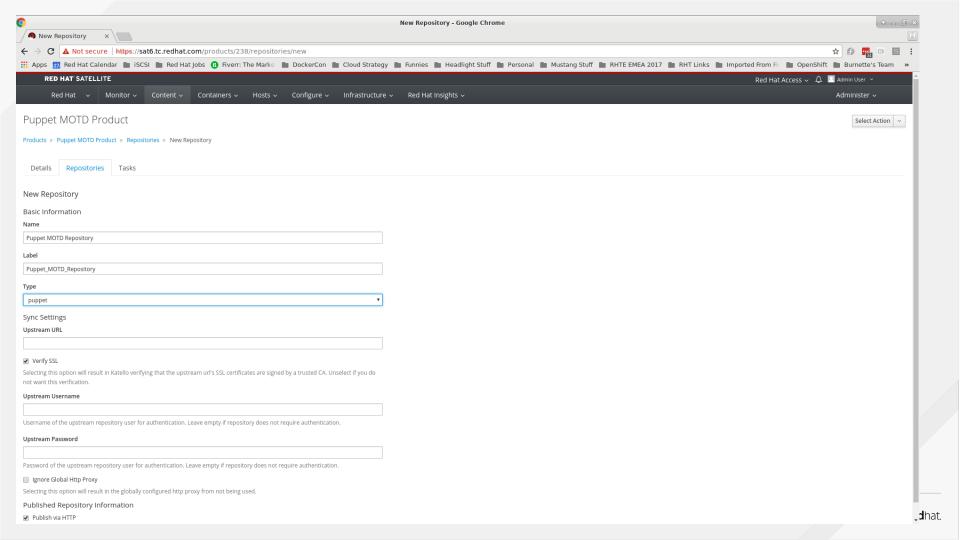
Adding Puppet module(s)

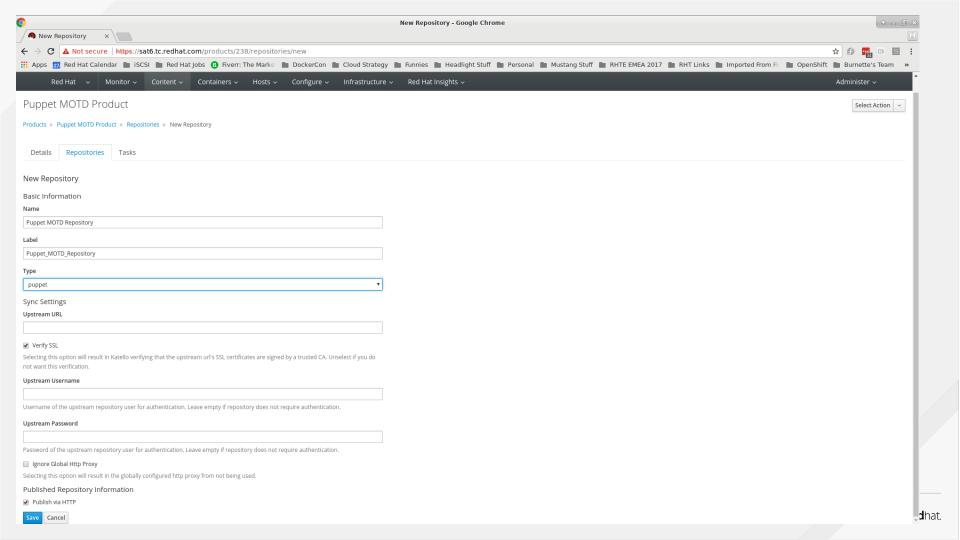
Create a repository for the Puppet modules

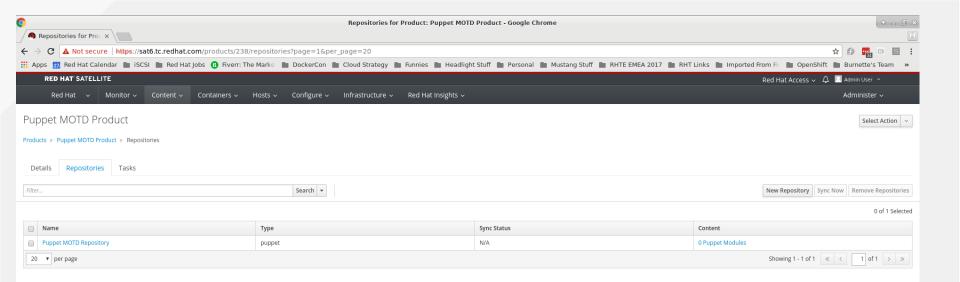










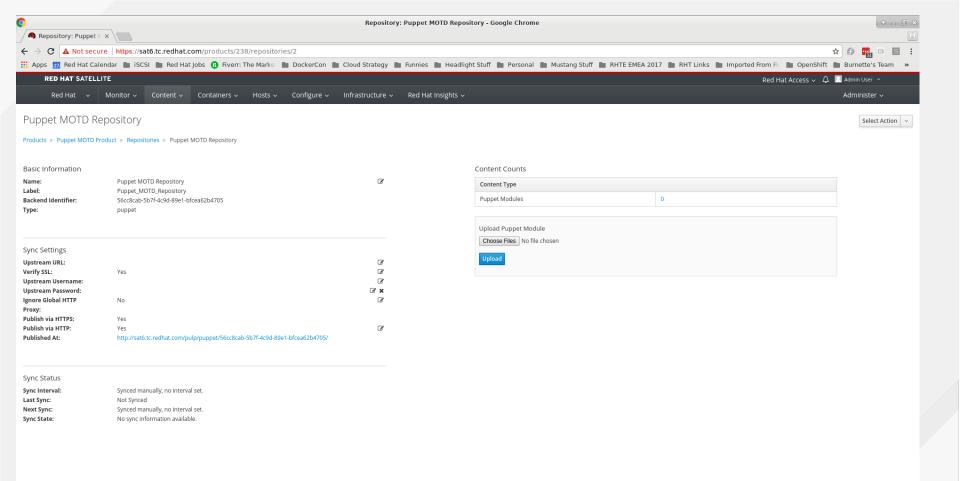


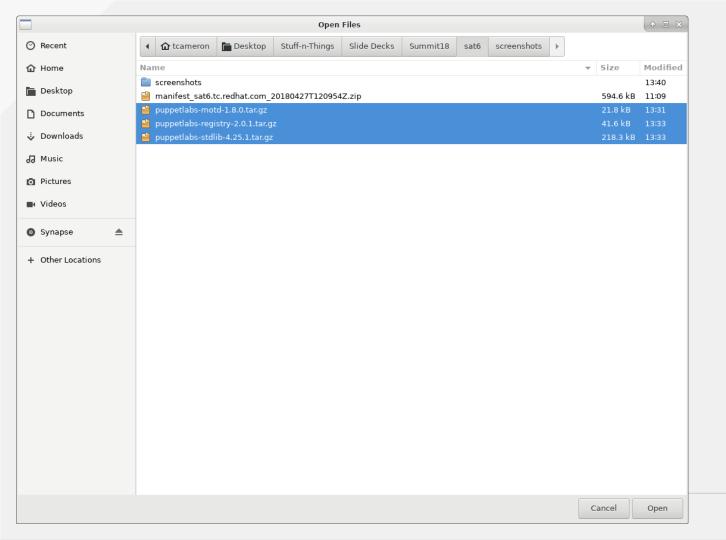
PRODUCTS

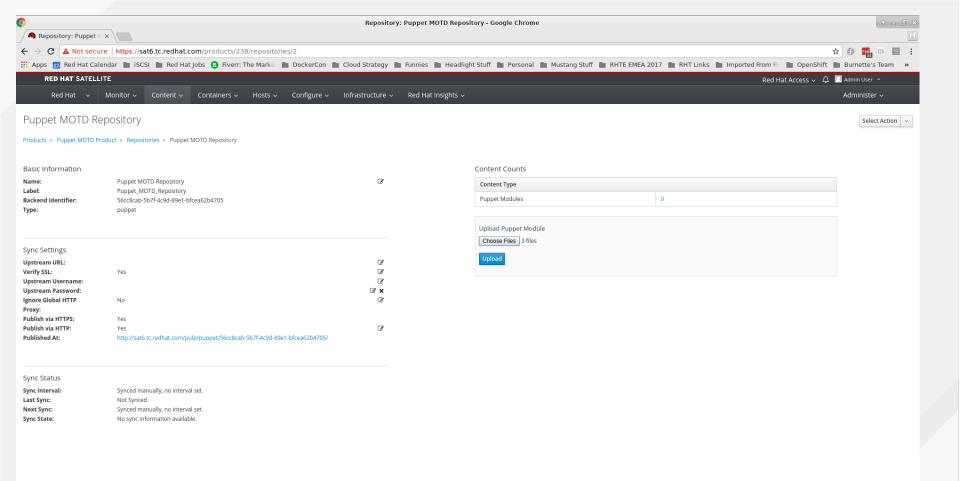
Adding Puppet module(s)

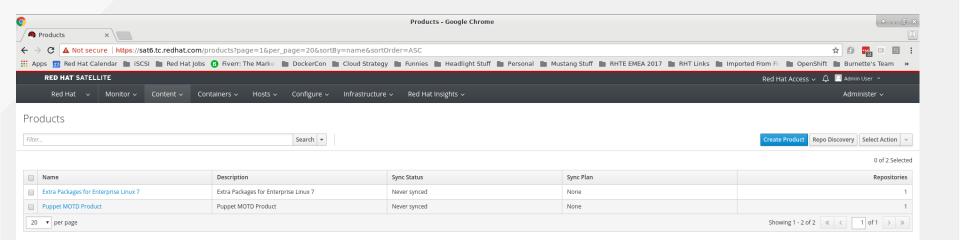
Add the modules to your repository













What is a repository?

Repositories are groupings of packages which make up part of a product. For instance, the base OS (RHEL 6, RHEL 7) is actually made up of multiple repositories per architecture (x86, x86_64) – one for 6.0, one for 6.1, one for 7.0, one for 7.1, and so on. There are also repositories for Supplementary, Optional, Extras, clustering, OpenStack, etc. This is where you can choose which of the Red Hat repositories you want synchronized with your Satellite server. You may have standardized on RHEL 6.4 or later, so there's no need to synchronize 6.0, 6.1, etc. If you're not using OpenStack yet, don't bother syncing it.

There are two types of repositories we generally care about.

- The Product repositories contain every single RPM which has ever been released for a distribution. So if a mythical package "foo" has had three releases (foo-1.0.1, foo-1.0.2, and foo-10.0.3) between 7.2 and 7.3, for instance, all three of those packages will be available in the Product repositories.
- The kickstart repositories contain only those packages which appear on the distribution DVD iso images. They are only used for installing the operating system on Satellite-managed systems.



Adding repositories to sync

Choose Content and the Red Hat Repositories. For this demo, I'll set up a fairly simple environment.

- Red Hat Enterprise Linux 7
 - Core Linux Distribution
- Extras for Red Hat Enterprise linux 7
 - Contains rapidly evolving technologies that may eventually make it into the base repository. Some example packages are atomic, buildah, docker and runc
- Optional for Red Hat Enterprise linux 7
 - Open source software that either compliments software out of the base repository, or software that users would like but Red Hat generally does not want to support.
- Supplementary for Red Hat Enterprise Linux 7
 - Proprietary licensed software some customers want. Currently, this repository only contains IBM Java, VirtIO para-virtualized drivers for Windows and some fonts.
- Red Hat Satellite 6.3 Tools for Red Hat Enterprise Linux 7
- Red Hat Satellite 6.3 Tools Puppet 4 for Red Hat Enterprise Linux 7

Note that RH-Common should not be used with newer Satellite servers!

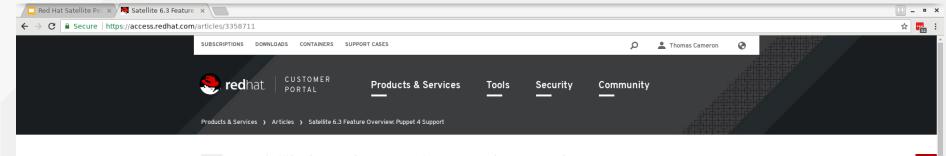


Adding repositories to sync

Notes:

- Red Hat Satellite 6.3 Tools Puppet 4 for Red Hat Enterprise Linux 7 is only for environments where
 you've upgraded to Puppet 4. I'm syncing it for a future upgrade, out of scope for today's
 presentation.
- See https://access.redhat.com/articles/3358711 and
 https://access.redhat.com/documentation/en-us/red_hat_satellite/6.3/html/upgrading_and_updat_ing_red_hat_satellite/upgrading_puppet-1
 for details.







Satellite 6.3 Feature Overview: Puppet 4 Support

Updated March 23 2018 at 11:14 AM - English -



Satellite 6.3 includes support for Puppet 4. Note that the Puppet 3 is the default option when installing Satellite 6.3.

Puppet has been a central feature of Satellite for many years, and upgrading the supported Puppet to version 4 helps to keep embedded Puppet relevant for customers using Puppet Open Source.

Puppet 4 brings many innovations to the Puppet Open Source environment, including but not limited to:

- Puppet Server and static catalogs. The Clojure-based Puppet Server replaces the Apache+Passenger parts of the network stack. With it, one
 master serves more agents, faster.
- Static catalogs optimize the most computationally expensive part of Puppet by reducing both the number of catalogs compiled and file
 checksum requests as the agents are applying their catalogs.
- A completely rewritten parser, new constructs like iterators and lambdas, and an opt-in data type system all make for modules that do more
 with less work.
- · Improved error messages.
- Structured facts allow you to access inventory data such as network interfaces more intuitively.
- · Resources apply in top-down order
- All-in-one (AlO) package that includes Puppet 4, both Facter 2.4 and CFacter 0.4, the latest Hiera and MCollective, Ruby 2.1.5, OpenSSL 1.0.0r and gem dependencies.
- Puppet Collections, a new way of delivering our open source software. A Puppet Collection is a package repository that ensures open source
 packages that are in a particular collection work together.

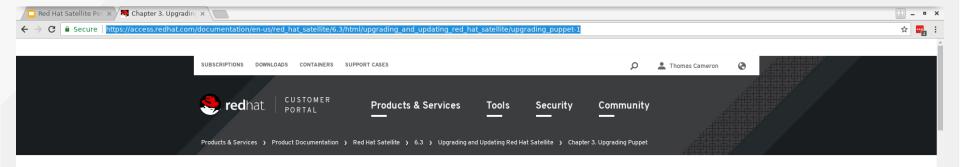
The entirety of differences between Puppet 3.8 and Puppet 4 is summarized at https://docs.puppet.com/puppet/4.0/release_notes.html

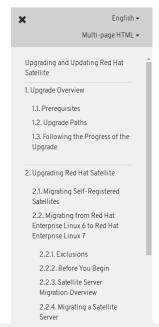
Support Status

Red Hat Satellite 6.3 supports Puppet 4 when the Satellite server is fully updated to the latest release of RHELT.

There are a few other items to consider when using Satellite with Punnet-







CHAPTER 3. UPGRADING PUPPET

Red Hat Satellite 6.3 uses Puppet 3 by default, but you can also upgrade to Puppet 4. Satellite 6.4 will support only Puppet 5. The migration path for Puppet 5 supports only Puppet 4 to Puppet 5 migrations. Therefore if you are using a version of Puppet prior to version 4, you must upgrade to Puppet 4 prior to upgrading to Satellite 6.4. Satellite 6.3 includes an upgrade path to Puppet 4, and Red Hat recommends you do it now to prepare for your next upgrade. This chapter describes the process of upgrading to Puppet 4.

3.1. Upgrade Path

You must first review your Puppet modules, and make changes, to ensure they are compatible with Puppet 4 before upgrading Puppet. For example, if the client has blank configuration values after running the Puppet agent, updating Puppet modules is indicated.

Red Hat Satellite and Capsules do not have to be upgraded to Puppet 4 at the same time. You have the flexibility to upgrade Capsules depending on your progress with testing and upgrading Puppet modules. An alternative is to install new Capsules and move hosts to them after testing. You can use Satellite web UI, the Hammer CLI, or the bootstrap script to move hosts from a Puppet 3 Capsule to a Puppet 4 Capsule.

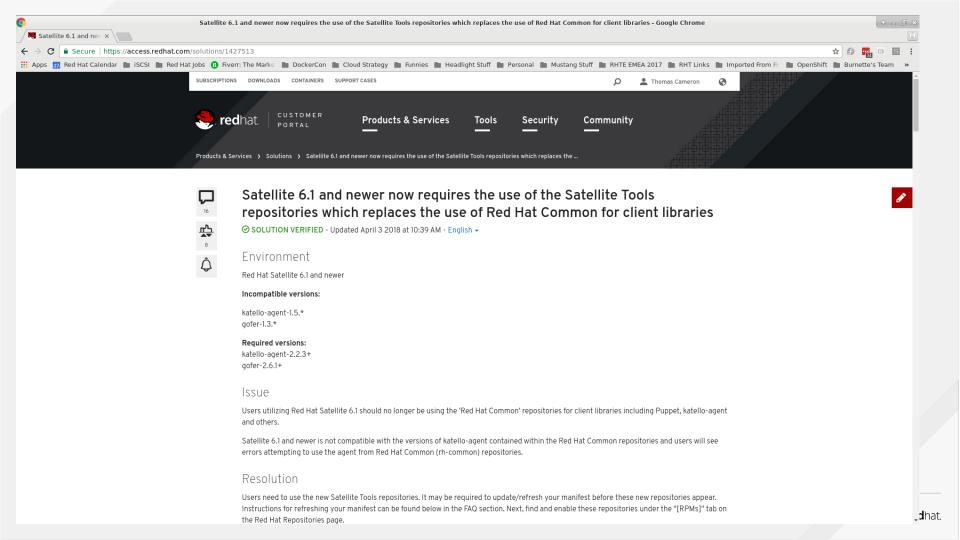


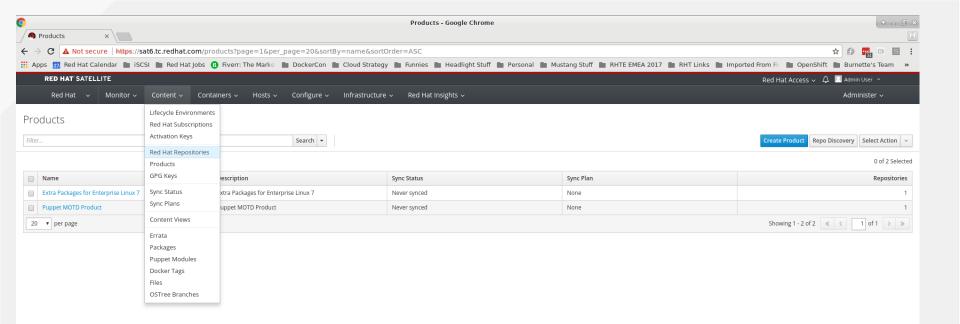
Adding repositories to sync

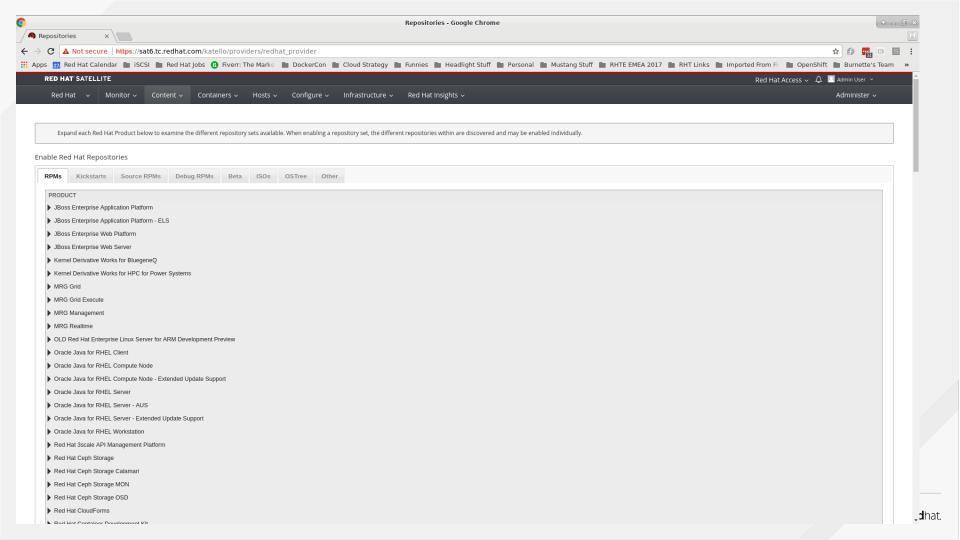
Notes:

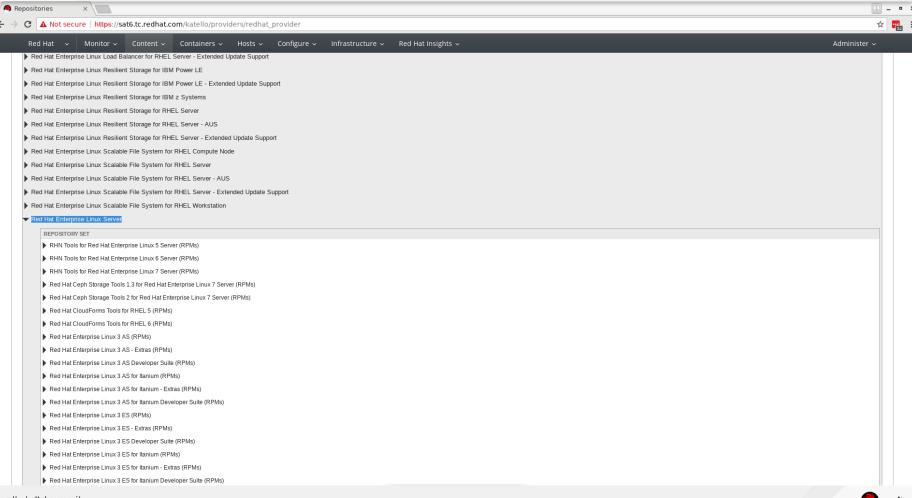
• RH-Common should not be used with newer Satellite servers!



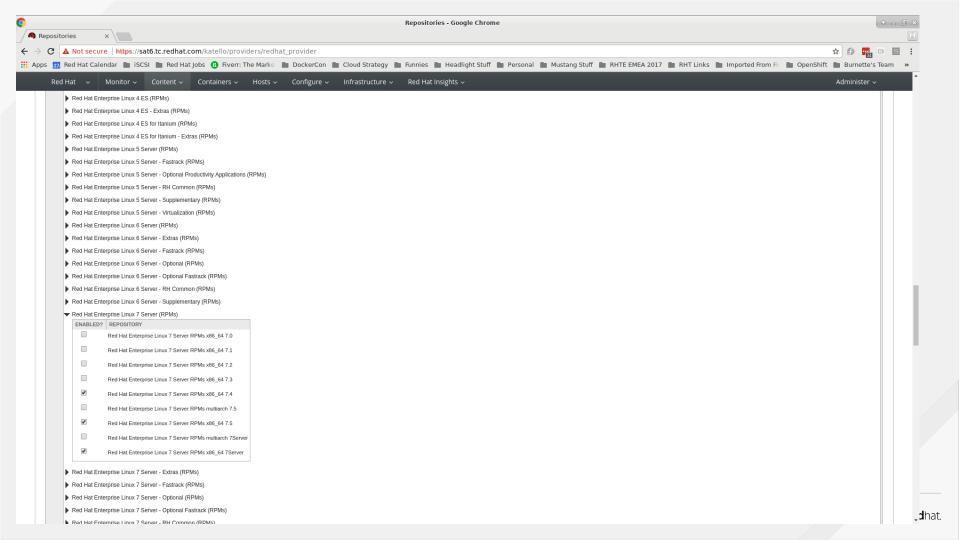


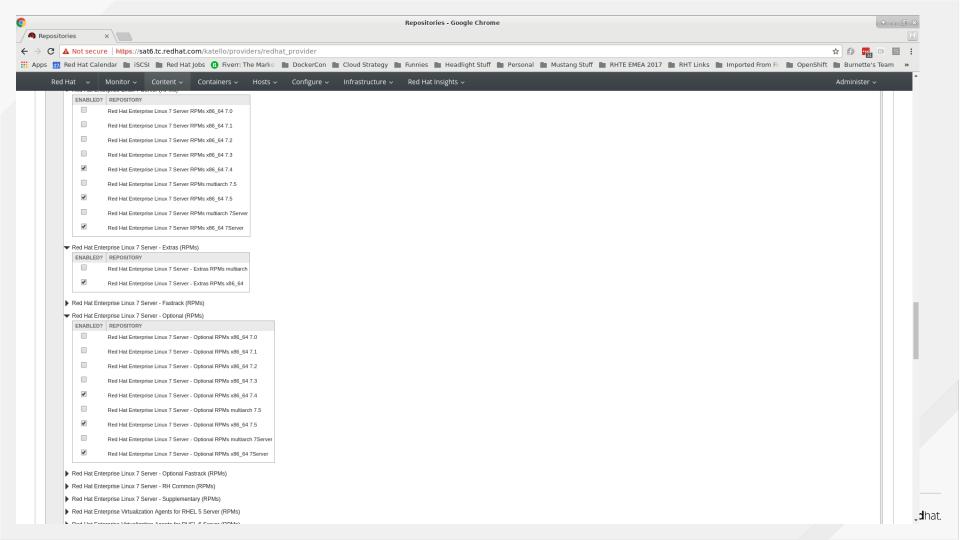


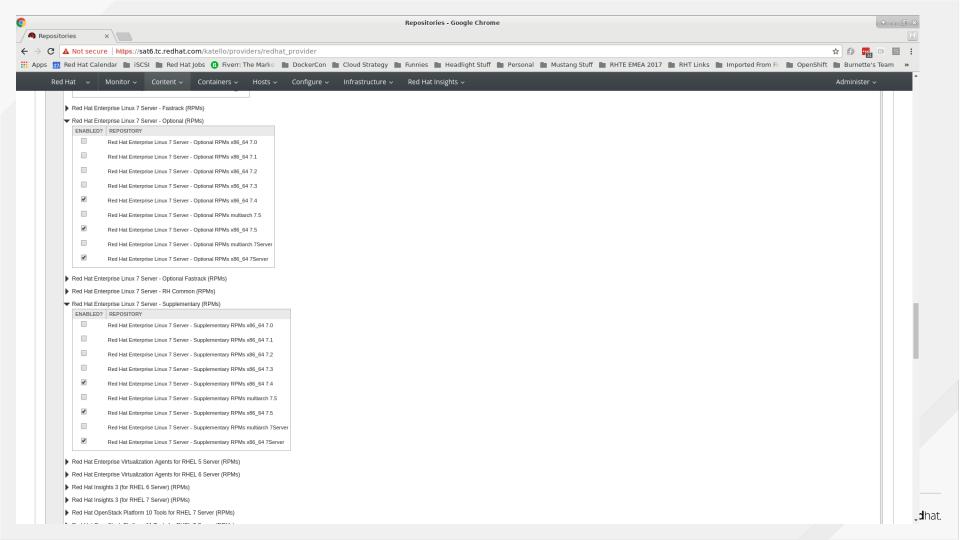


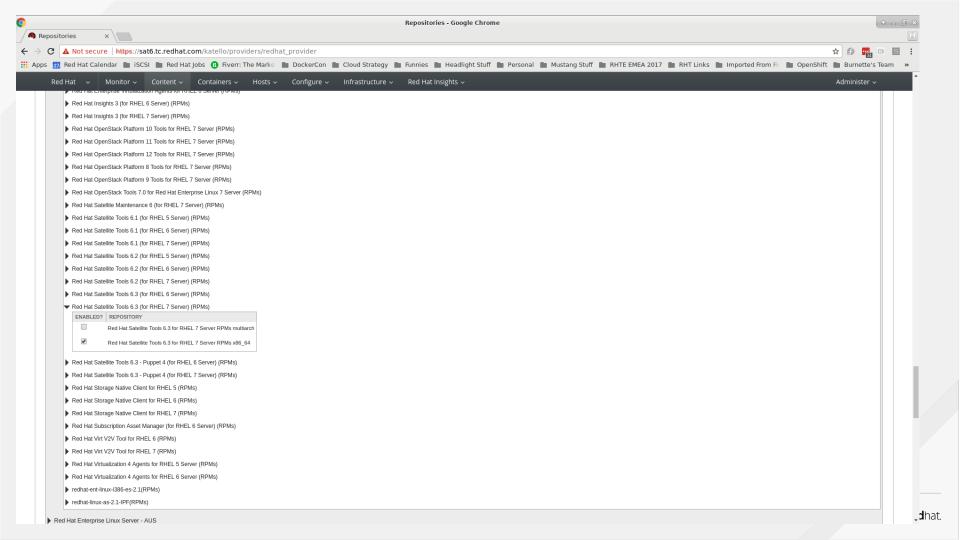


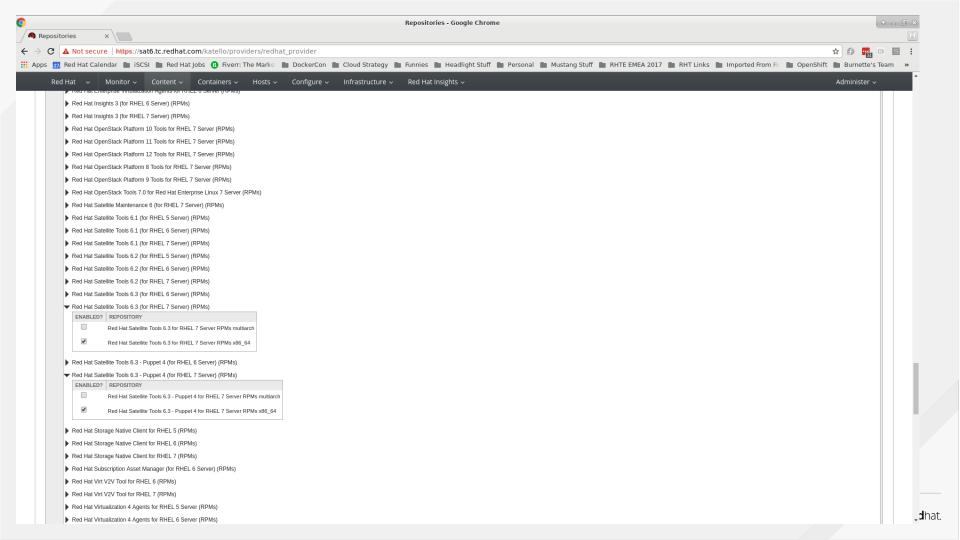








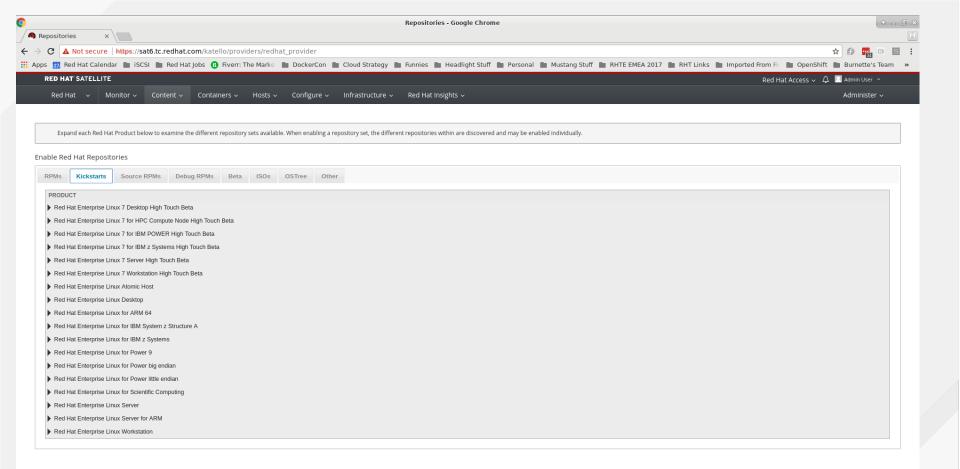


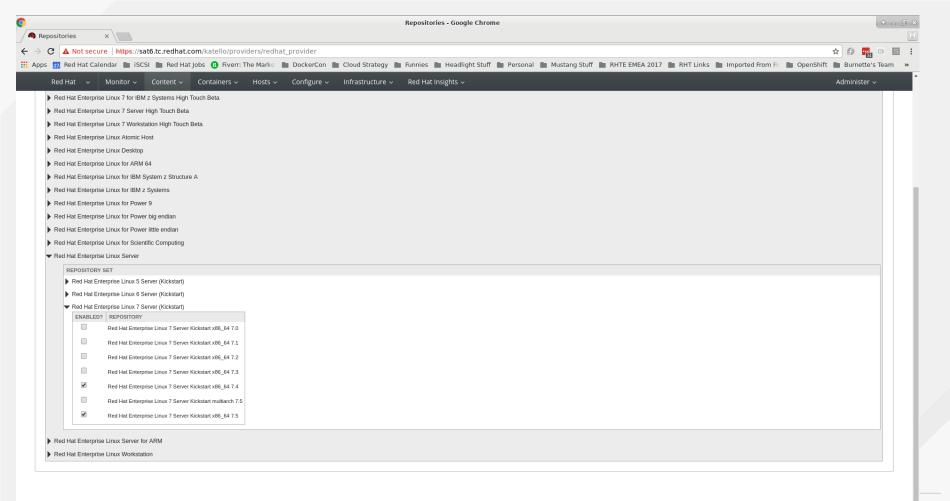


Adding repositories to sync

Also sync the kickstart trees for your environment. Since I will only be installing RHEL 7.4 or newer, I just sync those trees.







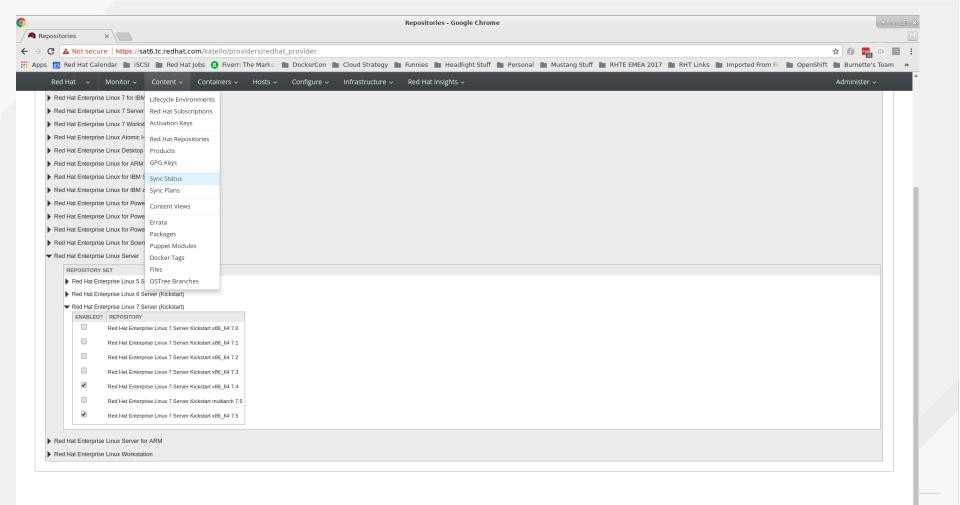


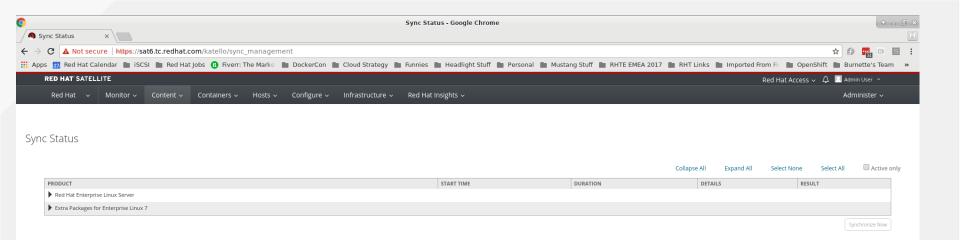
Manual Process

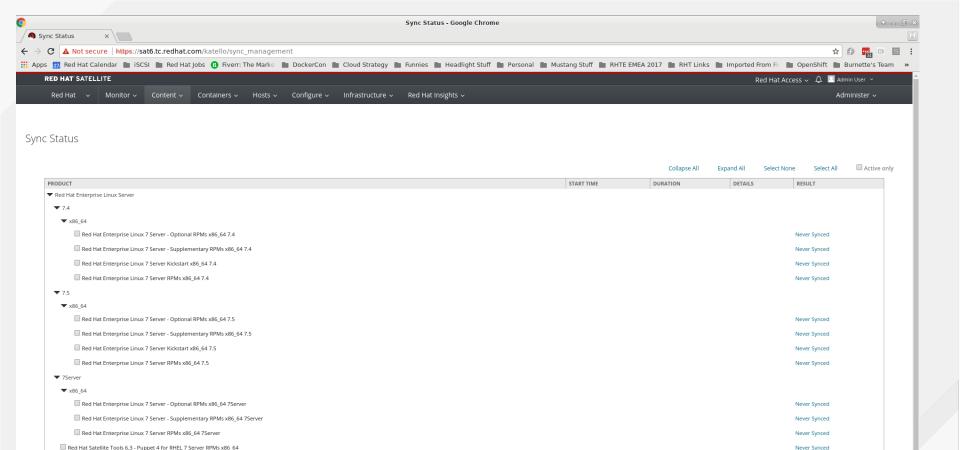
Also sync the kickstart trees for your environment. Since I will only be installing RHEL 7.4 or newer, I just sync those trees.

Choose Content, then Sync Status









Red Hat Satellite Tools 6.3 for RHEL 7 Server RPMs x86 64

Red Hat Enterprise Linux 7 Server - Extras RPMs x86 64

▼ Extra Packages for Enterprise Linux 7

EPEL7

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Never Synced

Never Synced

Never Synced

Manual Process

Hint: If you sync 7Server, it gets *everything* from GA through today. Then you can go back and sync 7.4 and 7.5 and it will be a lot faster.

- 7Server has everything
- 7.0 has everything from GA up to, but not including, 7.1
- 7.1 has everything from GA up to, but not including, 7.2
- etc...



Sync Status

| | | Collapse All | Expand All | Select None Select All | Active only |
|--|------------|--------------|------------|------------------------|-------------|
| PRODUCT | START TIME | DURATION | DETAILS | RESULT | |
| Red Hat Enterprise Linux Server | | | | | |
| ▼7.4 | | | | | |
| ▼ x86_64 | | | | | |
| Red Hat Enterprise Linux 7 Server - Optional RPMs x86_64 7.4 | | | | Never Synced | |
| Red Hat Enterprise Linux 7 Server - Supplementary RPMs x86_64 7.4 | | | | Never Synced | |
| Red Hat Enterprise Linux 7 Server Kickstart x86_64 7.4 | | | | Never Synced | |
| Red Hat Enterprise Linux 7 Server RPMs x86_64 7.4 | | | | Never Synced | |
| ▼7.5 | | | | | |
| ▼ x86_64 | | | | | |
| Red Hat Enterprise Linux 7 Server - Optional RPMs x86_64 7.5 | | | | Never Synced | |
| Red Hat Enterprise Linux 7 Server - Supplementary RPMs x86_64 7.5 | | | | Never Synced | |
| Red Hat Enterprise Linux 7 Server Kickstart x86_64 7.5 | | | | Never Synced | |
| Red Hat Enterprise Linux 7 Server RPMs x86_64 7.5 | | | | Never Synced | |
| ▼ 7Server | | | | | |
| ▼ x86_64 | | | | | |
| ■ Red Hat Enterprise Linux 7 Server - Optional RPMs x86_64 7 Server | | | | Never Synced | |
| ■ Red Hat Enterprise Linux 7 Server - Supplementary RPMs x86_64 7 Server | | | | Never Synced | |
| ✓ Red Hat Enterprise Linux 7 Server RPMs x86_64 7 Server | | | | Never Synced | |
| ▼ Red Hat Satellite Tools 6.3 - Puppet 4 for RHEL 7 Server RPMs x86_64 | | | | Never Synced | |
| ✓ Red Hat Satellite Tools 6.3 for RHEL 7 Server RPMs x86_64 | | | | Never Synced | |
| ☑ Red Hat Enterprise Linux 7 Server - Extras RPMs x86_64 | | | | Never Synced | |
| ▼ Extra Packages for Enterprise Linux 7 | | | | | |
| ▼ EPEL7 | | | | Never Synced | |
| | | | | | |

Synchronize Now

```
File Edit View Terminal Tabs Help
[root@sat6 ~]# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
       inet 172.31.100.56 netmask 255.255.255.0 broadcast 172.31.100.255
       inet6 fe80::5054:ff:fe3e:240a prefixlen 64 scopeid 0x20<link>
       ether 52:54:00:3e:24:0a txqueuelen 1000 (Ethernet)
       RX packets 907220 bytes 304482354 (290.3 MiB)
       RX errors 0 dropped 5 overruns 0 frame 0
       TX packets 244527 bytes 60420432 (57.6 MiB)
       TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,L00PBACK,RUNNING> mtu 65536
       inet 127.0.0.1 netmask 255.0.0.0
       inet6 ::1 prefixlen 128 scopeid 0x10<host>
       loop txqueuelen 1000 (Local Loopback)
       RX packets 34353881 bytes 10366858164 (9.6 GiB)
       RX errors 0 dropped 0 overruns 0 frame 0
       TX packets 34353881 bytes 10366858164 (9.6 GiB)
       TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

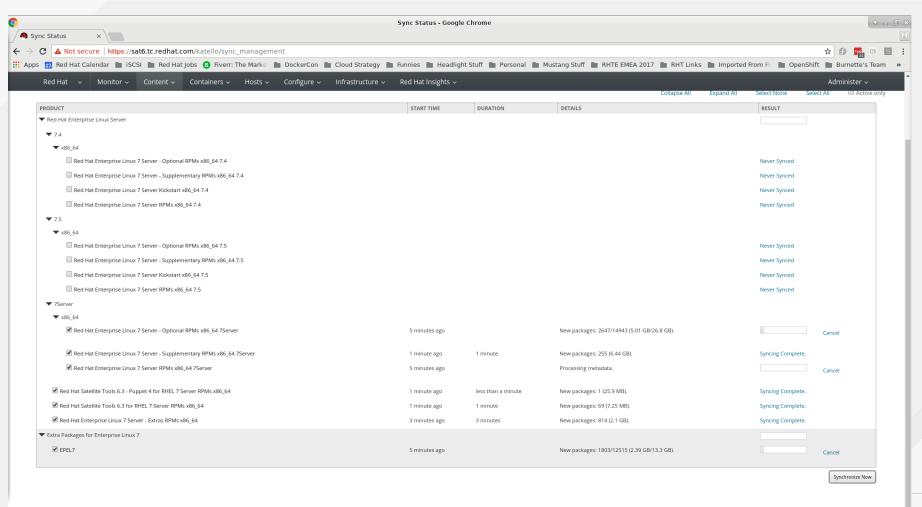
[root@sat6 ~]#

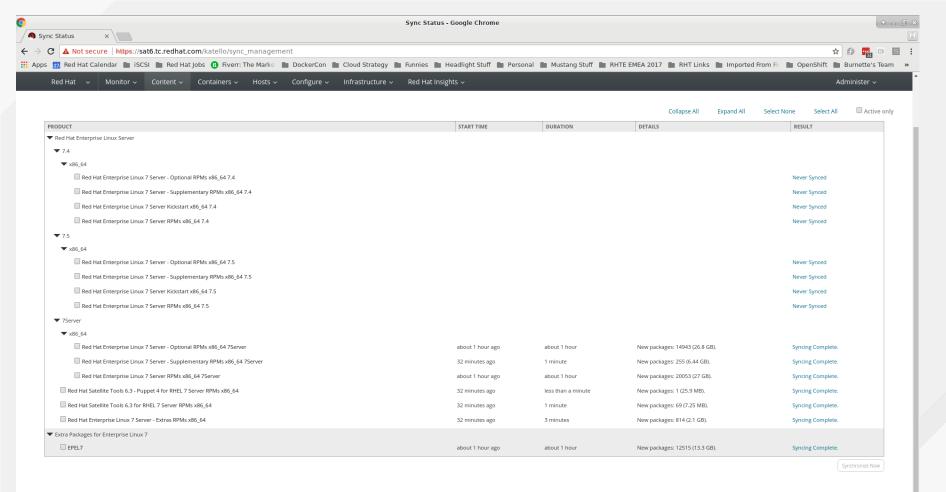


Manual Process

It will take a while the first time. Subsequent syncs will be much faster.





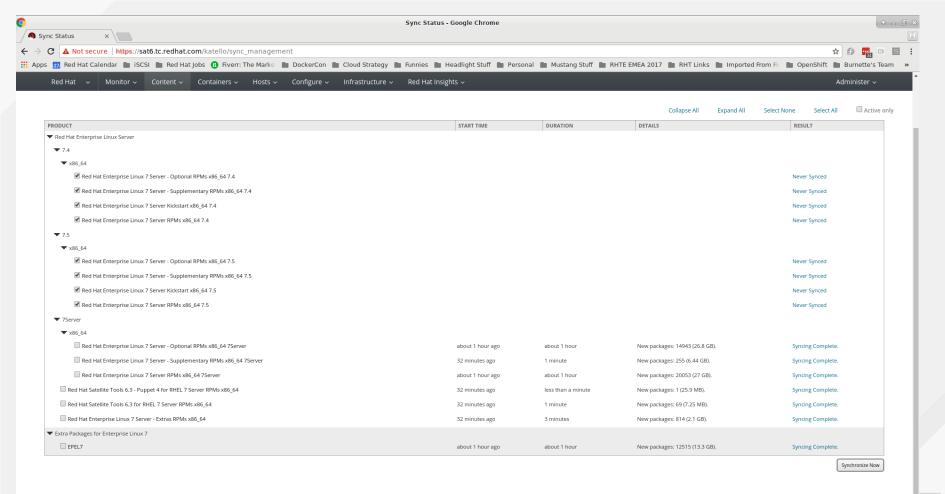


SYNC CONTENT

Manual Process

Now sync the rest of the content. It should go faster.





dhat.

SCHEDULE CONTENT SYNC



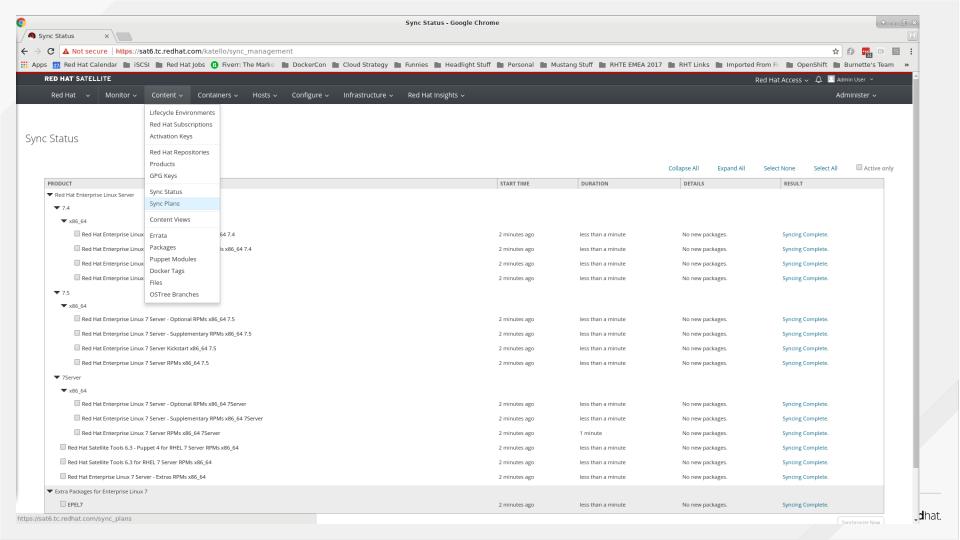
SCHEDULE CONTENT SYNC

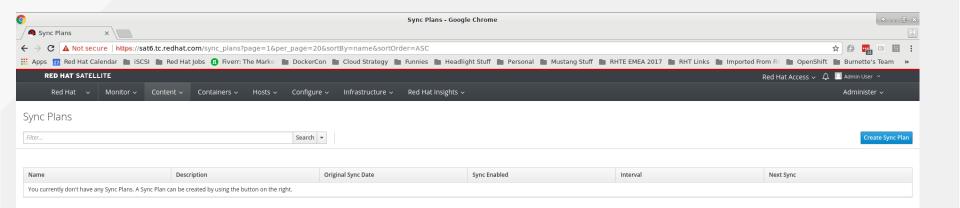
Automatic Process

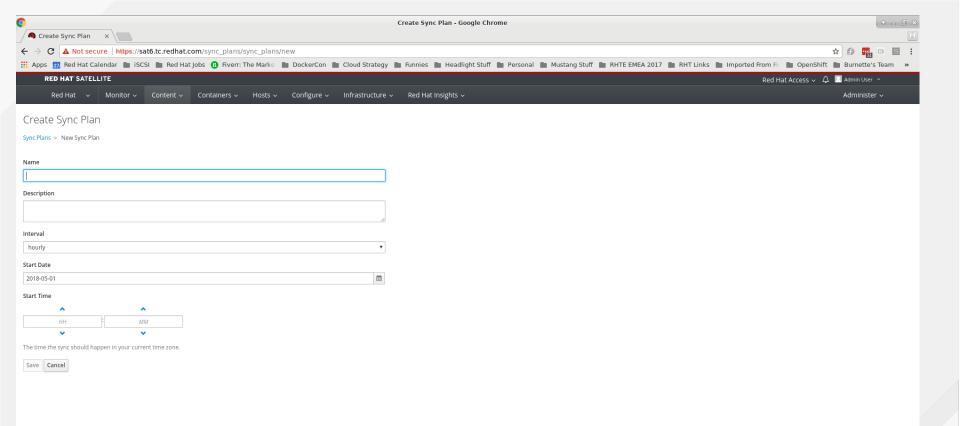
You can schedule content syncs through the web UI. No more cron job!

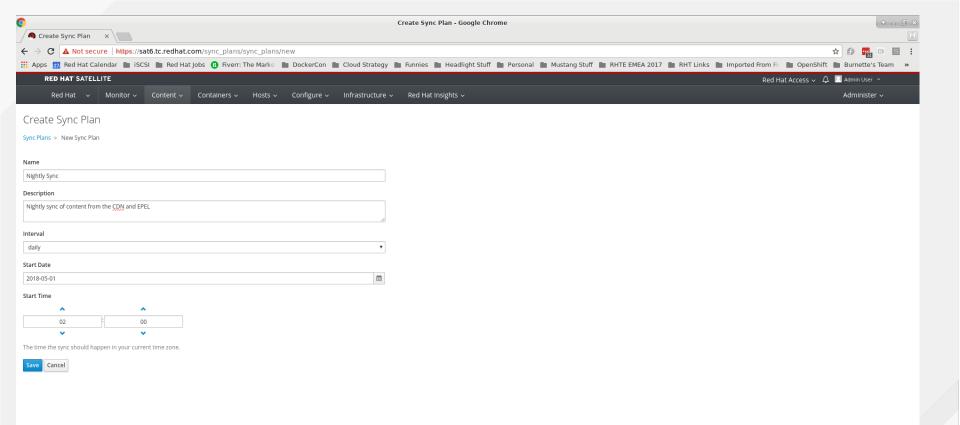
Choose Content/Sync Plans

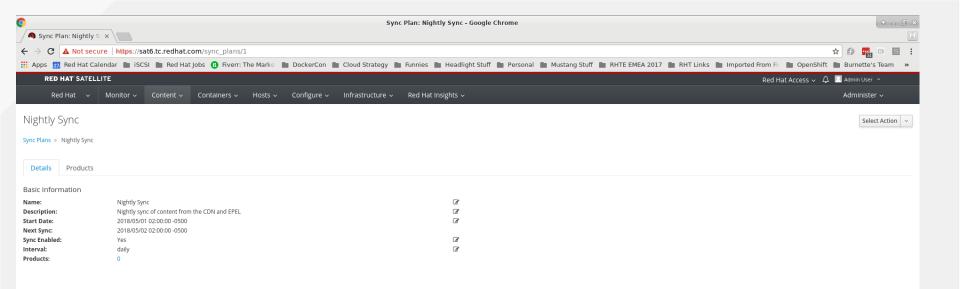


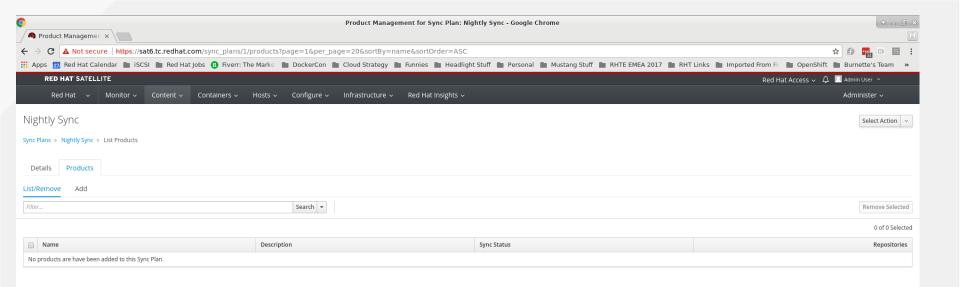


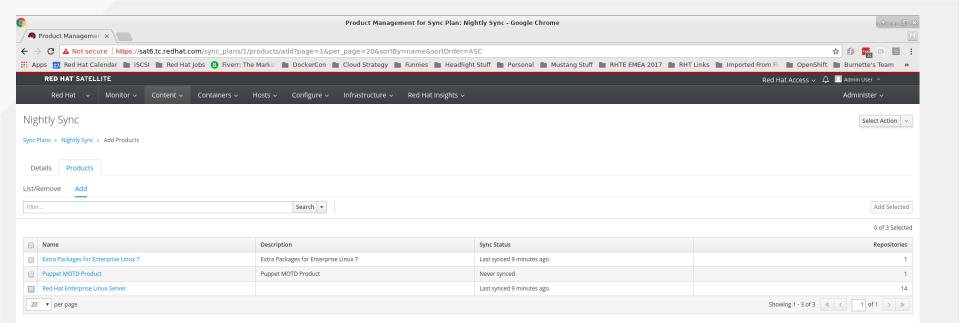


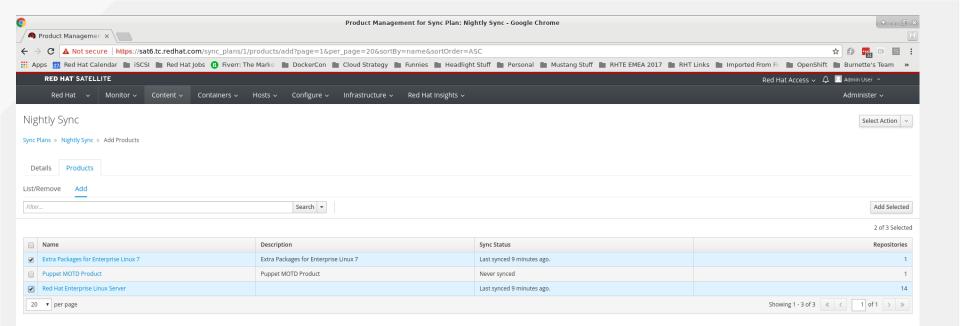


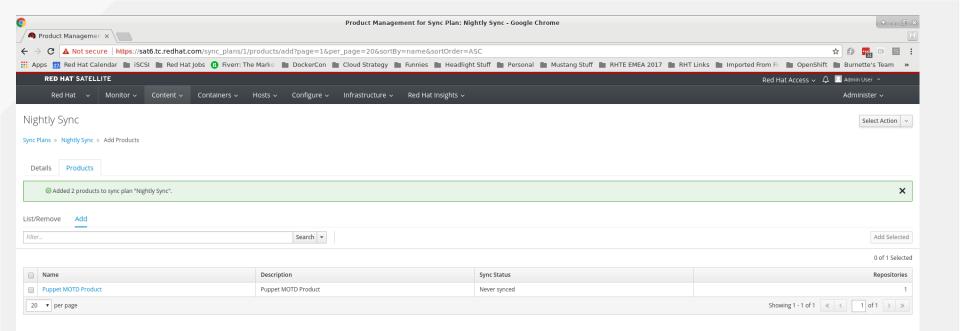


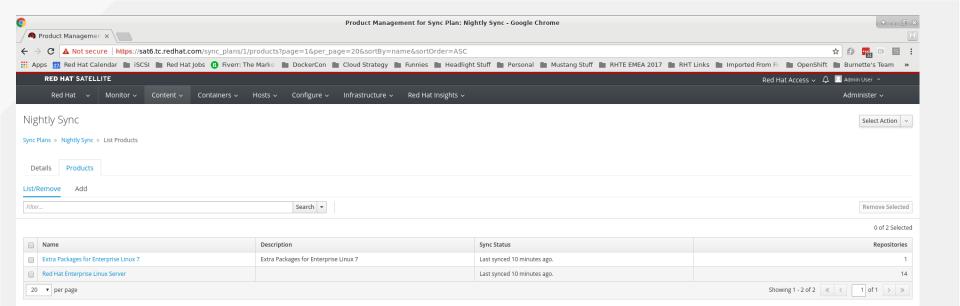


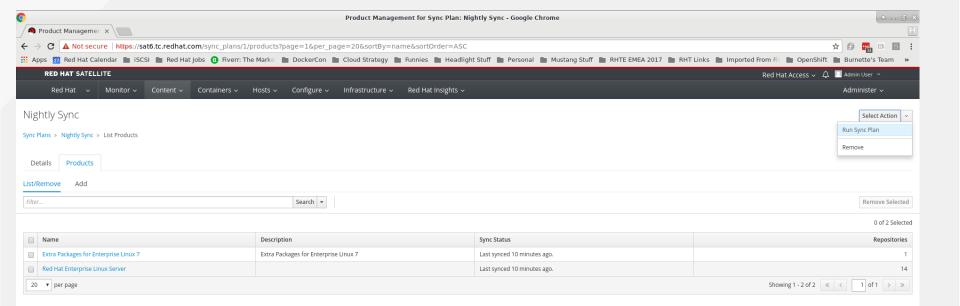


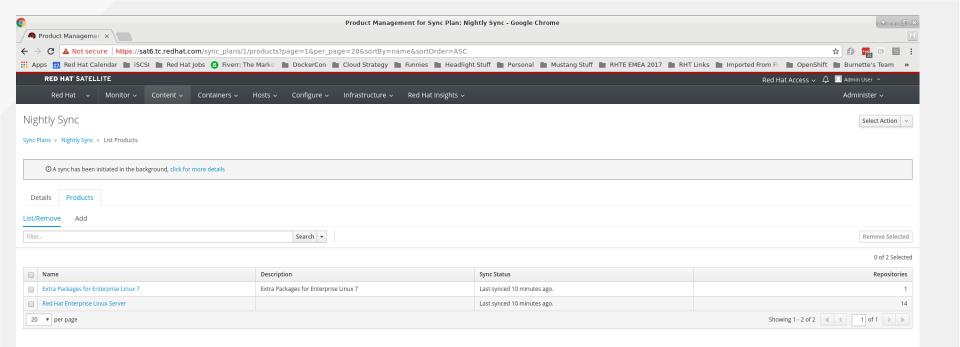


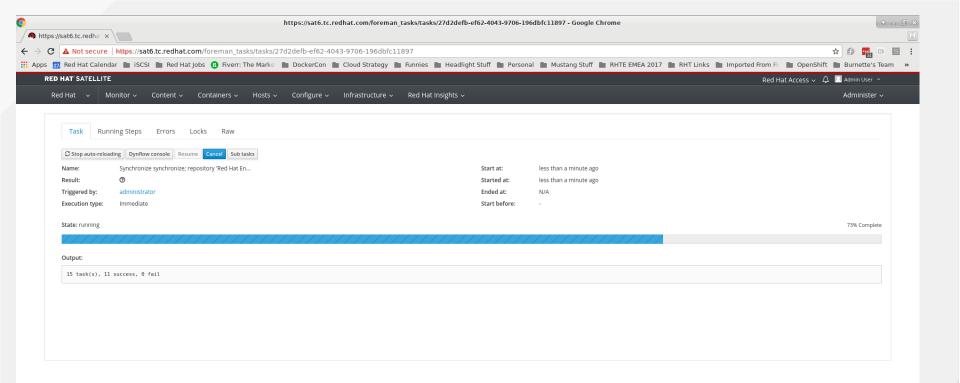


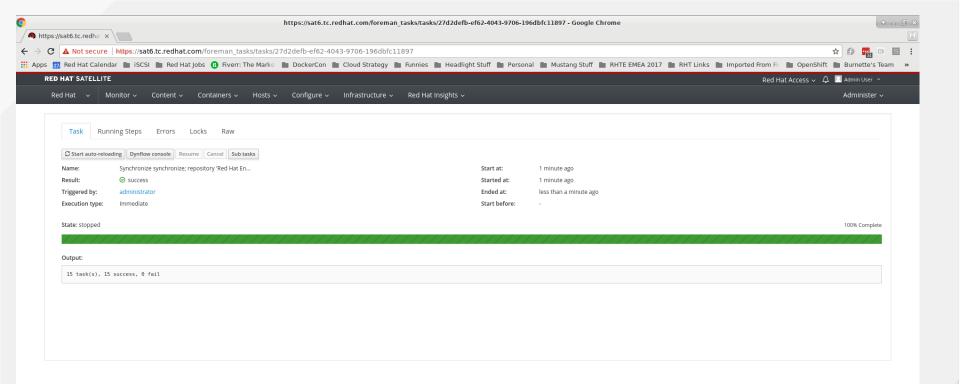


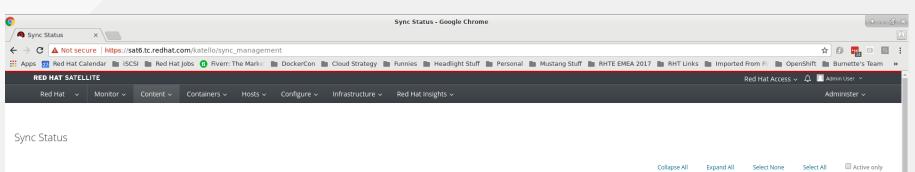


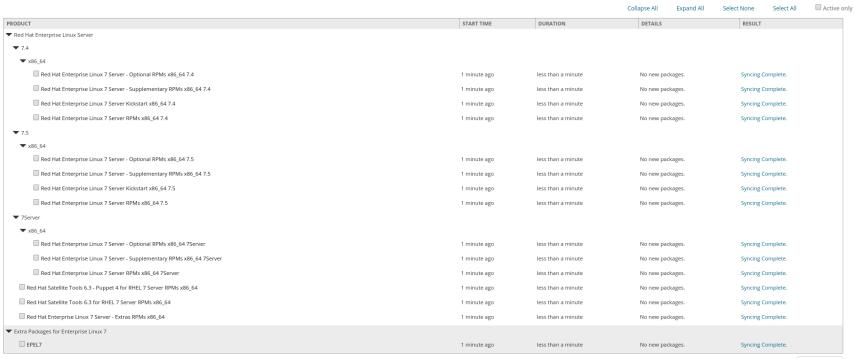












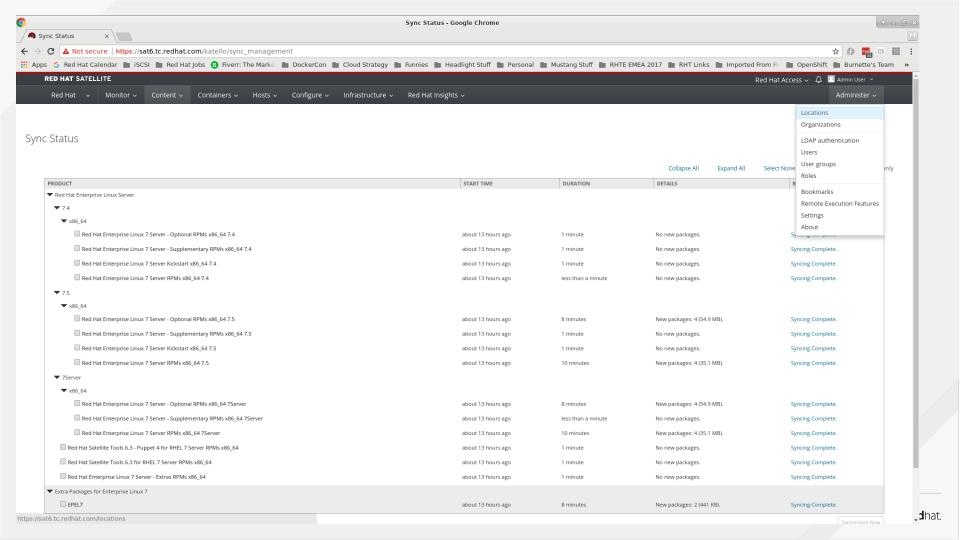


We have to tell the Satellite server about the network layout

Locations divide organizations into logical groups based on geographical location. Each location is created and used by a single Red Hat customer account, although each account can manage multiple locations and organizations.

We have to define these locations by going into Administer/Locations





We have to tell the Satellite server about the network layout

Define a new location in the Satellite server for every location you have in your enterprise.

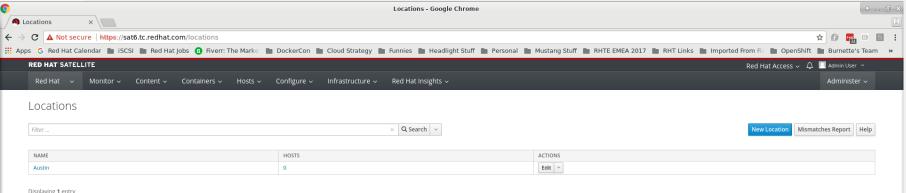
Remember we defined the Austin location at installation time. I'll show you what Austin looks like, and then define a location for Dallas, as well.

We need to make a couple of changes.

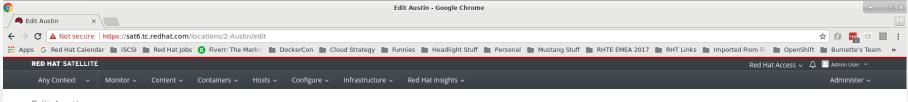
- Add the domain to the location
- Add the Organization to the location.

This just tells the Satellite server that those resources are available in these locations. If you have locations which are in different domains, or used by different organizations, proceed accordingly.

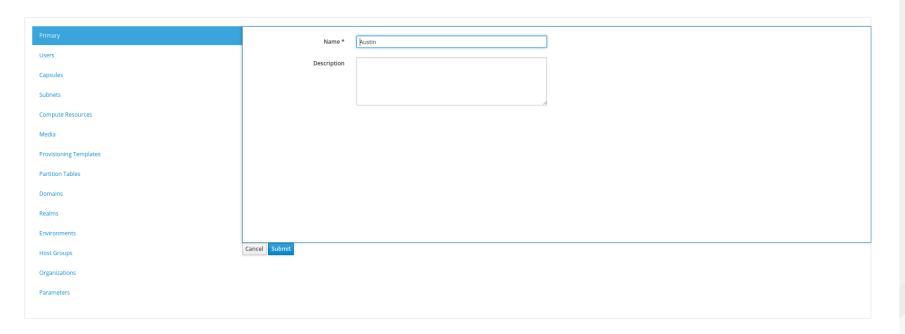


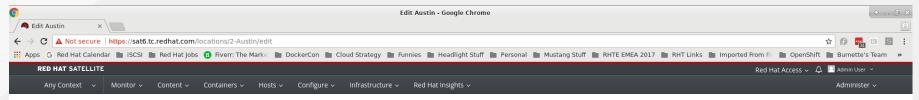


Displaying 1 entry

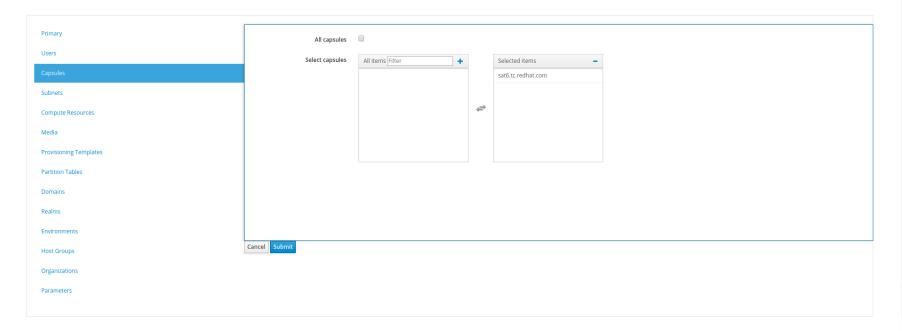


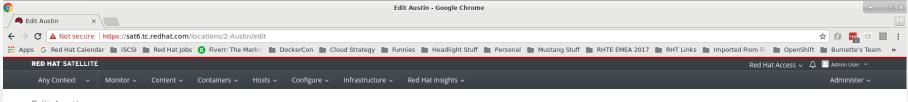
Edit Austin



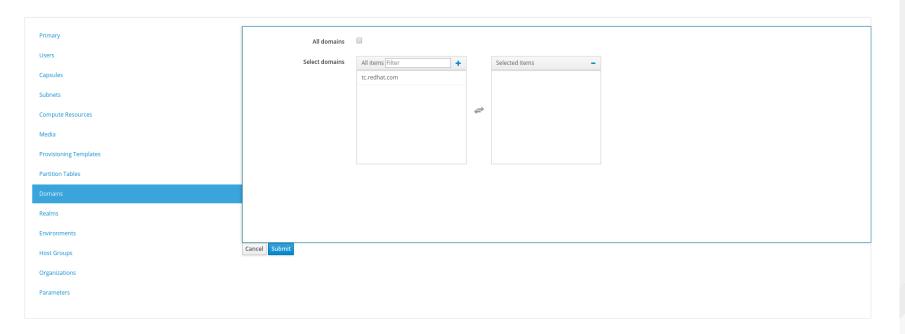


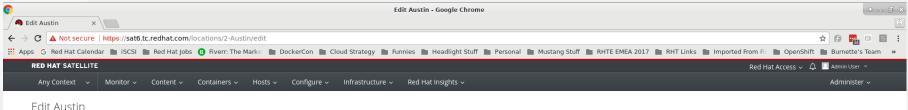
Edit Austin

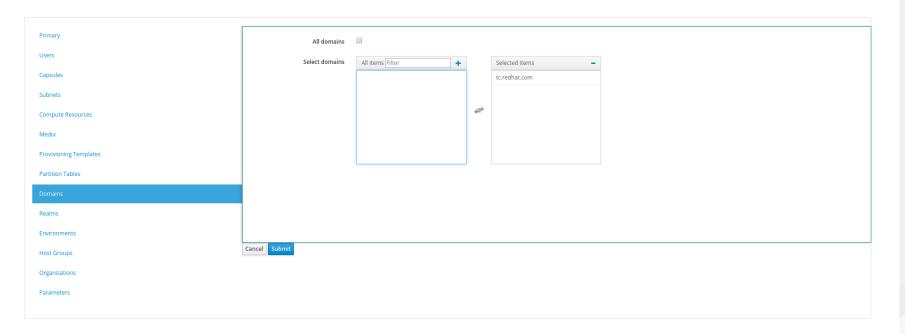


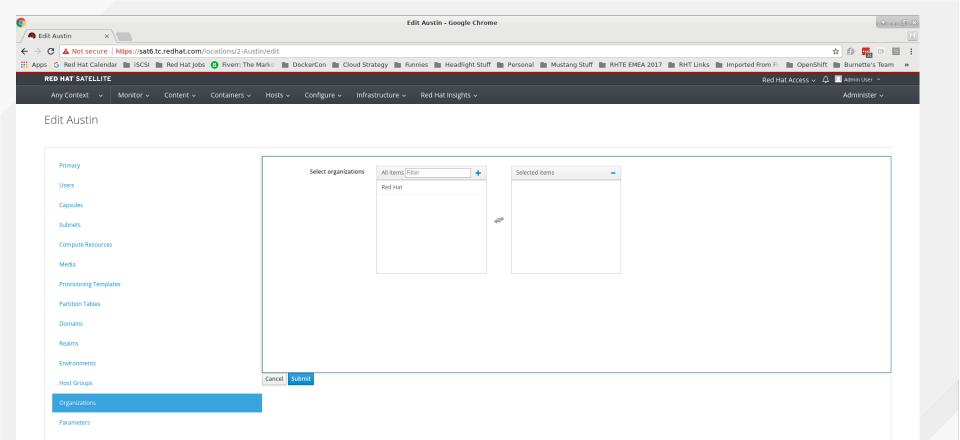


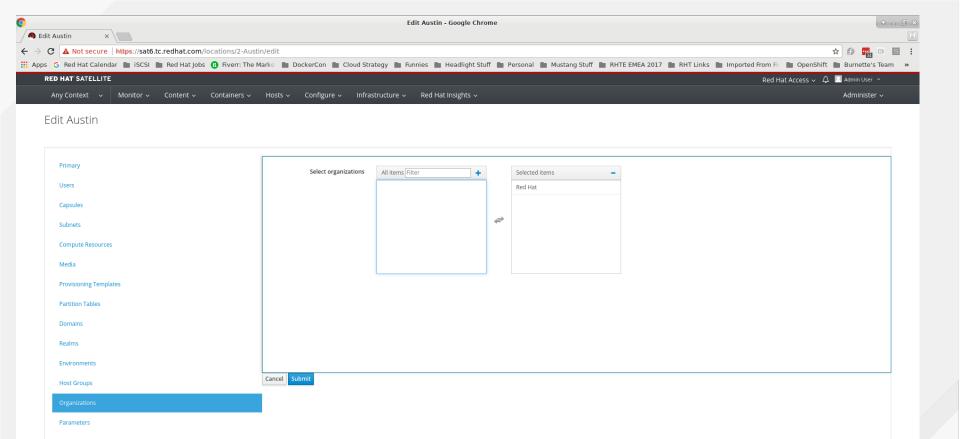
Edit Austin







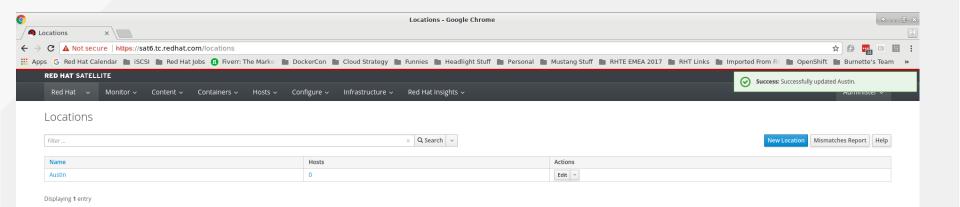


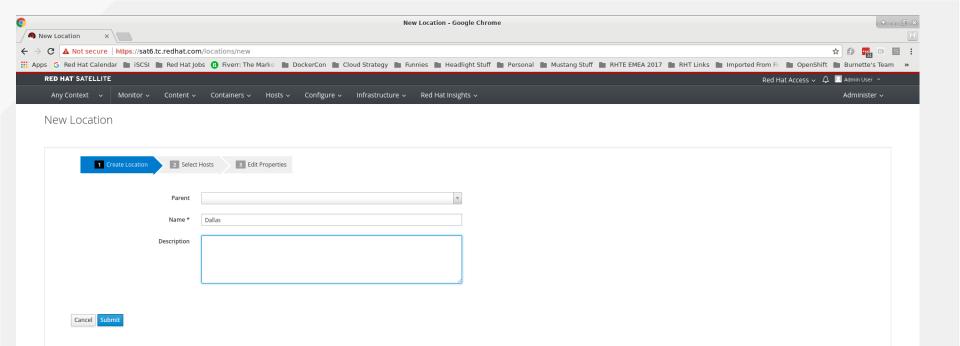


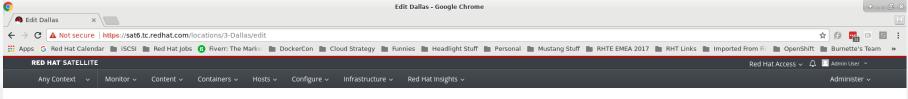
We have to tell the Satellite server about the network layout

There are other changes to locations which we'll make later, after we define some other resources. It'll make sense by the end, be patient.

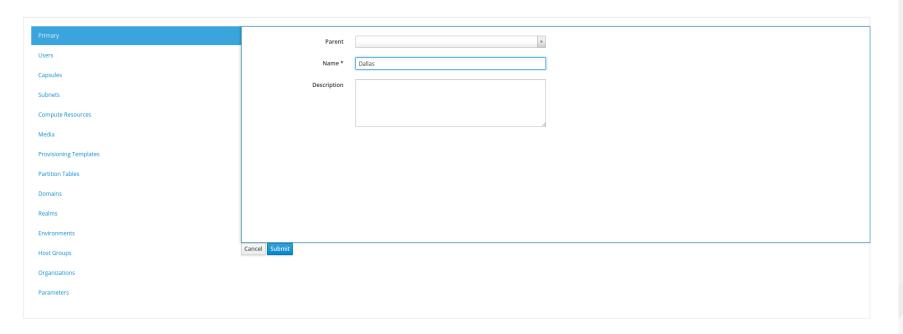


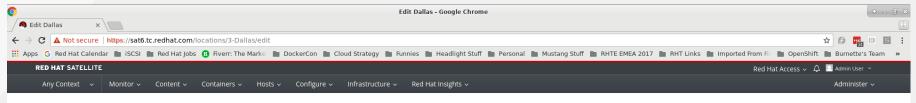




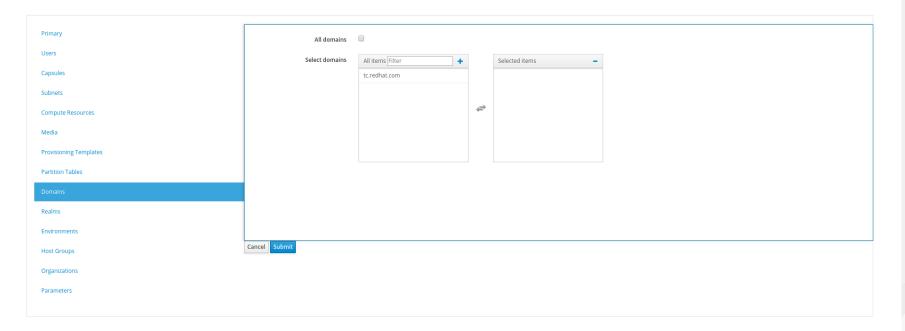


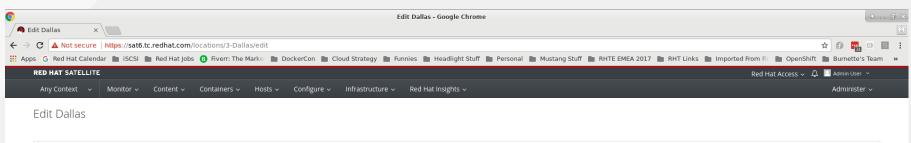
Edit Dallas

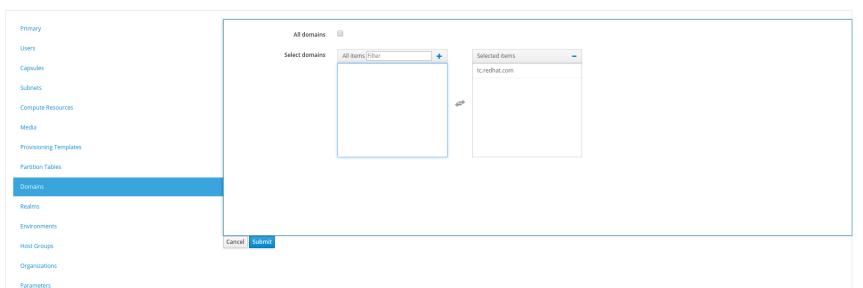


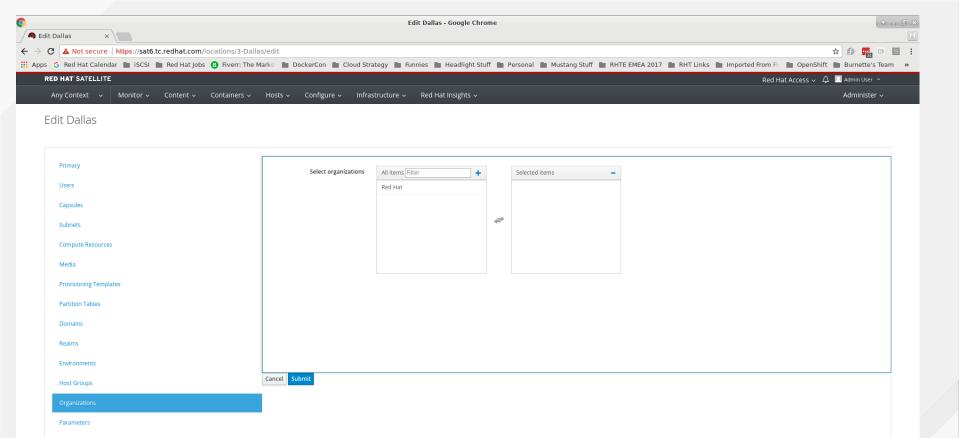


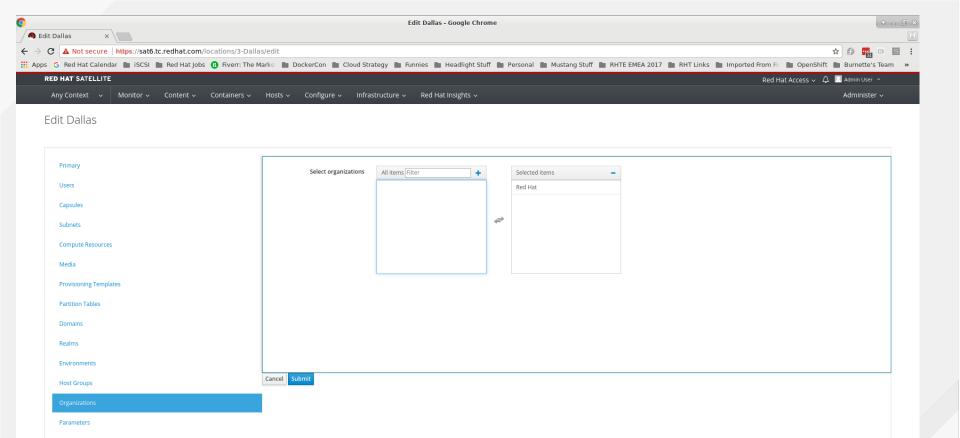
Edit Dallas

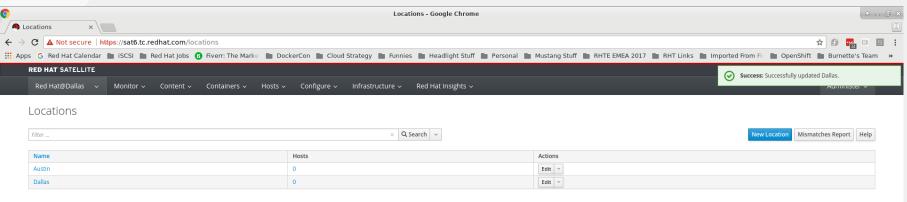












Displaying all 2 entries

LOCATIONS

We have to tell the Satellite server about the network layout

Repeat for any additional locations.





A method for ensuring a safe progression of software from development to QA to production

The application life cycle is a concept central to Red Hat Satellite 6's content management functions. The application life cycle defines how a particular system and its software look at a particular stage. For example, an application life cycle might be simple; you might only have a development stage and production stage. In this case the application life cycle might look like this:

- Development
- Production



A method for ensuring a safe progression of software from development to QA to production

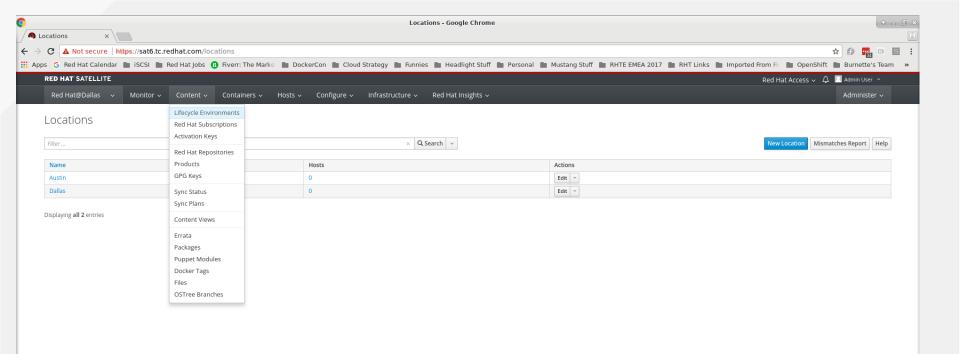
However, a more complex application life cycle might have further stages, such as a phase for testing or a beta release. This adds extra stages to the application life cycle:

- Development
- Testing
- Beta Release
- Production



A method for ensuring a safe progression of software from development to QA to production Choose Content/Lifecycle Environments

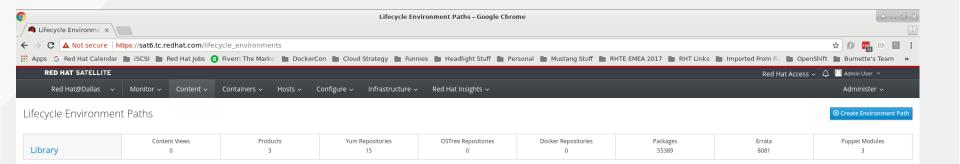




Create

The Library is where content synced from the Red Hat content delivery network is stored on your server. It will change every time you run an automated sync. For most users, you don't want to attach systems to the Library. When we get into content views and filtering, later, it'll become clear why.



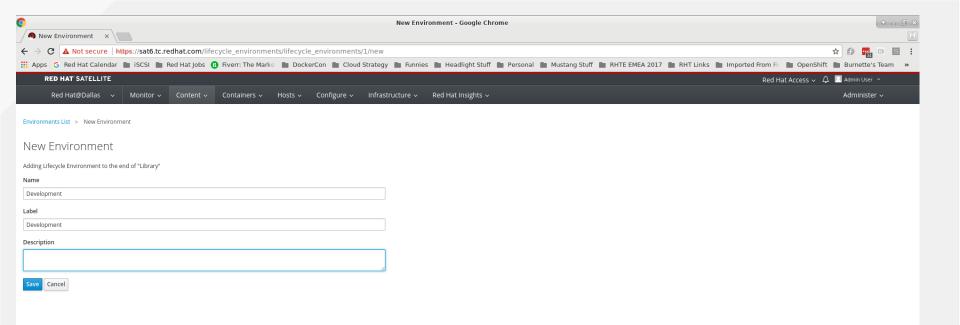


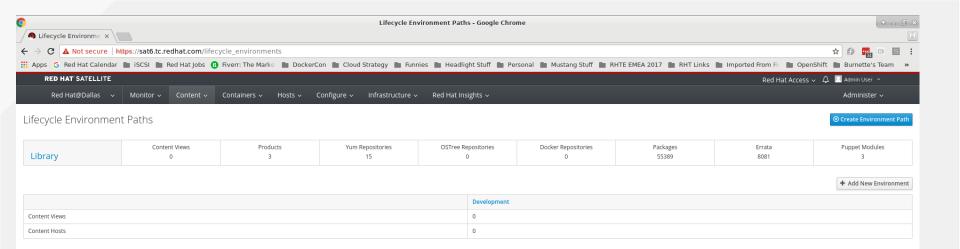
Create environments

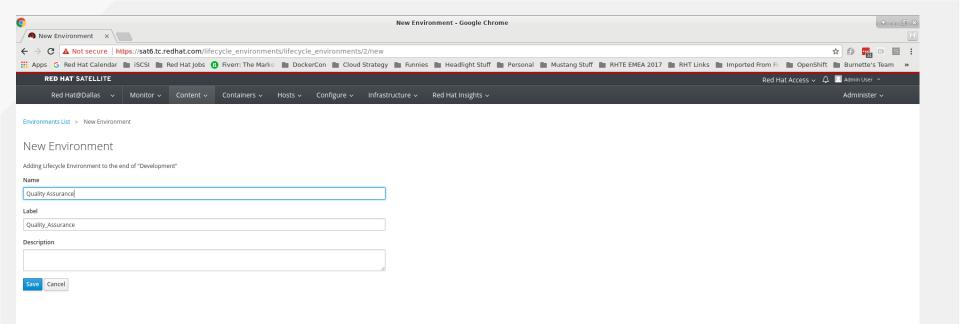
You'll create lifecycle environments depending on your workflow. For may enterprises, it's a pretty standard setup:

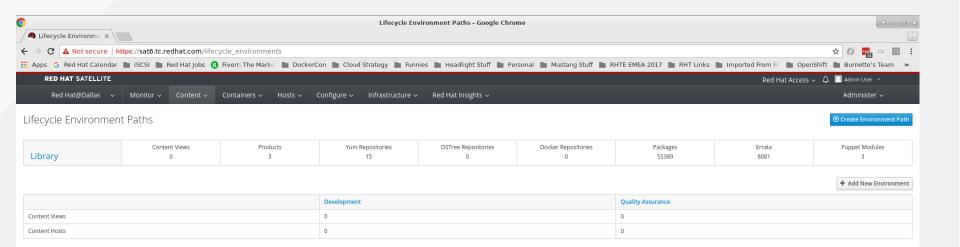
- development (dev)
- quality assurance (qa)
- production (prod)

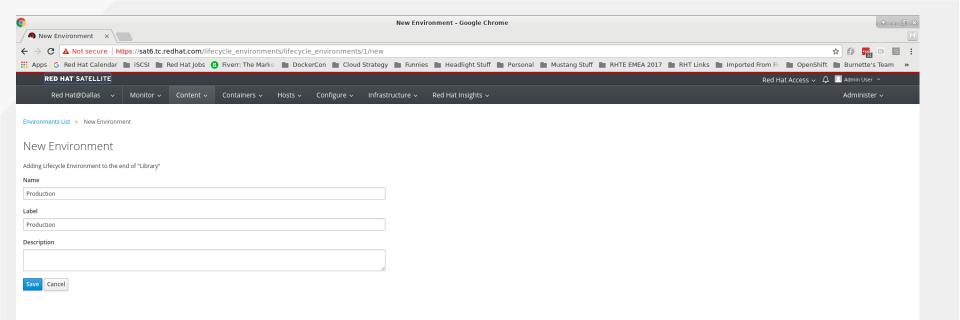


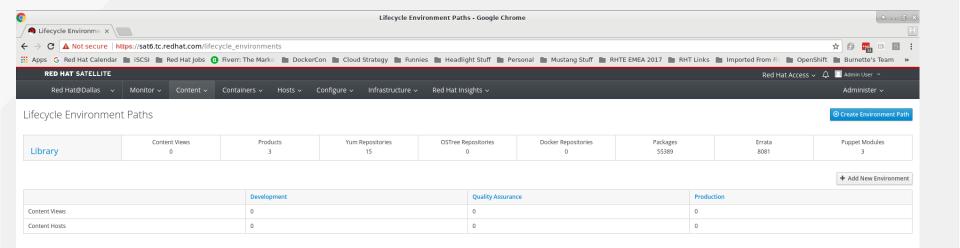












Create environments

We'll use these when registering systems, later.





Managing how systems access software and configuration

Red Hat Satellite 6 uses content views to create customized repositories from the core repositories in your Definitive Media Library (DML). It achieves this through defining which repositories to use and then applying certain filters to the content. These filters include both package filters, package group filters, and errata filters. We use content views as a method to define which software versions a particular environment uses. As mentioned earlier, a Production environment might use a content view containing older package versions, while a Development environment might use a content view containing newer package versions.

Each content view creates a set of repositories across each environment, which the Satellite Server stores and manages. When we promote a content view from one environment to the next environment in the application life cycle, the respective repository on the Satellite Server updates and publishes the packages.

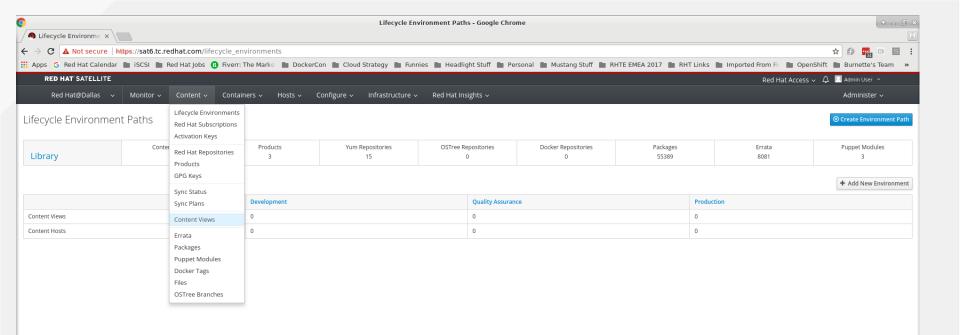


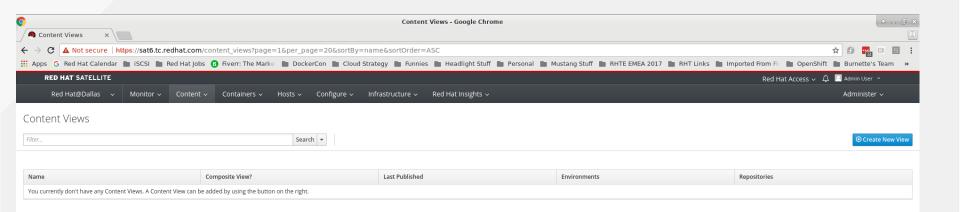
Managing how systems access software and configuration

Navigate to Content/Content Views

Reminder: Don't use "Red Hat Common" any more. Now you should use "Satellite Tools."



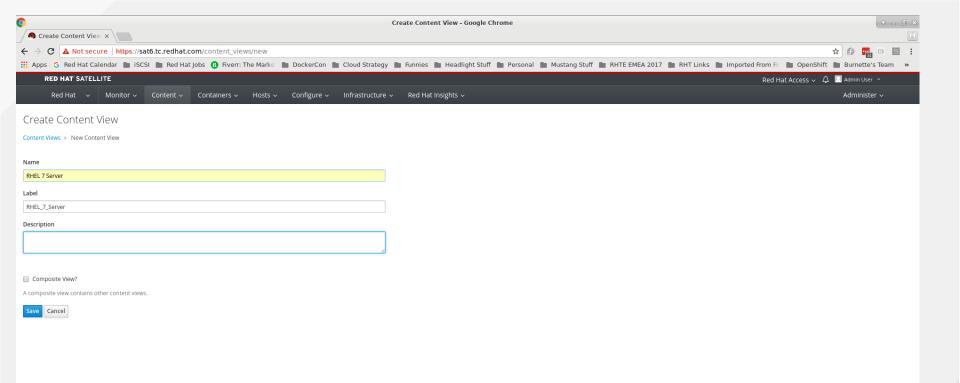




Managing how systems access software and configuration

We'll create a common content view (CV) for all RHEL 7 systems. We can stack CVs for specific content, so I will keep this a super basic CV.





Managing how systems access software and configuration

Add the repositories you want your systems to have access to. There are generally two schools of thought:

- Only add the absolute bare minimum to keep tight control over what gets installed
- Make everything available to make your core build as flexible as possible

For this demo, I'm choosing the former. There are very good reasons for both methods. You'll want to weigh the pros and cons of each for your enterprise.



Managing how systems access software and configuration

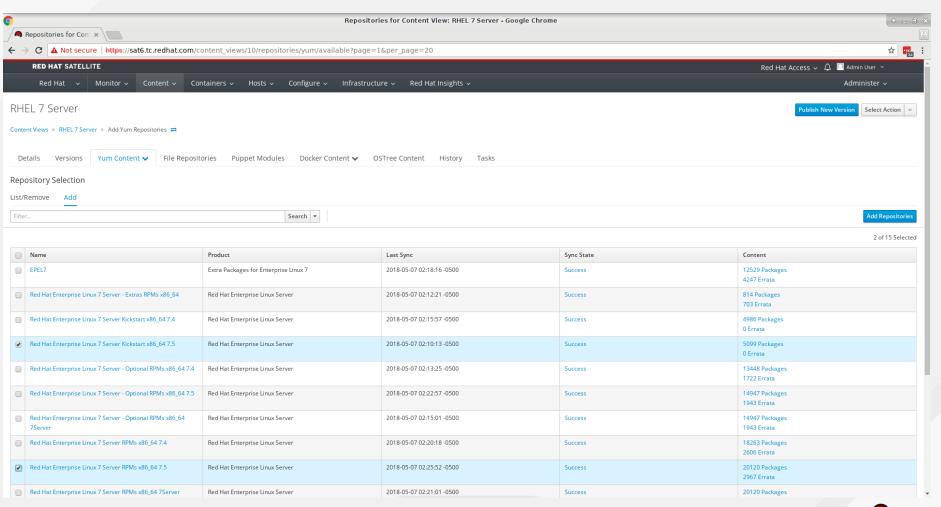
Remember that 7Server is everything from GA through the last time you synced content. If you choose 7.4, for instance, you'll get everything from the release of 7.4 up but not including the content for 7.5.

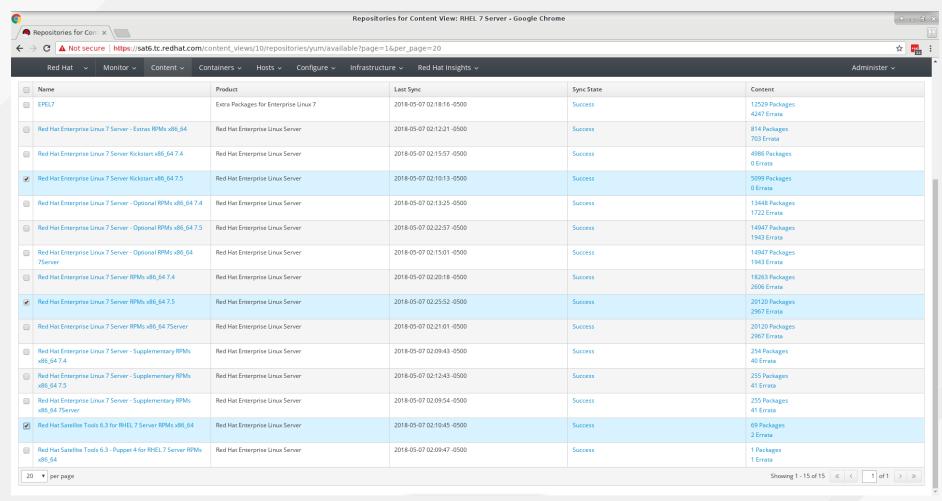
You can use the 7.4, 7.5, etc. repos to lock down your systems to a specific release, or you can use 7Server and then set up date-based filters to lock down your systems to a specific release. In this example, I'll use the 7.5 repo.

You **do** want to add the kickstart tree to your CV if you're going to provision off it. See https://access.redhat.com/solutions/3365941 for more details.

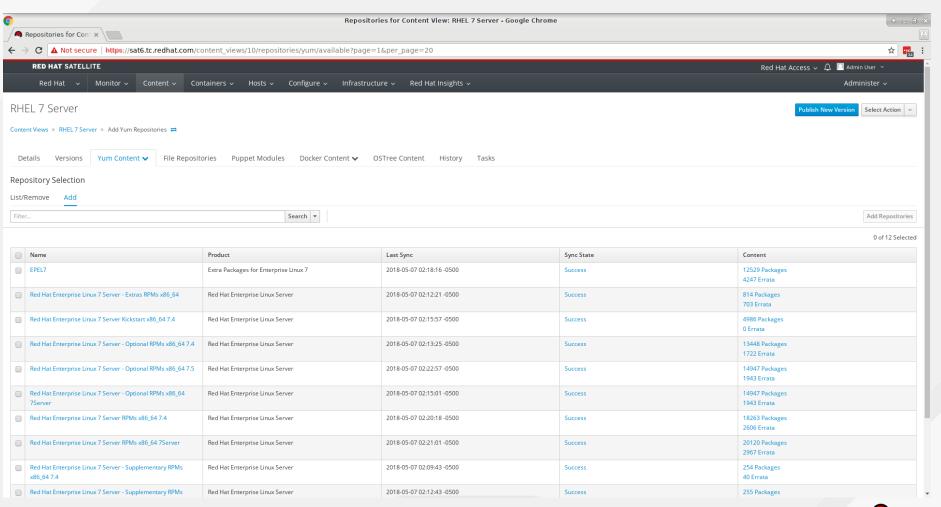
In this example, I'll only add what's needed to provision a base system and attach it to the Satellite server.

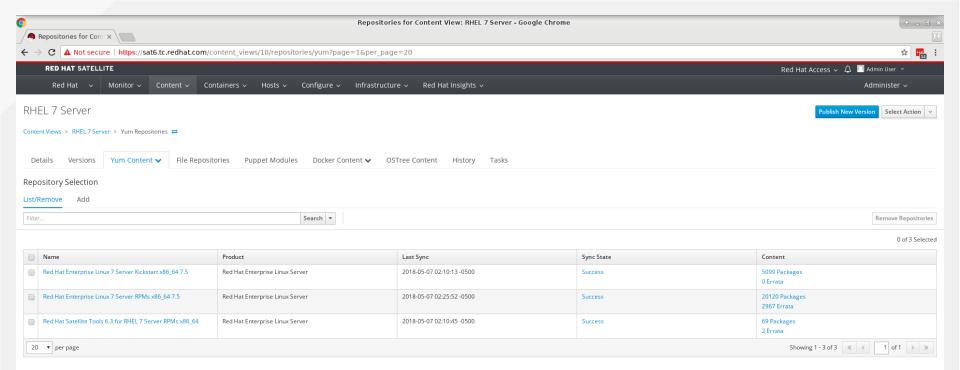










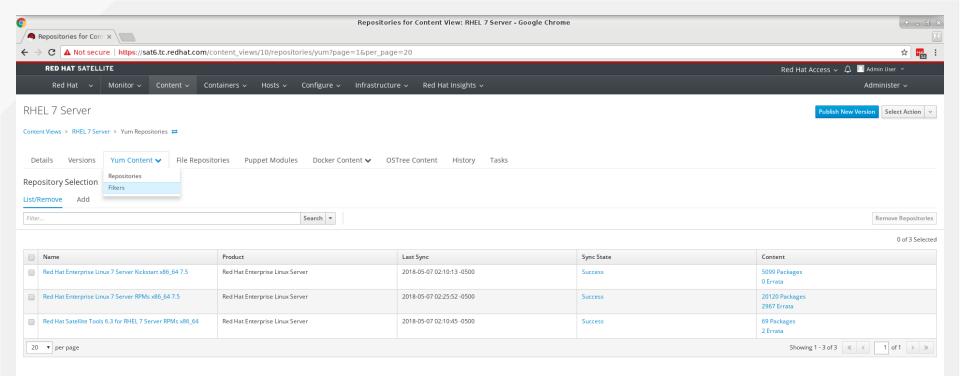


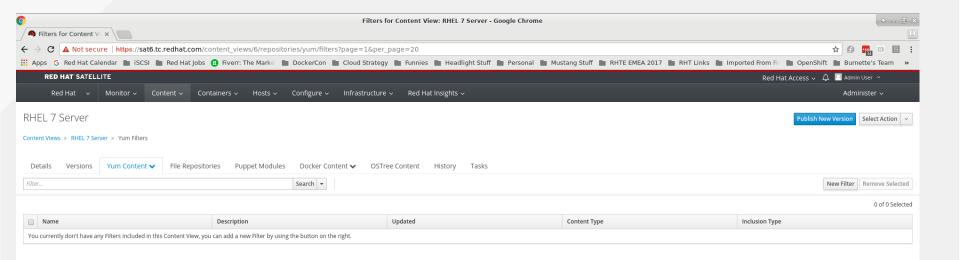
Filters

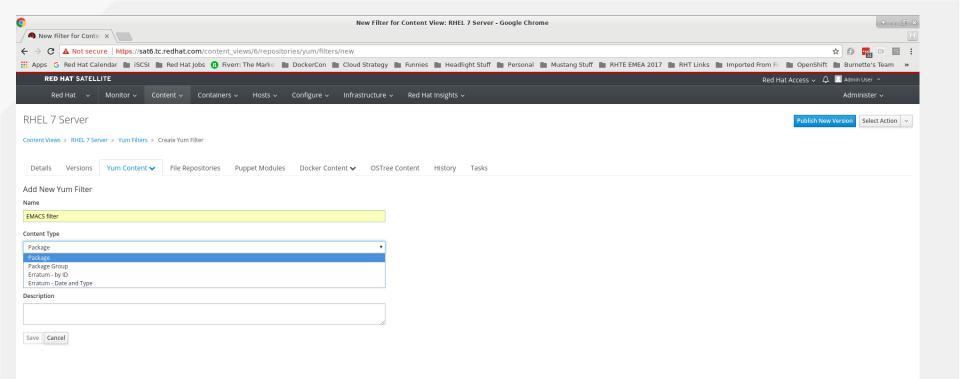
Filters can be used to manage how content is presented via your CV. You can filter based on package name, package group name, date, and so on.

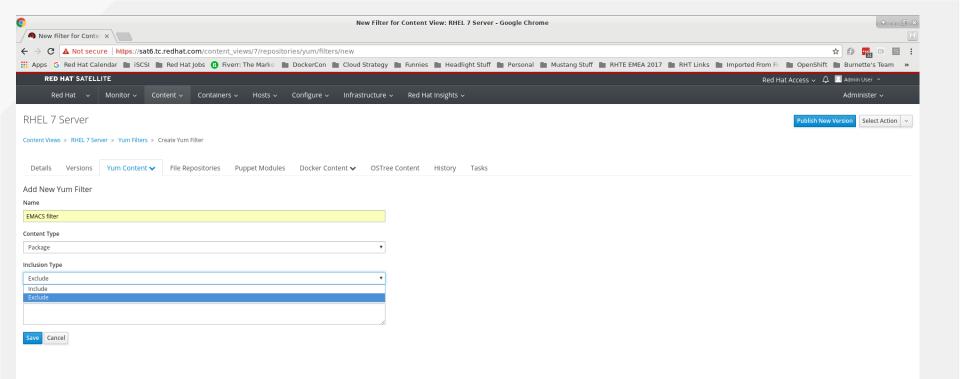
In this example, I'll filter by package name to exclude emacs, because the One True Editor is clearly vi. Because it's an exclude filter, it will include everything in the repository except what we've excluded.

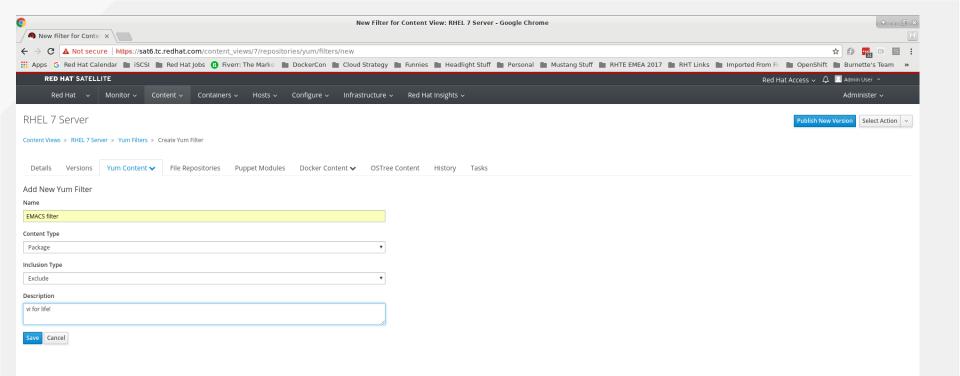


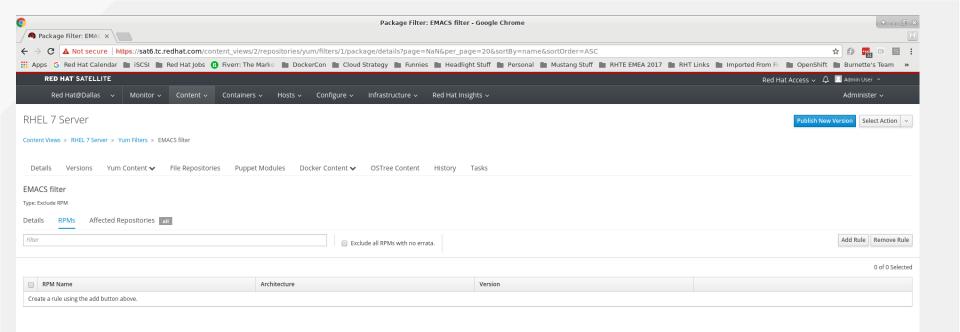


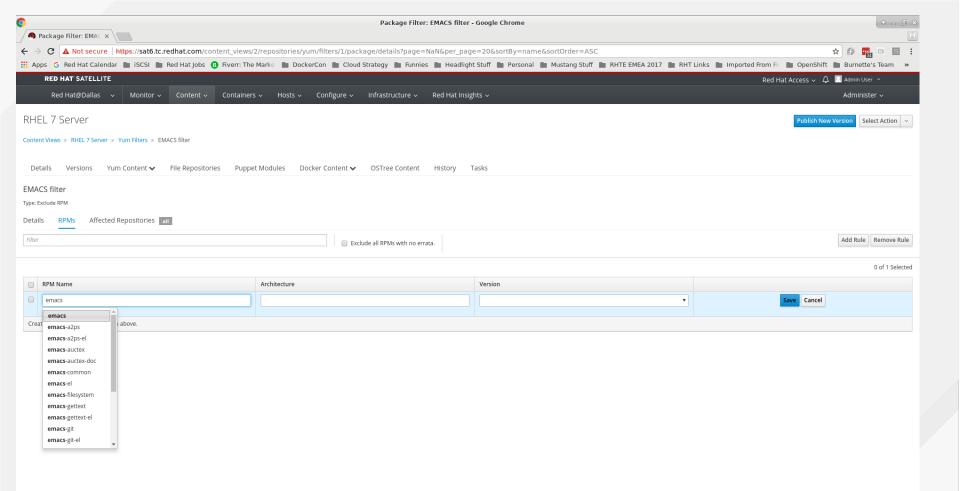


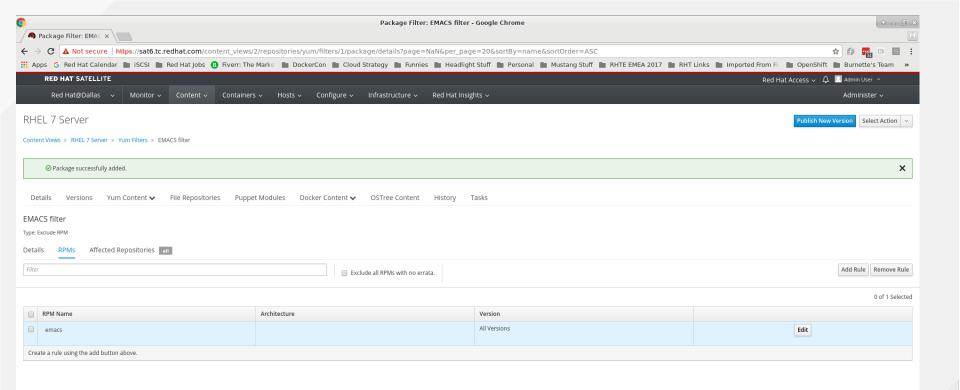










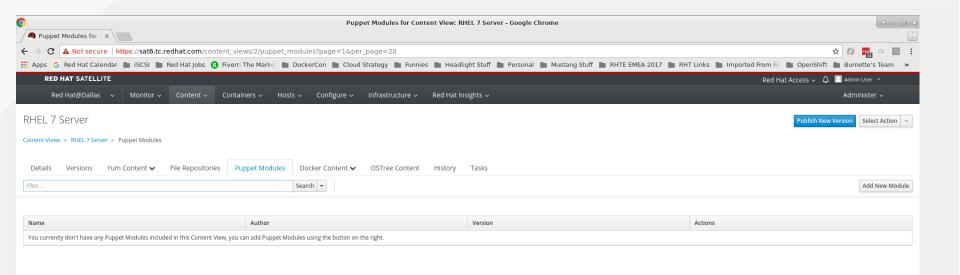


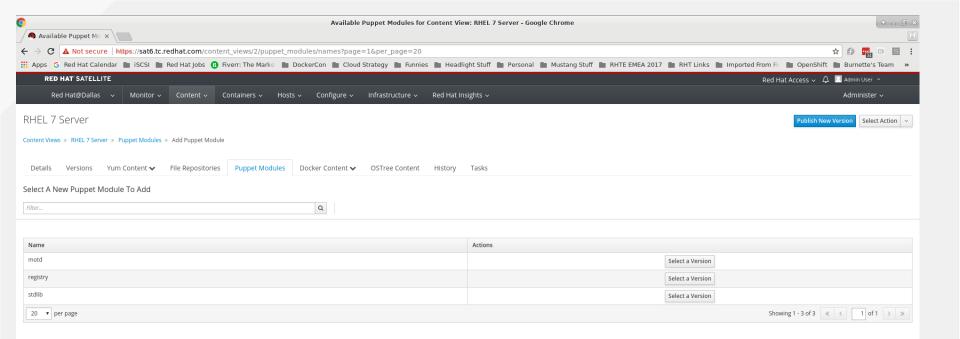
CONTENT VIEWS

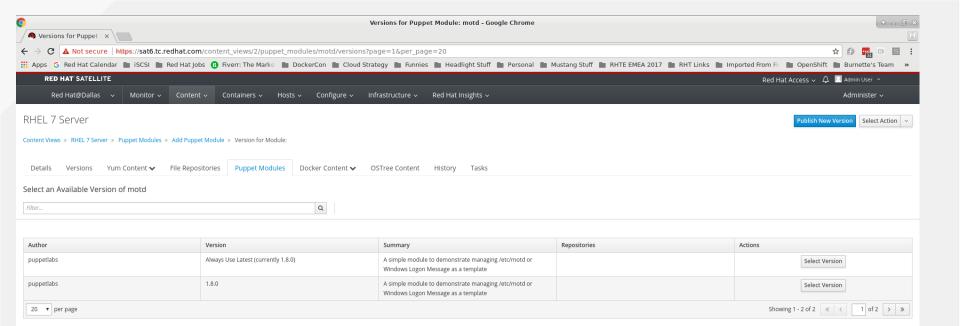
Puppet modules

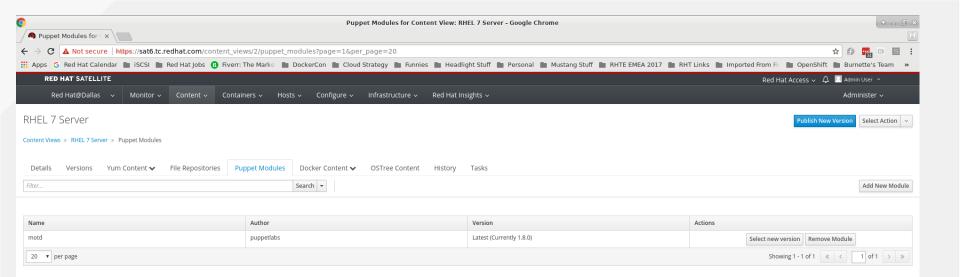
Here's where we add the puppet modules we uploaded earlier. We need to add all three.

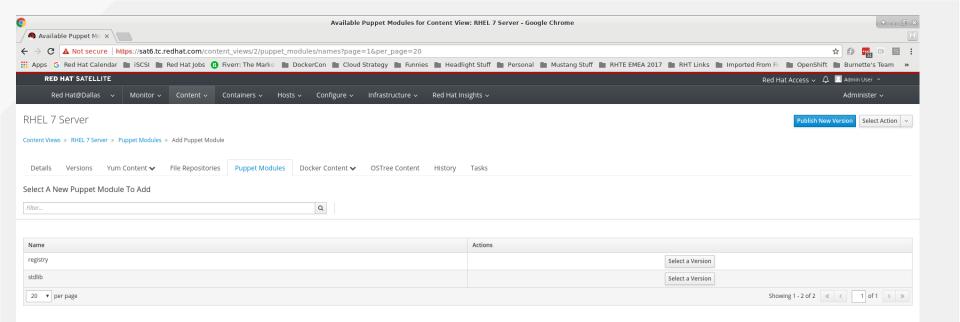


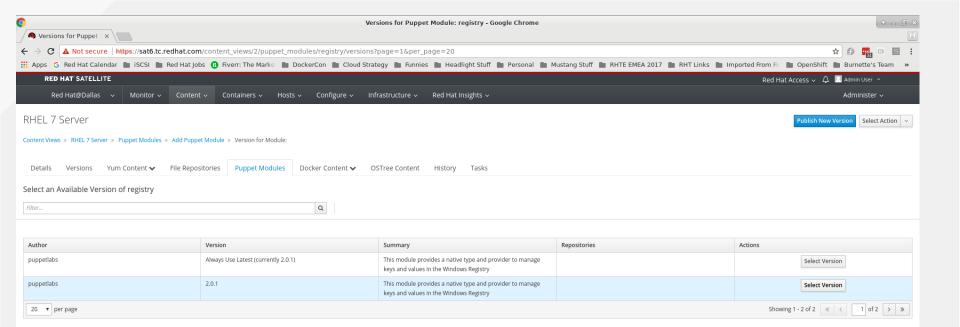


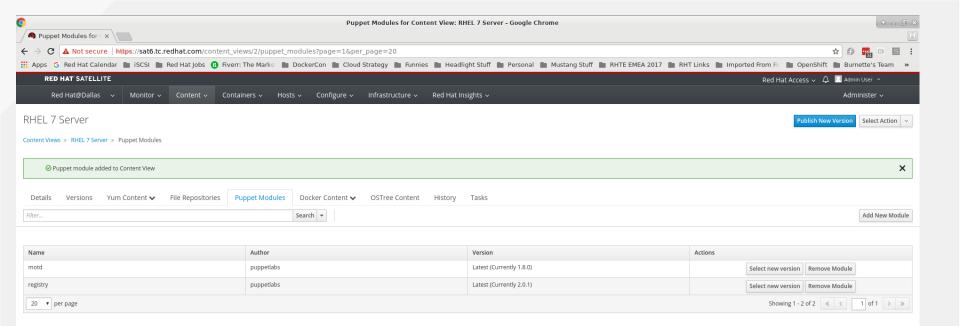


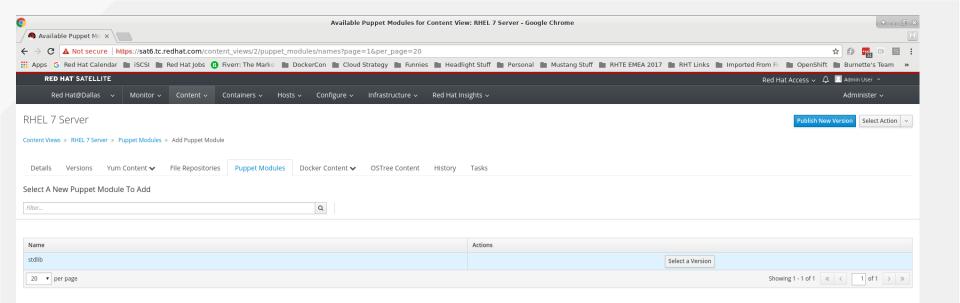


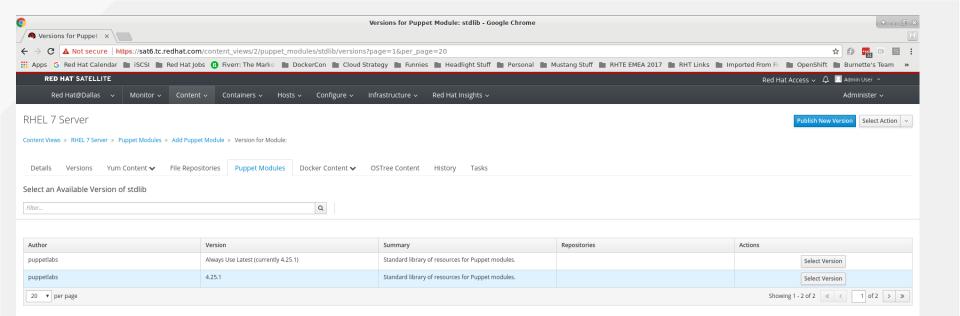


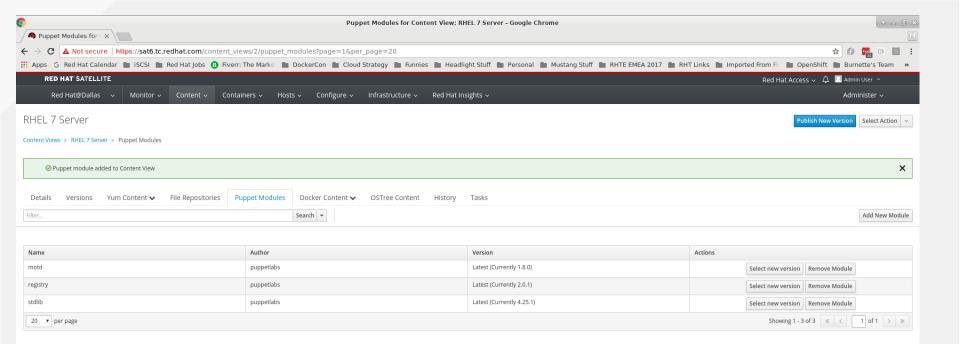












CONTENT VIEWS

Publish the CV

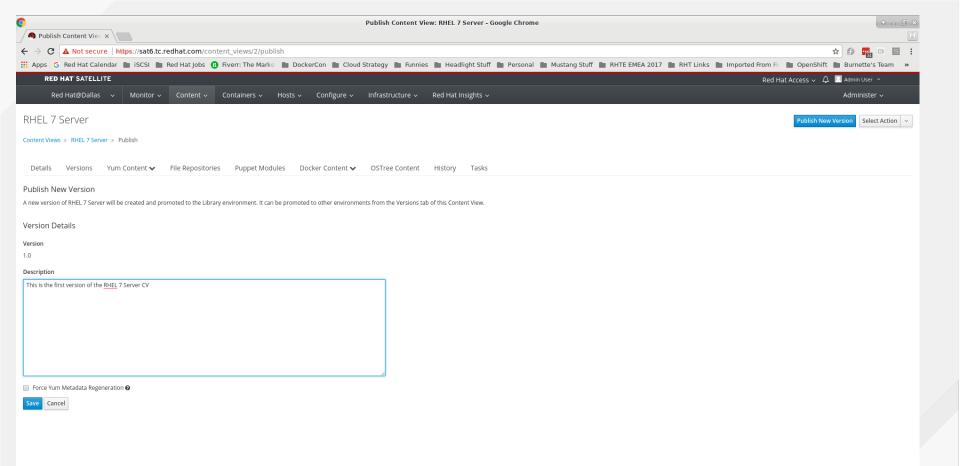
This is how we make this content available to the various lifecycle environments.

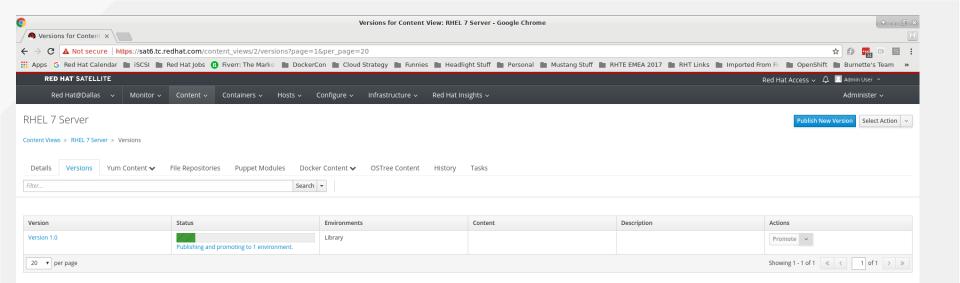
Press the "Publish new version" button at the upper right of the screen.

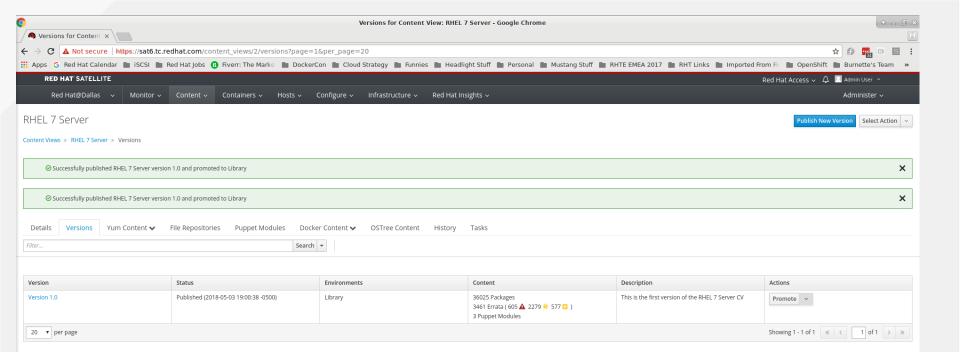
Note that the first time you publish, it is associated with the Library. We'll need to promote it to dev, qa, and prod as well.

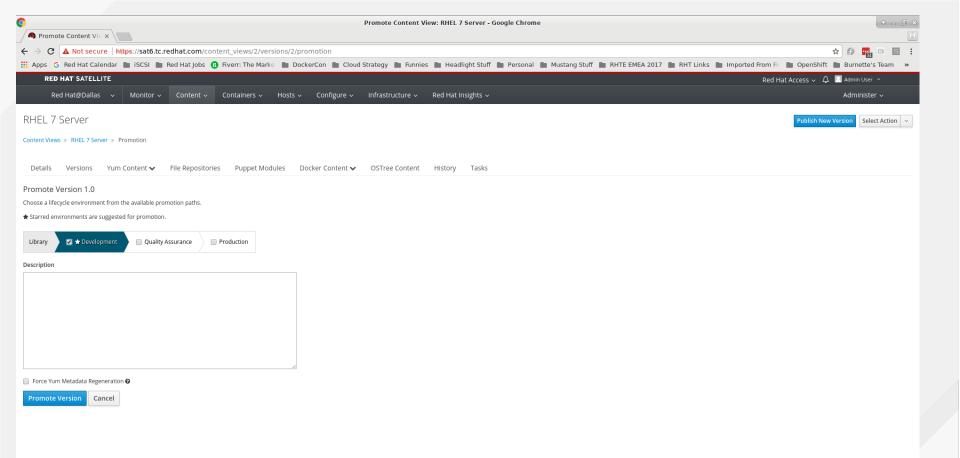
In your enterprise, you'd promote content to dev, subscribe development systems to dev, do your development work, and when it's ready for QA, you'd promote the content to QA. You'd then subscribe QA systems to the QA channel, do your QA testing, and when it passes, promote content to prod. You'd subscribe your production systems to the prod channel, and apply updates.

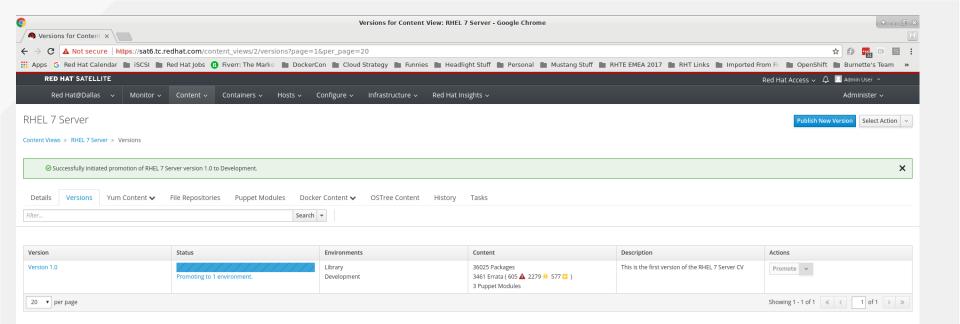


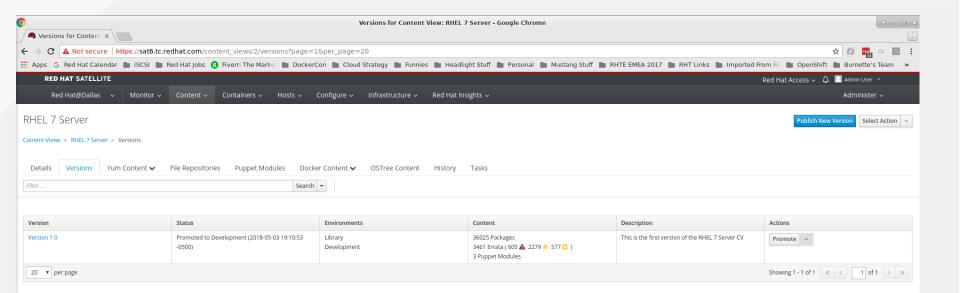


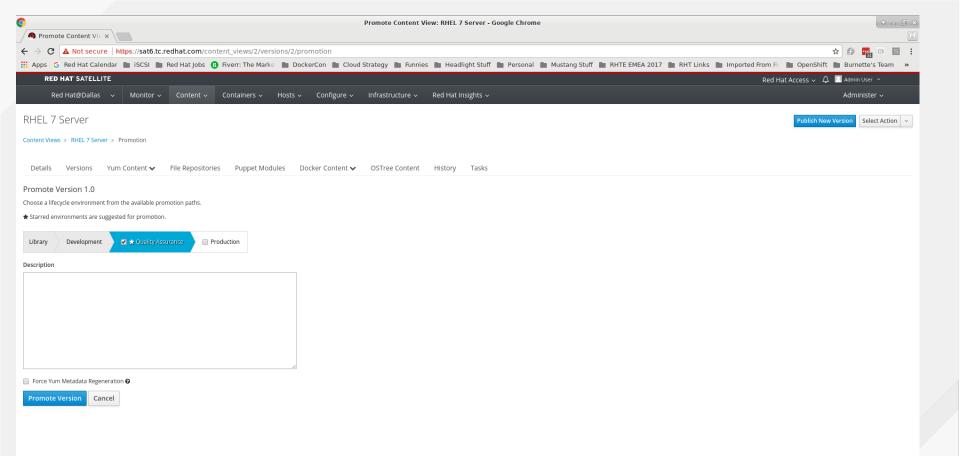


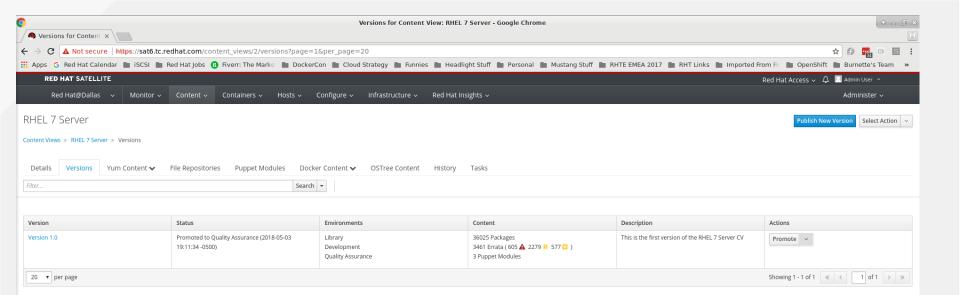


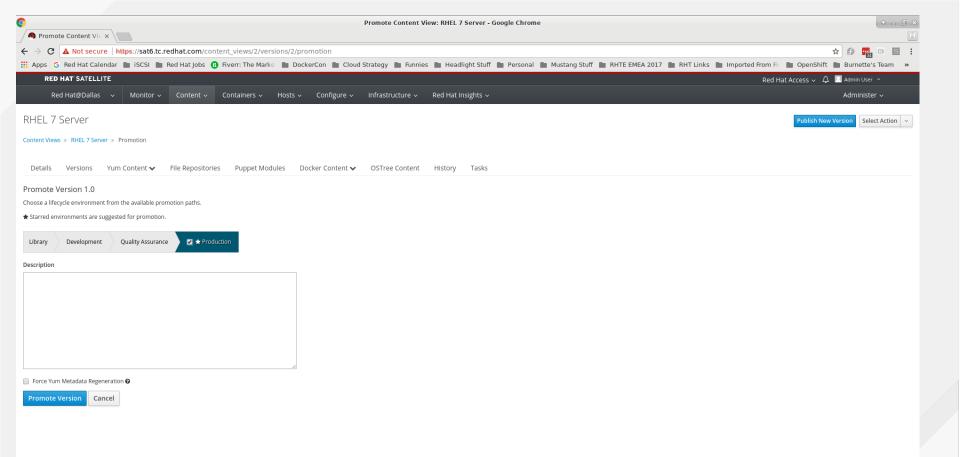


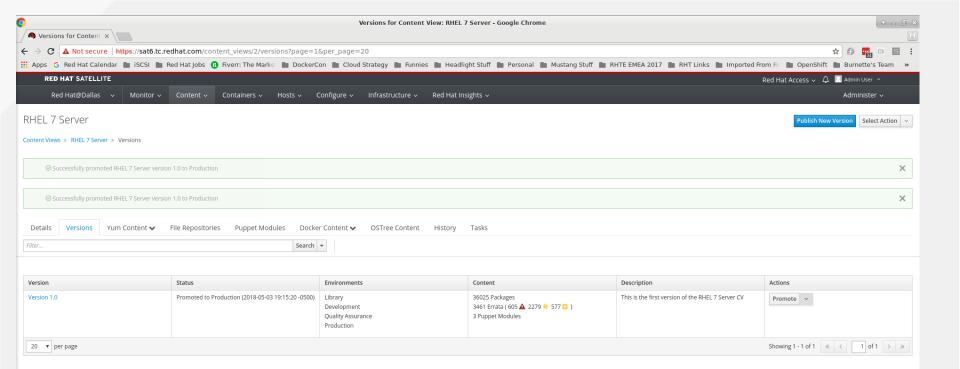












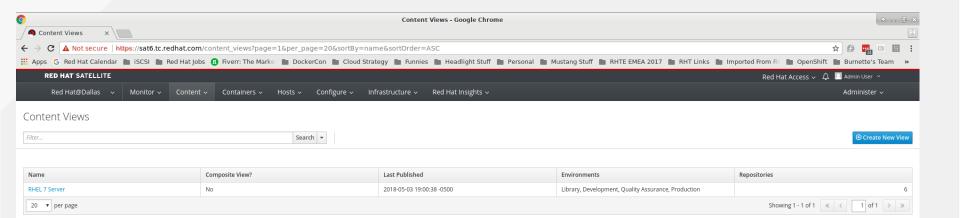
CONTENT VIEWS

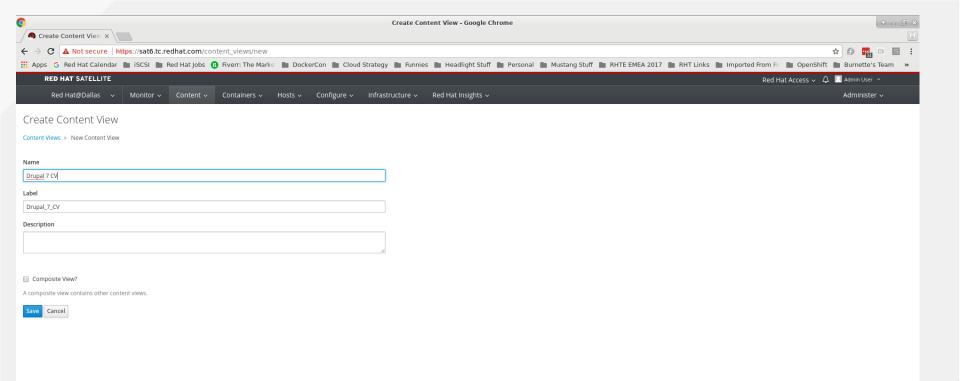
A more specialized content view - web server

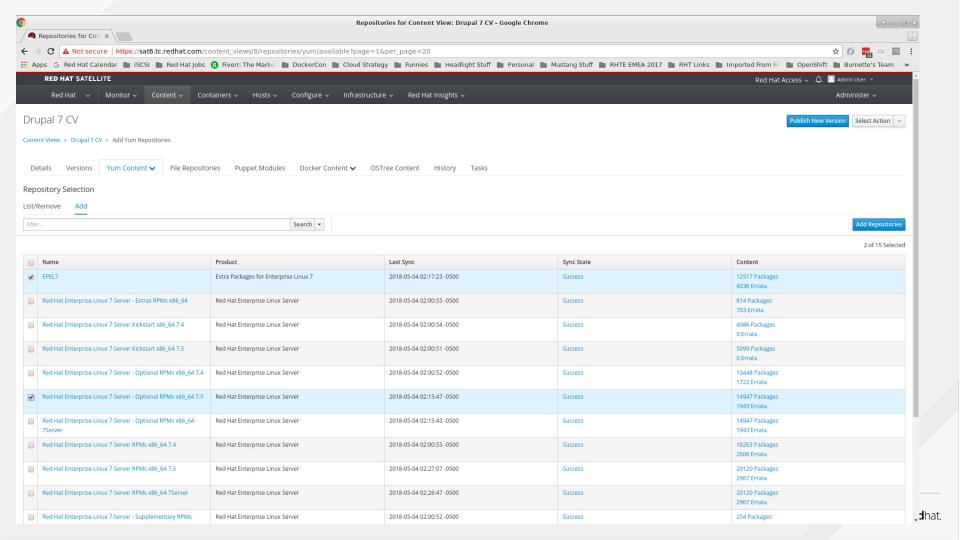
Next, we'll create a CV for some web servers. We're going to use drupal, which is available in the EPEL repository we synced earlier. We'll also need some packages from Optional, so we'll include that.

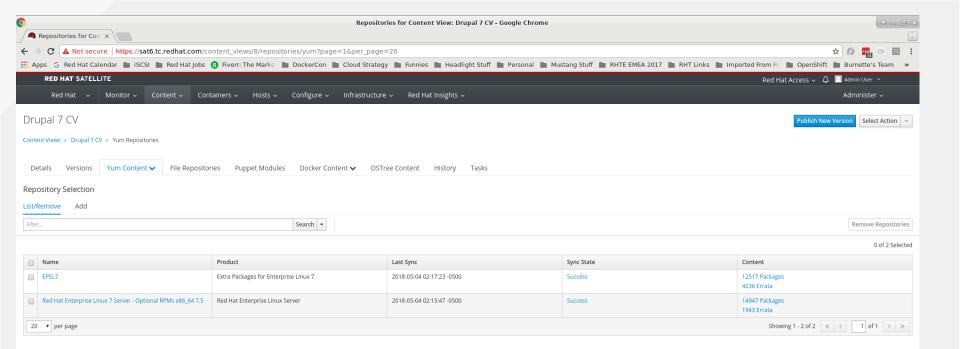
We'll use a filter to make only the packages in EPEL necessary for drupal to install. Because it's an include filter, it will exclude everything in EPEL except what we include.

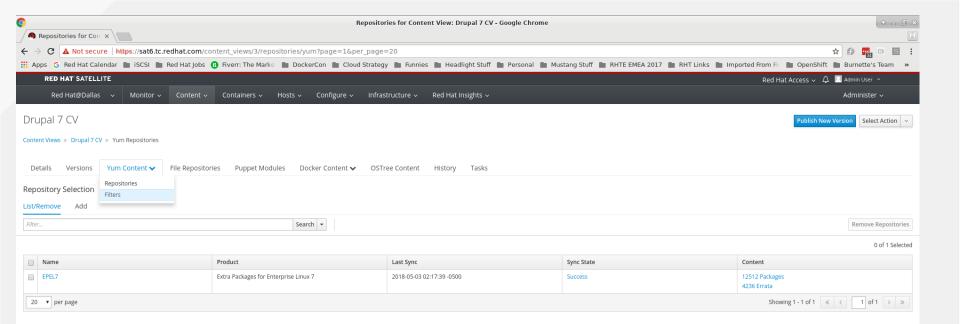


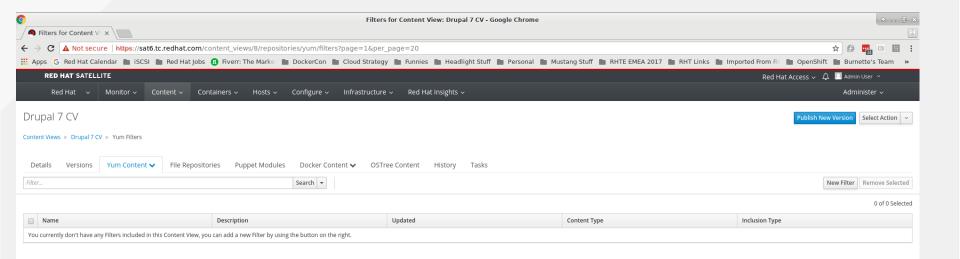


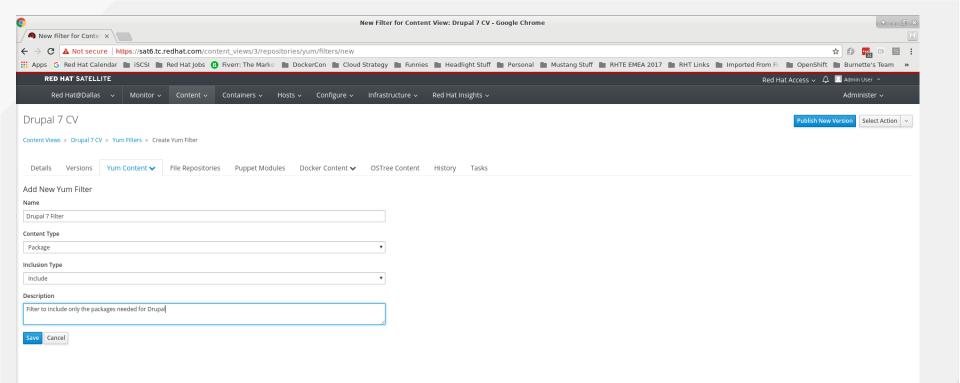


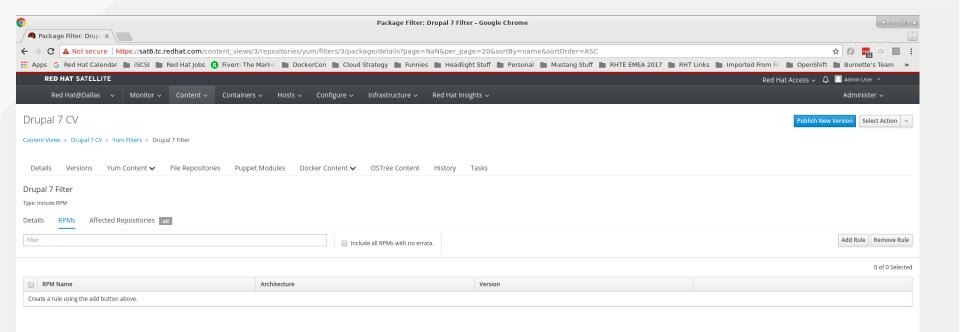


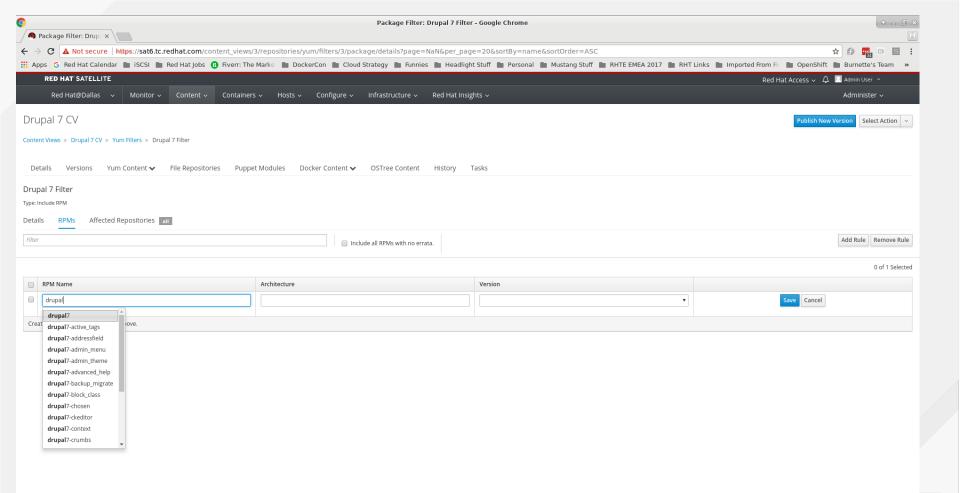


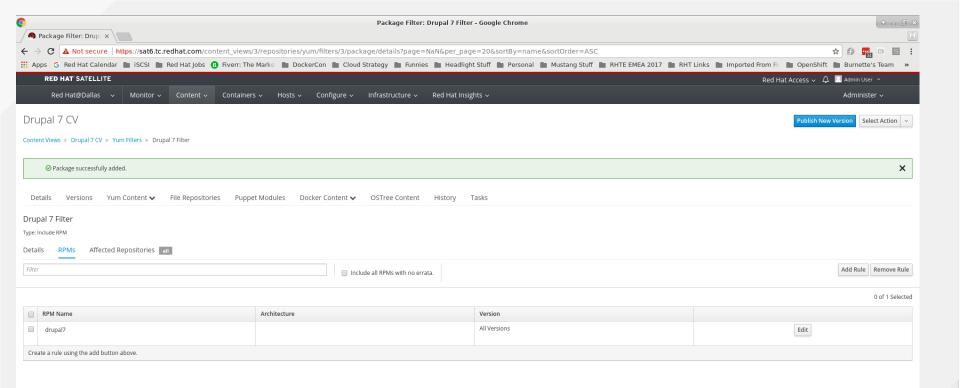


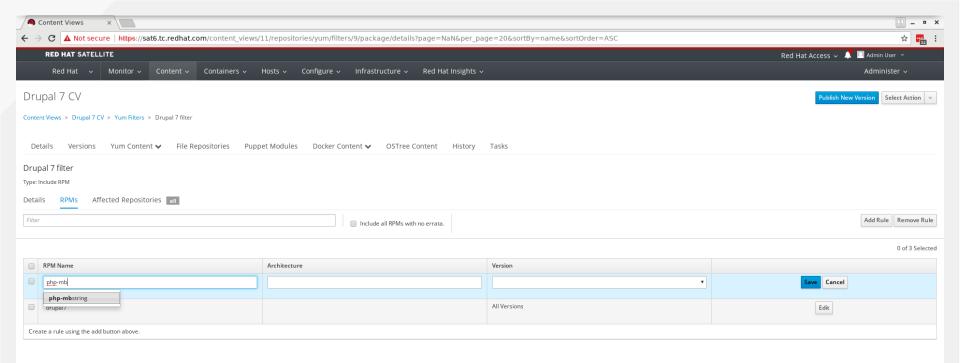


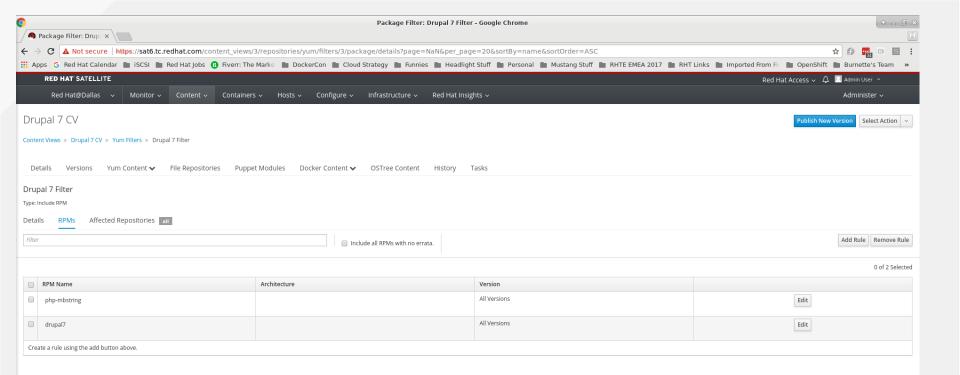










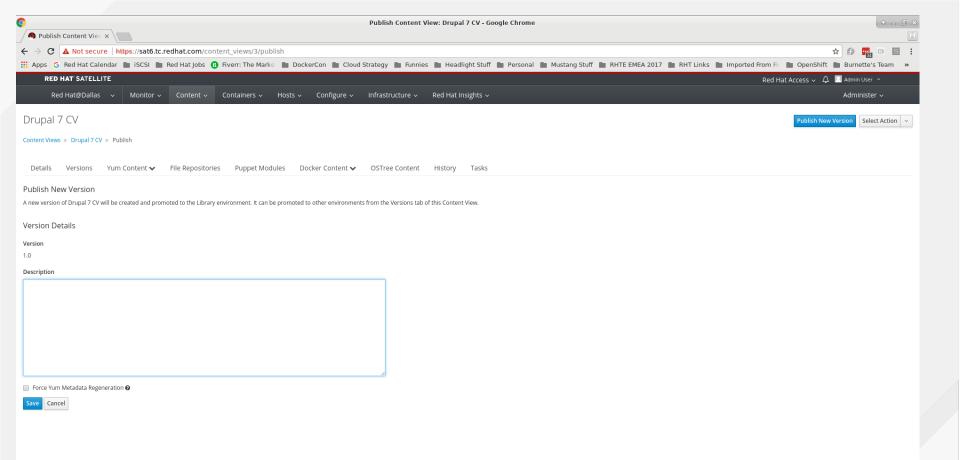


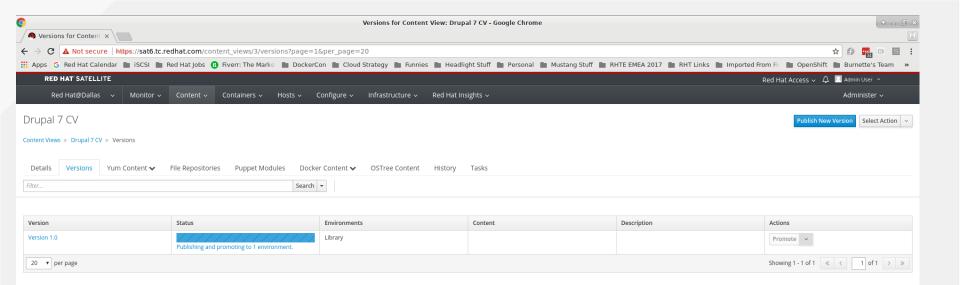
CONTENT VIEWS

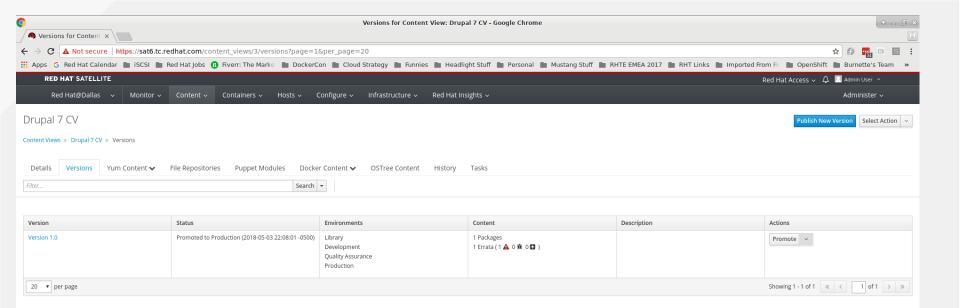
A more specialized content view - web server

Publish the content view and promote it as before.







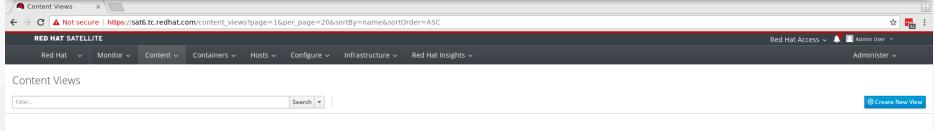


CONTENT VIEWS

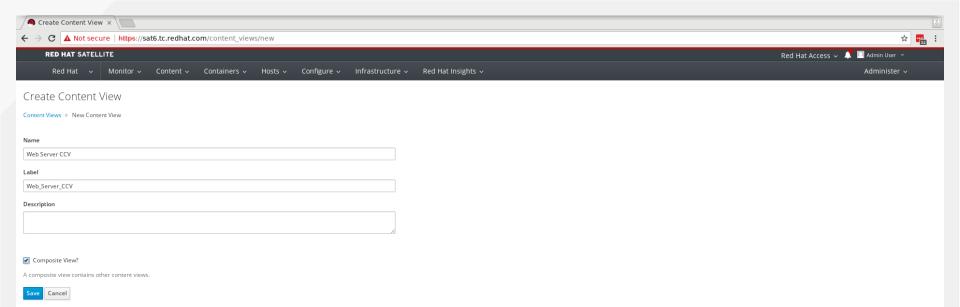
Composite content view

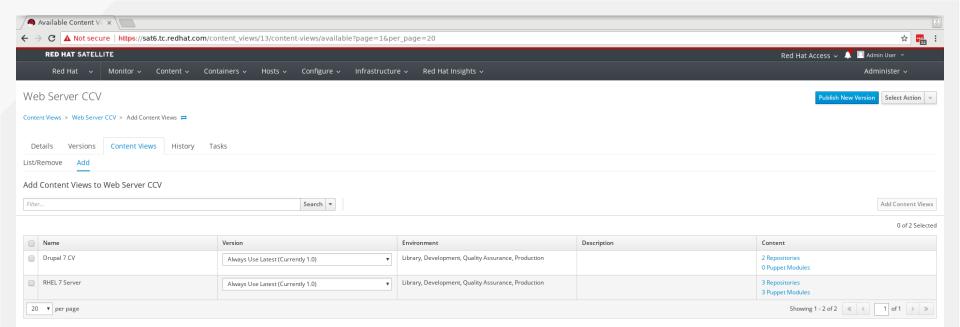
Now create a CCV of the RHEL 7 and the Drupal 7 CVs

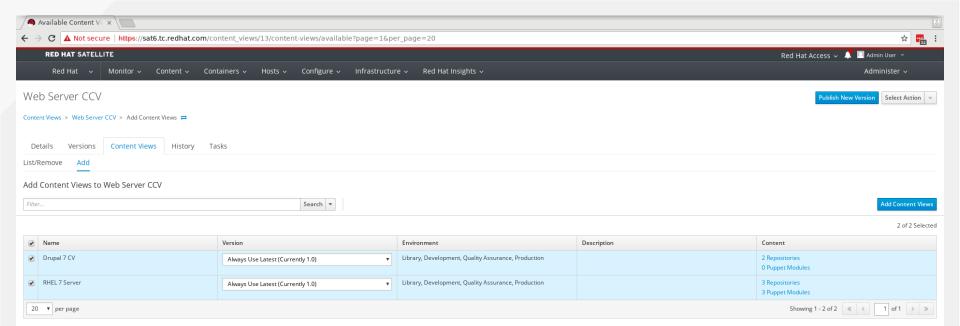


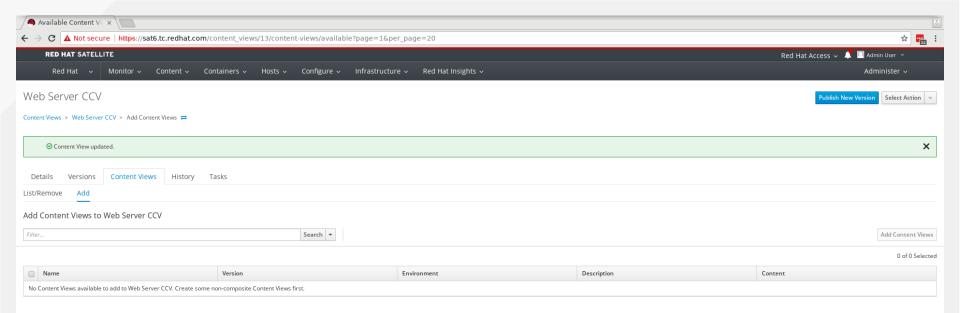


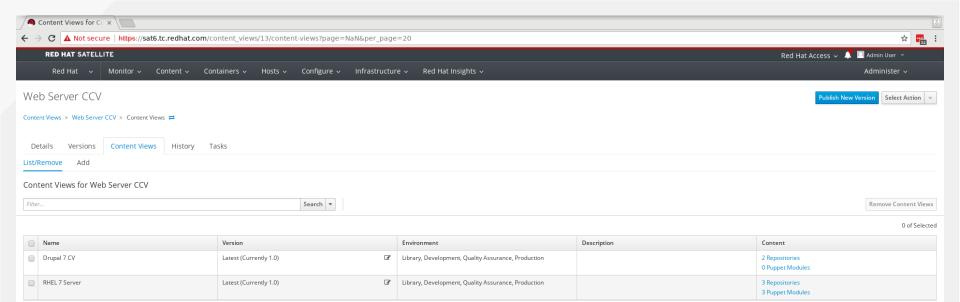










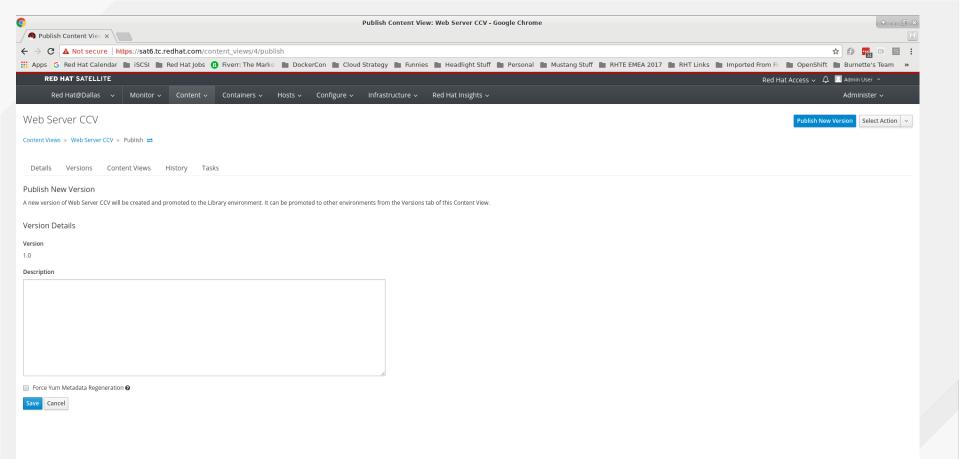


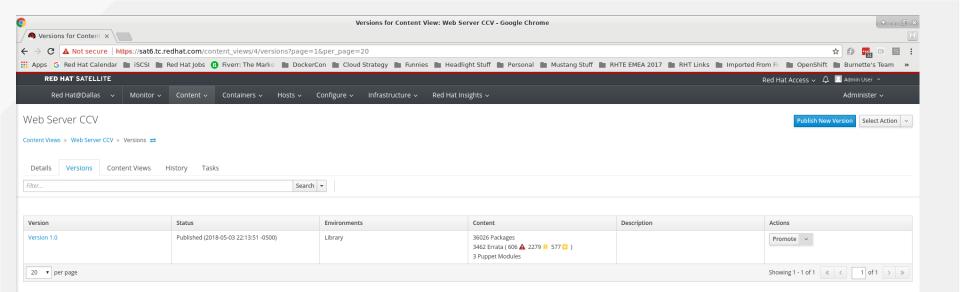
CONTENT VIEWS

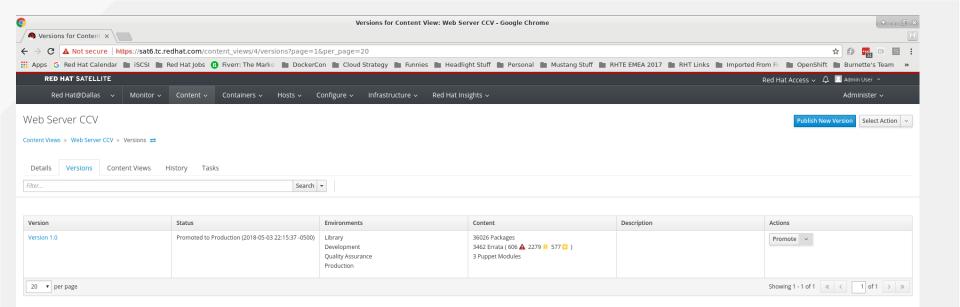
Composite content view

Publish them as before.









PUPPET CLASSES



PUPPET CLASSES

Config management

Puppet is a tool for applying and managing system configurations. Puppet collects system information, or facts, and uses this information to create a customized system configuration using a set of modules. These modules contain parameters, conditional arguments, actions, and templates. Puppet is used as either a local system command line tool or in a client-server relationship where the server acts as the Puppet master and applies configuration to multiple client systems using a Puppet agent. This provides a way to automatically configure newly provisioned systems, either individually or simultaneously to create a specific infrastructure.



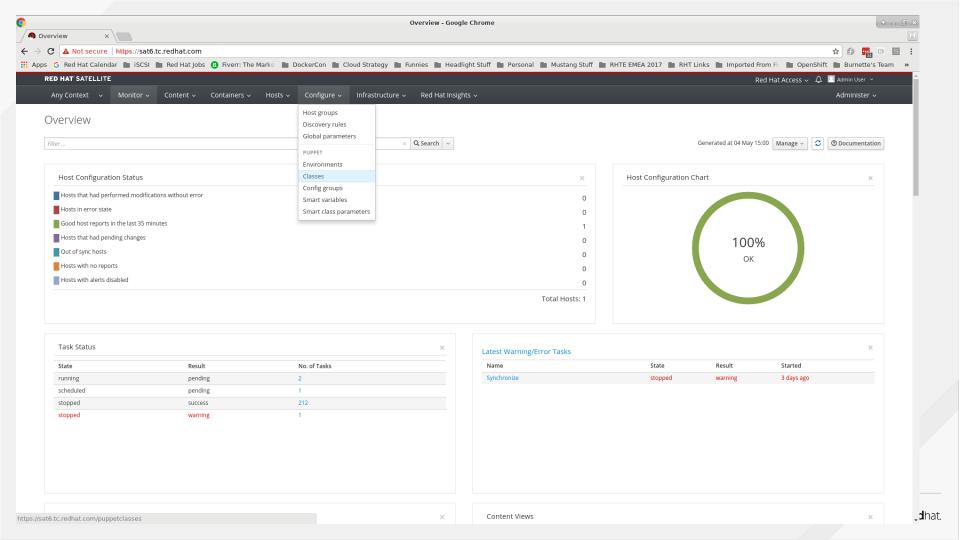
PUPPET CLASSES

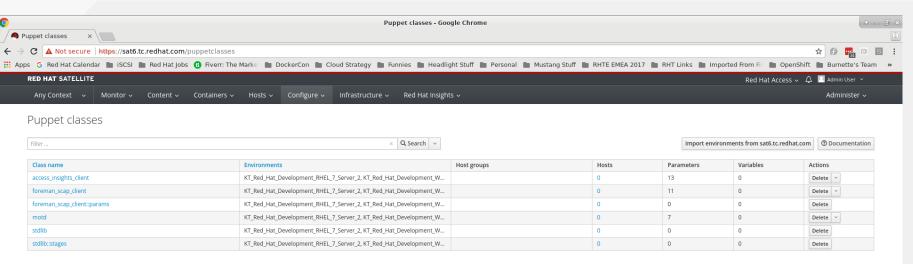
Config management

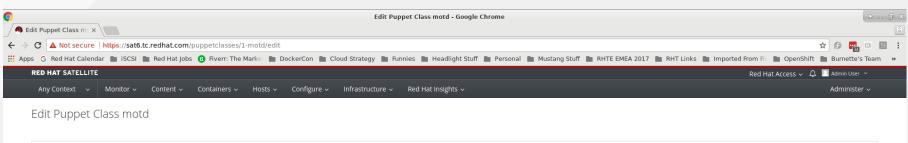
Puppet uses the following workflow to apply configuration to a system.

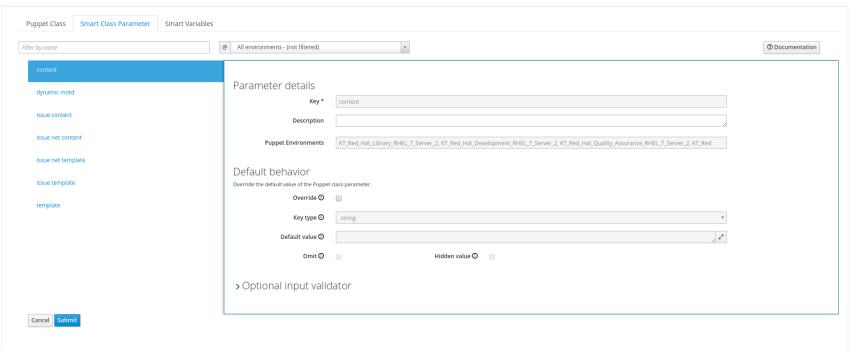
- Collect facts about each system. These facts can include hardware, operating systems, package versions, and other information. The Puppet agent on each system collects this information and sends it to the Puppet master.
- The Puppet master generates a custom configuration for each system and sends it to the Puppet agent. This custom configuration is called a catalog.
- The Puppet agent applies the configuration to the system.
- The Puppet agent sends a report back to the Puppet master that indicates the changes applied and if any changes were unsuccessful.
- Third-party applications can collect these reports using Puppet's API.

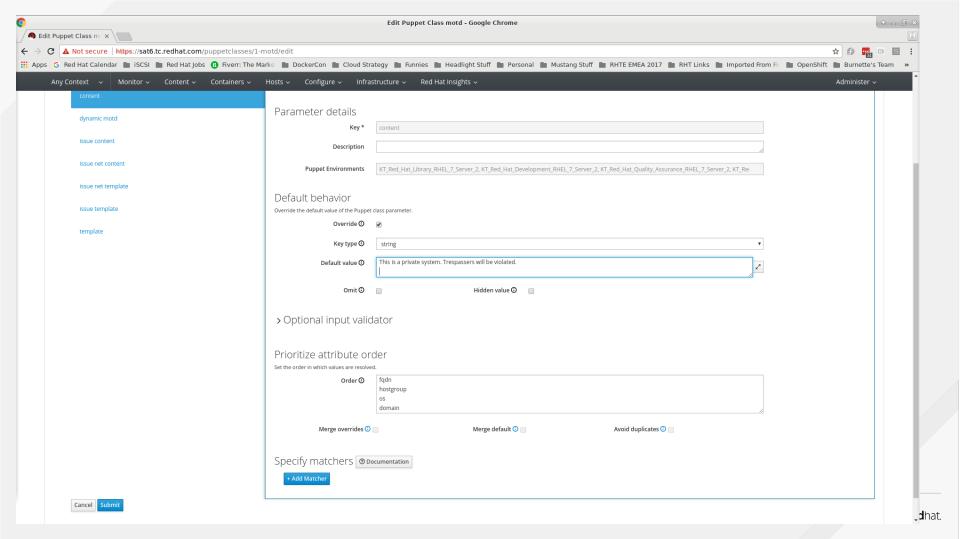


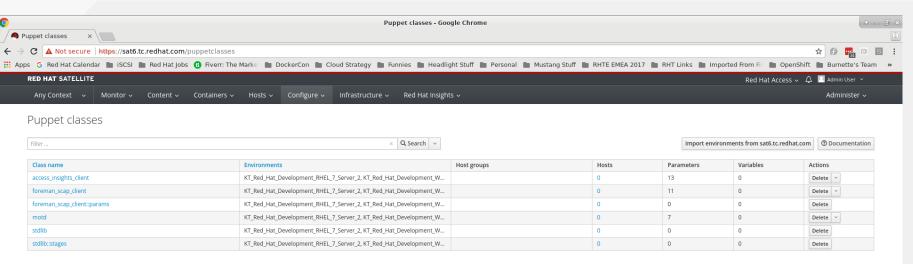












DOMAINS



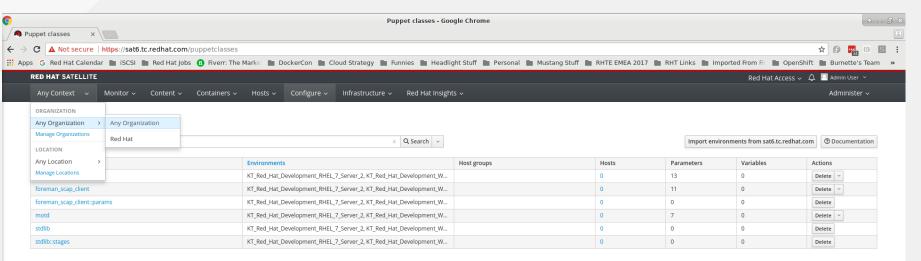
DOMAINS

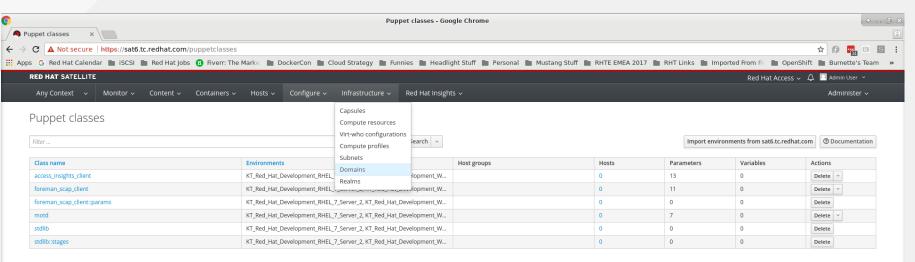
Tell Satellite about the DNS domains it's dealing with

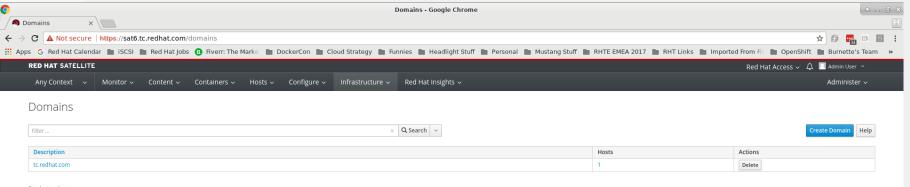
The Satellite server as configured in this example manages DNS. You need to define the DNS zones (domains) and configure them so that the Satellite server can dynamically update the zone files.

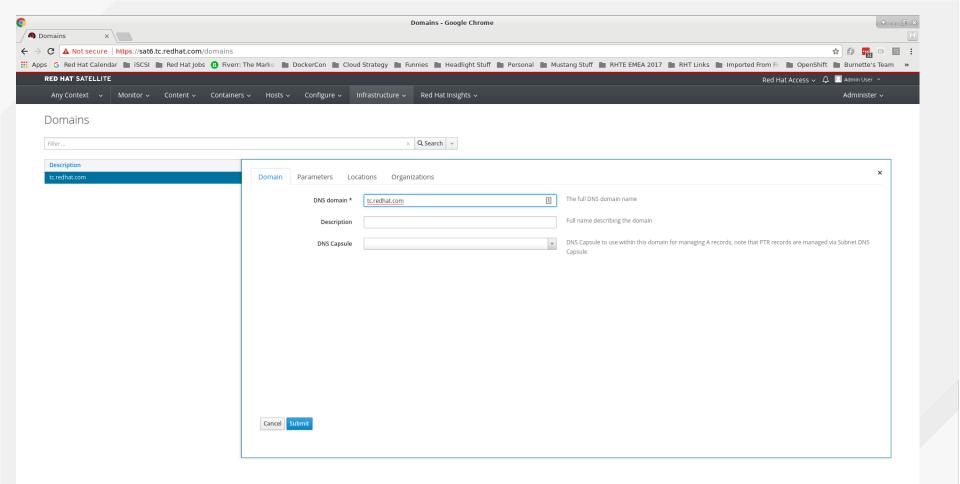
DNS domains are not initially associated with any one organization.

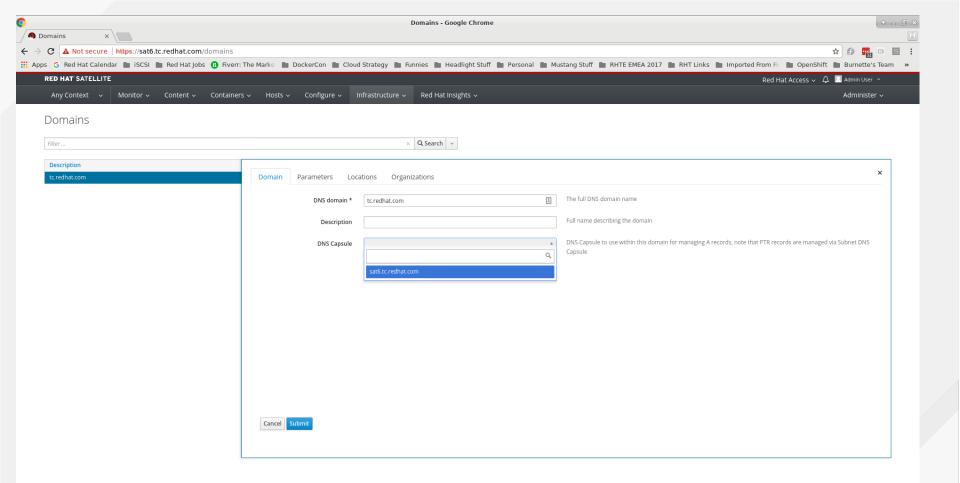


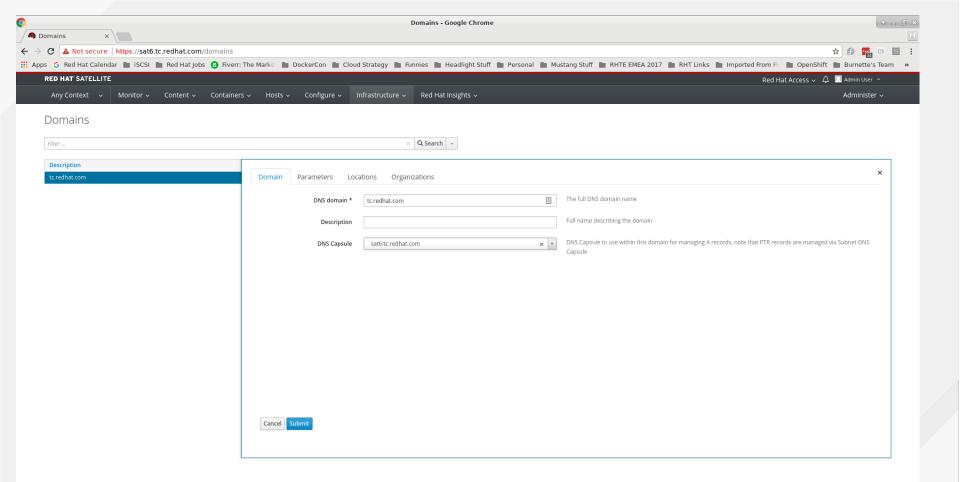


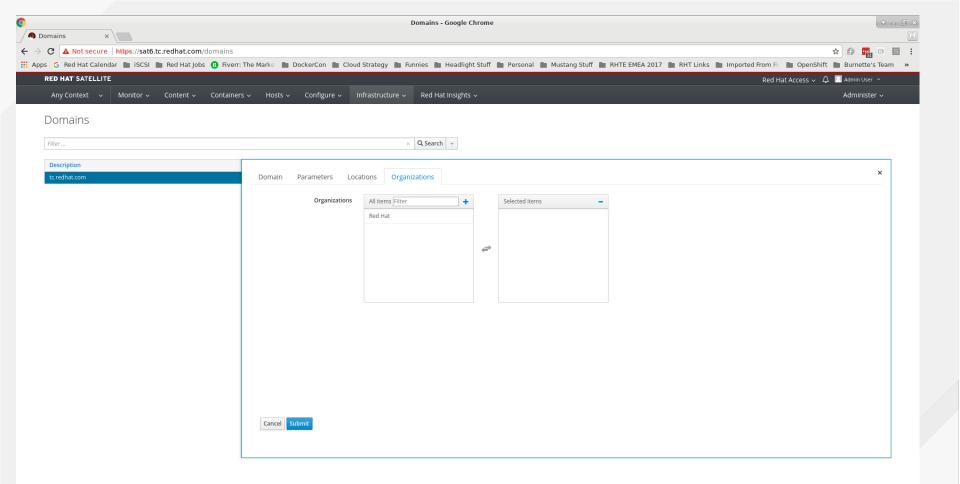


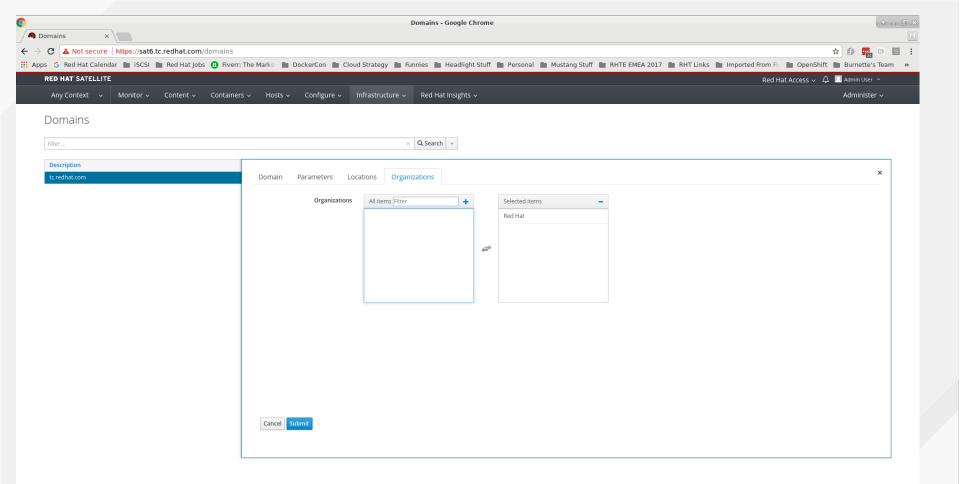


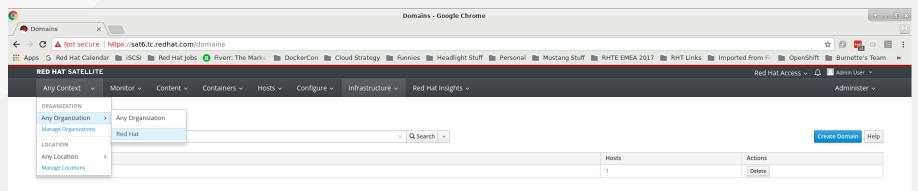




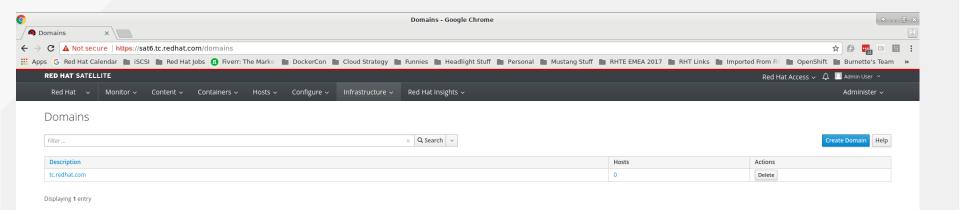








Displaying 1 entry



SUBNETS

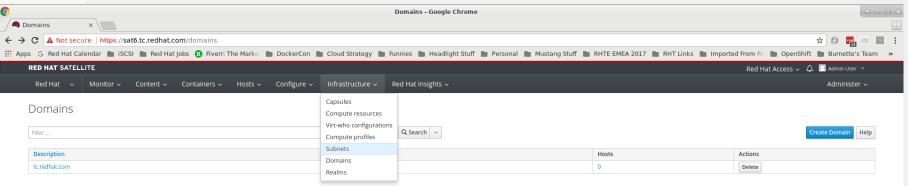


SUBNETS

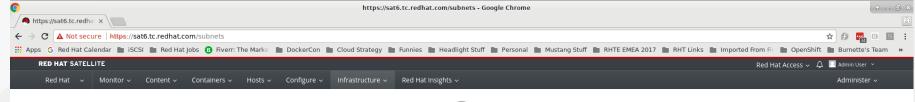
Tell Satellite about the networks upon which it's managing hosts

The Satellite server is capable of custom, per-subnet configurations for things like kickstarts. In order to customize those configurations, you have to define the subnets.





Displaying 1 entry



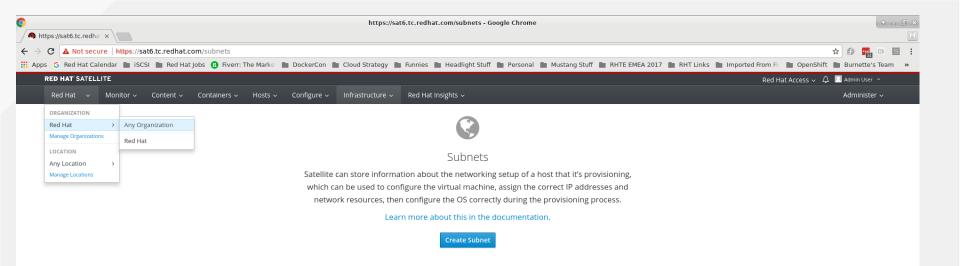


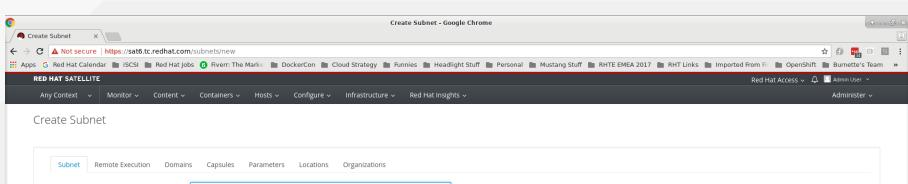
Subnets

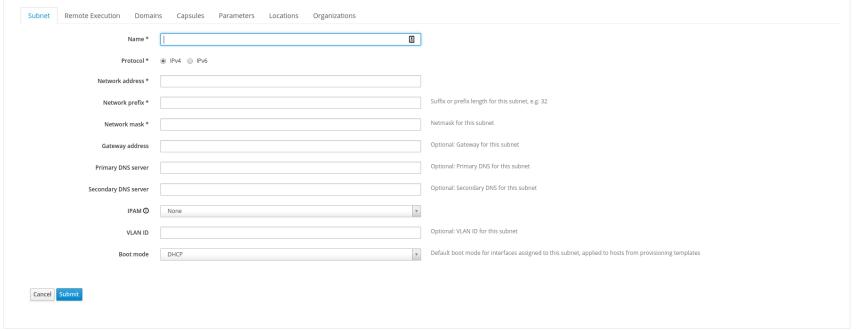
Satellite can store information about the networking setup of a host that it's provisioning, which can be used to configure the virtual machine, assign the correct IP addresses and network resources, then configure the OS correctly during the provisioning process.

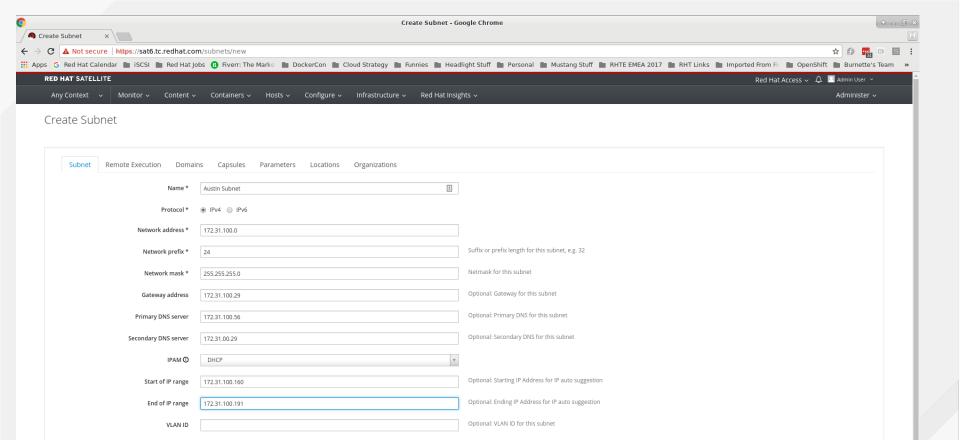
Learn more about this in the documentation.

Create Subnet









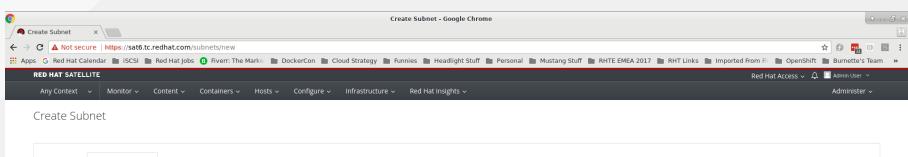
Boot mode

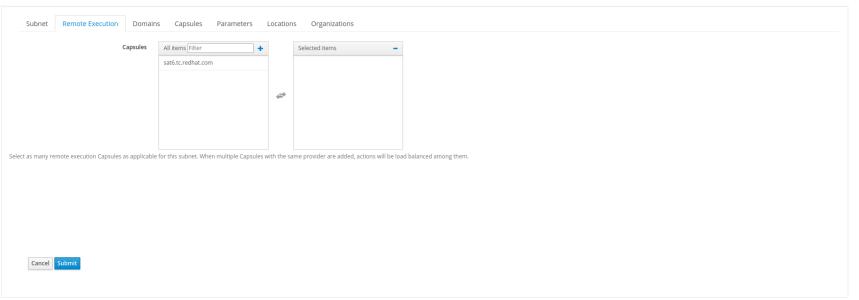
Cancel Submit

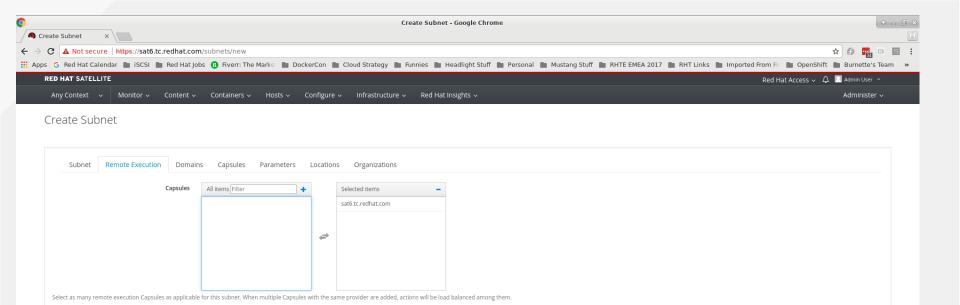
DHCP

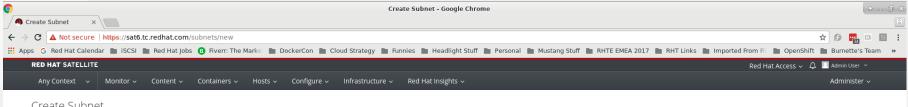
Default boot mode for interfaces assigned to this subnet, applied to hosts from provisioning templates

_**d**hat.

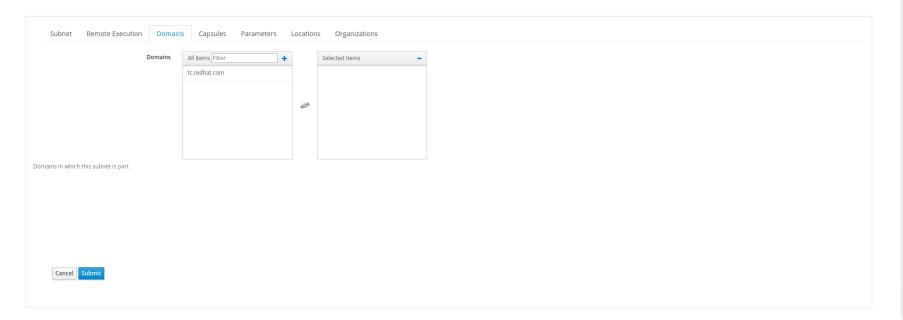


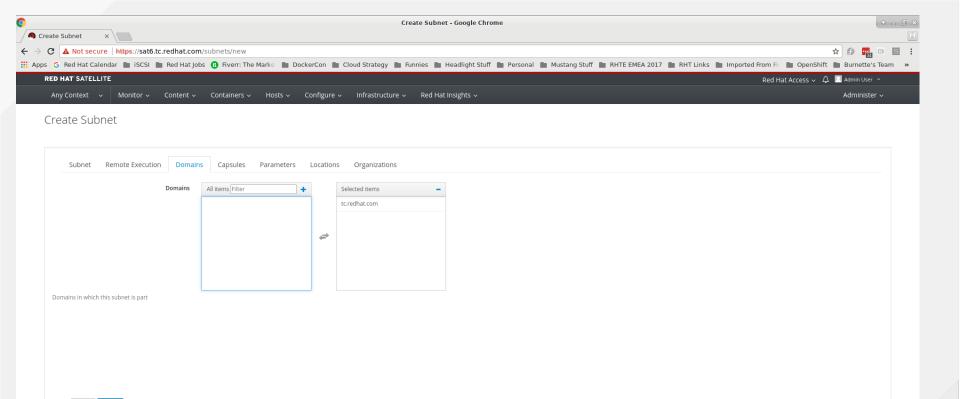


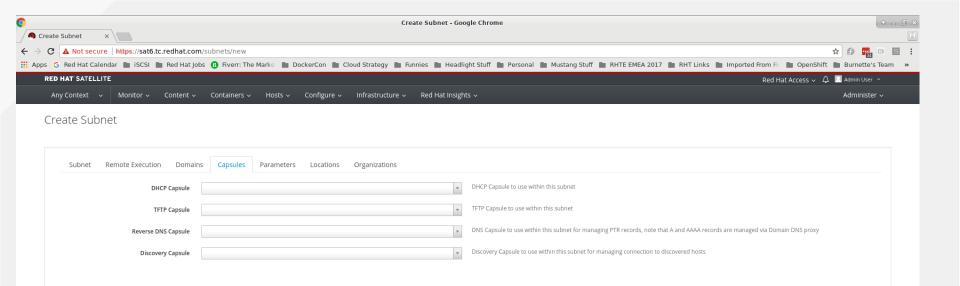


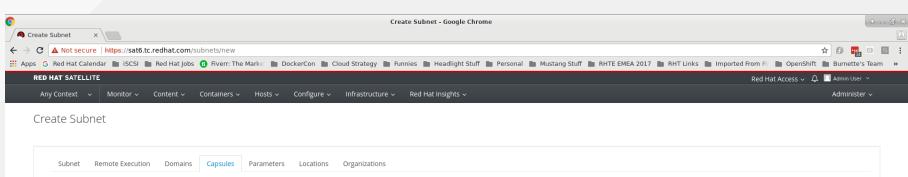


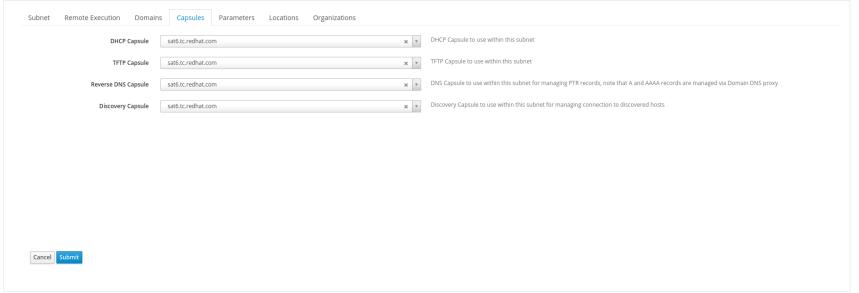
Create Subnet

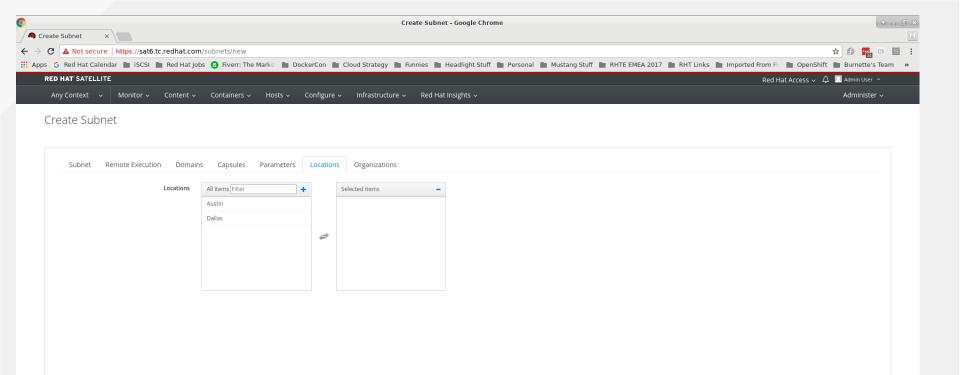


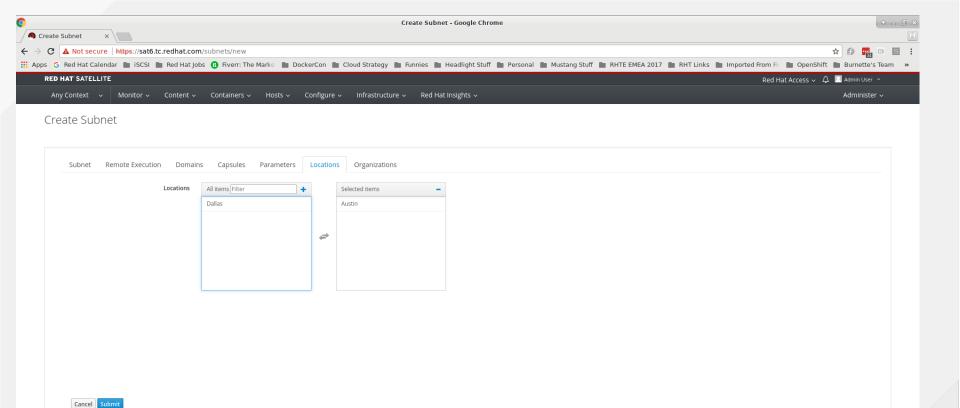


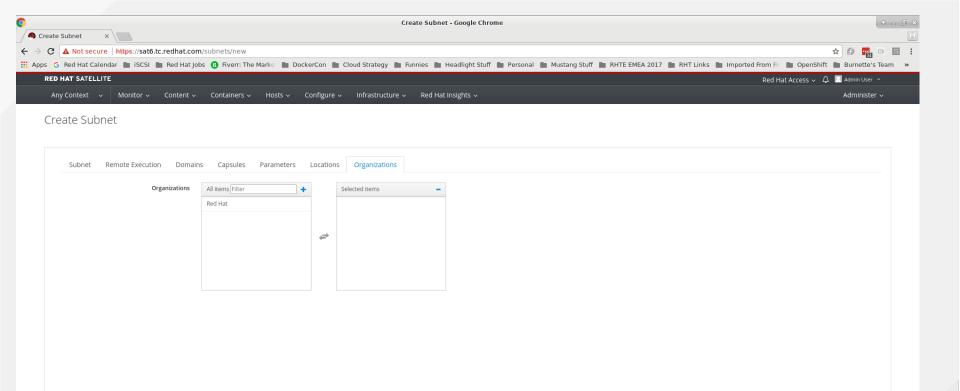


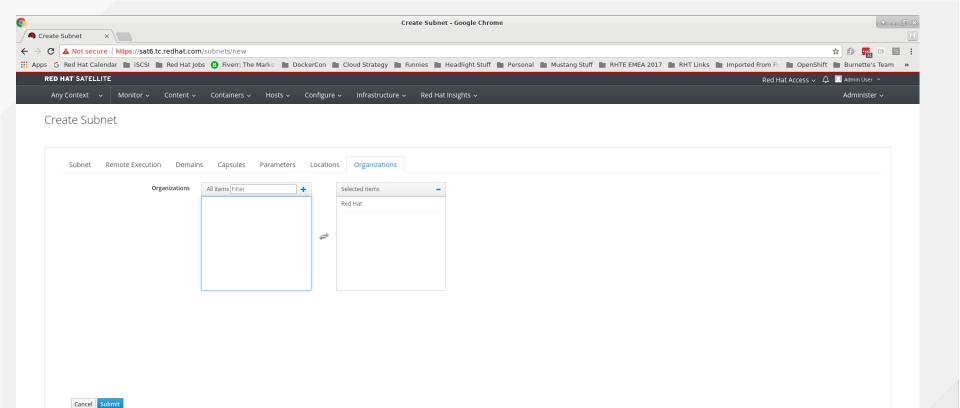


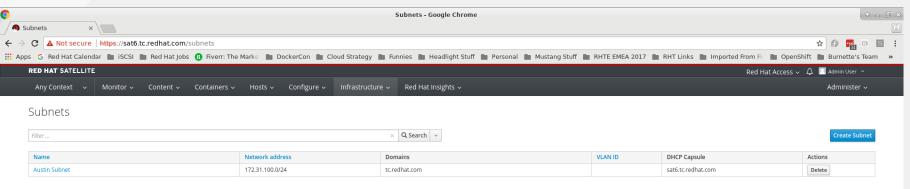




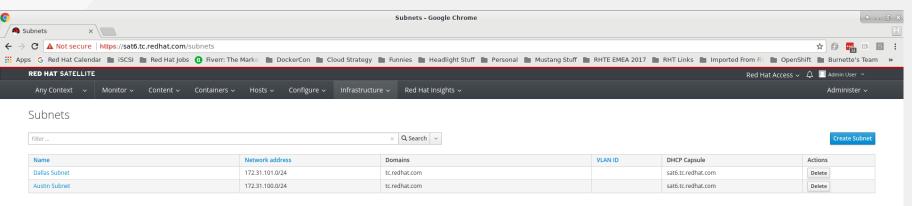




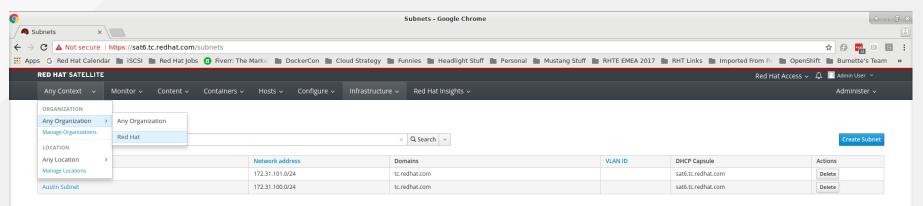




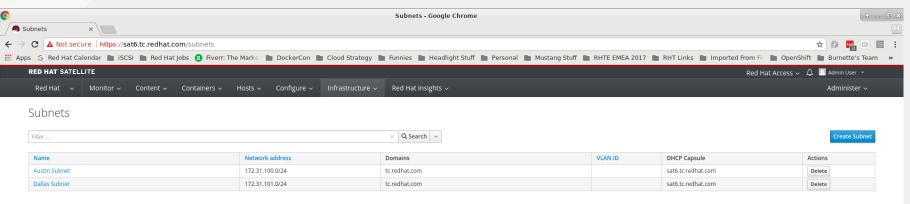
Displaying 1 entry



Displaying all 2 entries



Displaying all 2 entries



Displaying all 2 entries

SUBNETS

Use cases

Rich?



HOST COLLECTIONS

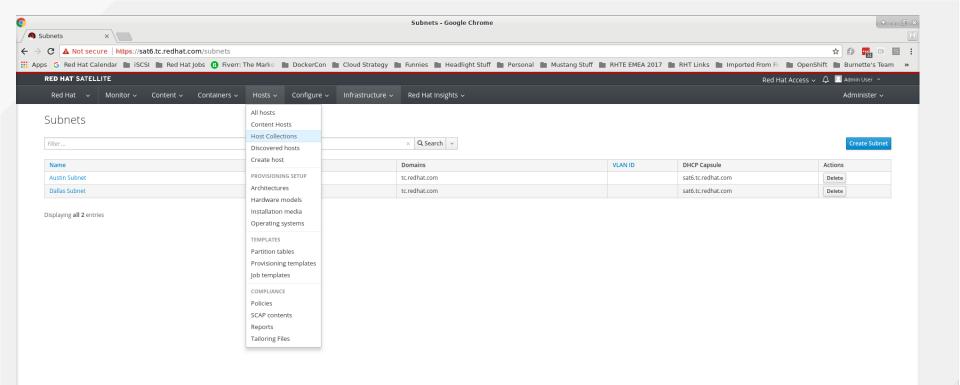


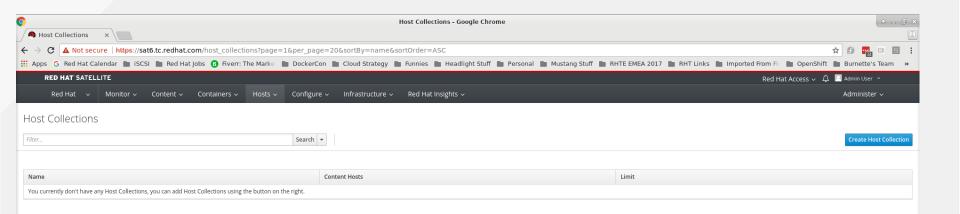
HOST COLLECTIONS

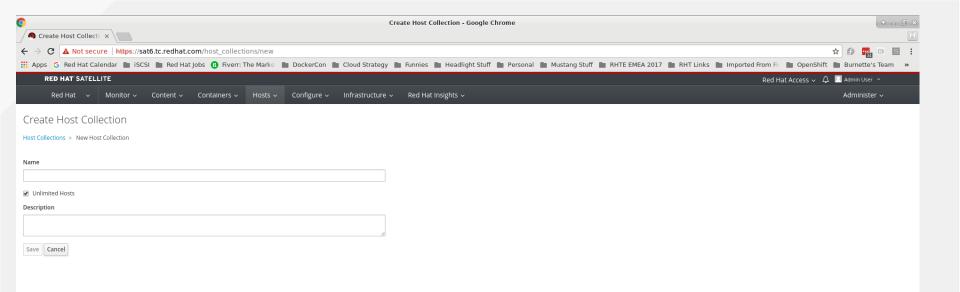
Local groupings of systems

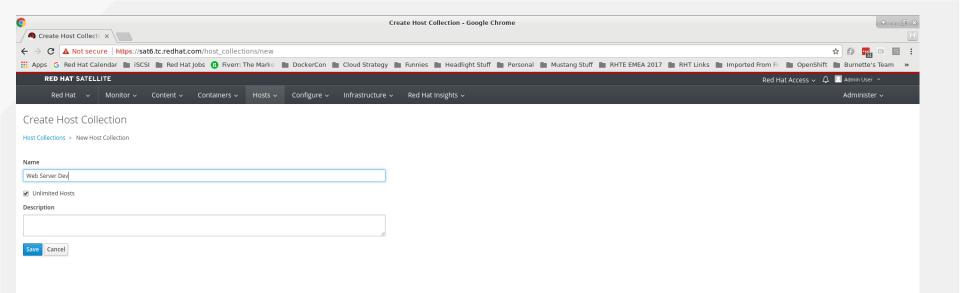
Logical groupings of systems for use for patching and remote commands. Can be based on anything the admin wants – location (Austin, Dallas), role (dev, QA, production), category (app, web, database), or anything else.

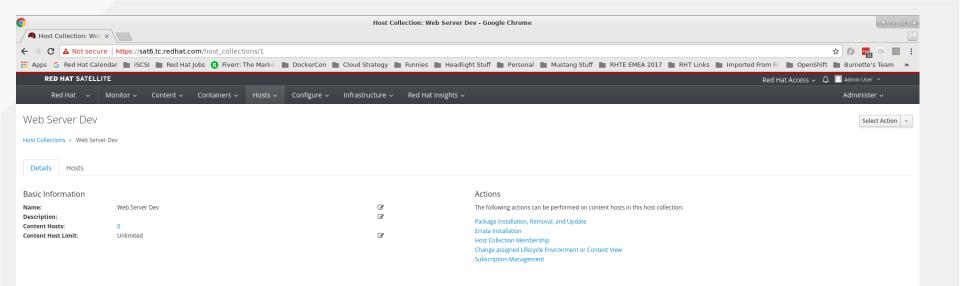


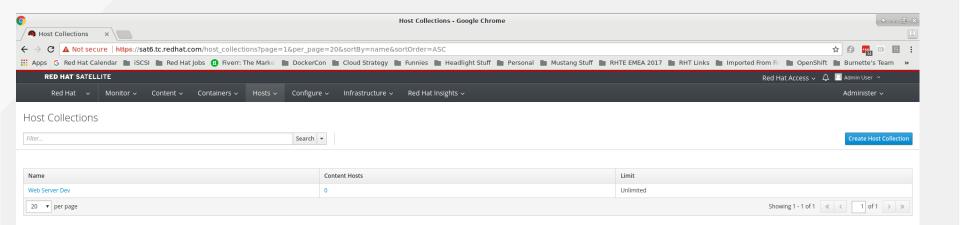


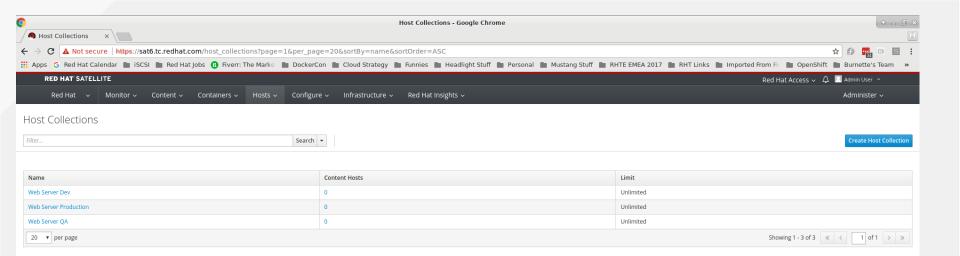












INSTALLATION MEDIA



INSTALLATION MEDIA

No longer visible!

If you were here last year, you remember me covering the configuration of installation media. This is no longer necessary.

See https://access.redhat.com/solutions/3365941 and https://bugzilla.redhat.com/show_bug.cgi?id=1382775

With recent change in Red Hat Satellite 6.3, auto-creation of Installation Media for synced Kickstart repositories has been stopped, to support Synced Content under Media Selection option, when creating either a New Host or creating a New Host Group.



PROVISIONING TEMPLATES

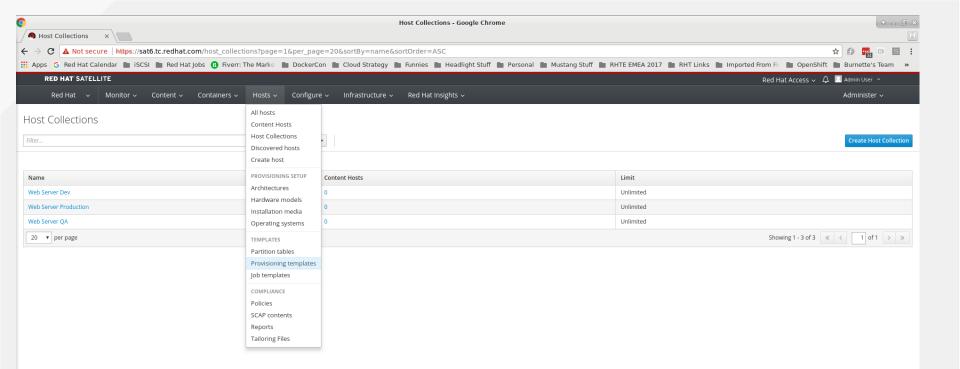


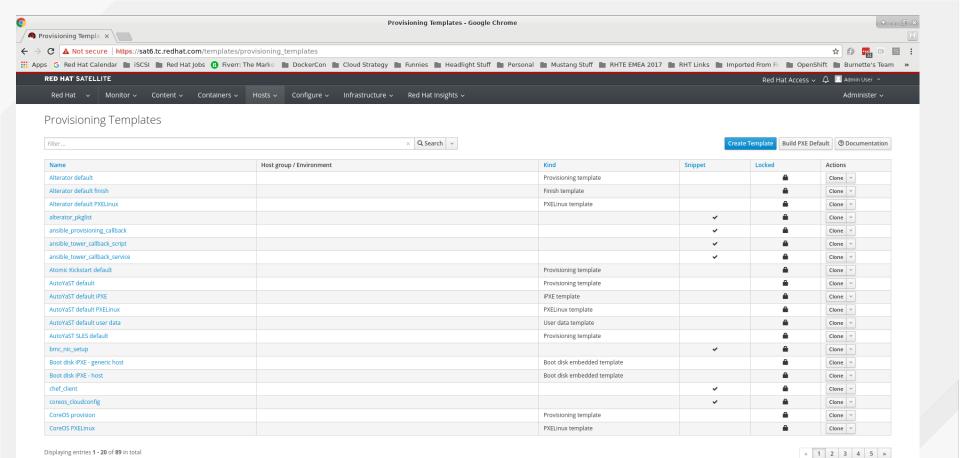
PROVISIONING TEMPLATES

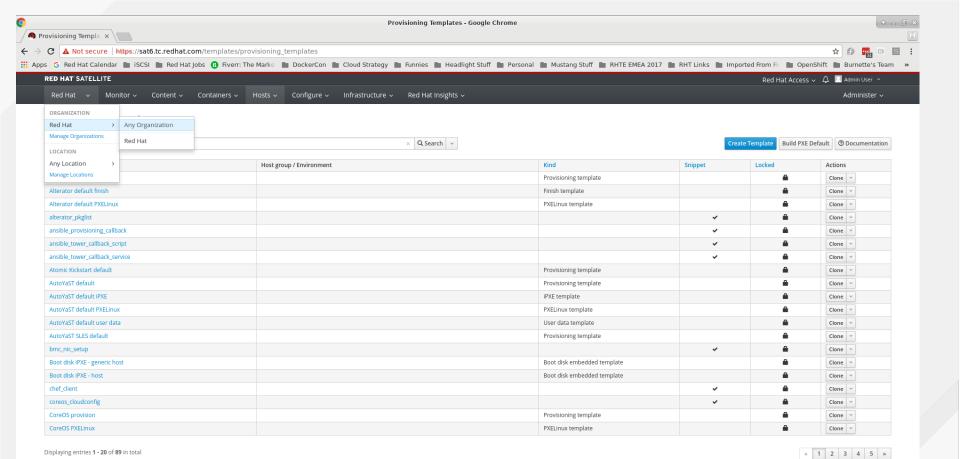
For kickstart

Stackable, mix and match templates which are used to create a kickstart script when provisioning new hosts. We're going to make the templates commonly used in various methods of kickstarting (iPXE, PXELinux, and Satellite kickstart, %post, and user information) available to the organization and locations the Satellite server manages.

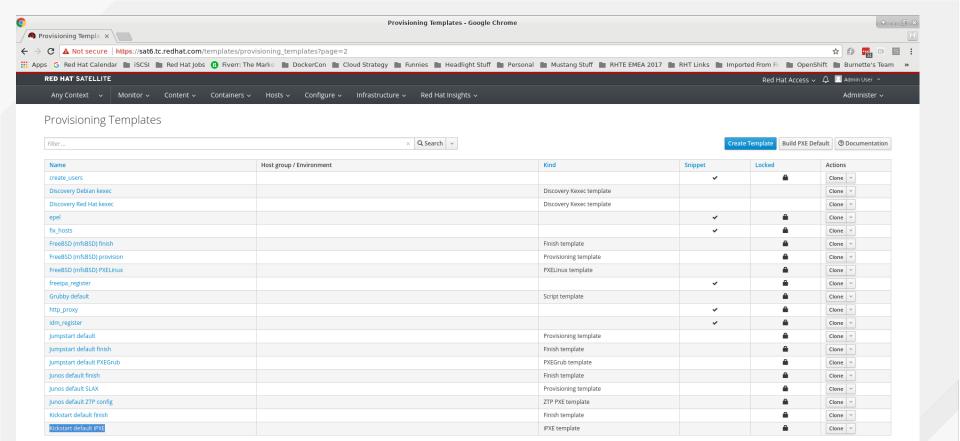






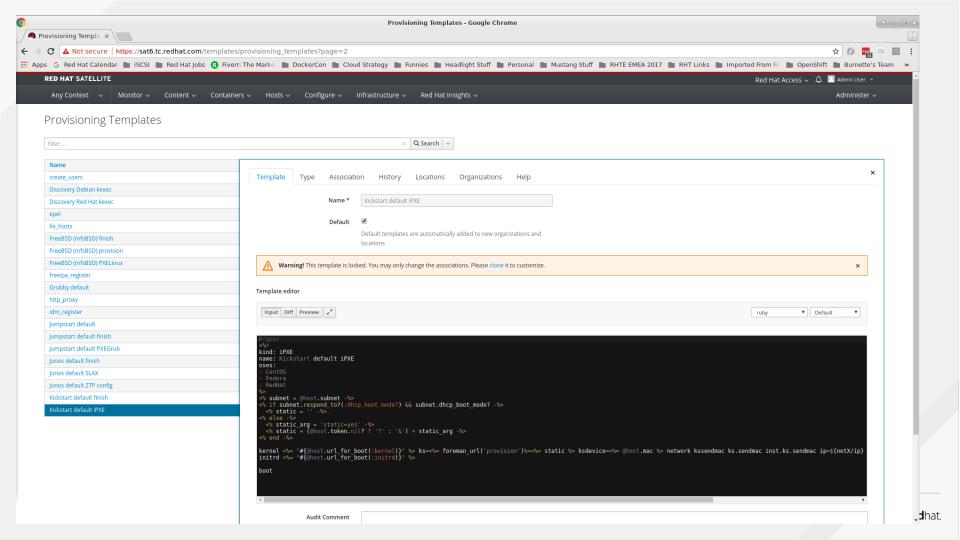


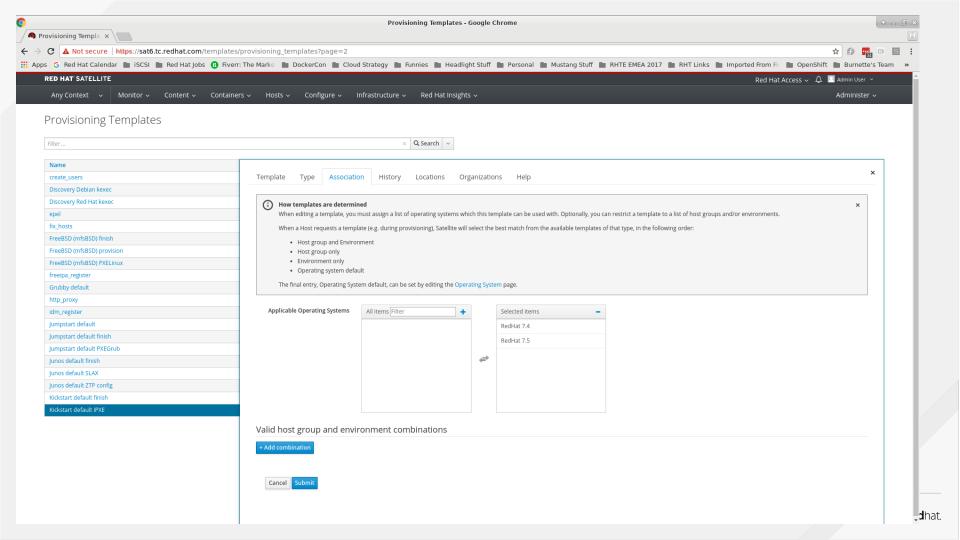
https://sat6.tc.redhat.com/organizations/clear

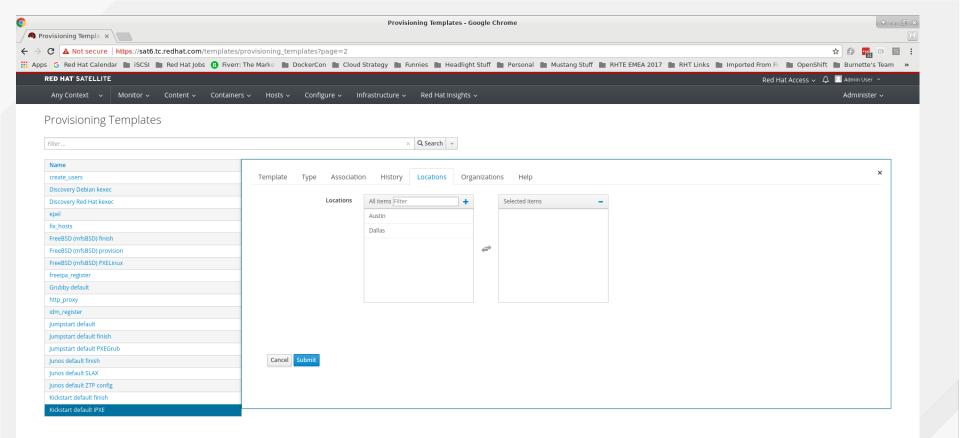


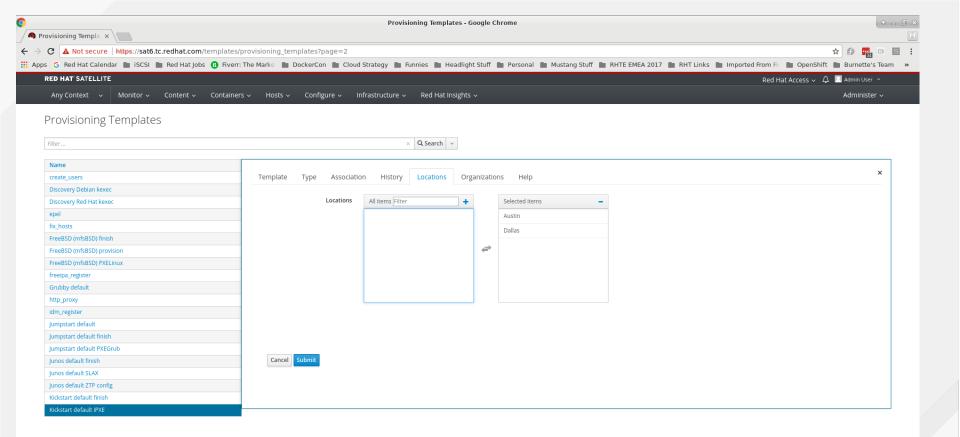
Displaying entries 21 - 40 of 89 in total

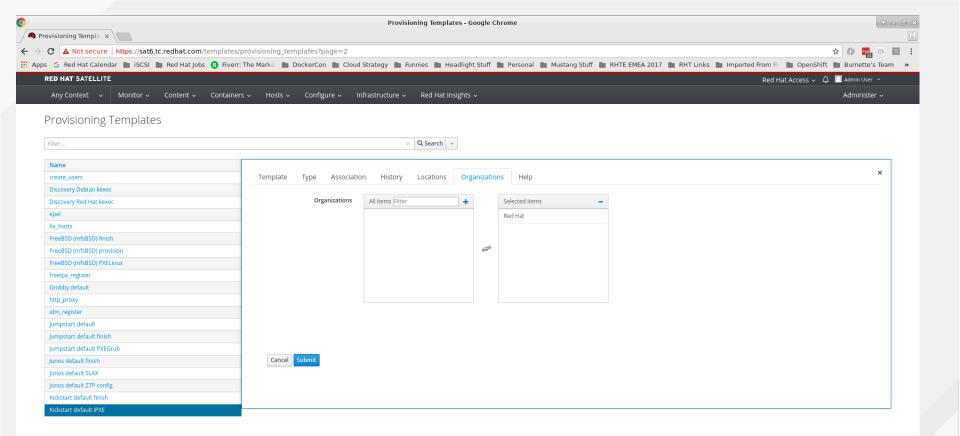
« 1 2 3 4 5 »

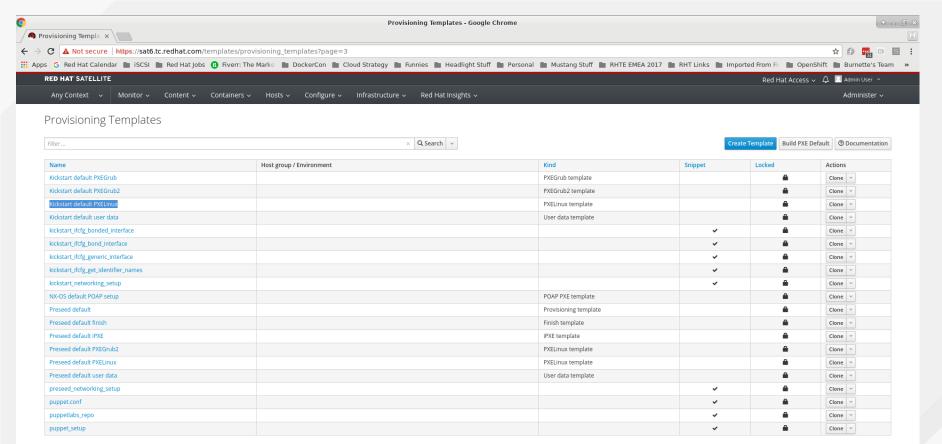






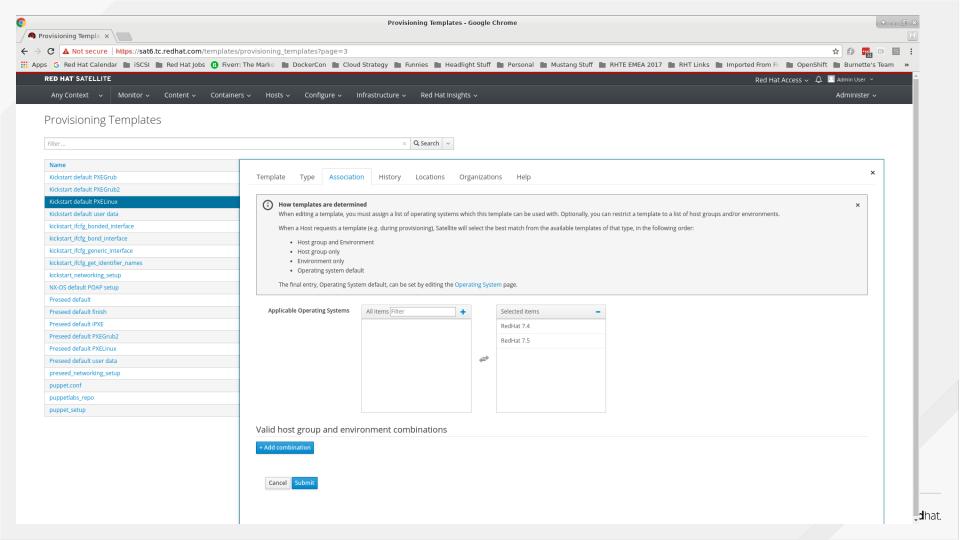


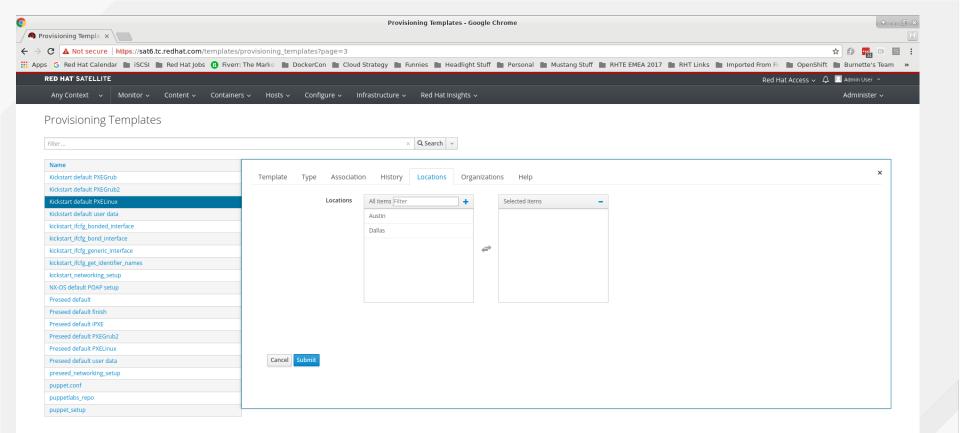


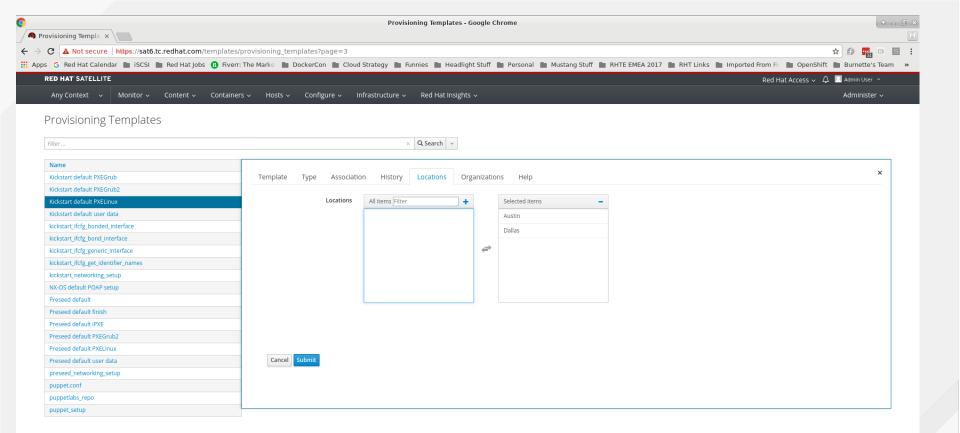


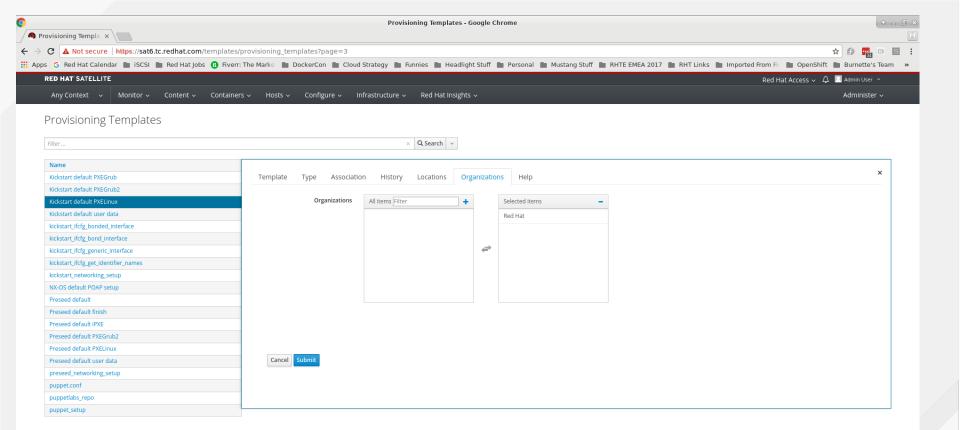
Displaying entries 41 - 60 of 89 in total

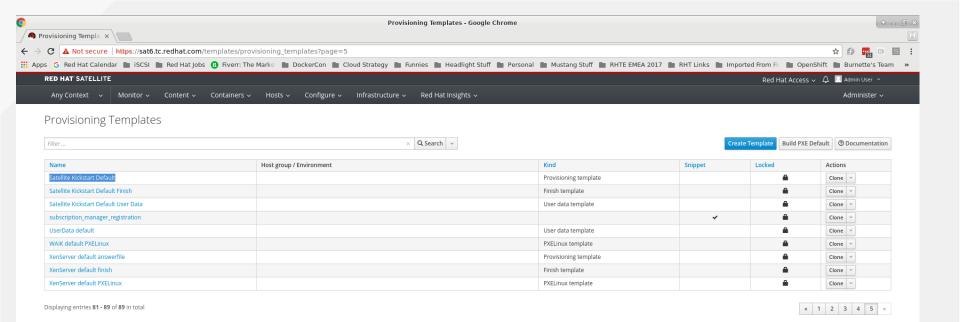
« 1 2 3 4 5 »

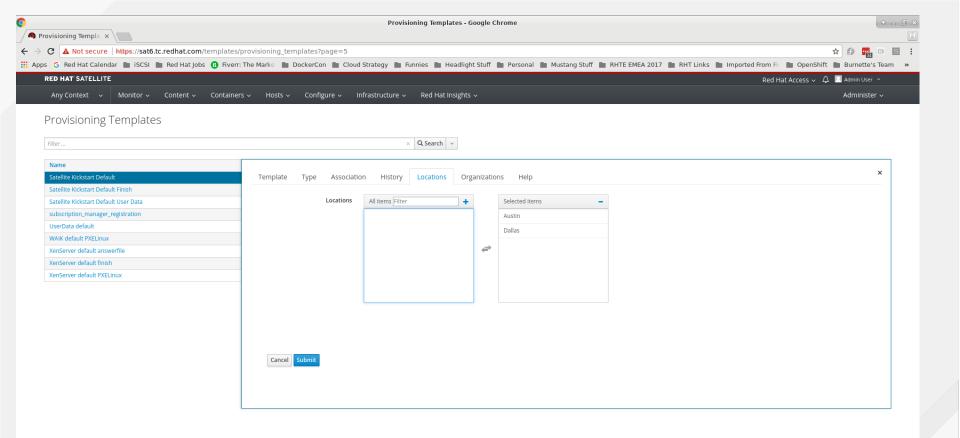


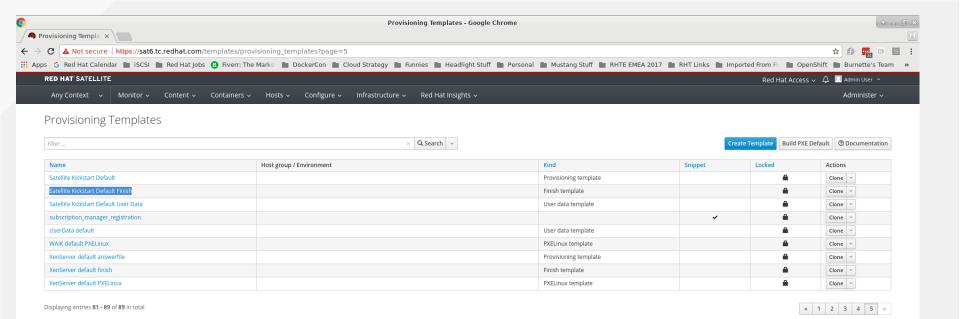


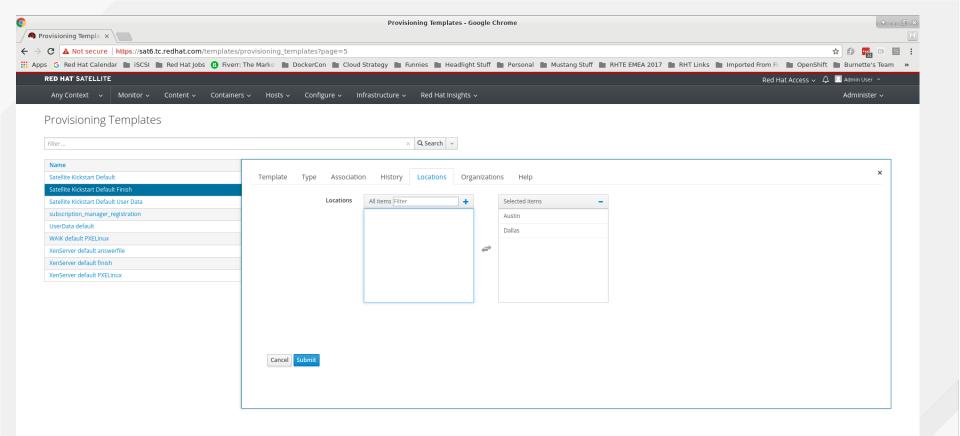


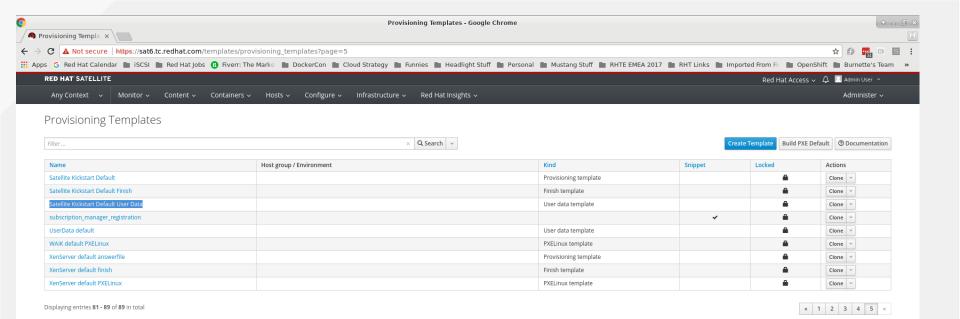


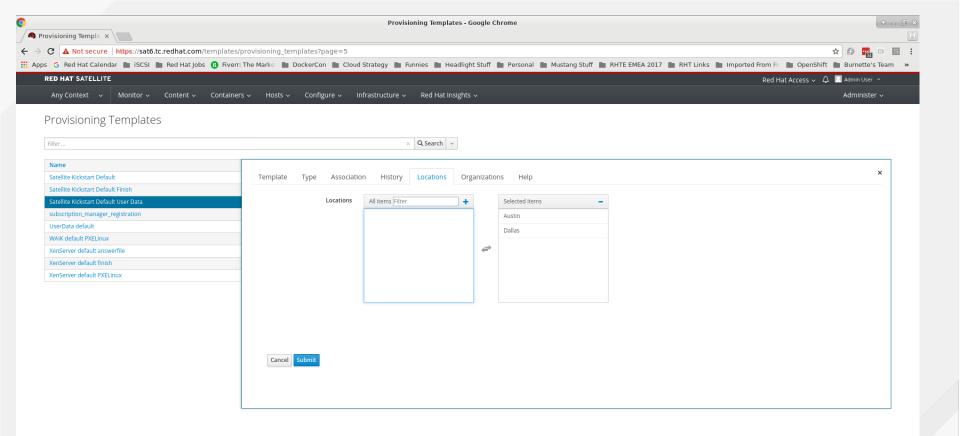












ACTIVATION KEYS

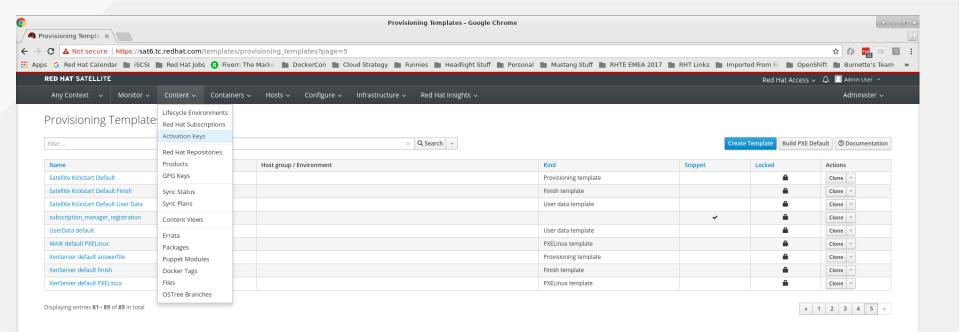


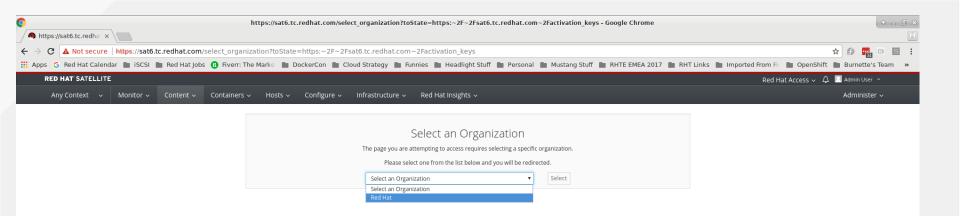
ACTIVATION KEYS

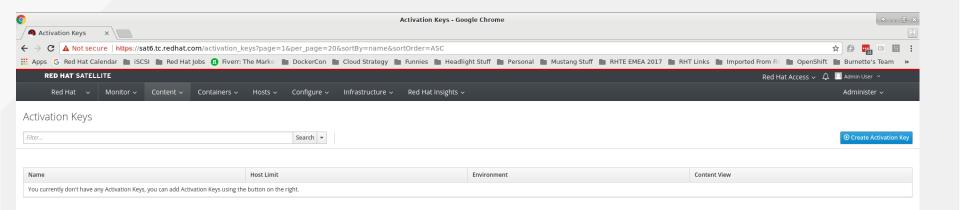
Tying everything together

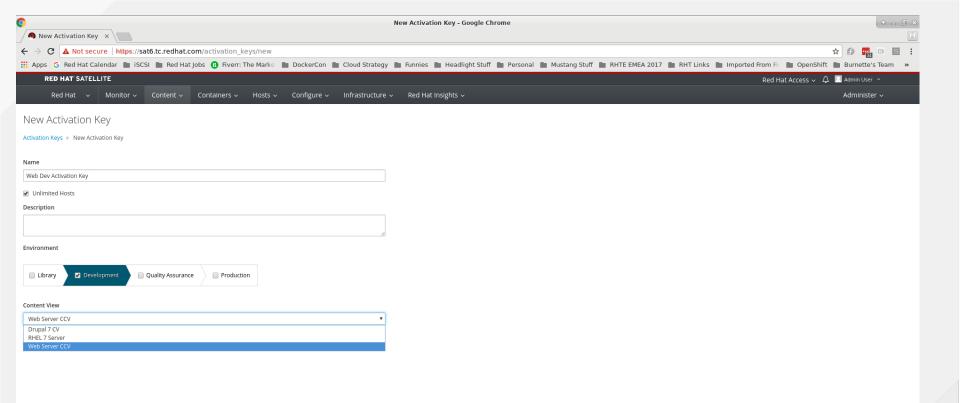
Activation keys enable a new host to attach to your Satellite and automatically join an environment (Dev, QA, Production), a content view or composite content view, consume the correct subscriptions to products, have the correct repositories available, and join the correct host collections (system groups)

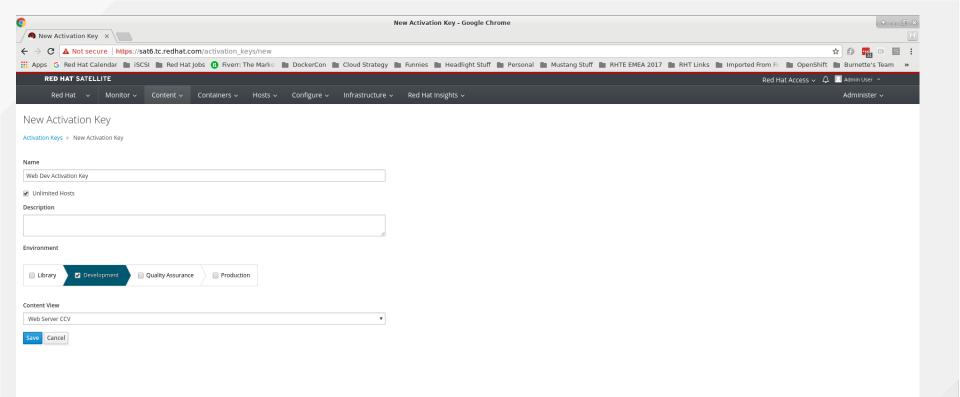


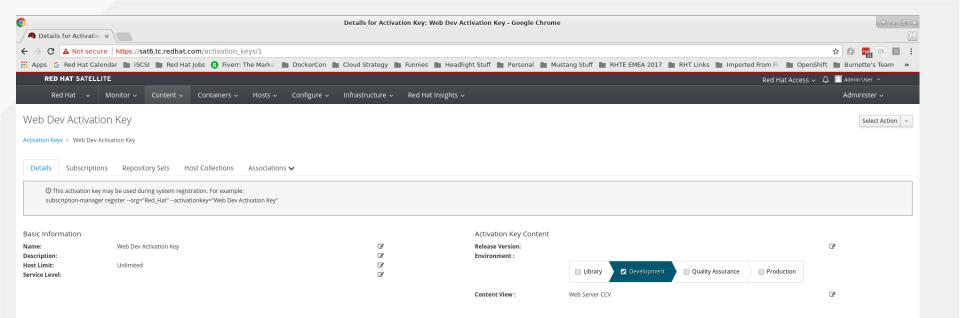


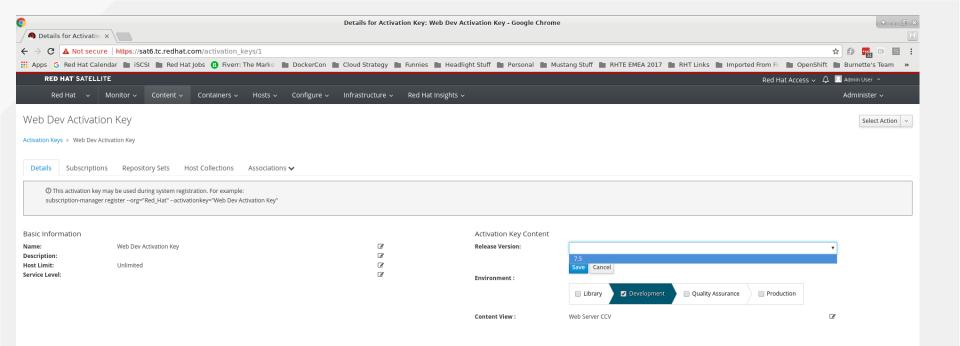


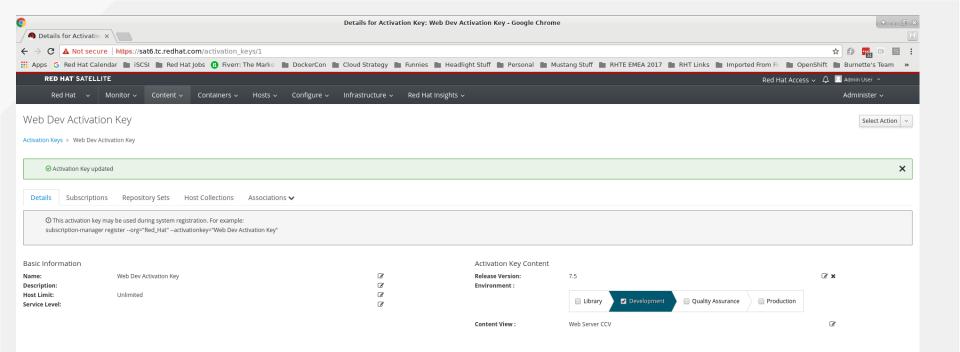


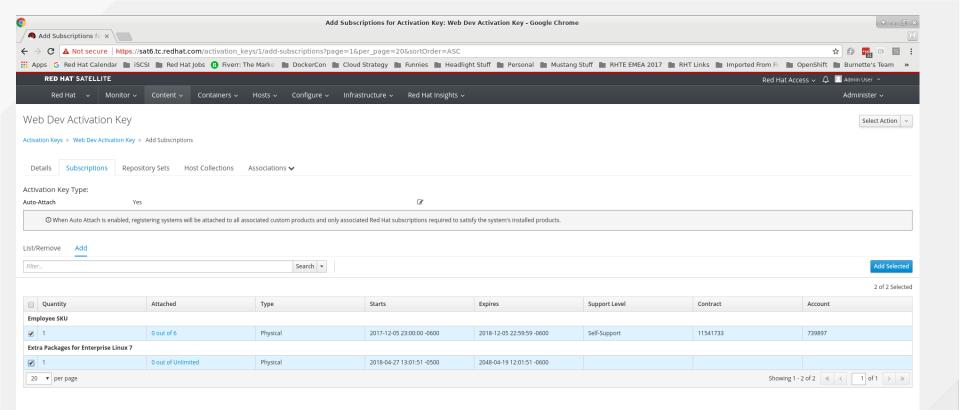


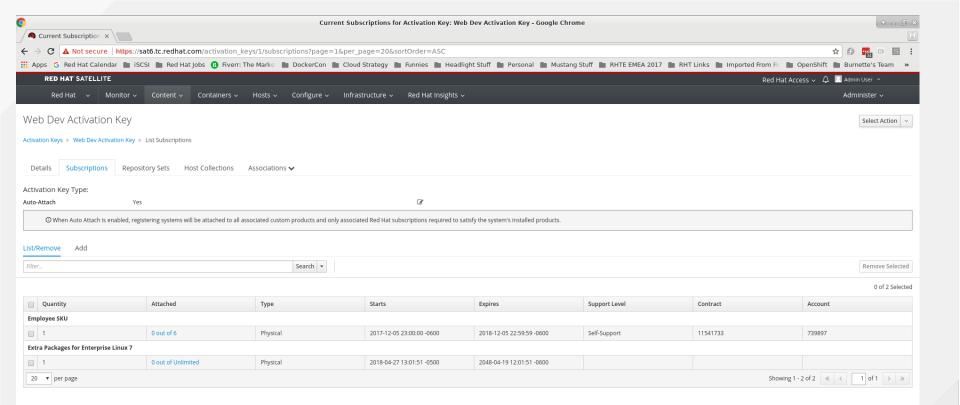


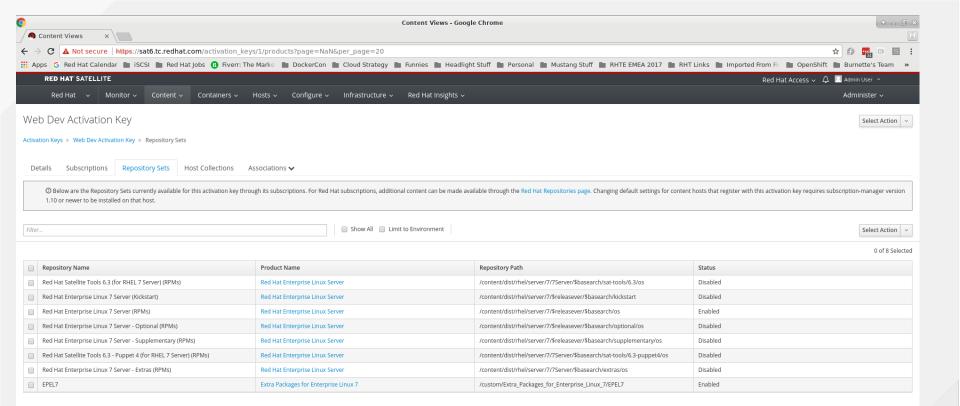


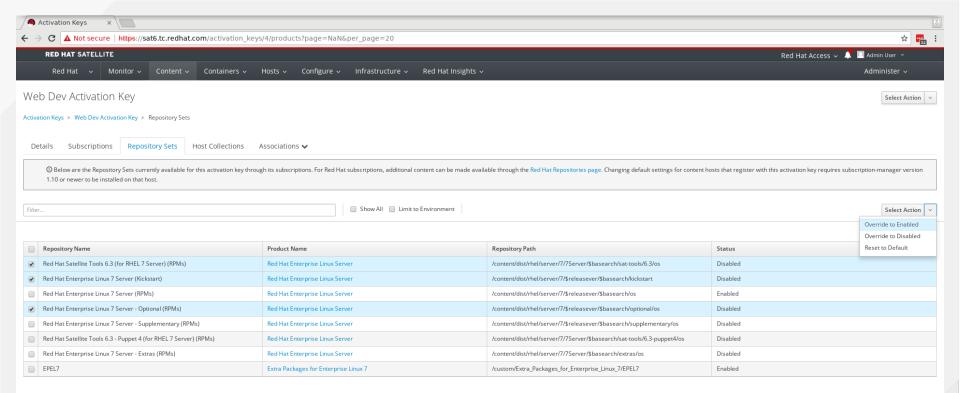




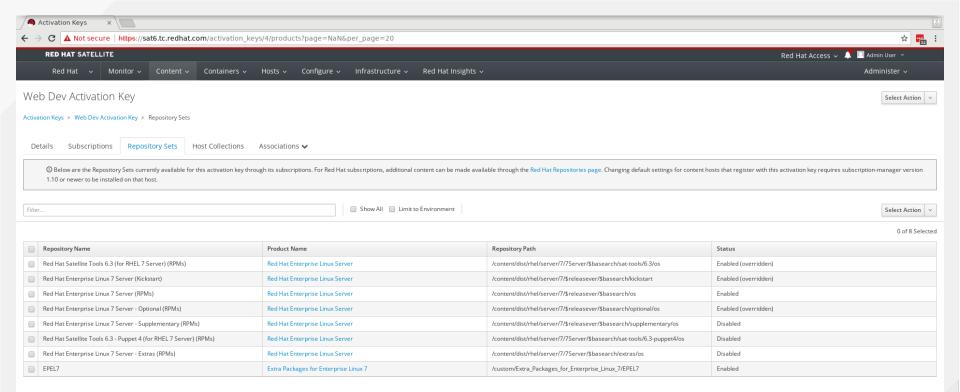




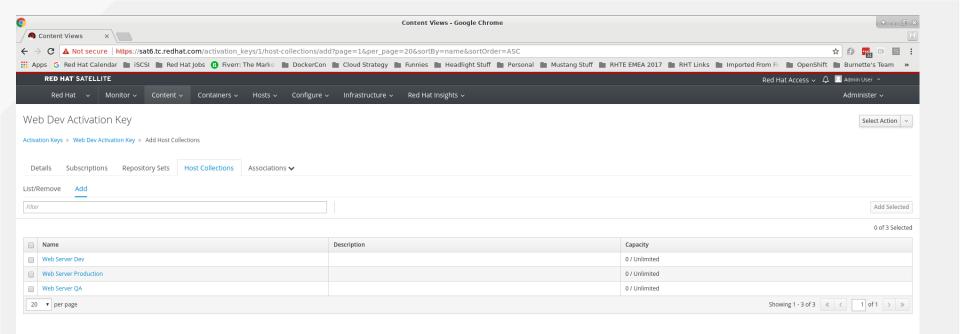


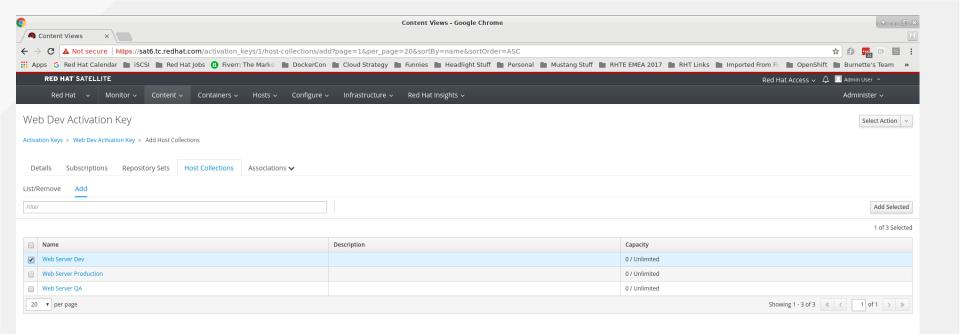


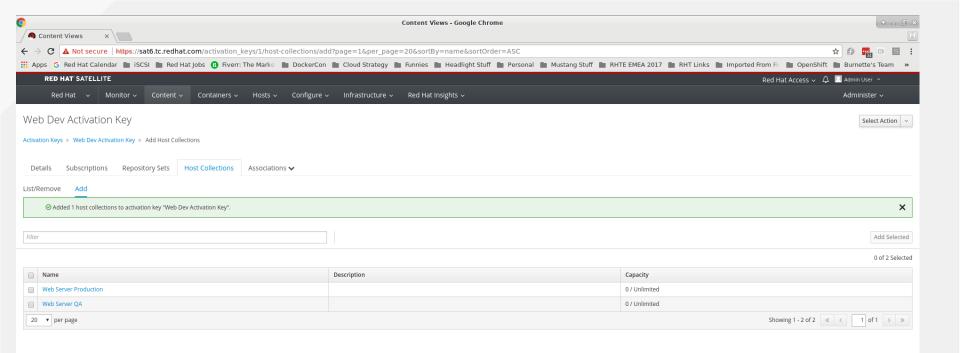


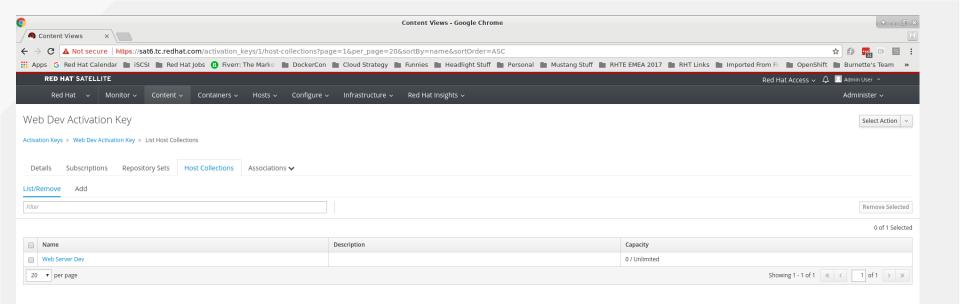


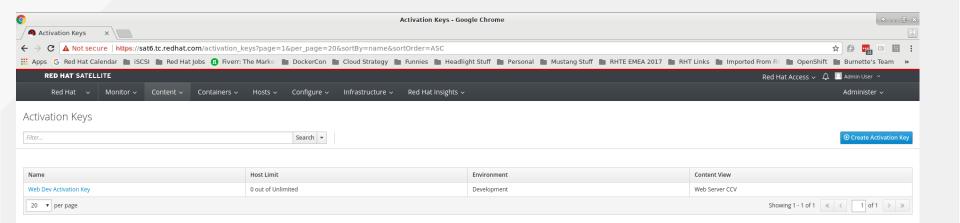


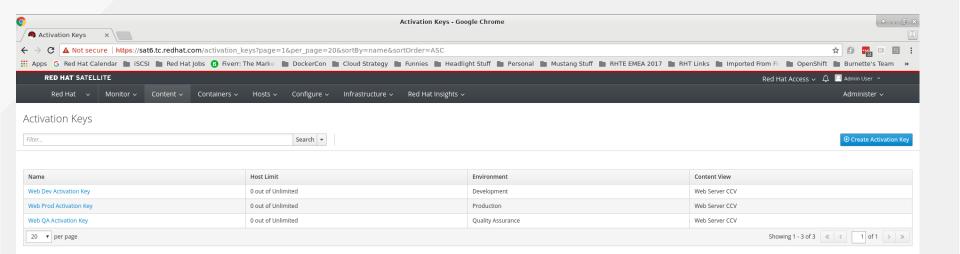












HOST GROUPS

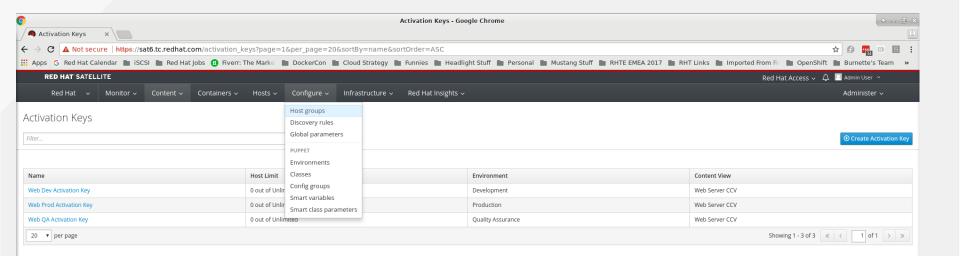


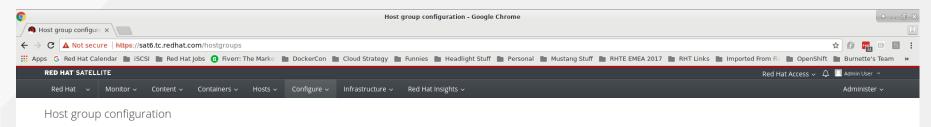
HOST GROUPS

Think Puppet groups

Host groups are logical groupings of hosts, but for configuration management (puppet) and provisioning. Host collections, discussed earlier, are for grouping systems for administrative tasks. This is a side effect of using puppet for configuration management and katello for system management.



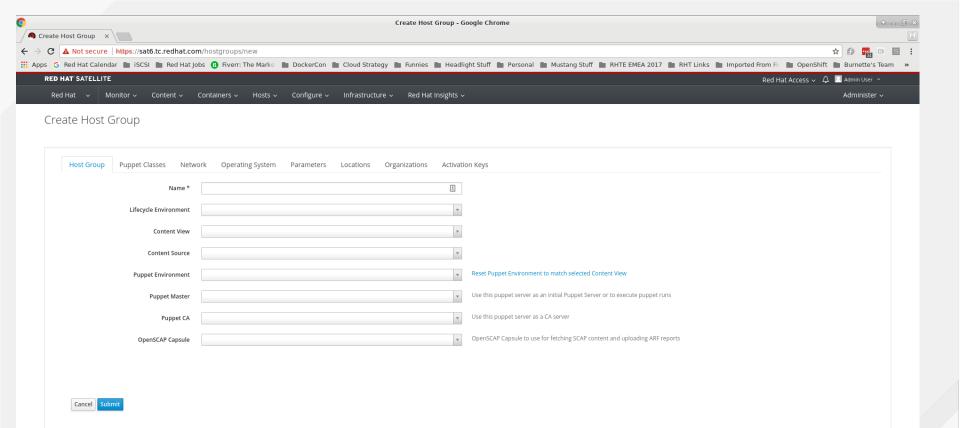


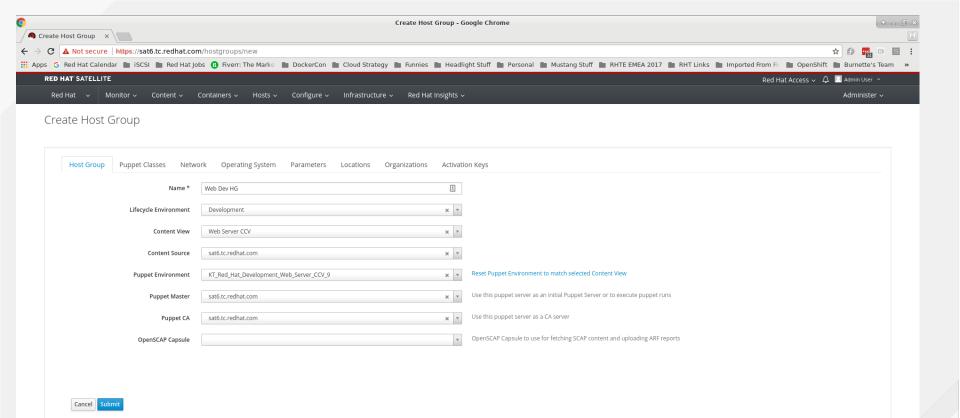


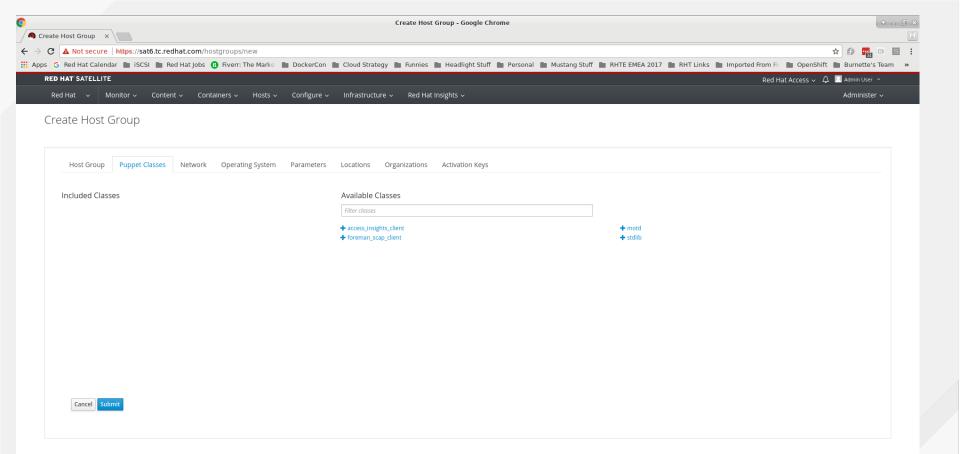
eate Host Group

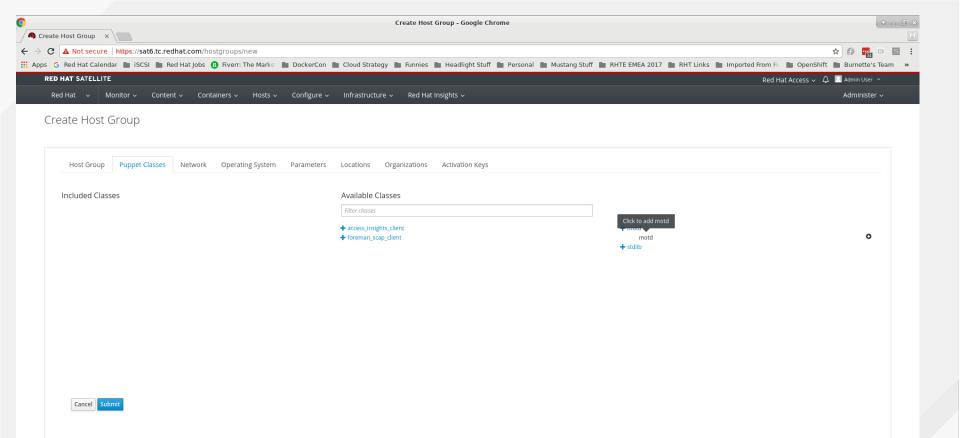
A host group is in some ways similar to an inherited node declaration, in that it is a high level grouping of classes that can be named and treated as a unit. This is then treated as a template and is selectable during the creation of a new host and ensures that the host is configured in one of your pre-defined states. In addition to defining which puppet classes get included when building this host type you are also able to assign variables and provisioning information to a host group to further refine the behavior of the puppet runtime. The host group's classes and the host group's variables are included in the external node information when the puppet runtime. The host group's classes and the host group's variables are included in the external node information when the puppet runtime.

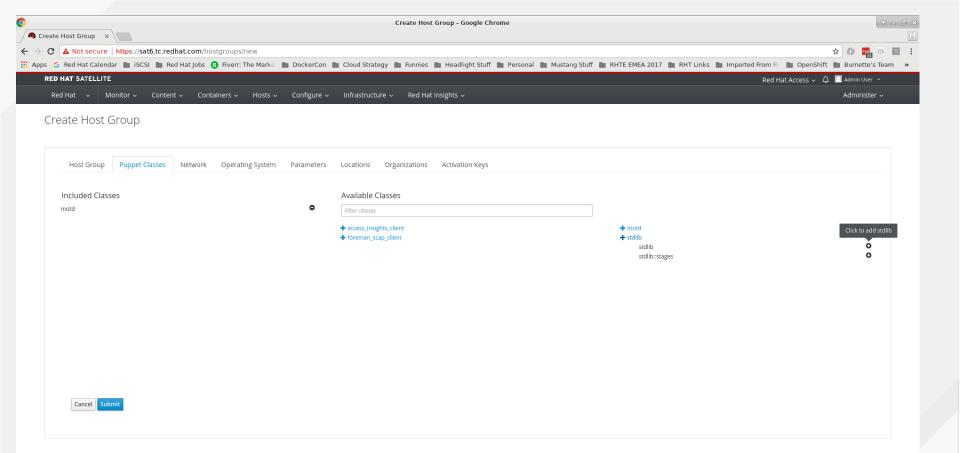
There are two strategies when using host groups. You may create puppet classes that represent high-level host configurations, for example, a host-type-ldap-server class, which includes all the required functionality from other modules or you may decide to create a host group called host-type-ldap-server and add the required classes into the host group configuration. These two options are personal decisions and are up to you (where the main difference would be the parameter/variables settings).

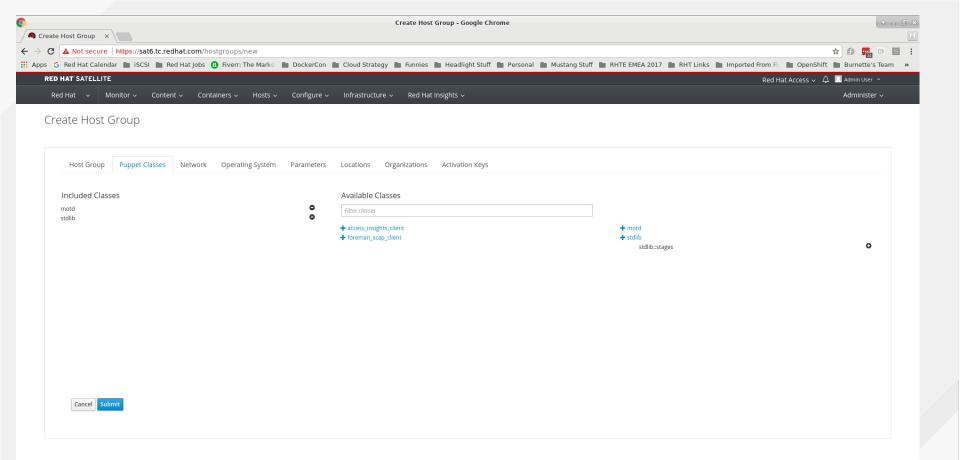


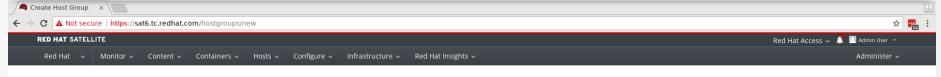




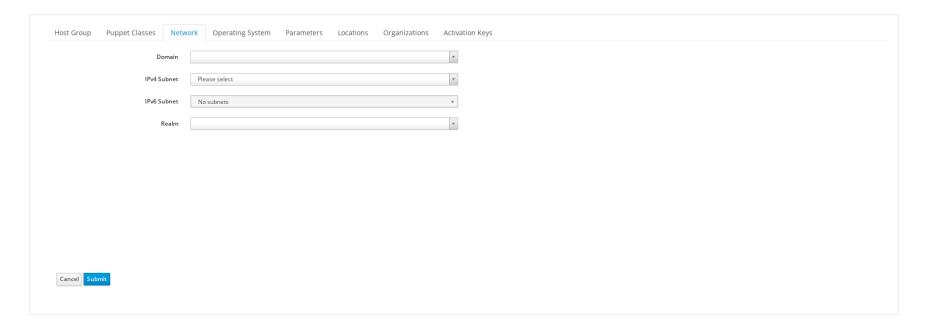




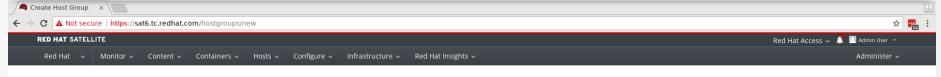




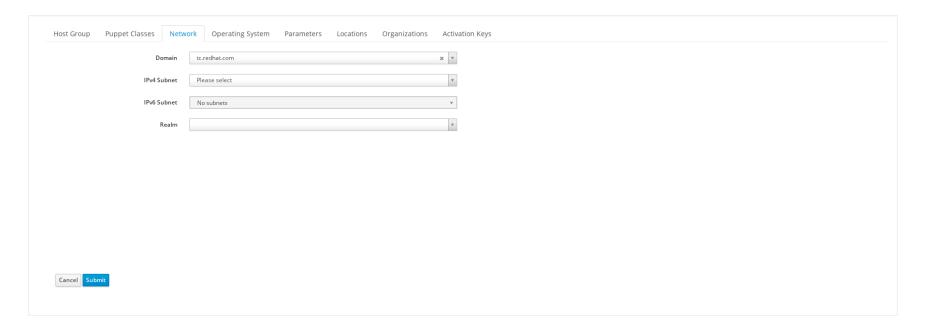
Create Host Group



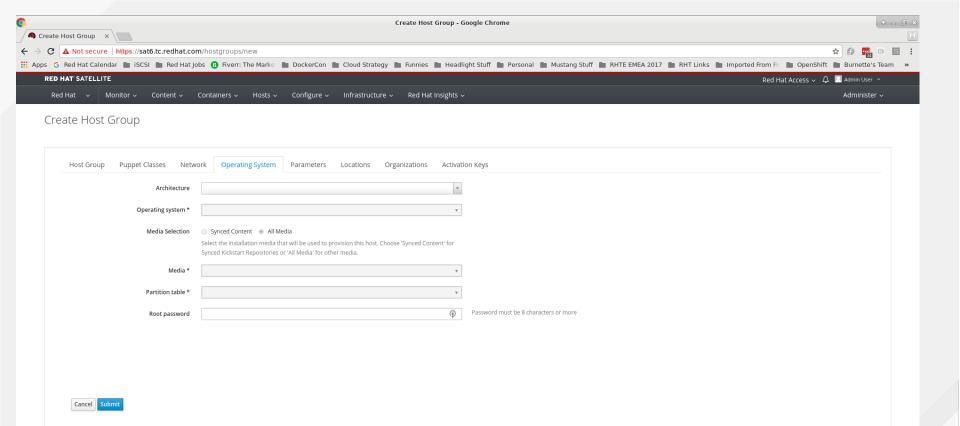


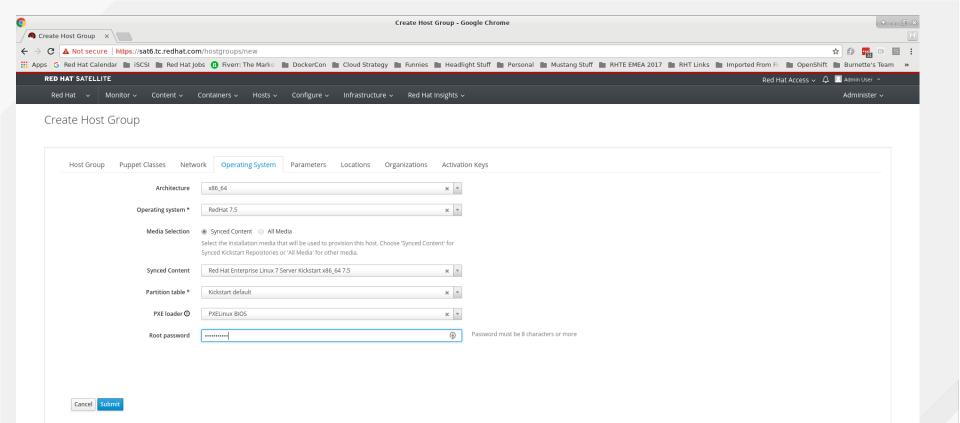


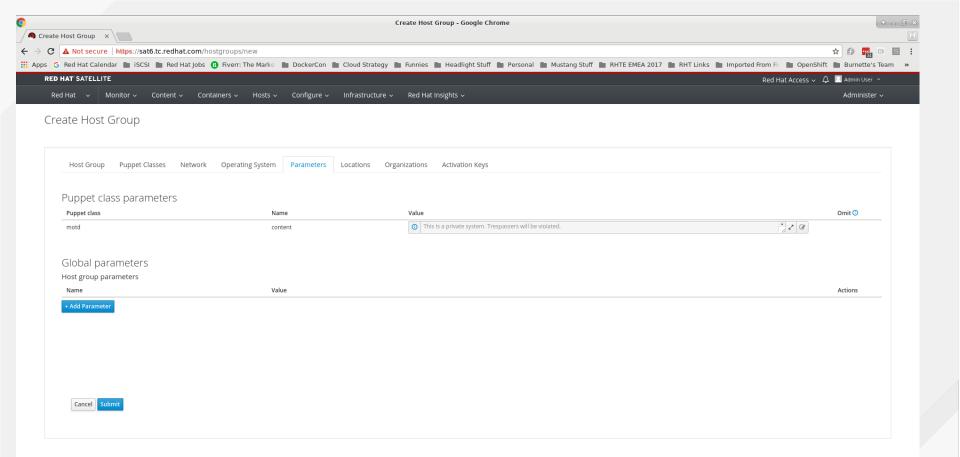
Create Host Group

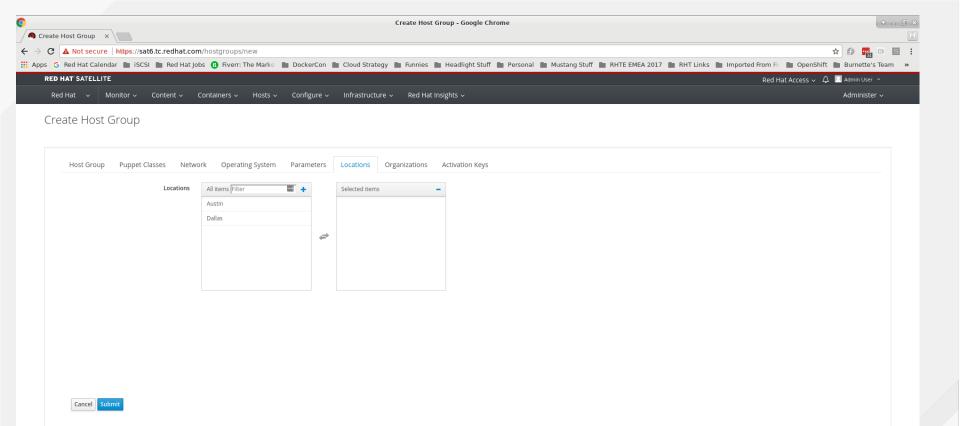


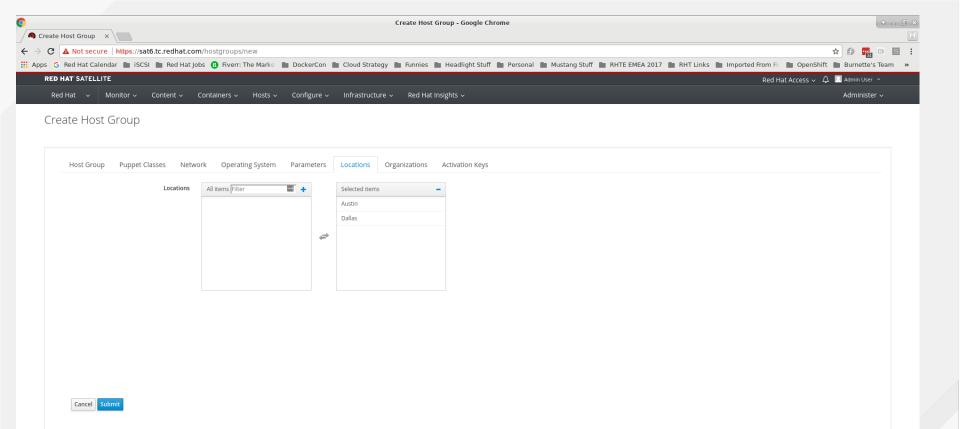


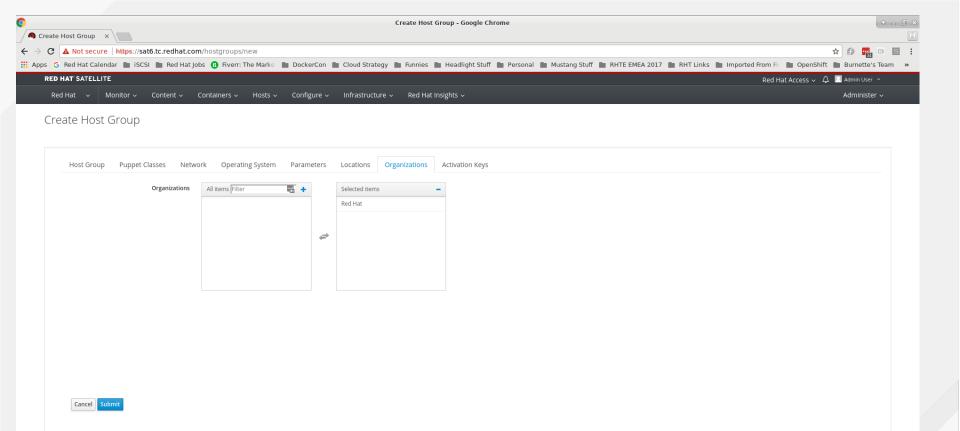


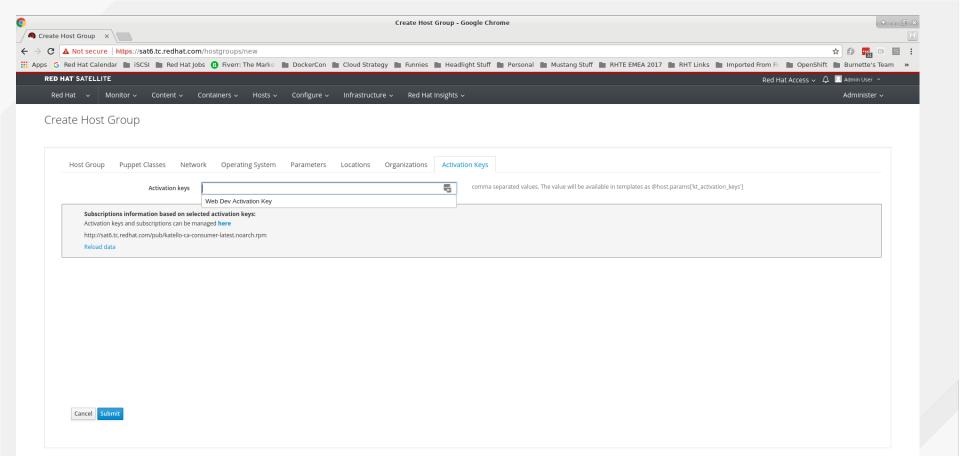


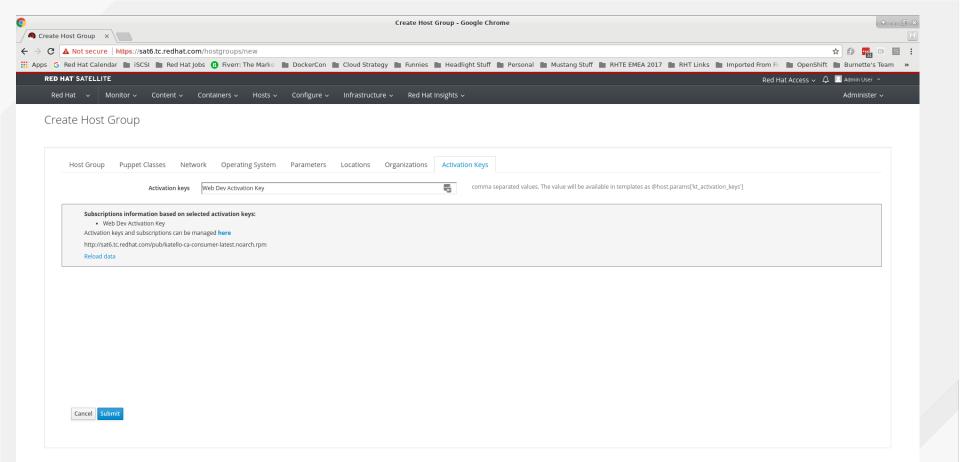


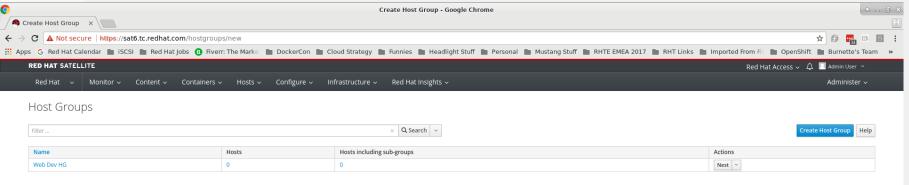




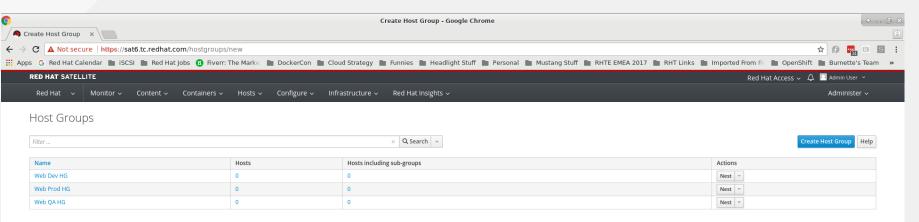








Displaying 1 entry



Displaying all 3 entries

COMPUTE RESOURCES

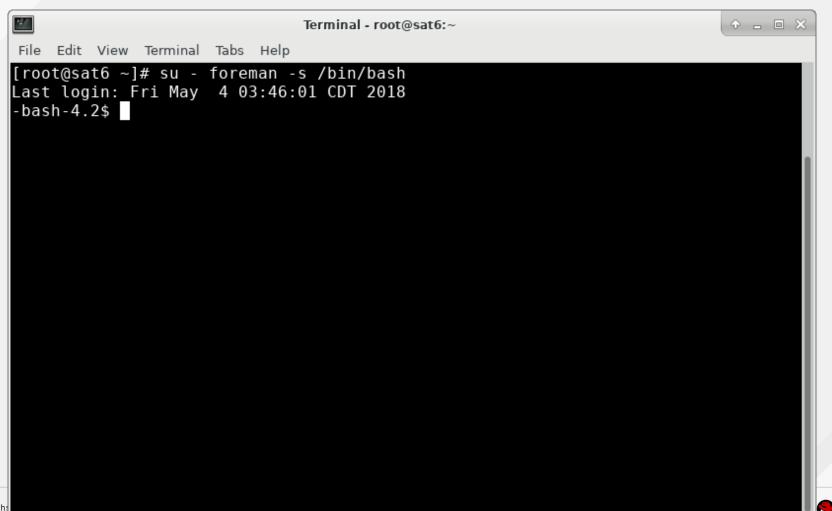


COMPUTE RESOURCES

What are compute resources?

Compute resources are hypervisors. Standalone KVM (libvirt), VMWare, and Red Hat Virtualization are all supported. We'll enable foreman to connect to the hypervisors via ssh with ssh keys.





#redhat #rhs

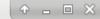
🦲 redha

File Edit View Terminal Tabs Help

```
-bash-4.2$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/usr/share/foreman/.ssh/id rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /usr/share/foreman/.ssh/id rsa.
Your public key has been saved in /usr/share/foreman/.ssh/id rsa.pub.
The key fingerprint is:
SHA256:bJbYa1obbpvCQT2ab9JyP31yaPbyaorrBKRr1C9EqaY foreman@sat6.tc.redhat.com
The key's randomart image is:
+---[RSA 2048]----+
      *.+0.
     = . = 0S.
    + 0+= .
```

E o..+B . . $. = B^* = . 0 o$.00+o*.0o ---[SHA256]----+

-bash-4.2\$



File Edit View Terminal Tabs Help

-bash-4.2\$ ssh-copy-id root@dixie-flatline.tc.redhat.com

/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/usr/share/foreman/.s sh/id_rsa.pub"

The authenticity of host 'dixie-flatline.tc.redhat.com (172.31.100.28)' can't be established.

ECDSA key fingerprint is SHA256:wbmJBLjCv30CgosI315VHHgu83odl1QPBNmhMG2httQ.

ECDSA key fingerprint is MD5:60:52:b1:85:f4:3f:9b:dc:03:c2:c6:b5:32:d7:21:18.

Are you sure you want to continue connecting (yes/no)? yes

/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed

/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted n ow it is to install the new keys

root@dixie-flatline.tc.redhat.com's password:

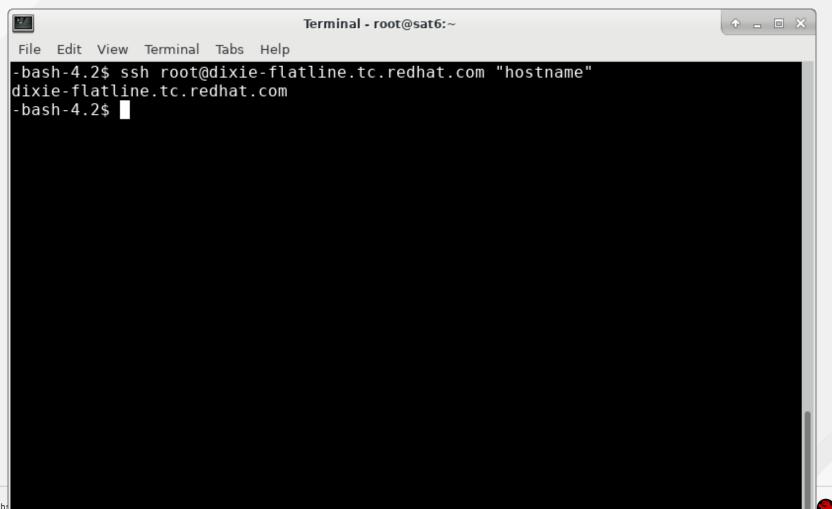
Number of key(s) added: 1

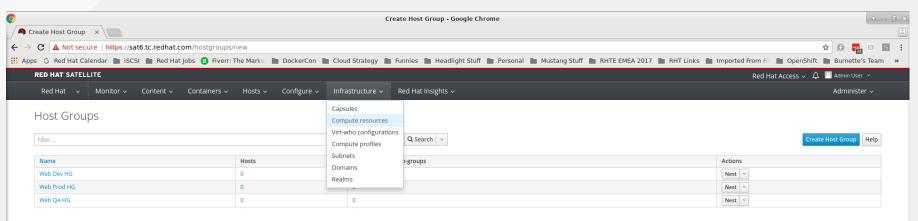
Now try logging into the machine, with: "ssh 'root@dixie-flatline.tc.redhat.co m'"

and check to make sure that only the key(s) you wanted were added.

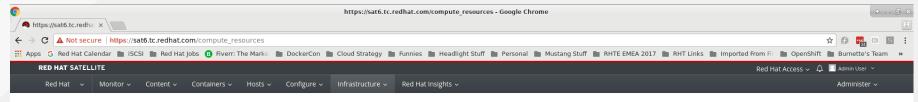
-bash-4.2\$







Displaying all 3 entries



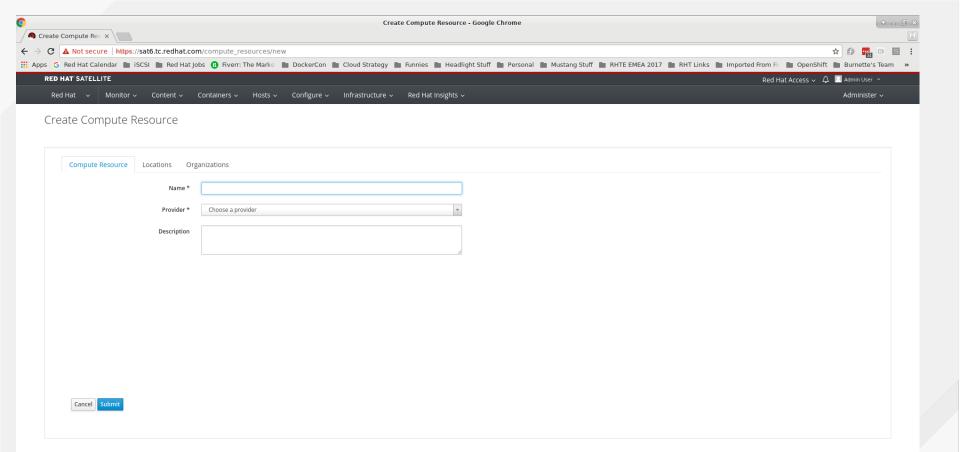


Compute Resources

Satellite supports creating and managing hosts on a number of virtualization and cloud services - referred to as "compute resources" - as well as bare metal hosts.

Learn more about this in the documentation.

Create Compute Resource



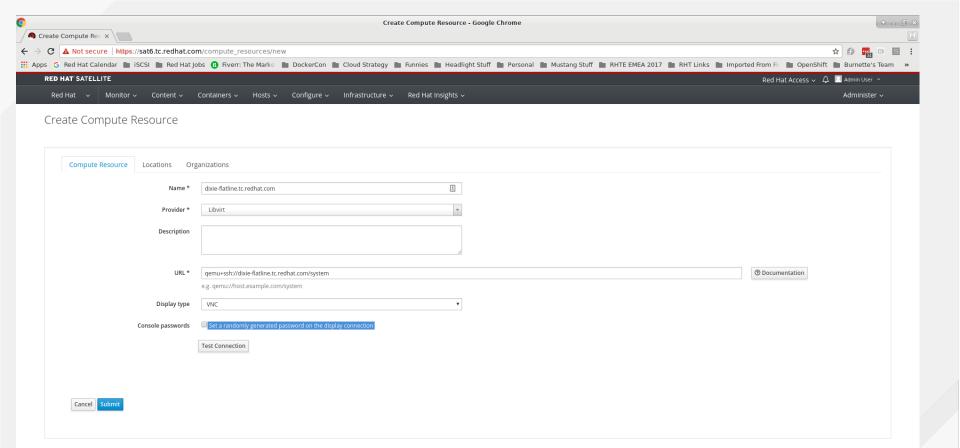
COMPUTE RESOURCES

Tips

Note the connection is qemu+ssh://root@[host]/system. The example on the page is wrong for this use case.

Don't leave the box checked for random passwords!



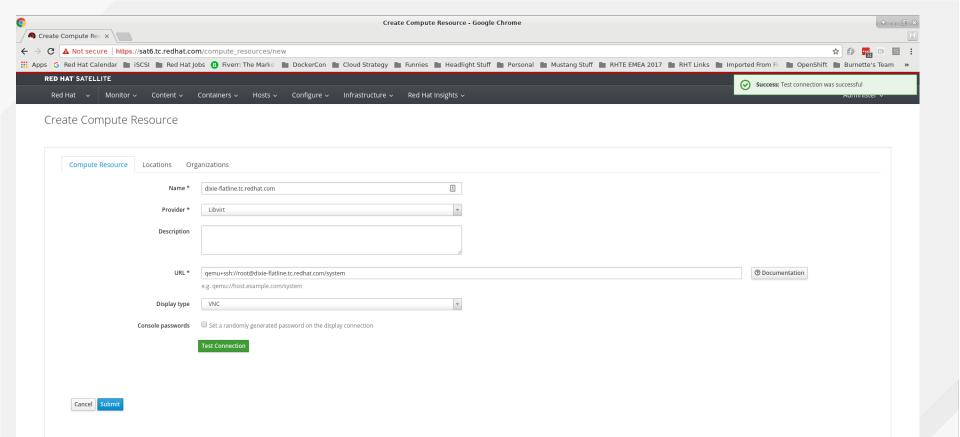


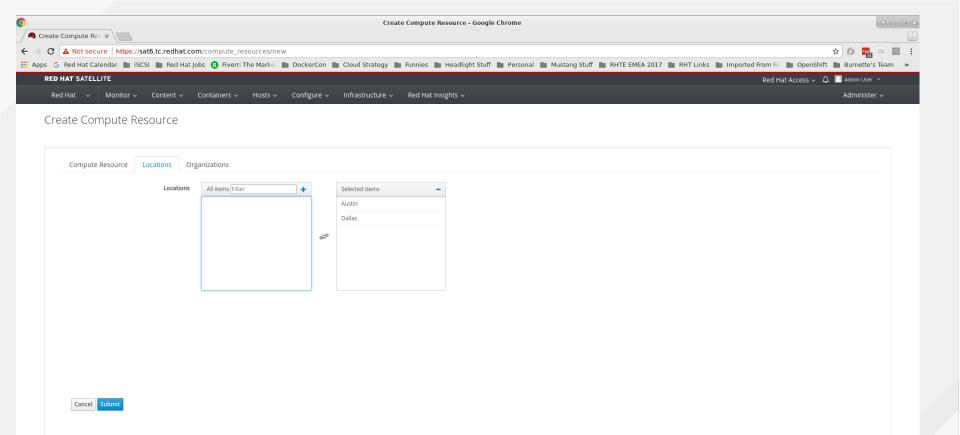
COMPUTE RESOURCES

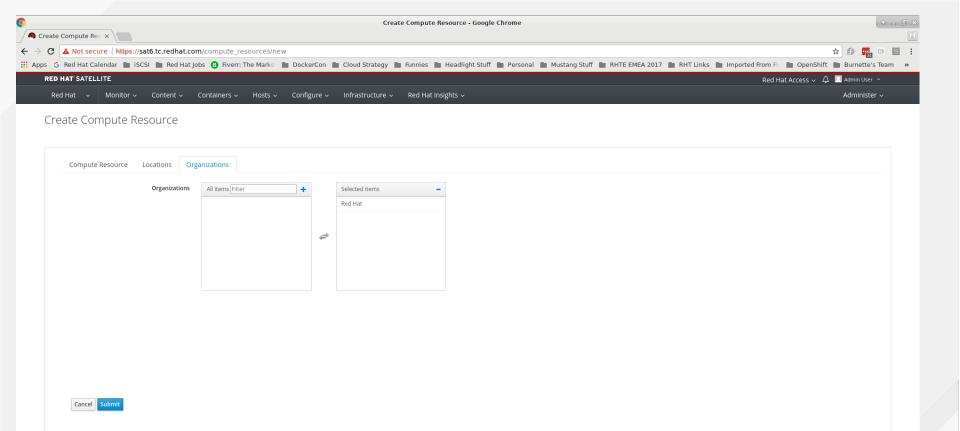
Password

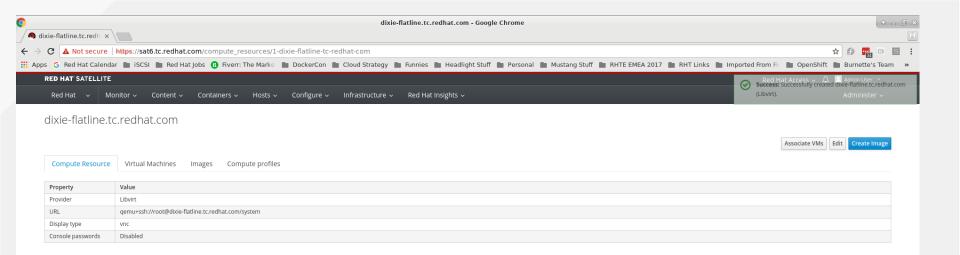
Test the connection before continuing.









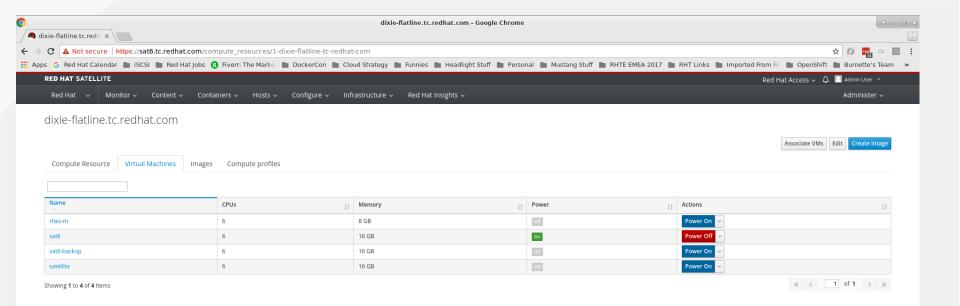


COMPUTE RESOURCES

Other VMs

In my case, I already have several VMs on the hypervisor.





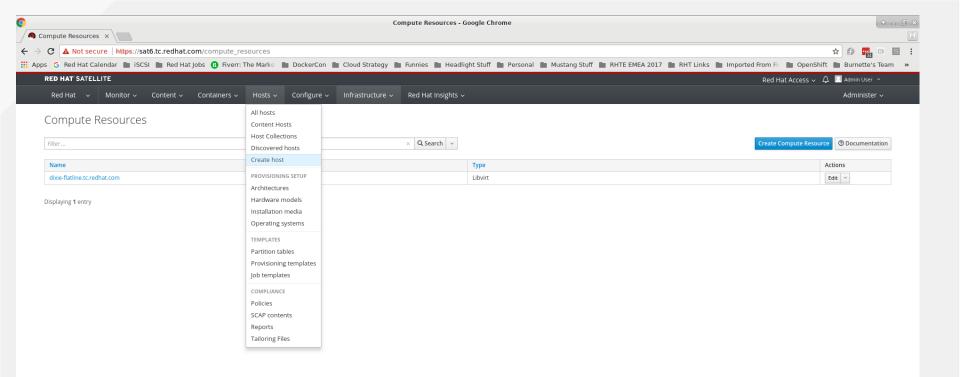
BUILD A VM

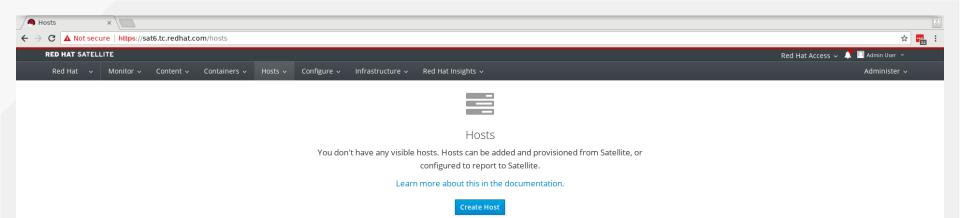


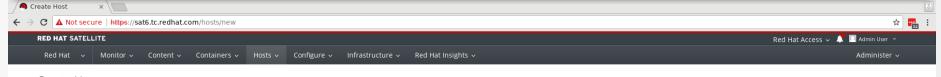
BUILD A VM

We see the results of all this seemingly random work!

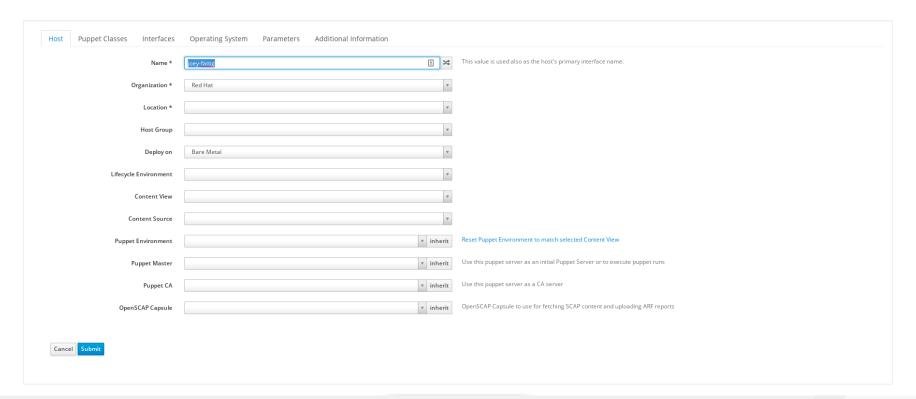




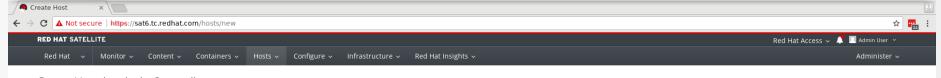




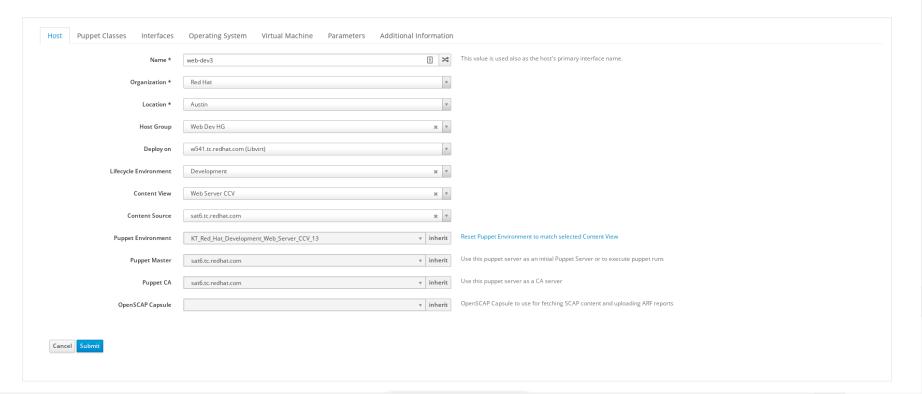
Create Host



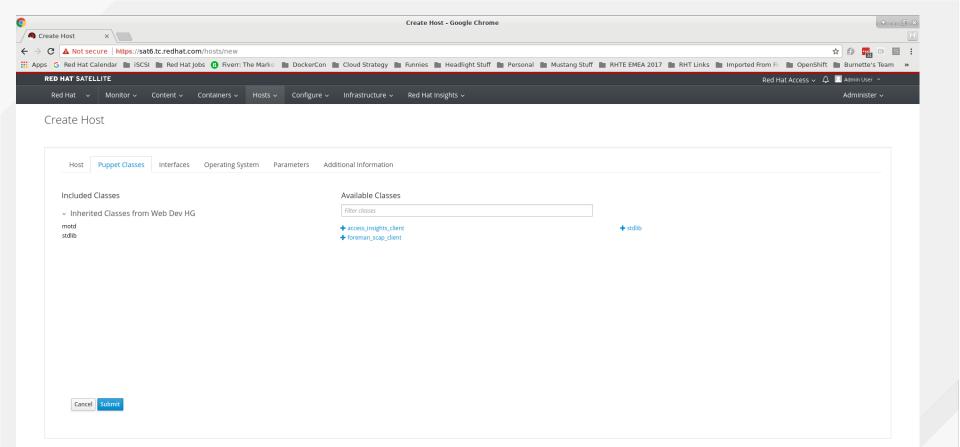


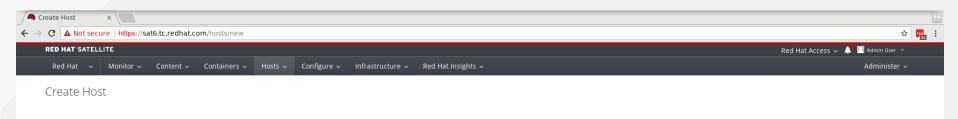


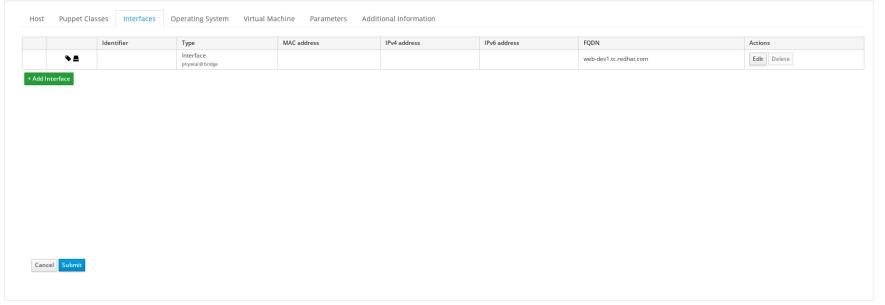
Create Host | web-dev3.tc.redhat.com



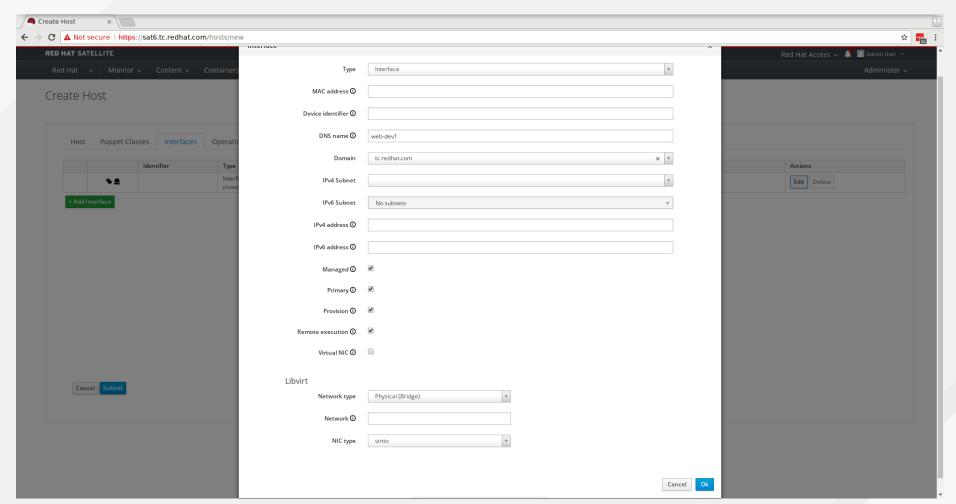




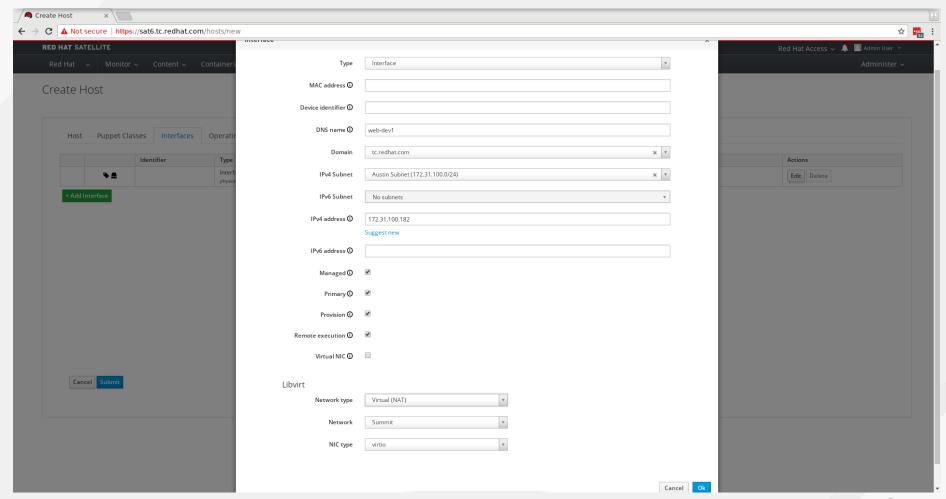


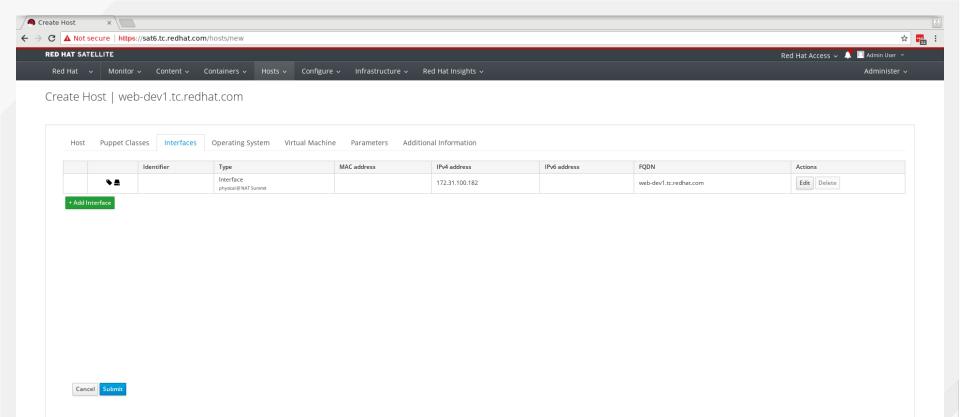




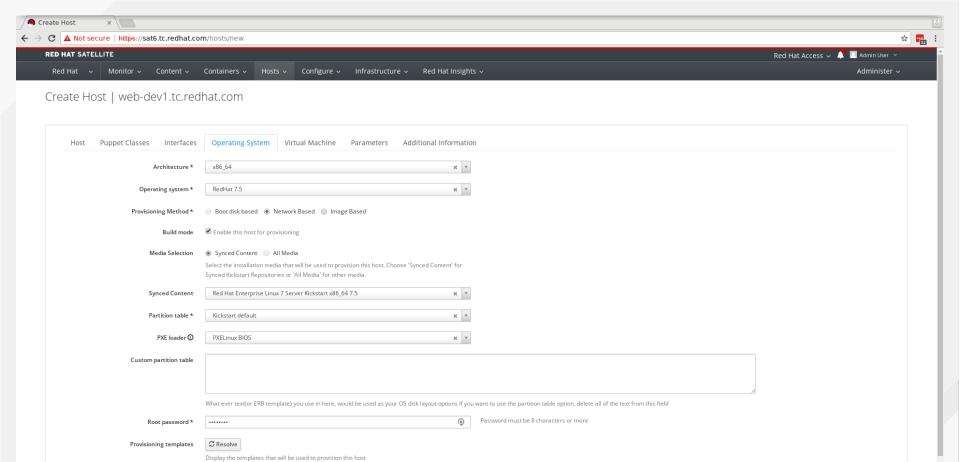






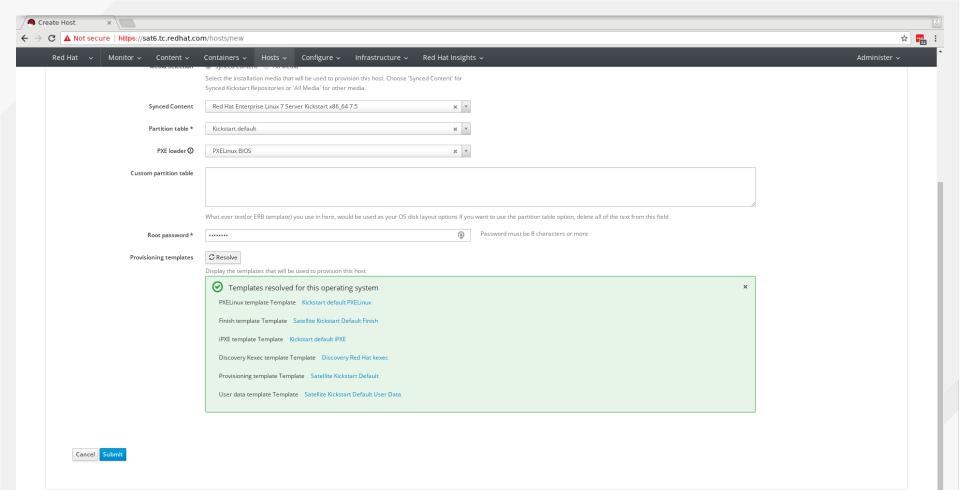


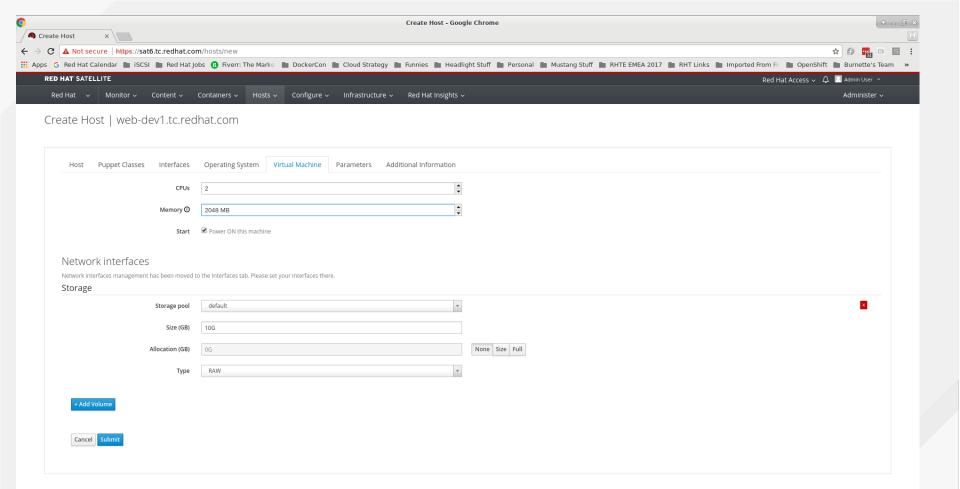


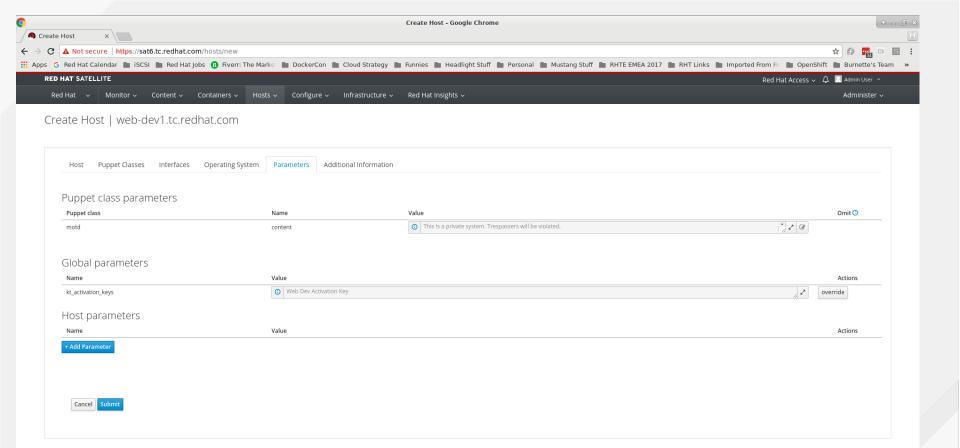


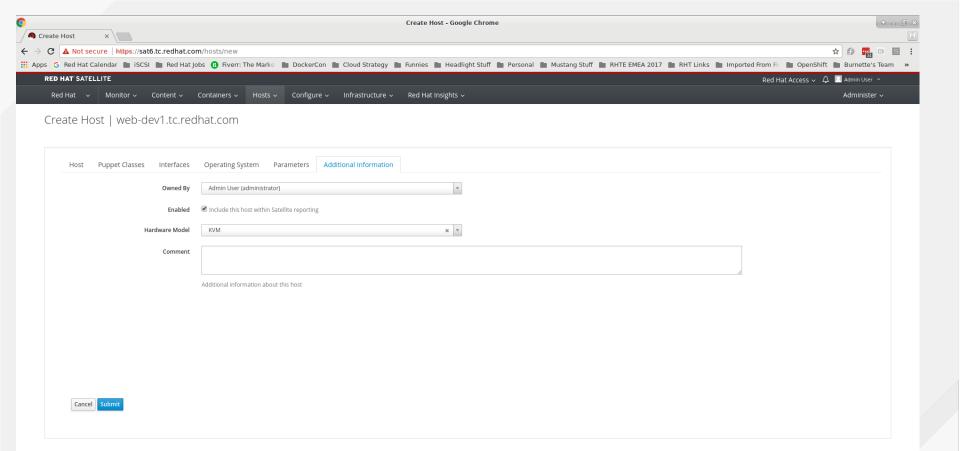


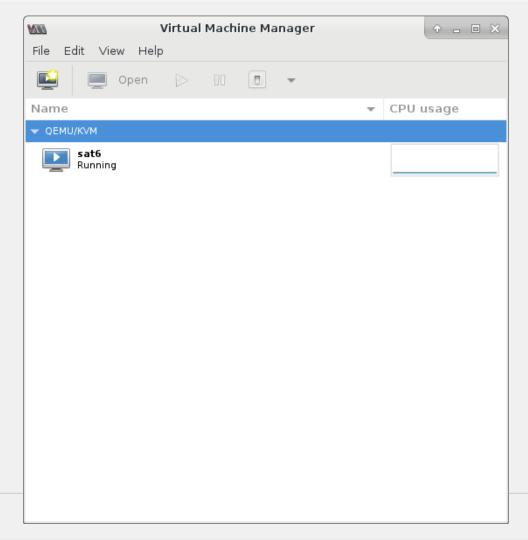
Cancel Submit



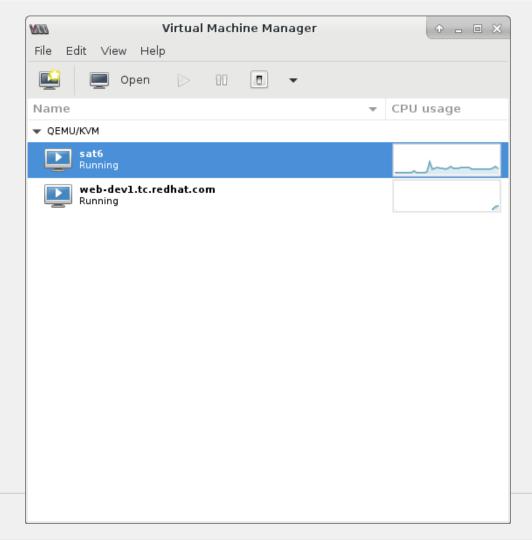




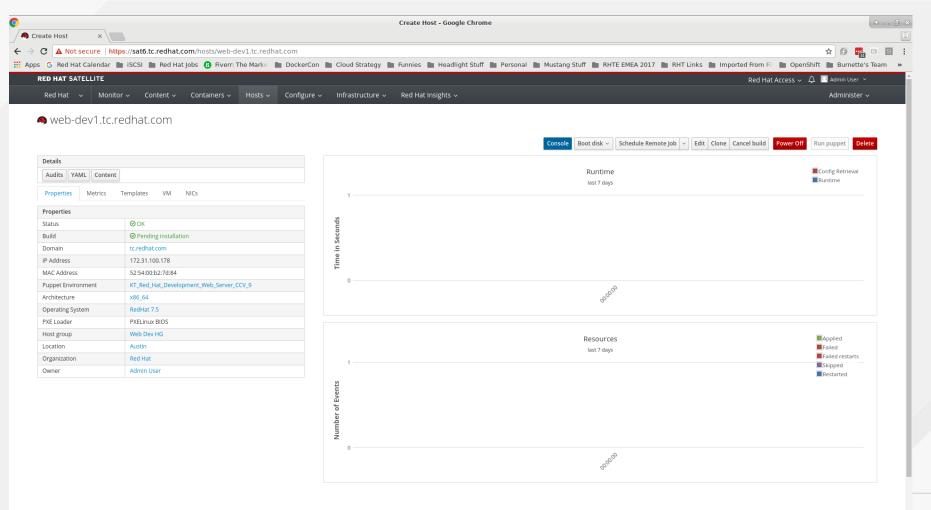


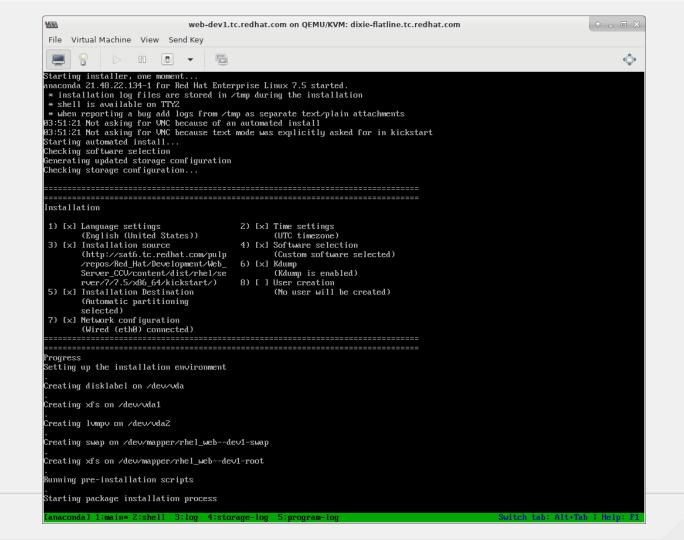


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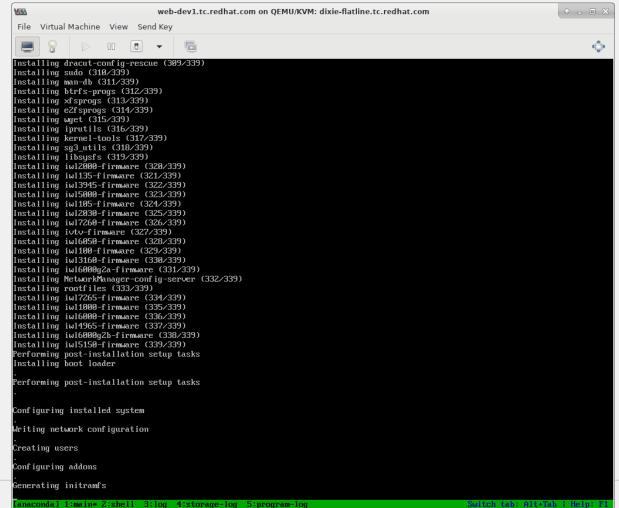


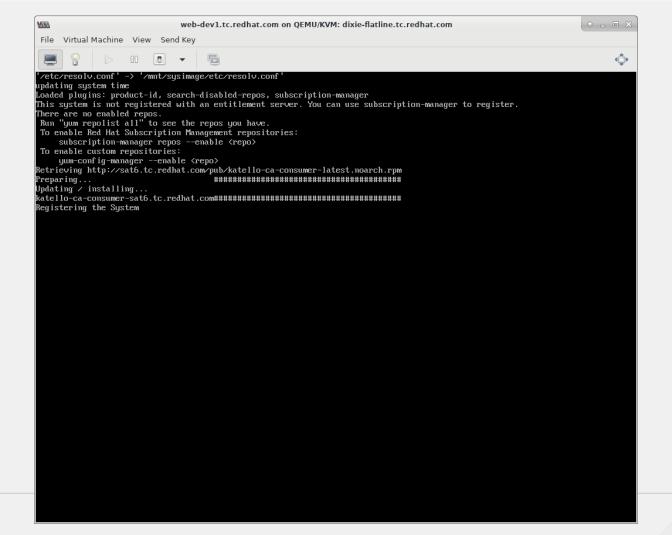
edha

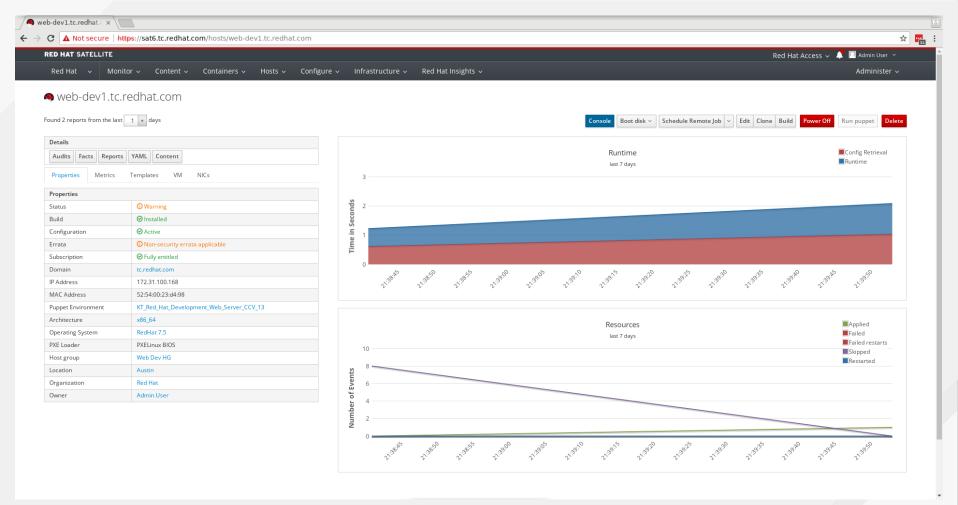














Do we have our MOTD?



nedhat.

Are we attached to the correct repos?



Terminal - root@web-dev1:~



status

Edit View Terminal Tabs Help

Uploading Enabled Repositories Report

Loaded plugins: product-id, subscription-manager

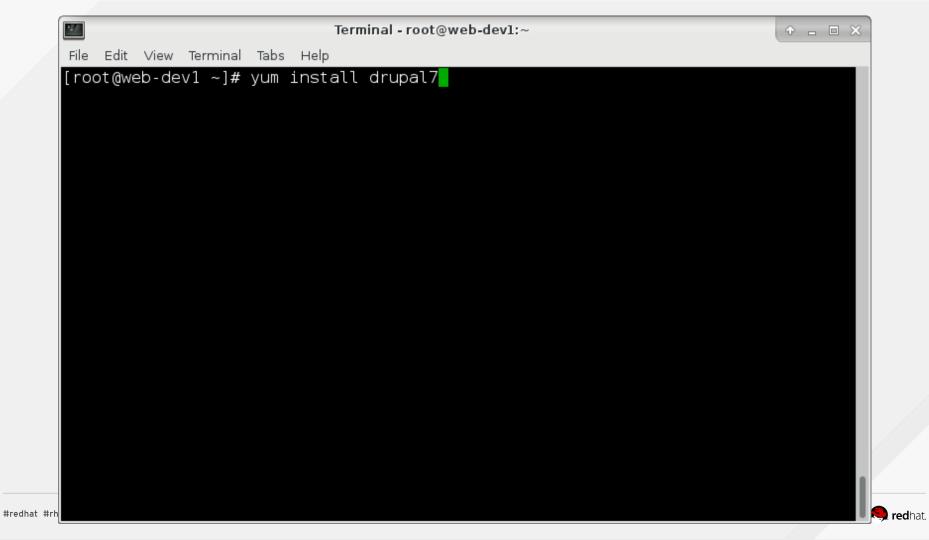
repolist: 20,197

[root@web-dev1 ~]#

```
[root@web-dev1 ~]# yum repolist
Loaded plugins: enabled repos upload, package upload, product-id, search-
              : disabled-repos, subscription-manager
repo id
                                                     repo name
!Red Hat Extra Packages for Enterprise Linux 7 EPEL7 EPEL7
!rhel-7-server-optional-rpms/x86 64
                                                     Red Hat Enterprise L
!rhel-7-server-rpms/x86 64
                                                     Red Hat Enterprise L 20,116
!rhel-7-server-satellite-tools-6.3-rpms/x86 64
                                                    Red Hat Satellite To
```

Can we install drupal7 from EPEL?





Terminal - root@web-dev1:~ File Edit View Terminal Tabs Help Verifying : libXau-1.0.8-2.1.el7.x86 64 20/22 Verifying : libzip-0.10.1-8.el7.x86 64 21/22 Verifying: httpd-tools-2.4.6-80.el7.x86 64 22/22 Installed: drupal7.noarch 0:7.58-1.el7 Dependency Installed: apr.x86 64 0:1.4.8-3.el7 4.1 apr-util.x86 64 0:1.5.2-6.el7 httpd.x86 64 0:2.4.6-80.el7 httpd-tools.x86 64 0:2.4.6-80.el7 libX11.x86 64 0:1.6.5-1.el7 libX11-common.noarch 0:1.6.5-1.el7 libXau.x86 64 0:1.0.8-2.1.el7 libXpm.x86 64 0:3.5.12-1.el7 libjpeg-turbo.x86 64 0:1.2.90-5.el7 libpng.x86 64 2:1.5.13-7.el7 2 libxcb.x86 64 0:1.12-1.el7 libzip.x86 64 0:0.10.1-8.el7 mailcap.noarch 0:2.1.41-2.el7 php.x86 64 0:5.4.16-45.el7 php-cli.x86 64 0:5.4.16-45.el7 php-common.x86 64 0:5.4.16-45.el7 php-gd.x86 64 0:5.4.16-45.el7 php-mbstring.x86 64 0:5.4.16-45.el7 php-pdo.x86 64 0:5.4.16-45.el7 php-xml.x86 64 0:5.4.16-45.el7 t1lib.x86 64 0:5.1.2-14.el7 Complete! Uploading Enabled Repositories Report Loaded plugins: product-id, subscription-manager [root@web-dev1 ~]#

Can we install other packages from EPEL?

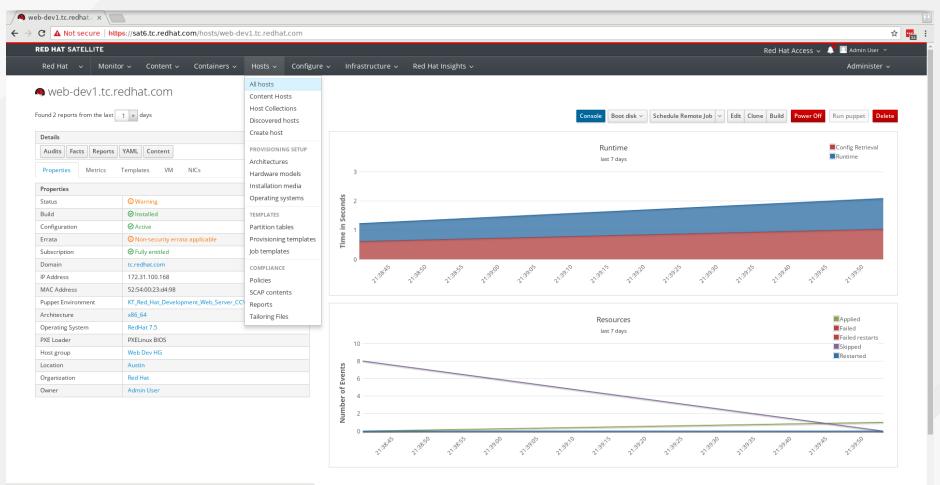


```
Terminal - root@web-dev1:~
    Edit View Terminal Tabs Help
[root@web-dev1 ~]# yum install exim
Loaded plugins: enabled repos upload, package upload, product-id, search-
              : disabled-repos, subscription-manager
Red Hat Extra Packages for Enterprise Linux 7 EPEL7
                                                                       00:00
                                                            2.1 kB
rhel-7-server-optional-rpms
                                                            1.9 kB
                                                                       00:00
rhel-7-server-rpms
                                                            2.0 kB
                                                                       00:00
rhel-7-server-satellite-tools-6.3-rpms
                                                            2.1 kB
                                                                       00:00
No package exim available.
Error: Nothing to do
Uploading Enabled Repositories Report
Loaded plugins: product-id, subscription-manager
[root@web-dev1 ~]#
```

Can we install EMACS?

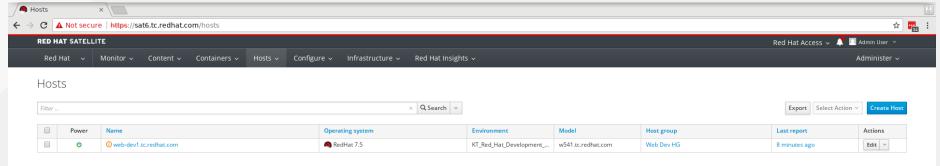


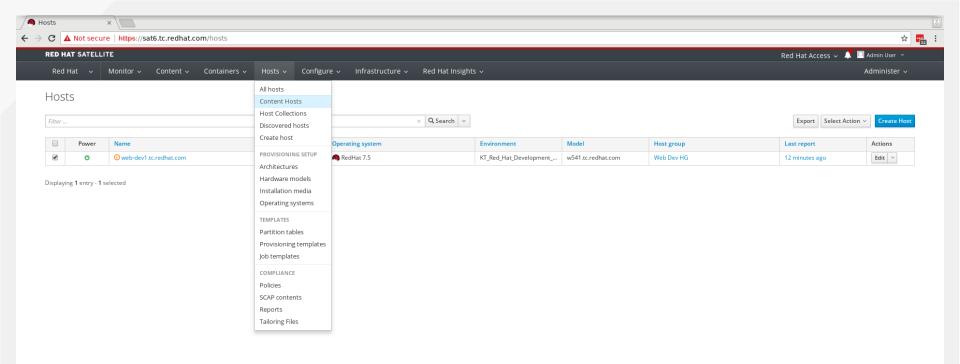
```
Terminal - root@web-dev1:~
    Edit View Terminal Tabs Help
[root@web-dev1 ~]# yum install emacs
Loaded plugins: enabled repos upload, package upload, product-id, search-
              : disabled-repos, subscription-manager
Red Hat Extra Packages for Enterprise Linux 7 EPEL7
                                                                       00:00
                                                            2.1 kB
rhel-7-server-optional-rpms
                                                            1.9 kB
                                                                       00:00
rhel-7-server-rpms
                                                            2.0 kB
                                                                       00:00
rhel-7-server-satellite-tools-6.3-rpms
                                                            2.1 kB
                                                                       00:00
No package emacs available.
Error: Nothing to do
Uploading Enabled Repositories Report
Loaded plugins: product-id, subscription-manager
[root@web-dev1 ~]#
```



https://sat6.tc.redhat.com/hosts

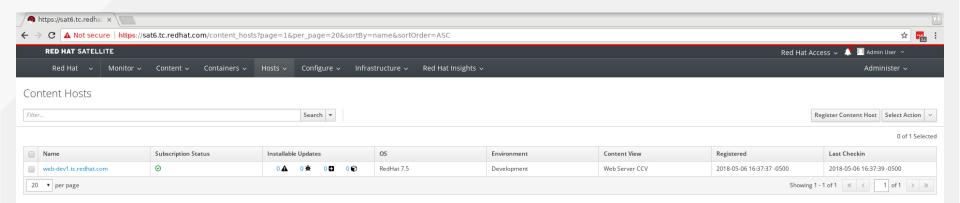






https://sat6.tc.redhat.com/content hosts







THANK YOU



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facebook.com/redhatinc



linkedin.com/company/red-hat



twitter.com/RedHat



youtube.com/user/RedHatVideos

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Insert paragraph of copy here. Do not exceed 40 words.

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- Bullet
- Bullet



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