

Red Hat Satellite 6

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Where's This Presentation Going?

1. Introductions/Level Set

- A. Who am I?
- B. Who are you?
- C. What is Satellite?

2. Timeline of Satellite(s)

- A. Satellite 5.x
- B. Satellite 6.1
- C. Satellite 6.2
- D. Satellite 6.3
- E. Satellite 6.4 – Automated setup/Consume more features
- F. Satellite 6.5 – HTB and the future

3. Tips and Tricks/Learn from my Mistakes





who am I?

I'm Josh

In IT for ~ 2 years

Dog chaser

Brewery visitor



Who Are You?

Satellite Customer?

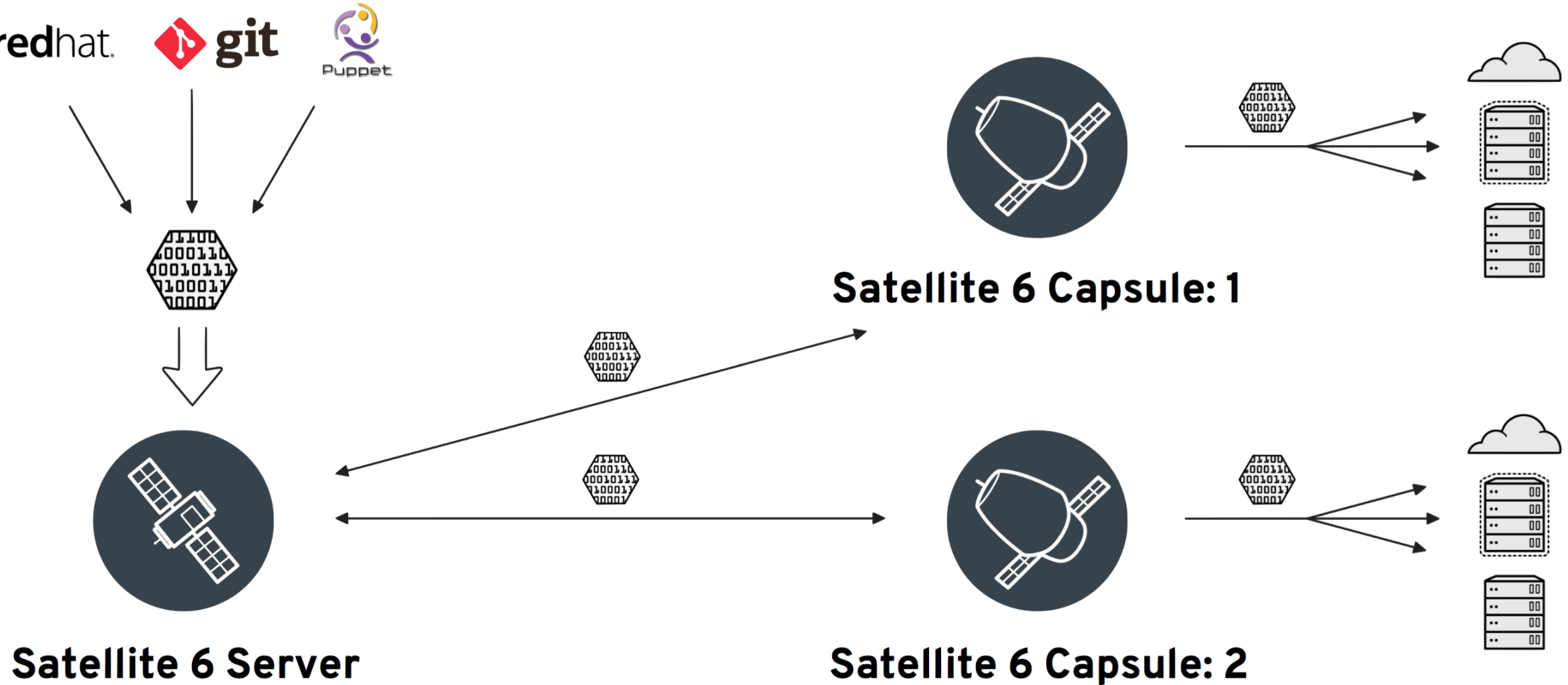
What versions of Satellite?

How many connected devices?

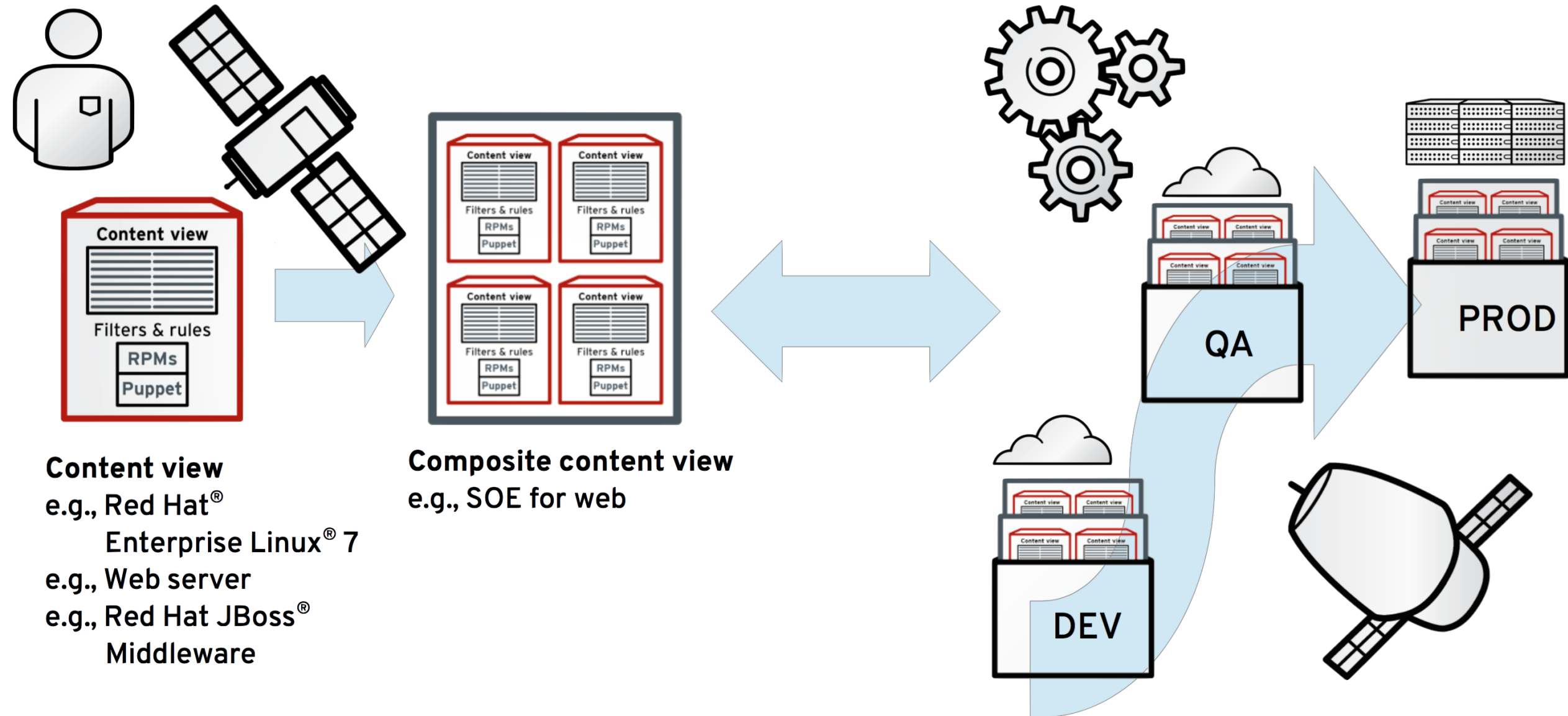
What company are you from?

RED HAT[®]
SATELLITE

What is Satellite 6?

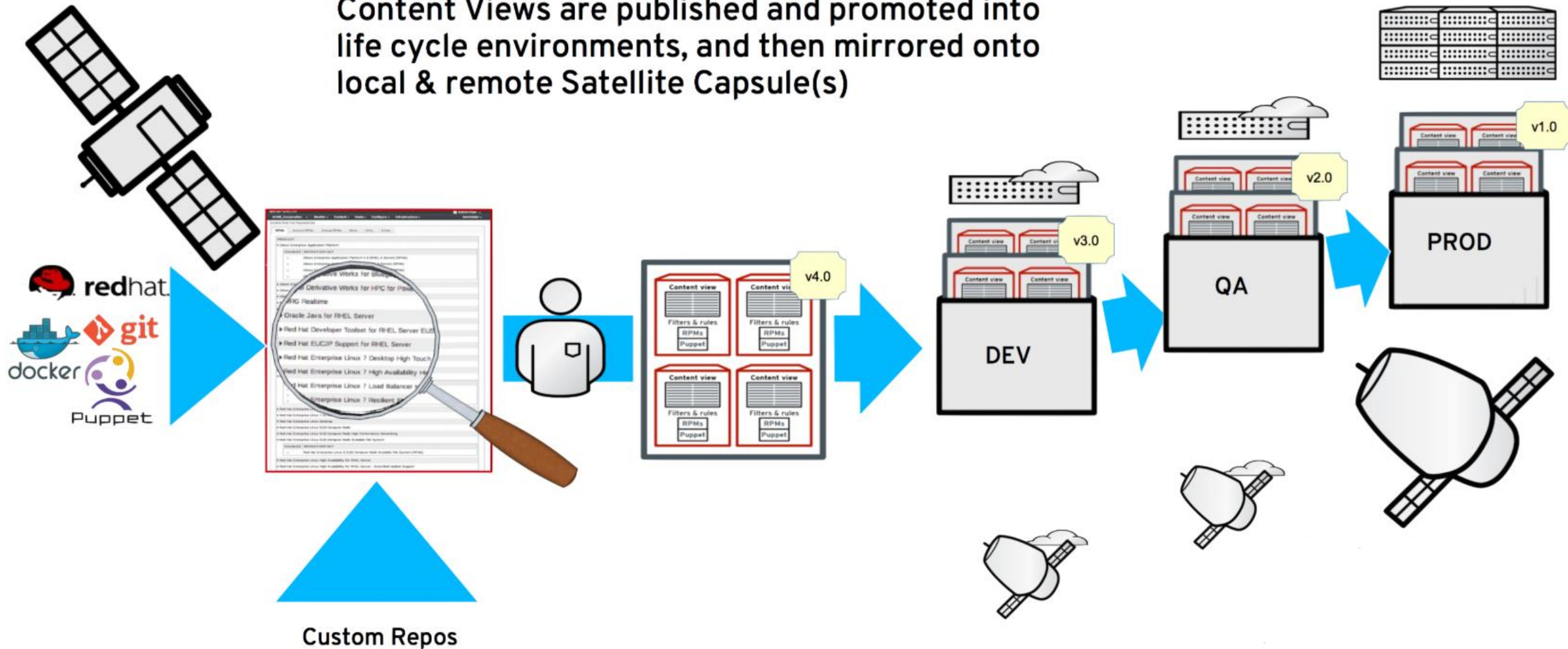


What is Satellite 6?



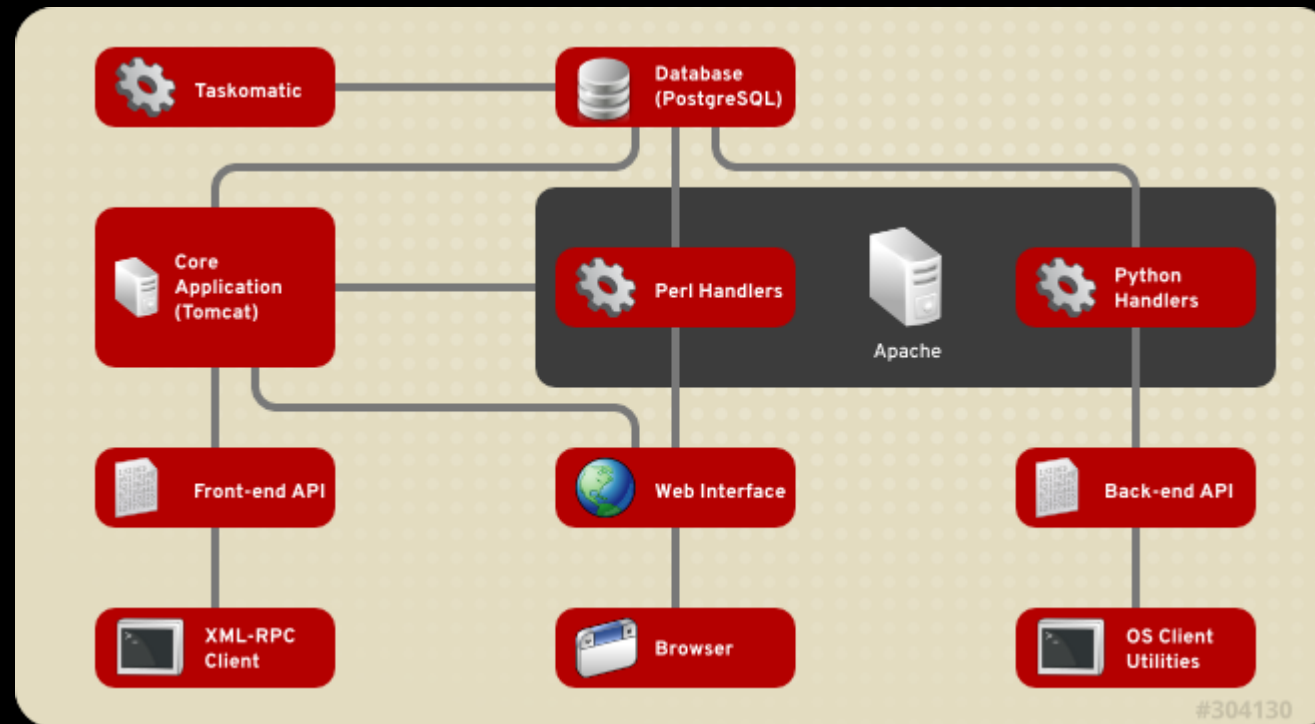
What is Satellite 6?

Content Views are published and promoted into life cycle environments, and then mirrored onto local & remote Satellite Capsule(s)



A long time ago in a galaxy far,
far away....

Satellite 5: Old Faithful



Satellite 6.1: New School Cool

RED HAT SATELLITE 5



RED HAT SATELLITE 6



Satellite 6.1: New School Cool



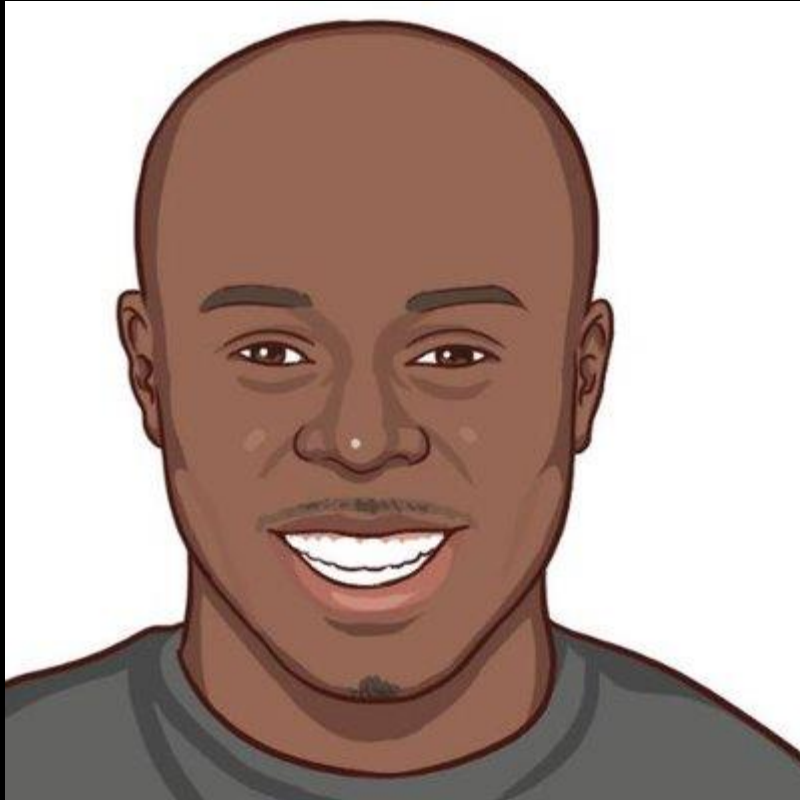
Satellite 6.2: Move Everything



Satellite 6.3: Start Over



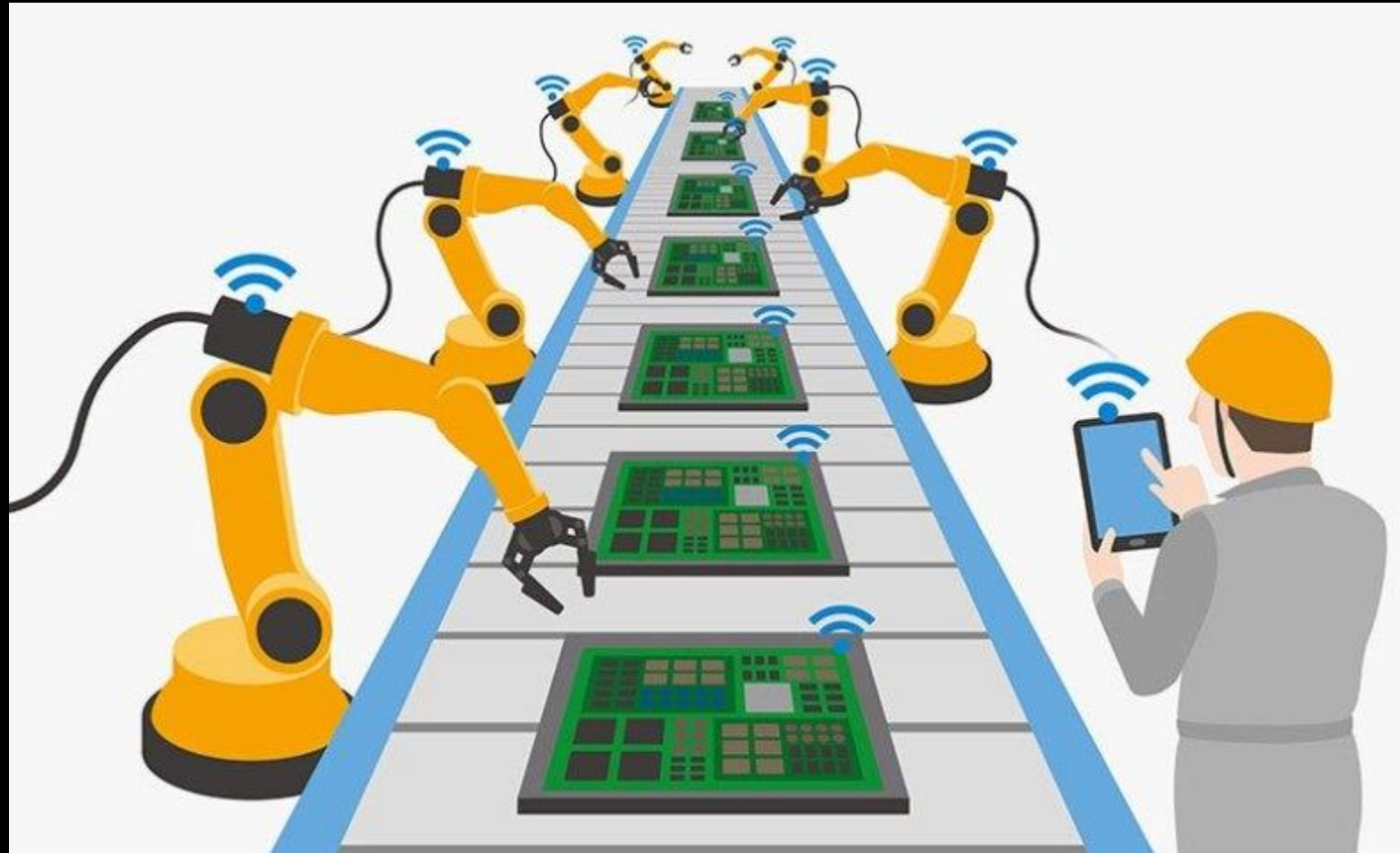
Quick Stop: We Need Help



Rich Jerrido

“Product Management Droid working at the crimson haberdashery. Avid lifter of heavy things. Dabbler in Python.” – His twitter page.

Satellite 6.4: Hitting our Stride



Satellite 6.4: Hitting our Stride

```
custom_products:
```

- product: EPEL6
description: 'Fedora Project EPEL6 Repository'
- product: EPEL7
description: 'Fedora Project EPEL7 Repository'

```
redhat_products:
```

- name: 'Red Hat Ansible Engine'
sync_plan: daily
- name: 'JBoss Enterprise Web Server'
sync_plan: daily
- name: 'Red Hat Enterprise Linux High Availability (for RHEL Server)'
sync_plan: daily
- name: 'Red Hat Enterprise Linux Server'
sync_plan: daily

Satellite 6.4: New Requirements



Satellite 6.4: Remote Execution

Jobs » Job invocation

Job category *

```
---
- hosts: all
  gather_subset:
    - 'min'
  vars:
    - packages_excluded_from_update: <%= input('exclude') %>
  roles:
    - update-packages
```


Satellite 6.4: Remote Execution

Job invocations

manualpatch × ▼

Description	Status	Succeeded
patching - patch and reboot - manualpatch	succeeded	1
patching - patch and reboot - manualpatch	failed	0
patching - patch no reboot - manualpatch	succeeded	4
patching - patch and reboot - manualpatch	failed	49
patching - patch and reboot - manualpatch	failed	0
patching - patch no reboot - manualpatch	succeeded	22
patching - patch no reboot - manualpatch	succeeded	21

100 ▼ per page

Satellite 6.4: Enforcing Standards

Job invocations

Post-install satellite × Q Search ▼

Description	Status	Succeeded	Failed
Post-install satellite	succeeded	1	0

100 ▼ per page

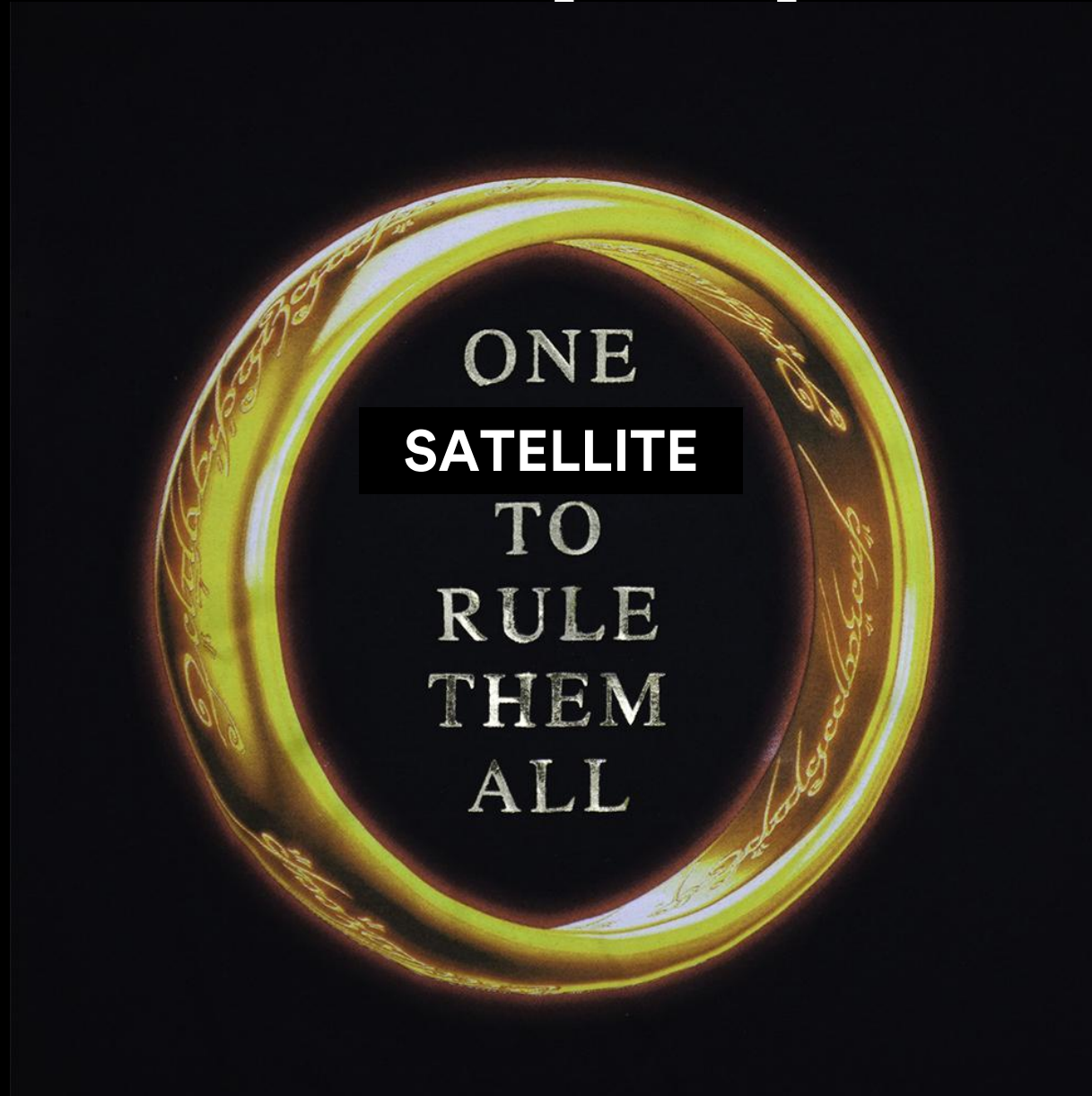
Ansible Roles

samba × Q Search ▼ Import ▼ Documentation

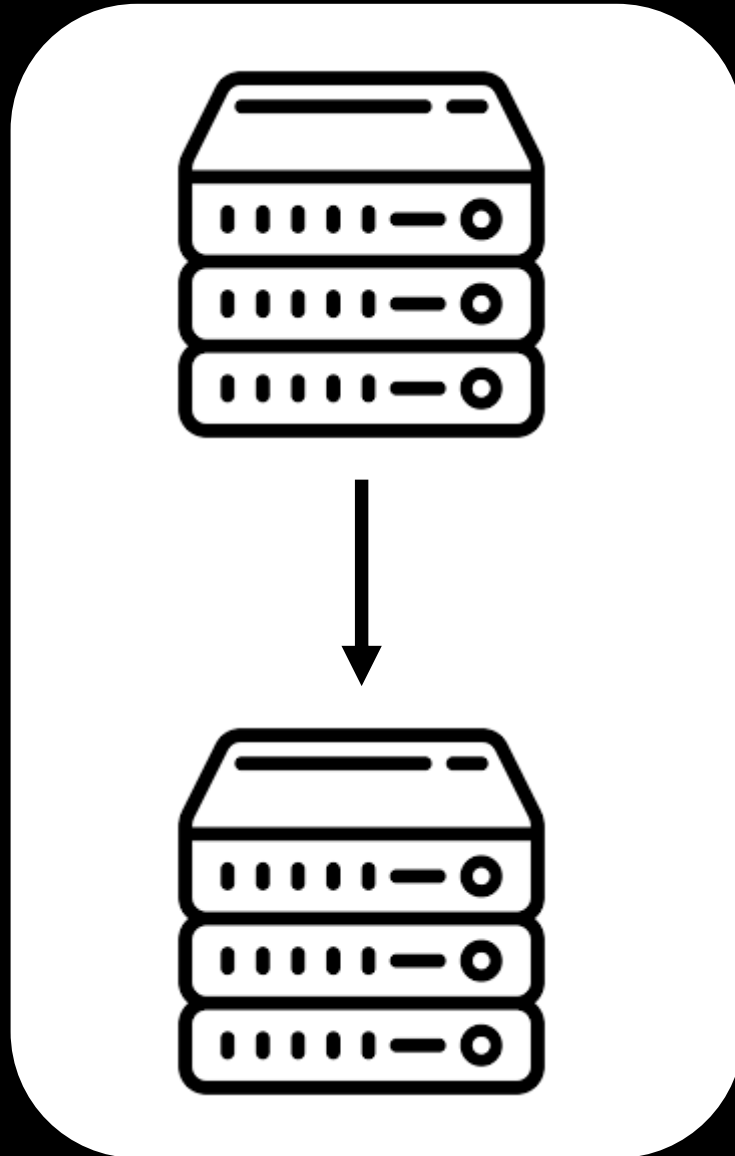
Name	Hostgroups	Hosts	Imported at	Actions
samba	0	0	about 2 months ago	Delete

50 ^ per page 1-1 of 1 « < 1 > »

Satellite 6.5: Up Up and Away



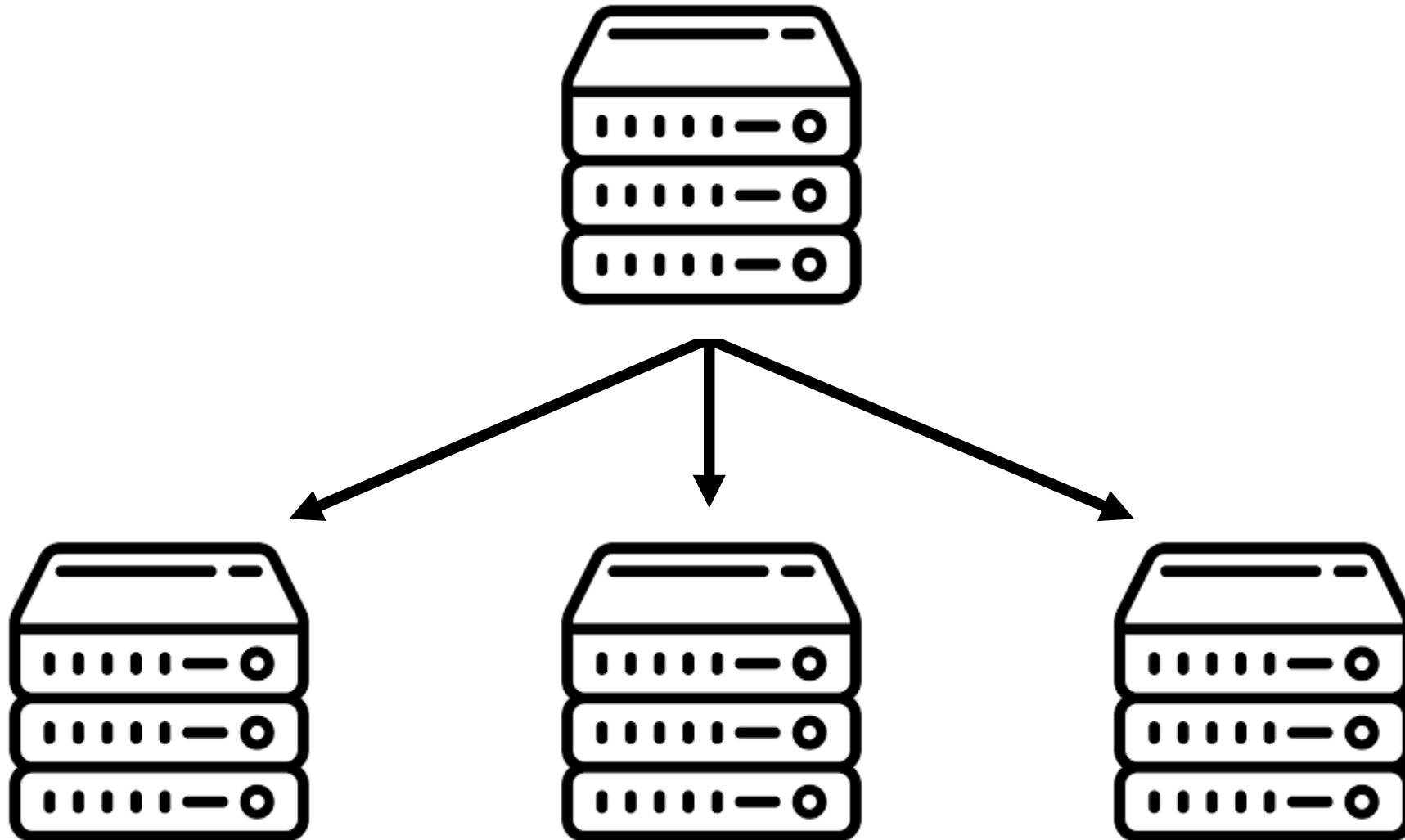
Satellite 6.5: Up Up and Away



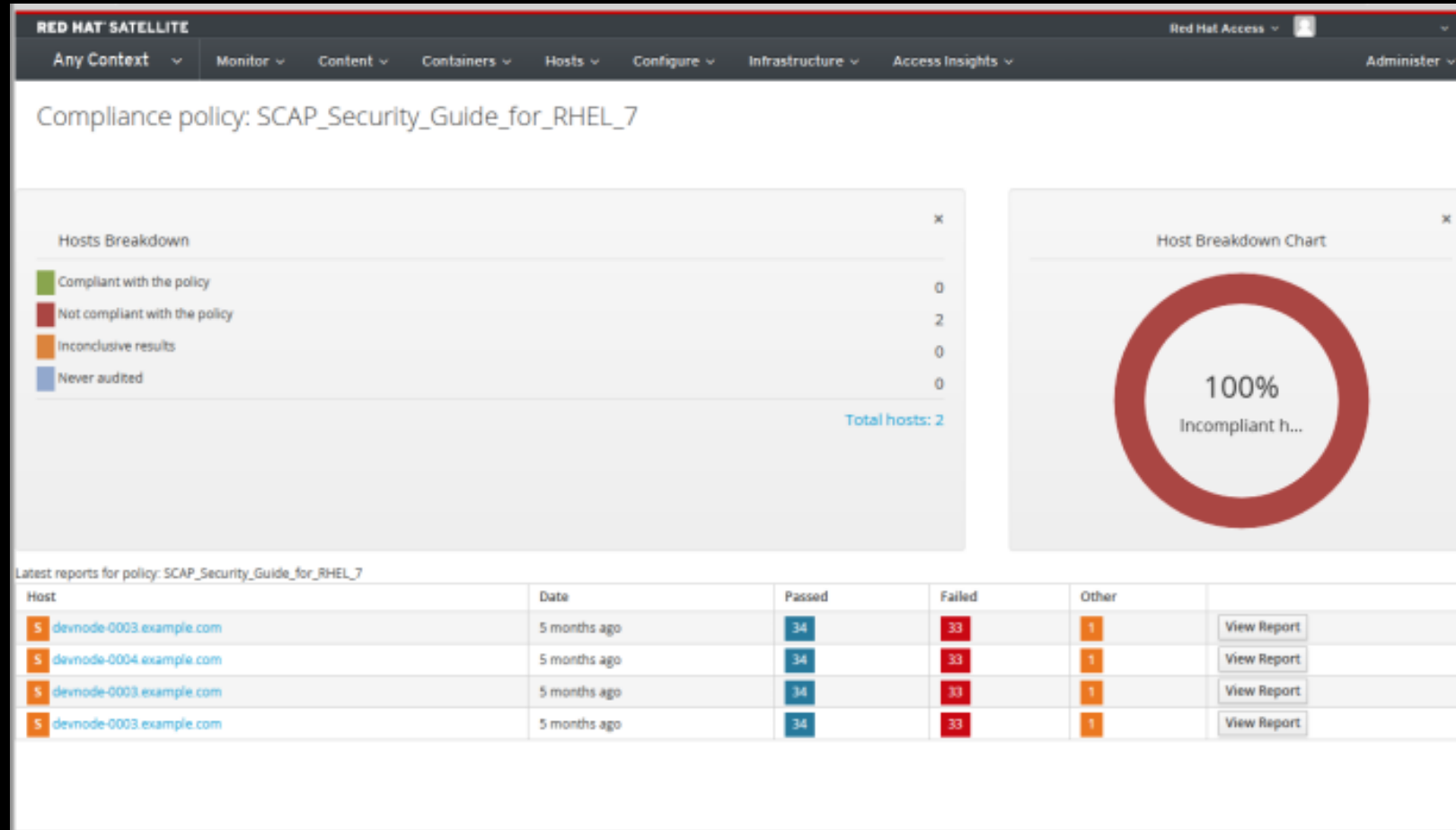
Satellite 6.5: Up Up and Away




Satellite 6.5: Up Up and Away



Satellite 6.5: What's Next?



Satellite 6.5: What's Next?

Compute Resources » Global AWS Test Compute Resource 

Compute Resource Virtual Machines Images SSH keys Compute profiles

Property	Value
Provider	EC2
Description	AWS EC2

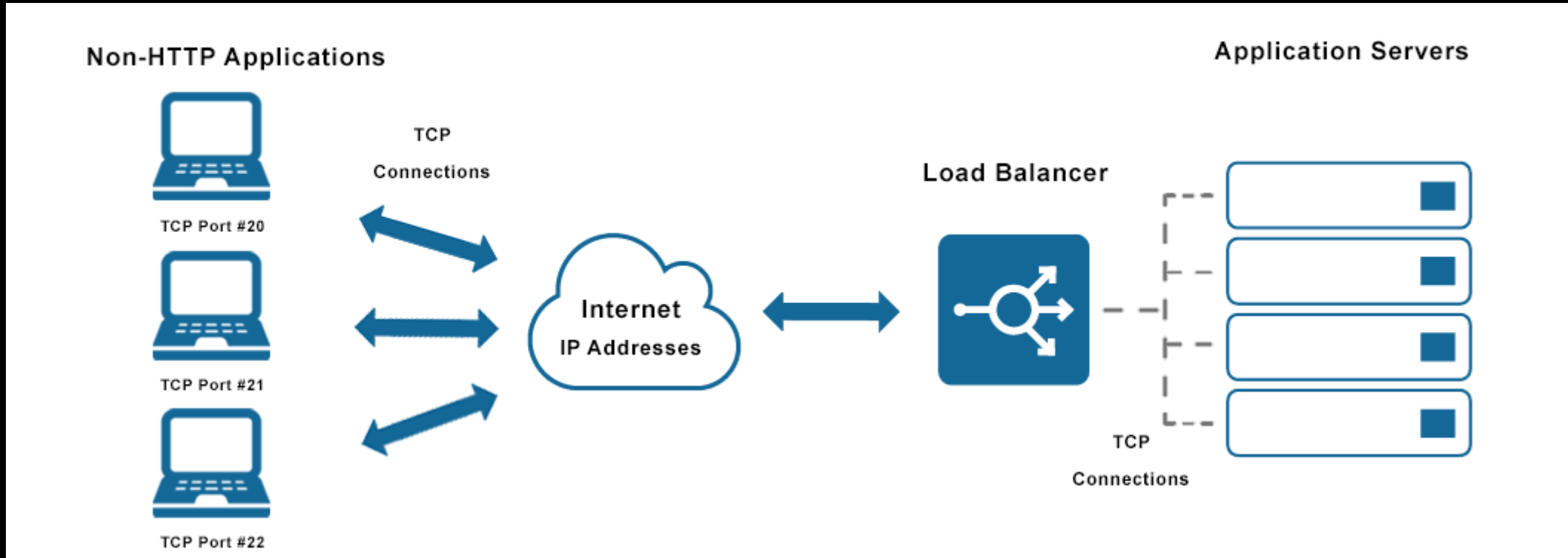
Tips and Tricks

Use capsules



Tips and Tricks

Toss a load balancer in front of your capsules



Learn from my Mistakes

Don't sync the Library out to capsules



Learn from my Mistakes

How many content views is too many?

CONTENT VIEW ID	NAME	LABEL	COMPOSITE	LAST PUBLISHED
26	ccv-rhel6	ccv-rhel6	true	2019/05/08 15:53:20
27	ccv-rhel7	ccv-rhel7	true	2019/05/08 15:58:21

Just because content is in a content view doesn't mean any server pointing at it can consume it. Subscriptions and repositories can be controlled via activation keys.

Tips and Tricks

“Steer” auto-attach as much as possible

Path: `/etc/pki/product/*.pem`

`Subscription-manager list`

Red Hat Product Certificates

This application guides you through retrieving and installing product certificate files that are necessary for Red Hat Subscription Management (RHSM) to recognize Red Hat products installed on your system. Certificate files could be missing in certain cases. [Read more.](#)

Choose your product

Product

Red Hat Enterprise Linux Server

Version

7.6

Architecture

x86_64

GENERATE

Tips and Tricks

Deploy custom facts

Path: `/etc/rhsm/facts/*.facts`

```
{ "CUSTOM.update_exclude_packages": "kernel*" }
```

```
Subscription-manager facts --update
```

Name
▼ CUSTOM
▼ memory
▼ uname
▼ proc_stat
▼ system
▼ net
▼ network
▼ cpu
▼ lscpu
▼ virt
▼ distribution
▼ proc_cpuinfo
▼ dmi
100 ▼ per page

Name	Value
CUSTOM > update_exclude_packages	kernel*
100 ▼ per page	

Tips and Tricks

Don't be afraid to get fancy with search queries for remote execution

Search Query

```
name ^ (aws-rhel8-test )
```

Search Query



```
lifecycle_environment = lab
```

Search Query

```
name ^ (aws-rhel8-test ) and lifecycle_environment = lab
```


Tips and Tricks

Look into dynamic query for scheduled remote executions jobs

Resolves to 121 hosts  

▼ Hide advanced fields

Effective user ⓘ

Description

Timeout to kill ⓘ

Password ⓘ

Private key passphrase ⓘ

Sudo password ⓘ

Concurrency level ⓘ

Time span ⓘ

Type of query ⓘ Static Query Dynamic Query

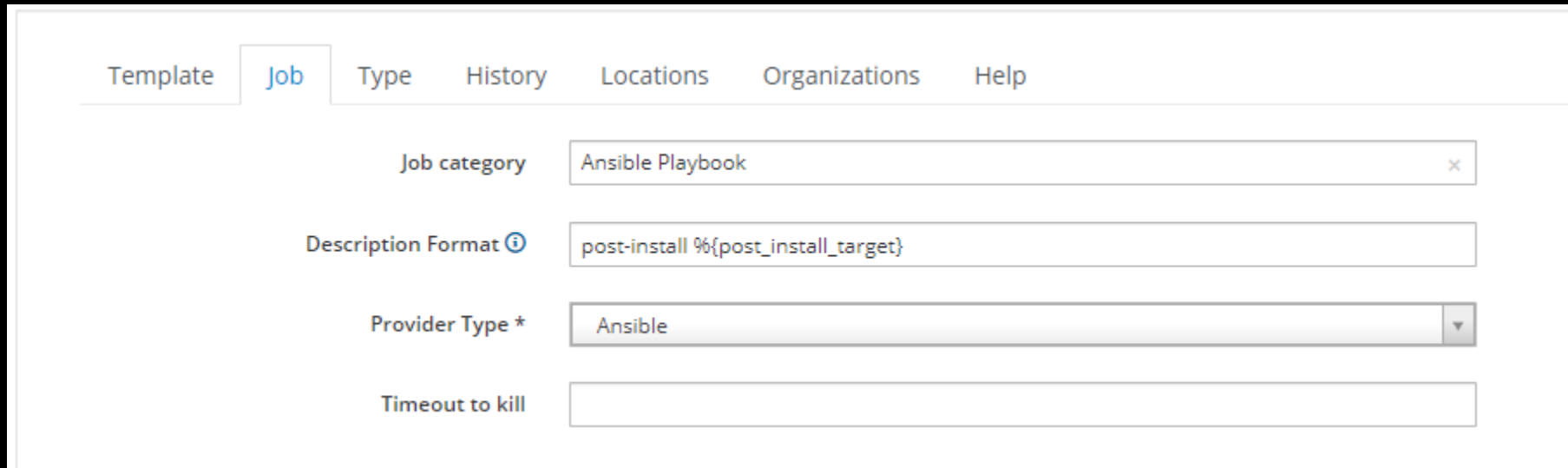
Schedule Execute now Schedule future execution Set up recurring execution

Start at

Start before ⓘ

Tips and Tricks

Names on remote execution jobs can be dynamic



The screenshot shows a configuration page for a job. At the top, there are tabs: Template, Job (selected), Type, History, Locations, Organizations, and Help. Below the tabs, there are four configuration fields:

- Job category:** A text input field containing "Ansible Playbook" with a close button (x) on the right.
- Description Format:** A text input field containing "post-install %{post_install_target}" with a help icon (i) on the left.
- Provider Type *:** A dropdown menu with "Ansible" selected.
- Timeout to kill:** An empty text input field.

Tips and Tricks

Update ansible on your capsules

```
subscription-manager repos --enable=rhel-7-server-ansible-2-rpms && yum update  
ansible
```



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ANSIBLE[®]

Learn from my Mistakes

Clean up old tasks

```
satellite-installer --foreman-plugin-tasks-automatic-cleanup true
```

```
SHELL=/bin/sh
```

```
RAILS_ENV=production
```

```
FOREMAN_HOME=/usr/share/foreman
```

```
# Clean up expired tasks from the database
```

```
45 19 * * * foreman /usr/sbin/foreman-rake foreman_tasks:cleanup
```

```
>>/var/log/foreman/cron.log 2>&1
```


Learn from my Mistakes

Follow the tuning guide

https://access.redhat.com/documentation/en-us/red_hat_satellite/6.3/html/tuning_red_hat_satellite/index

“This document provides guidelines for tuning Red Hat Satellite for performance and scalability. There is no universally-applicable configuration for Red Hat Satellite. What maximizes performance in one situation will not necessarily maximize performance in another.”

Learn from my Mistakes

Have some basic health checks

```
[root@satellite ~]# foreman-maintain service status | grep 'All services  
are running' | grep '\[OK\]'  
- All services are running [OK]
```

```
[root@satellite ~]# hammer ping | grep 'ok' | wc -l  
5
```

If foreman-maintain service status doesn't say [OK], a service is down and systemd noticed.

A good hammer ping will return 'ok' five times. Less than five means something isn't responding.

Learn from my Mistakes

Have some basic health checks

```
[root@satellite ~]# subscription-manager list --available --all | grep  
'Available'
```

```
    Available Subscriptions  
Available:           15  
Available:           16  
Available:           Unlimited  
Available:           6
```

Note: disable rhsmcertd (systemctl disable --now rhsmcertd) to prevent a server from auto-attaching or changing subscriptions for longer-term monitoring.

Tips and Tricks

Use all the tools you can

<https://www.theforeman.org/plugins/foreman-ansible-modules/>

<https://pypi.org/project/nailgun/>

https://access.redhat.com/documentation/en-us/red_hat_satellite/6.5/html-single/hammer_cli_guide/index

Why use a hammer when you can use a nailgun.

Tips and Tricks

Use all the tools you can

```
satellites:
  satellitel:
    location: 'On-Premise'
    class: 'Prod'
    satellite_settings:
      organization: 'Corp'
      locations:
        - 'DC1'
        - 'DC2'
    manifest: '/tmp/sat6-manifest.zip'
    redhat_upstream_repos:
      - repo: 'Red Hat Enterprise Linux 7 Server (RPMs)'
        product: 'Red Hat Enterprise Linux Server'
```


Tips and Tricks

Use all the tools you can

```
- name: create satellite locations
  foreman_location:
    username: "{{ satellite_admin_username }}"
    password: "{{ satellite_admin_password }}"
    server_url: "{{ satellite_url }}"
    name: "{{ item.1 }}"
    state: present
    verify_ssl: no
  when:
    - item.0.location == location
    - item.0.class == class
  with_subelements:
    - "{{ satellites }}"
    - satellite_settings.locations
  delegate_to: "{{ nailgun_host }}"
```

Tips and Tricks

Activation keys are applied left to right when registering

`ak-rhel, ak-openshift, ak-lab`

1. **Apply a base subscription for Red Hat Enterprise Linux**
2. **Apply an additional subscription for OpenShift**
3. **Set the lifecycle environment of the server to lab**

`ak-rhel, ak-prod, ak-lab`

1. **Apply a base subscription for Red Hat Enterprise Linux**
2. **Set the lifecycle environment to prod**
3. **Set the lifecycle environment to lab (overrides the key to the left)**

Tips and Tricks

Give the betas/upstream versions a try

Navigation bar: FOREMAN R Labs ▾ Any Location ▾ Admin User ▾

Left sidebar menu:

- Monitor >
- Content >
- Containers >
- Hosts >**
- Configure >
- Infrastructure >
- Administer >

Content Hosts

Filter... Search ▾ Export Register Content Host Select Action ▾

0 of 1 Selected

<input type="checkbox"/>	Name	Subscription Status	Installable Updates	OS	Lifecycle Environment	Content View	Registered	Last Checkin
<input type="checkbox"/>	ns1.ext.dc1.lab		0 0 0 15		Library	CentOS7	2018-09-28 21:05:46 -0300	2018-09-28 21:05:50 -0300

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Tips and Tricks

Engage with Red Hat



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