RED HAT SATELLITE LIGHTNING TALKS

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Thomas McKay
Rich Jerrido
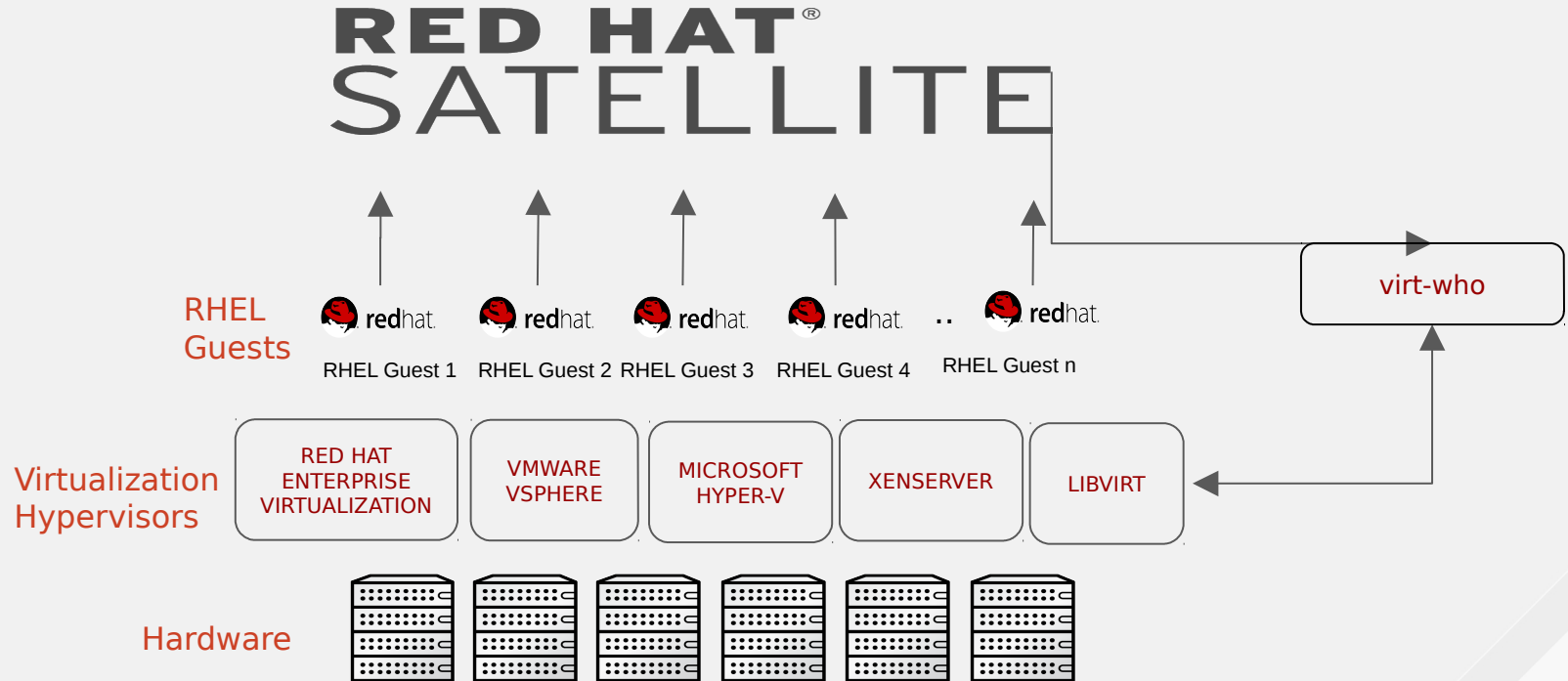
SATELLITE 6 & VIRTUALIZATION PLATFORMS

VIRT-WHO
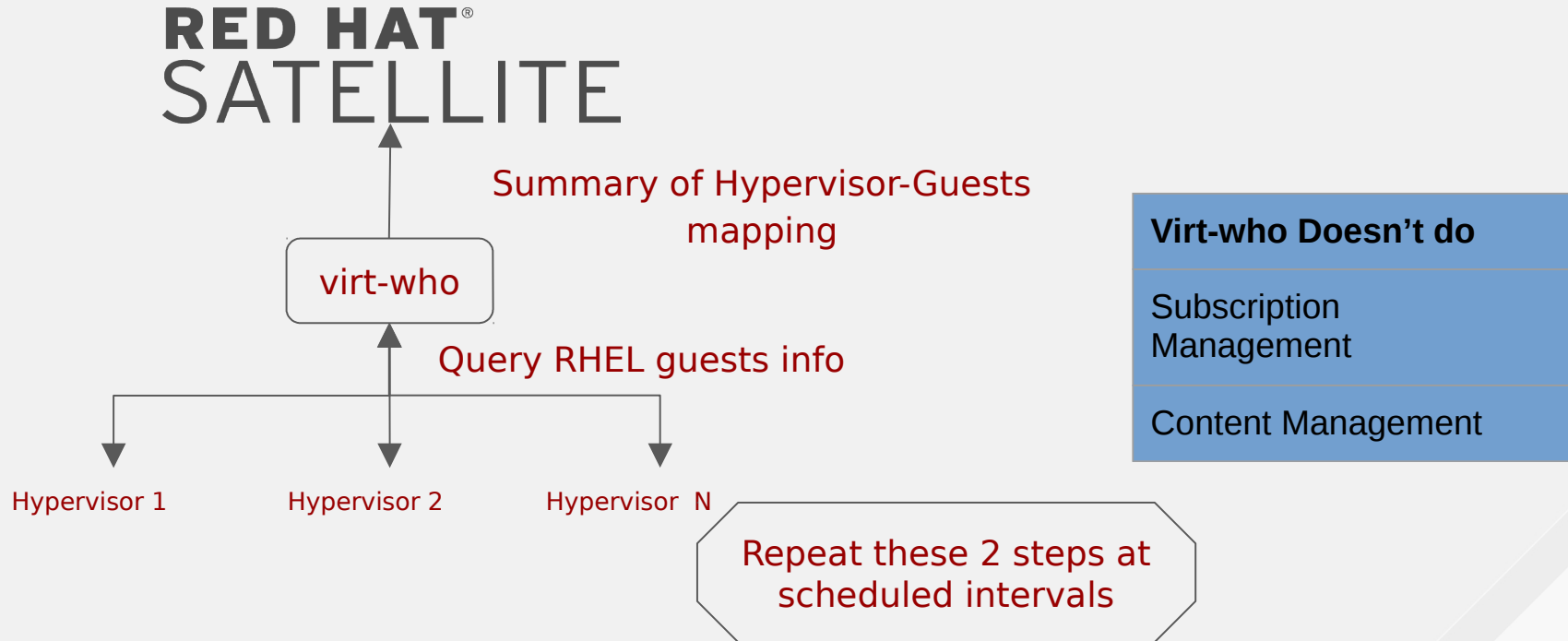
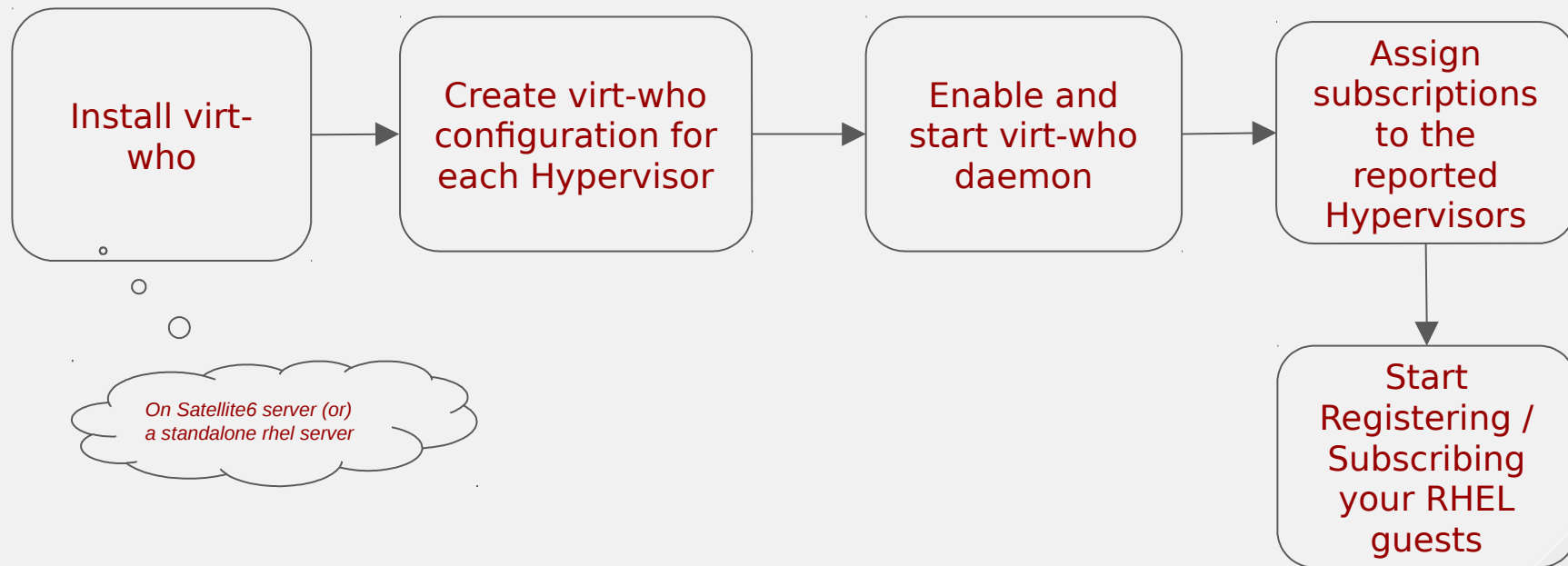Sureshkumar Thirugnanasambandan
Principal Quality Engineer
5/3/2017

Satellite & Virtualization Platforms

RED HAT® **SATELLITE**

RHEL Guests

redhat. redhat. redhat. redhat. .. redhat.

RHEL Guest 1   RHEL Guest 2   RHEL Guest 3   RHEL Guest 4   RHEL Guest n

virt-who

Virtualization Hypervisors

| RED HAT ENTERPRISE VIRTUALIZATION | VMWARE VSPHERE | MICROSOFT HYPER-V | XENSERVER | LIBVIRT |

Hardware

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What does virt-who do?

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Summary of Hypervisor-Guests mapping

virt-who

Query RHEL guests info

Virt-who Doesn't do
Subscription Management
Content Management

Hypervisor 1   Hypervisor 2   Hypervisor N

Repeat these 2 steps at scheduled intervals

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How to setup?

Install virt-who → Create virt-who configuration for each Hypervisor → Enable and start virt-who daemon → Assign subscriptions to the reported Hypervisors → Start Registering / Subscribing your RHEL guests

On Satellite6 server (or) a standalone rhel server

How it works?

RHEL Guest 1

Subscription request

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New virt-who report comes in

Allocate a *temporary* 24 hours subscription

Is the Hypervisor - guest mapping found?

No

Yes

Allocate 1 subscription from Hypervisor's unlimited pool

What happens if virt-who is setup incorrectly?

Your RHEL guest
- may not subscribed (or)
- may consume incorrect subscriptions

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Areas needed improvement

- Identify Red Hat Subscriptions in Satellite UI which need virt-who usage
- Automate virt-who server setup
- Manage configurations in Satellite UI
- Showing virt-who reporting status in UI
- Make *virt-who reporter* role available by default

Satellite 6.2.z improvements

Satellite 6.2.z improvements - Page 1

Subscriptions

Filter... | Search | Showing 2 of 2 (2 Total) | **Manage Manifest**

Consumed

Red Hat Enterprise Linux for Virtual Datacenters, Premium

0 out of 5

Red Hat Satellite Employee Subscription

0 out of 5

Subscription Manifest

Upstream Subscription Management Application	sthirugn_04282017

Delete Manifest | Refresh Manifest

Upload New Manifest

Browse... | manifest_vdc_satellite_employee_04282017.zip

Upload

ⓘ

The uploaded manifest contains subscriptions that require the use of virt-who. Learn how to configure and use this tool in the Virtual Instances Guide.

Manifest History

Message	Time
✔ Default_Organization file imported successfully.	4/28/17 5:09 PM
✔ Subscriptions deleted by foreman_admin	4/28/17 5:09 PM
✔ Default_Organization file imported successfully.	4/20/17 12:18 PM
✔ Subscriptions deleted by foreman_admin	4/20/17 12:18 PM

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Satellite 6.2.z improvements - Page 2

Subscriptions

Filter... [Q Search ▾] Showing 2 of 2 (2 Total)   **Manage Manifest**

Consumed	Type	Starts	Expires	Support Level	Contract	Account	Requires Virt-Who Usage
Red Hat Enterprise Linux for Virtual Datacenters, Premium							
0 out of 5	Physical	8/4/16	12/31/21	Premium	11045754	477931	✔
Red Hat Satellite Employee Subscription							
0 out of 5	Physical	9/19/14	12/31/21	Self-Support	10538625	477931	

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Upcoming improvements - Satellite 6.3

You asked, we listened!
What's coming in Satellite 6.3?

- New virt-who configuration helper in Satellite6 UI
  - to store/edit/redeploy virt-who configurations anytime
- Provides a shell script to run on the virt-who host which automates the following:
  - Install virt-who
  - Creating virt-who configurations
  - Start virt-who daemon
- New *virt-who reporter* role available by default

What's coming in Satellite 6.3 - Demo

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How can you contribute?

- Play with the new virt-who configure plugin and provide feedback
  - https://github.com/theforeman/foreman_virt_who_configure
- My irc nick: *sthirugn*

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Frequently Asked Questions - Page 1

virt-who configuration docs

Satellite 6.2 Virtual instances guide

An interactive lab is setup in access.redhat.com to create
virt-who config

Satellite blog -

Understanding virt-who

Working with subscriptions that require virt-who

Frequently Asked Questions - Page 2

Create virt-who role with minimal permissions?

Why is my hypervisor hosts are prefixed with `*virt-who*` after
    upgrading to Satellite 6.2.
How to use virt-who to report to multiple orgs?
Why is my Hypervisor host shows Green status although it does
    not have a subscription attached yet

Virt-who doesn't report host-guest info - see 1, 2, 3

Satellite-6 equals plugins!

The Satellite-6 product is a collection of supported plugins

Core Ruby on Rails application
- Foreman

Shipped plugins
- Katello, Access Insights, Ansible, OpenSCAP, Discovery, Hooks and more!

Unsupported upstream plugins*
- Salt, Chef and others

Warning: May be asked to uninstall when reporting support cases

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What are plugins?

Written in Ruby on Rails (RoR)
- Ruby - programming language
- Rails - server-side web application framework
- Plugin - extension or modification to the core framework

Details
- Loaded at server startup
- Full access to database and data relations
- Able to extend all areas of an application

Can I write my own plugin?

Q: Two Virtual Datacenter (VDC) subscriptions, how are they used?
A: Create report of usage over time

Requires specialized knowledge of Ruby on Rails
- How to debug
- Data relations
- Performance implications

Not supported
- Support of Satellite-6 itself may require removal of plugin
- Bring server down to modify, remove

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What are my choices then?

Q: Two Virtual Datacenter (VDC) subscriptions, how are they used?
A: Create report of usage over time

Other possible solutions
- *hammer --csv subscriptions* with *cron*
- Custom API script with *cron*
- Use the *foreman-hooks* plugin!

The foreman-hooks plugin runs scripts

A database object change will trigger a call to a custom executable

Benefits
- Write executable or script in any language
- Triggered only when needed with low burden on server
- Hooks for data validation, before and after save, and create-update-delete actions
- Modifications to script do not require server restart
- *foreman-hooks* plugin is supported (but debug your own scripts, please!)

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How it works

A database object change will trigger a call to a custom executable
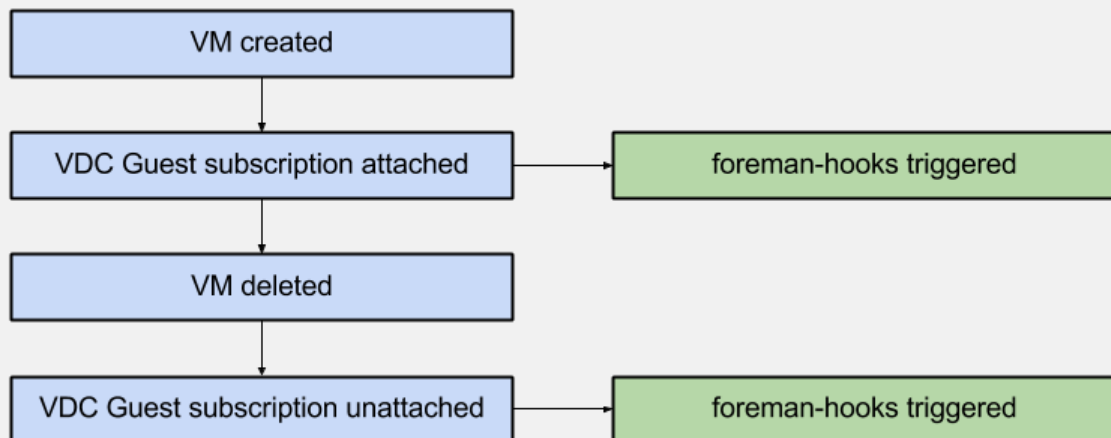
Using foreman-hooks like a plugin

Q: Two Virtual Datacenter (VDC) subscriptions, how are they used?

A: Write a *foreman-hooks* script to report usage as CSV

```
...
File.open(filename, "a") do |file|
  json = JSON.parse(STDIN.read)
  quantity = json['quantity']
  consumed = json['consumed']
  updated_at = DateTime.now.strftime('%F %T')
  file.puts "#{json['id']},#{json['subscription_id']}," \
            "#{updated_at},#{quantity},#{consumed}"
end
...
```

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Using foreman-hooks like a plugin

Q: Two Virtual Datacenter (VDC) subscriptions, how are they used?
A: Write a *foreman-hooks* script to report usage as CSV

```
ID,Subscription ID,Update Time,Quantity,Consumed
117,53,2017-04-25 14:41:25,-1,0
117,53,2017-04-25 14:41:25,-1,0
100,53,2017-04-25 14:41:27,4,1
100,53,2017-04-25 14:41:27,4,1
93,49,2017-04-25 14:41:29,200,3
93,49,2017-04-25 14:41:29,200,3
100,53,2017-04-25 14:41:35,4,0
100,53,2017-04-25 14:41:35,4,0
```
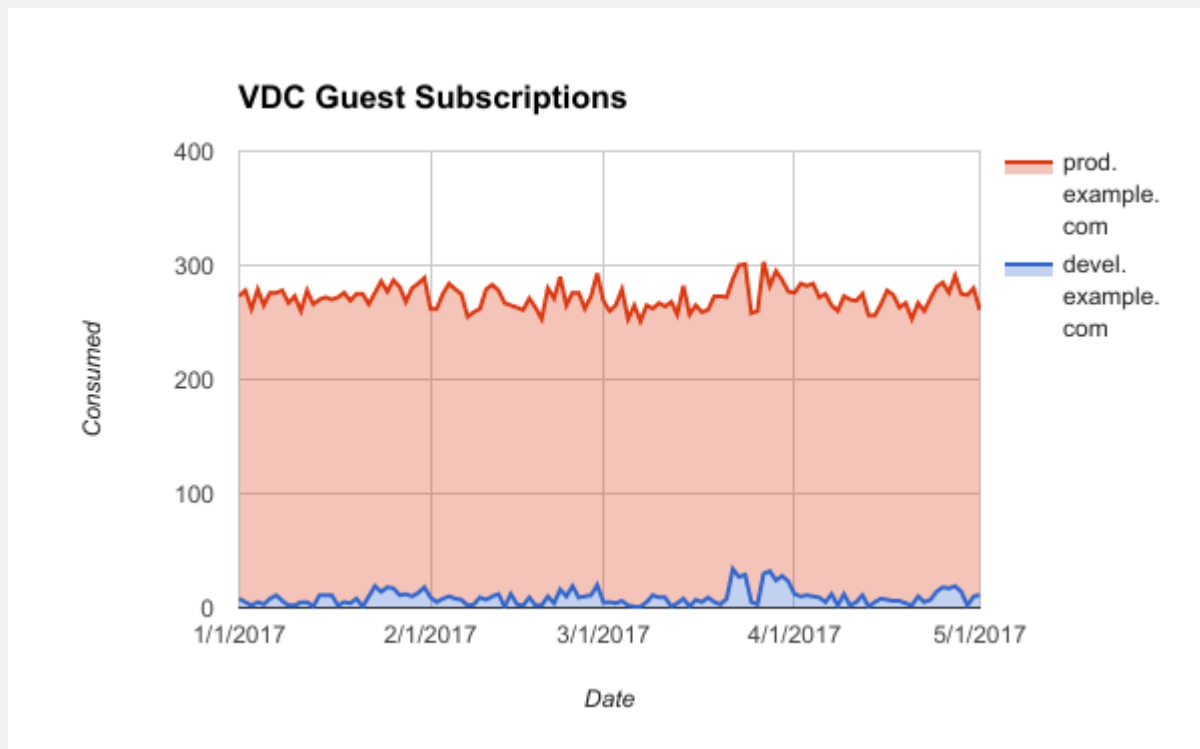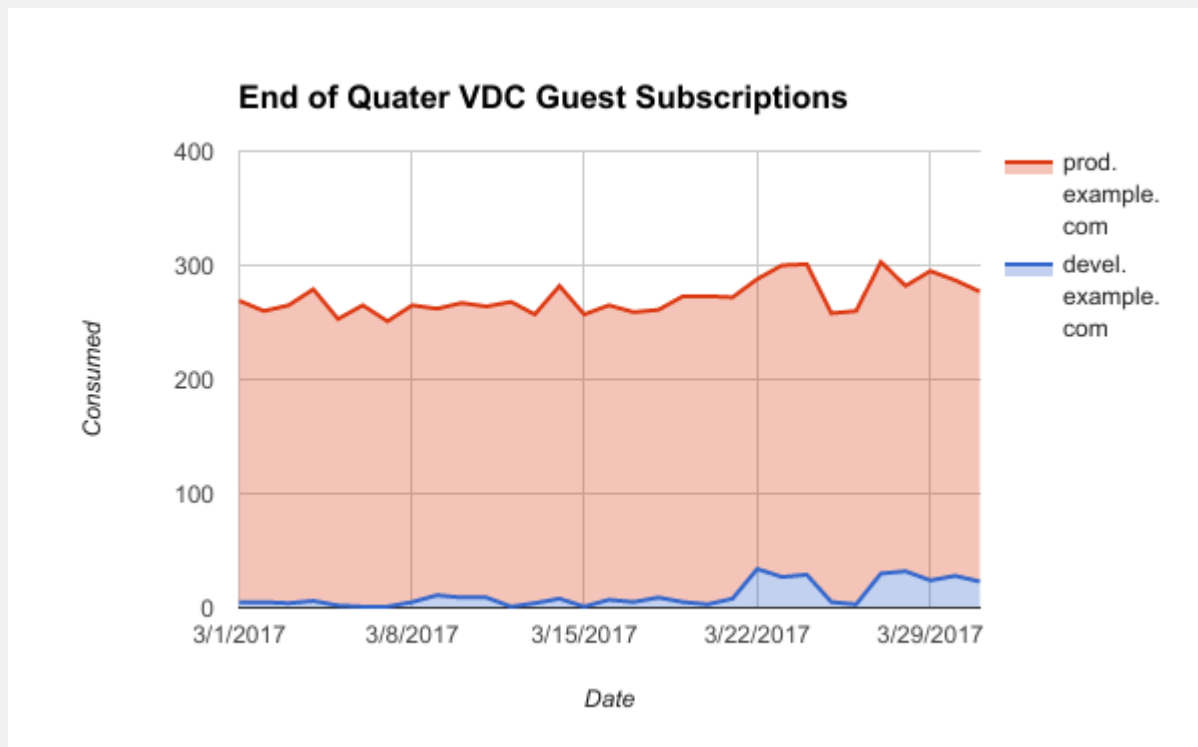
Using foreman-hooks like a plugin

Using foreman-hooks like a plugin

Interested in learning more?

Freenode IRC #satellite6 and #theforeman
thomasmckay

References
- Satellite-6 Documentation - Using Foreman Hooks
- Foreman Website - How to Create a Plugin

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Red Hat Satellite 5

In brief...

KEY EVENTS FOR SATELLITE 5

Red Hat Network UI End-of-Life

Satellite 5.8 General Availability

Satellite 5.6 / 5.7 End-of-Life

Satellite 5.8 Extended Lifecycle Support

Satellite 5.8 End of Extended Support

JUNE 2017

JUL 31 2017

JAN 31 2019

MAY 31 2020

WE ARE HERE

2018
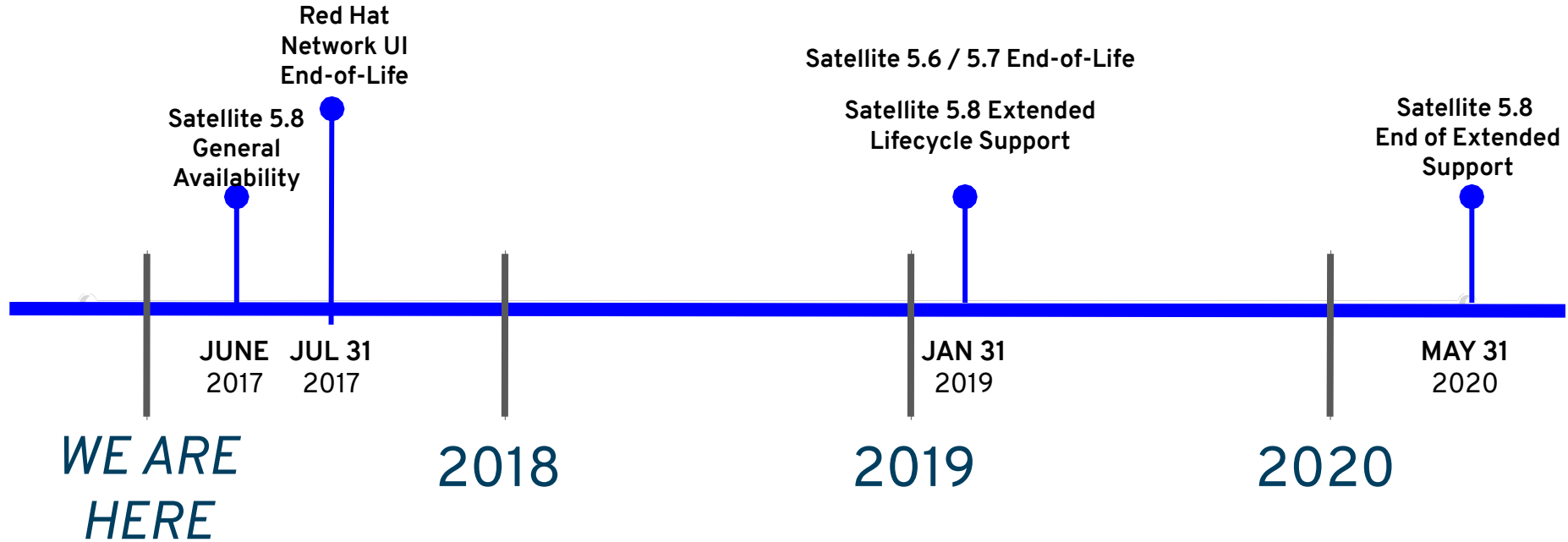
2019

2020

KEY EVENTS FOR SATELLITE 5, cont.

Your options as a Satellite 5 customer

	End of Production Phase 3	**End of Extended Life Phase**
Satellite and Proxy 5.8	Jan 31, 2019	May 31, 2020
Satellite and Proxy 5.7 & 5.6	Jan 31, 2019	Not supported
Proxy 5.x Stand-Alone (No Satellite server)*	Oct 31, 2017	Not supported

Using Proxy server without a corresponding Satellite server.

The full Satellite 5 & 6 support lifecycle
https://access.redhat.com/support/policy/updates/satellite/
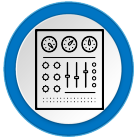
KEY EVENTS FOR SATELLITE 5, cont.

Satellite 5.8 is in beta! General Availability mid-year 2017.

Increased speed with channel install and content syncing

First version of Satellite 5 to access the Customer Portal

Register, activate and update Satellite from the Customer Portal, and synchronize content via our modern Content Delivery Network (CDN)

Improved diagnostics of background tasks and jobs
Introducing the Taskotop utility, which monitors Taskomatic job scheduler activities and provides insightful information on the status of those jobs.

Updated support of Oracle DB & PostgreSQL
Expanding that support for two additional databases for Satellite 5.8: External Oracle Database 12c + Embedded/Managed PostgreSQL 9.5 DB

__Legacy feature removal__
- *Monitoring*
- *Solaris management*
- *SAM support*

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