



Introduction to The OpenStack Foreman Installer

@jameslabocki
www.allthingsopen.com

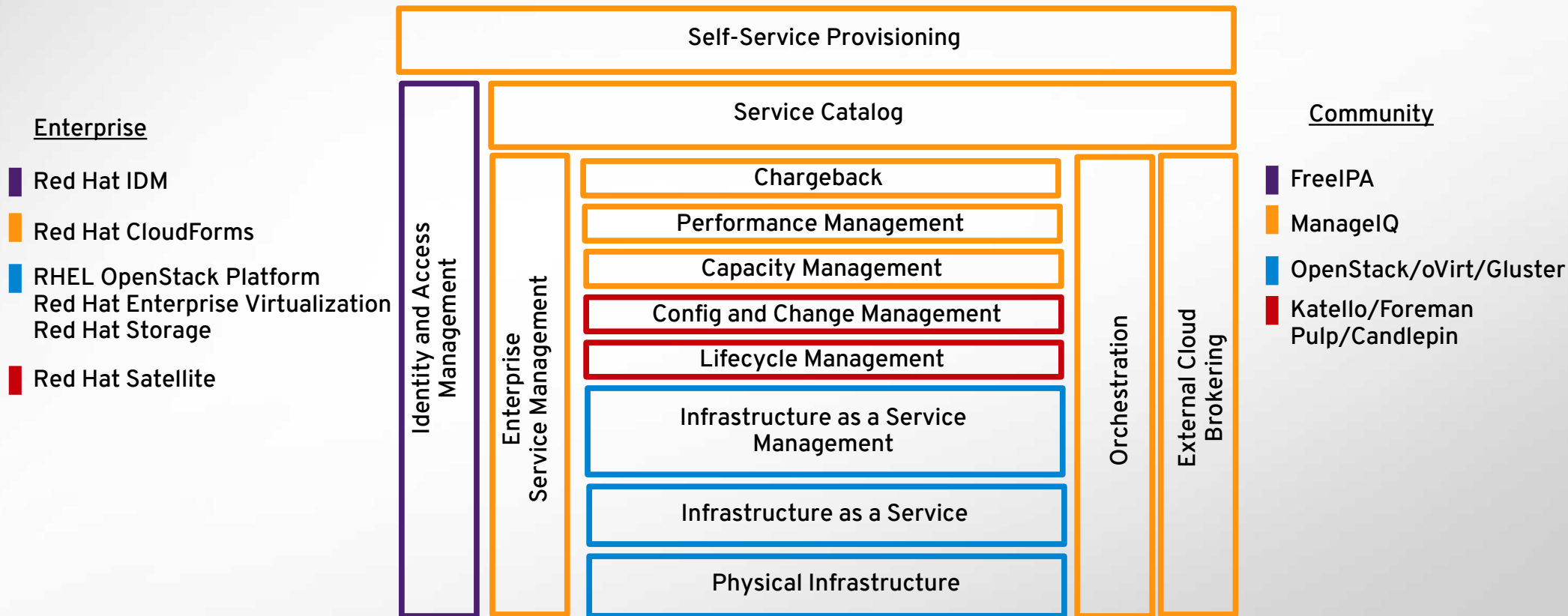
Agenda

- Introduction
- Features
- Demonstration
- Roadmap

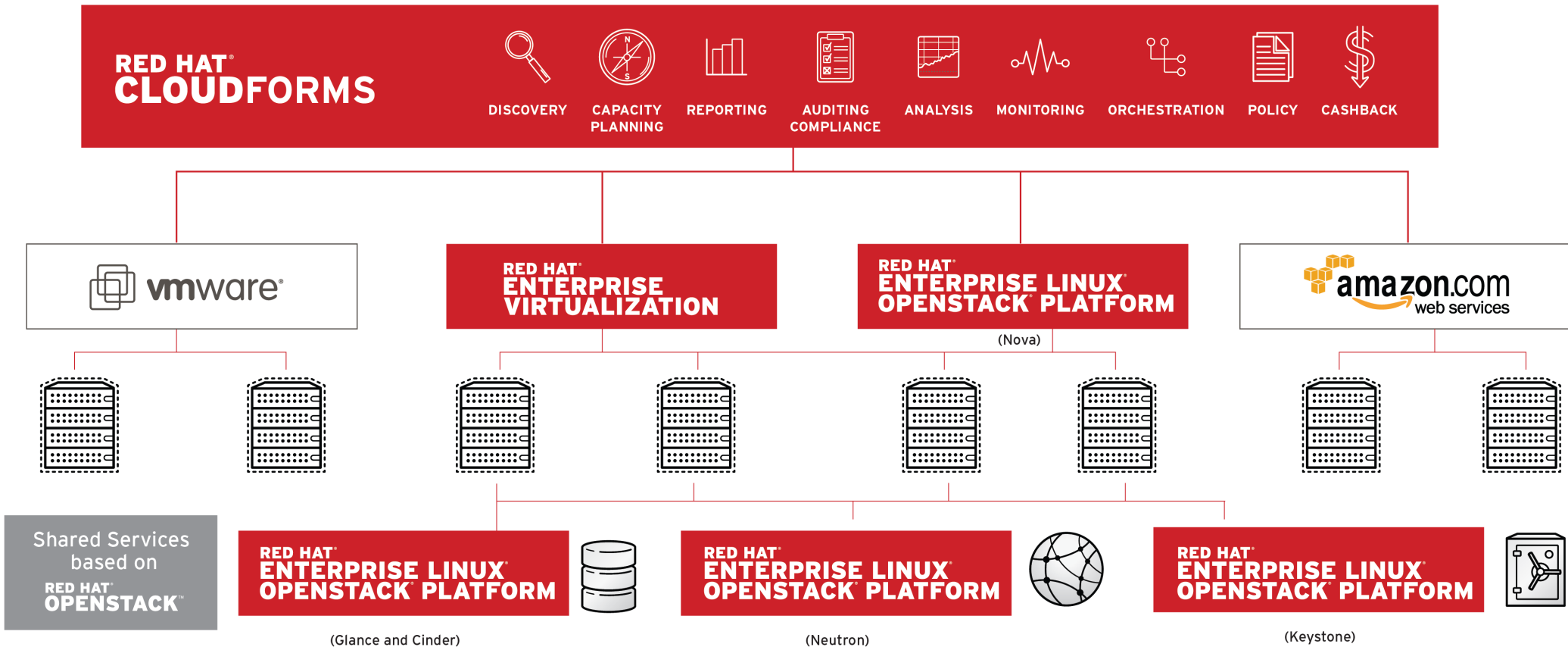


Introduction

Red Hat Private Cloud Capabilities



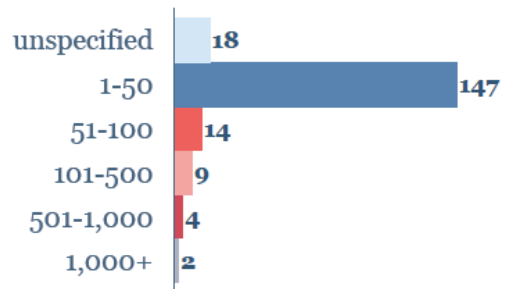
Red Hat Cloud Infrastructure



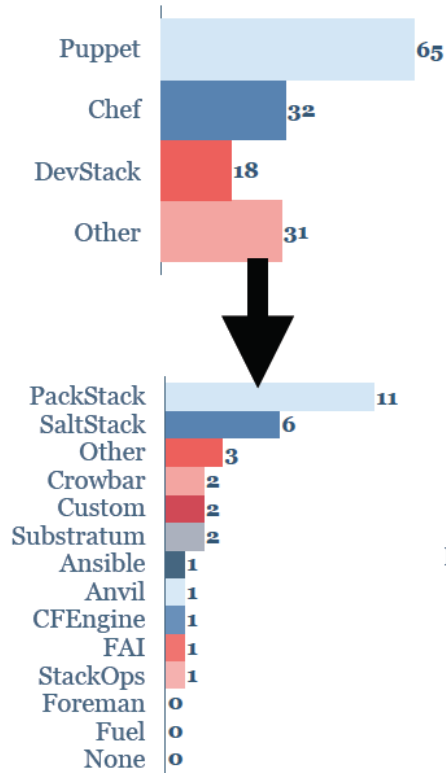
OpenStack Deployments

Dev

of compute nodes

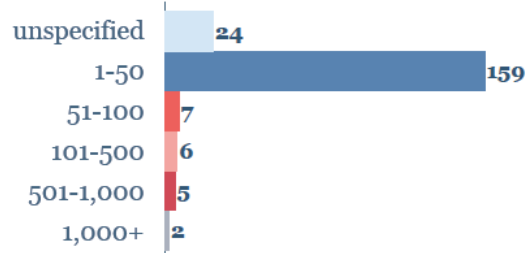


Deployment Tool

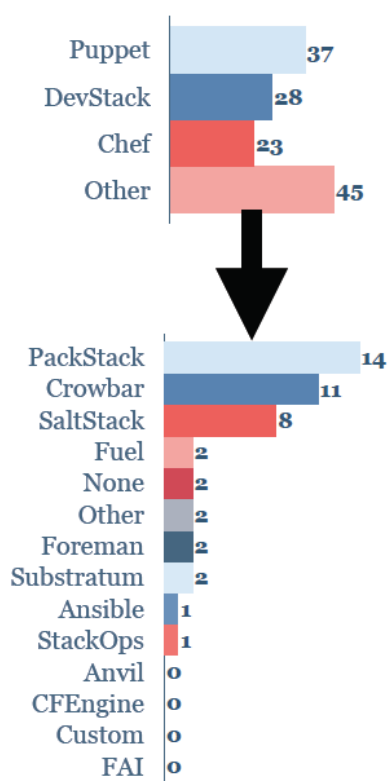


POC

of compute nodes

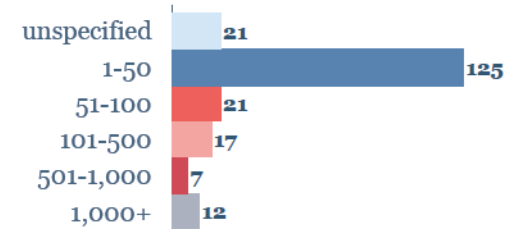


Deployment Tool

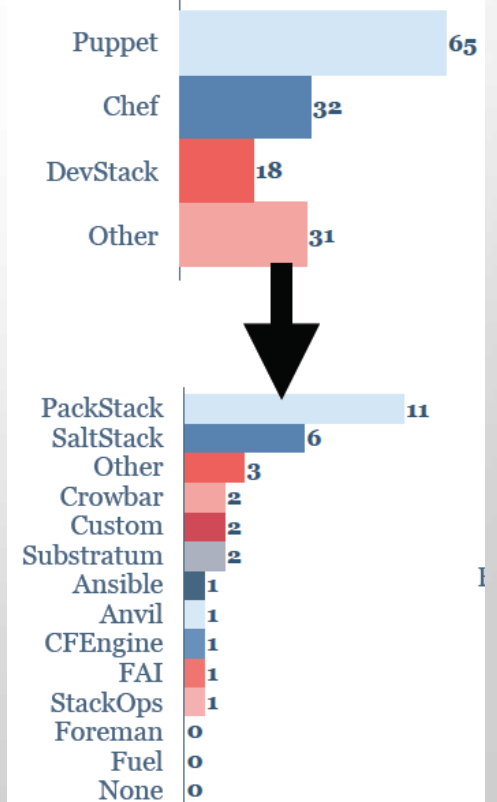


Prod

of compute nodes



Deployment Tool



Evolution of OpenStack Deployment Tools

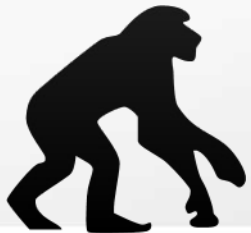


Evolution of OpenStack Deployment Tools

Manual

“Get out your reading glasses and typing gloves”

· Command Line



Evolution of OpenStack Deployment Tools

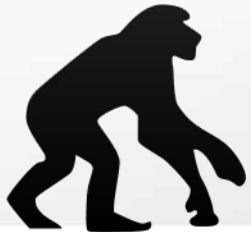
Manual

Great for learning.

Bad for ...
everything else.

“Get out your reading
glasses and typing
gloves”

· Command Line



Evolution of OpenStack Deployment Tools

Manual

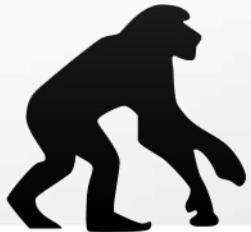
PackStack

“Get out your reading glasses and typing gloves”

“Get out your man page reading glasses and vi”

- Command Line

- Command Line
- Uses Puppet



Evolution of OpenStack Deployment Tools

Manual

“Get out your reading glasses and typing gloves”

- Command Line

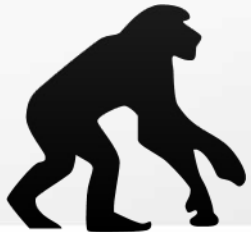
PackStack

“Get out your man page reading glasses and vi”

- Command Line
- Uses Puppet

Great for small deployments like --allinone.

Not robust.
Limited to OpenStack.



Evolution of OpenStack Deployment Tools

Manual

PackStack

Foreman

“Get out your reading glasses and typing gloves”

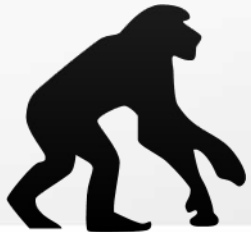
“Get out your man page reading glasses and vi”

“Point and click - hope you map the hostgroups correctly”

- Command Line

- Command Line
- Uses Puppet

- Web User Interface
- Uses Puppet
- Bare-Metal Provisioning
- Beyond OpenStack



Evolution of OpenStack Deployment Tools

Manual

PackStack

Foreman

Great for larger deployments.

Still Lacking.

Incomplete HA Modules
No workflow or orchestration

“Get out your reading glasses and typing gloves”

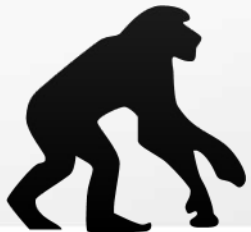
“Get out your man page reading glasses and vi”

“Point and click - hope you map the hostgroups correctly”

- Command Line

- Command Line
- Uses Puppet

- Web User Interface
- Uses Puppet
- Bare-Metal Provisioning
- Beyond OpenStack



Evolution of OpenStack Deployment Tools

Manual

PackStack

Foreman

OpenStack Foreman Installer

“Get out your reading glasses and typing gloves”

“Get out your man page reading glasses and vi”

“Point and click - hope you map the hostgroups correctly”

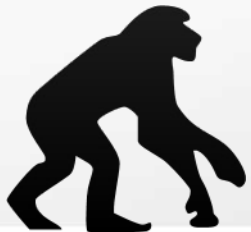
“Now that was easy, albeit a bit restrictive”

- Command Line

- Command Line
- Uses Puppet

- Web User Interface
- Uses Puppet
- Bare-Metal Provisioning
- Beyond OpenStack

- Web User Interface
- Uses Puppet
- Bare-Metal Provisioning
- Beyond OpenStack
- Prescriptive Guidance



Choosing an OpenStack Deployment Tool – Not Evolution



Choosing an OpenStack Deployment Tool – Not Evolution

Manual

PackStack

Foreman

OpenStack Foreman Installer

“Get out your reading glasses and typing gloves”

“Get out your man page reading glasses and vi”

“Point and click - hope you map the hostgroups correctly”

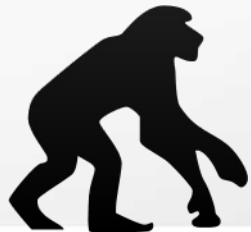
“Now that was easy, albeit a bit restrictive”

Learning

**Simple
Deployment**

**Complex
Deployment**

**Complex
Deployment
Made
Simple**



OpenStack Foreman Installer

- A plugin built on top of Foreman
- Leverages Foreman's capabilities
- Designed specifically to deploy OpenStack
 - User interface
 - Deployment orchestration
 - Auto-discovery of bare-metal hosts
 - Provides reference implementations for deployment topologies (High Availability)



OpenStack Foreman Installer Features

General Features

- Simplified installation and setup of provisioning tool
- Automatic discovery of physical systems
- User interface for specifying deployment parameters
- Staged deployment (orchestration)
- High availability deployments



Delivery

- RHEL-based livecd offers choice of packstack --allinone install or foreman multi-machine deployment
- Can run Foreman from livecd or install on host
- Runs on RHEL6



Discovery

- Hosts PXE boot RHEV-H based Foreman auto-discovery image and report facts back to Foreman DB
- User can then assign hosts to a particular role
- When deployment is initiated Foreman provisions RHEL6 or RHEL7 on bare metal
- Support for pre-provisioned hosts coming in next release



Installation User Interface

- Addition of Rails Engine provides OpenStack deployment UI and hostgroups in Foreman
- “Wicked” gem for out-of-the-box wizard
- Parameters in UI are inferred from puppet modules
- Parameter metadata in future for relationship and control



Orchestration

- **Dynflow for provisioning tasks and dependencies**
 - **Foreman add-on that will ship in Satellite 6**
 - **Allows ordering and dependencies between tasks**
 - **Currently coarse-grained, waits to boot next host**
 - **PuppetSSH in the future for concurrency and control**

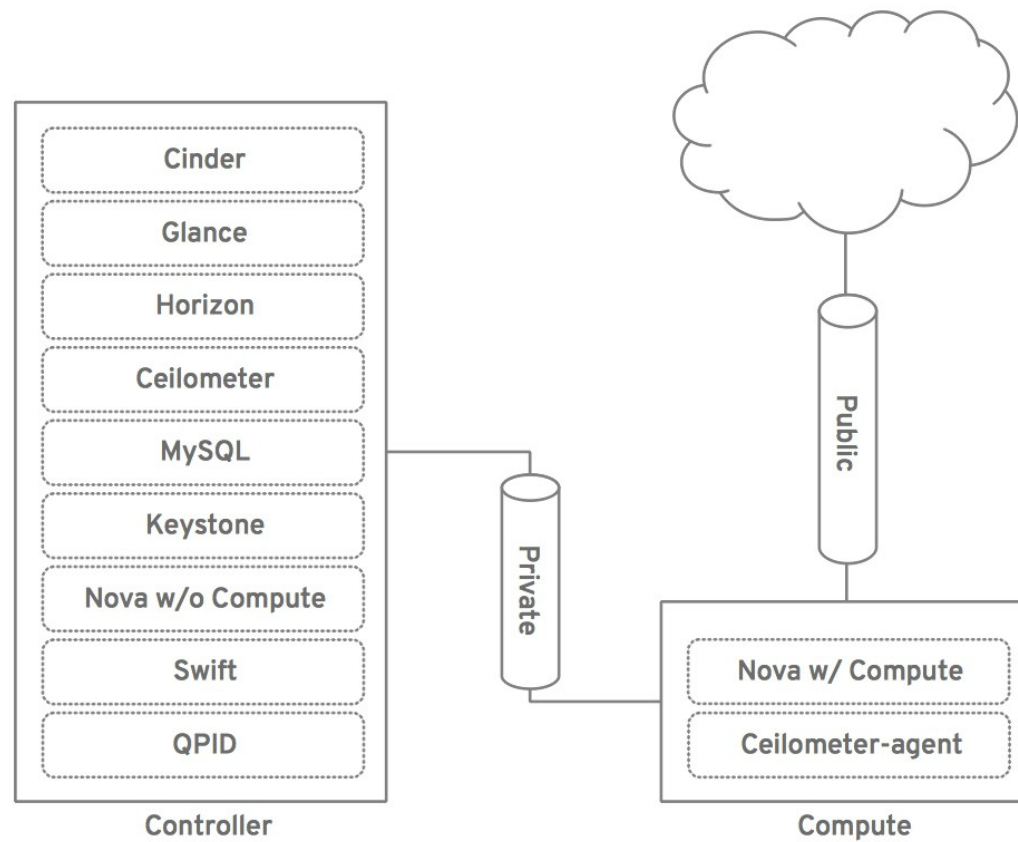


Deployment Topologies

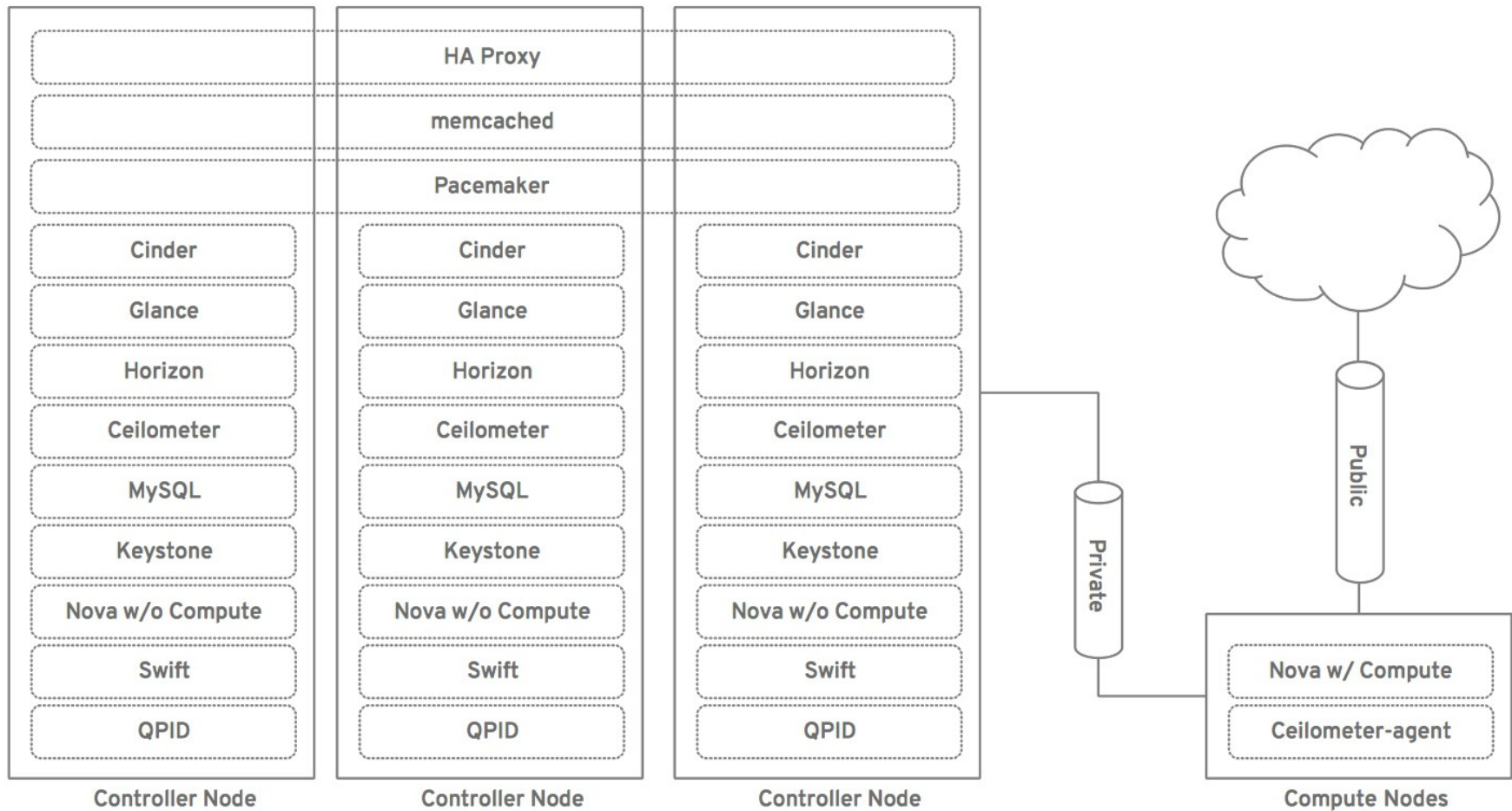
- 4 OpenStack layouts supported
 - Non-HA, Nova network
 - Non-HA, Neutron
 - HA, Nova network
 - HA, Neutron
- HA deployment is limited: All services on 3 identical nodes, Pacemaker and HAProxy provide VIPs
- Future releases will expanded reference implementations



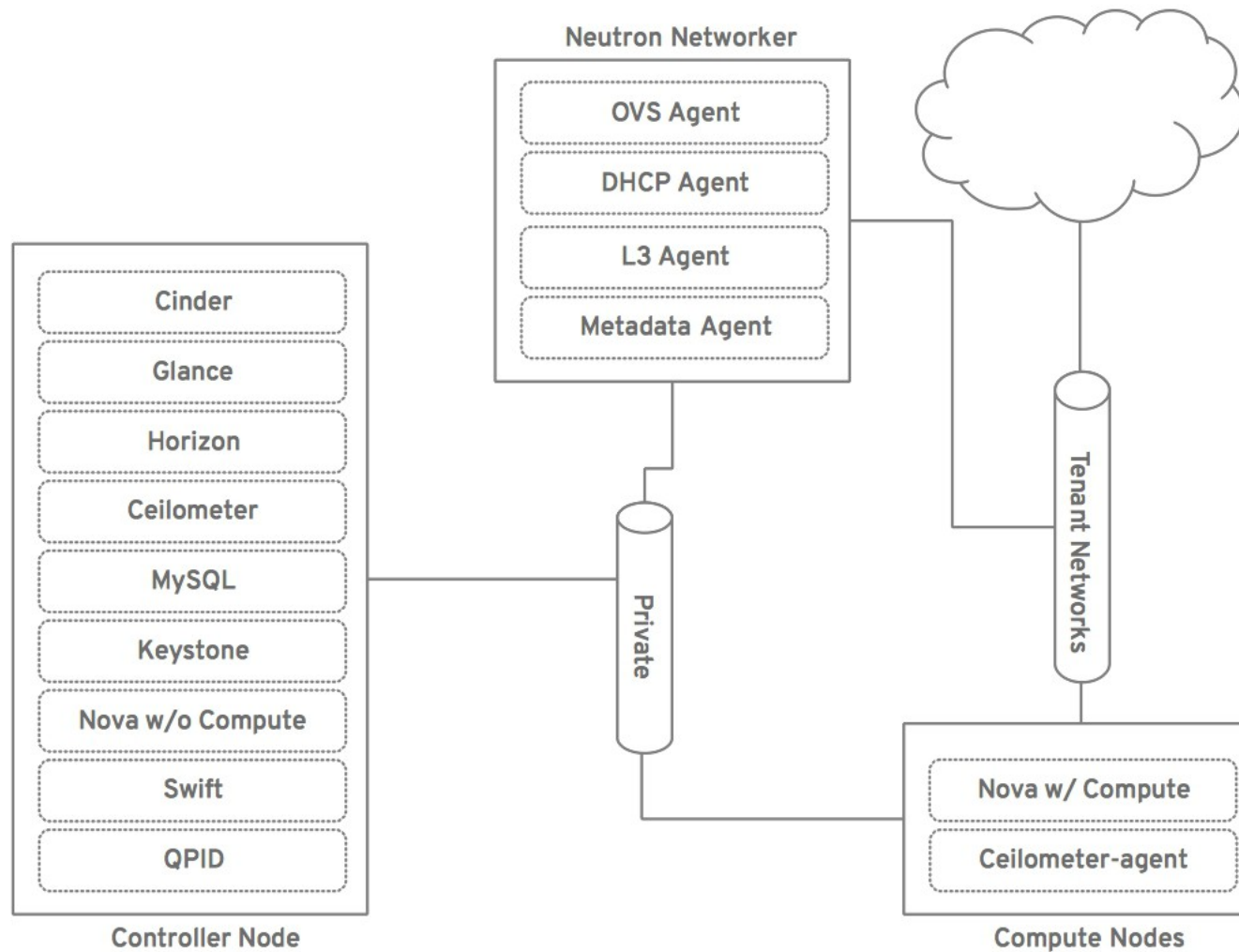
Non-Highly Available (Nova)



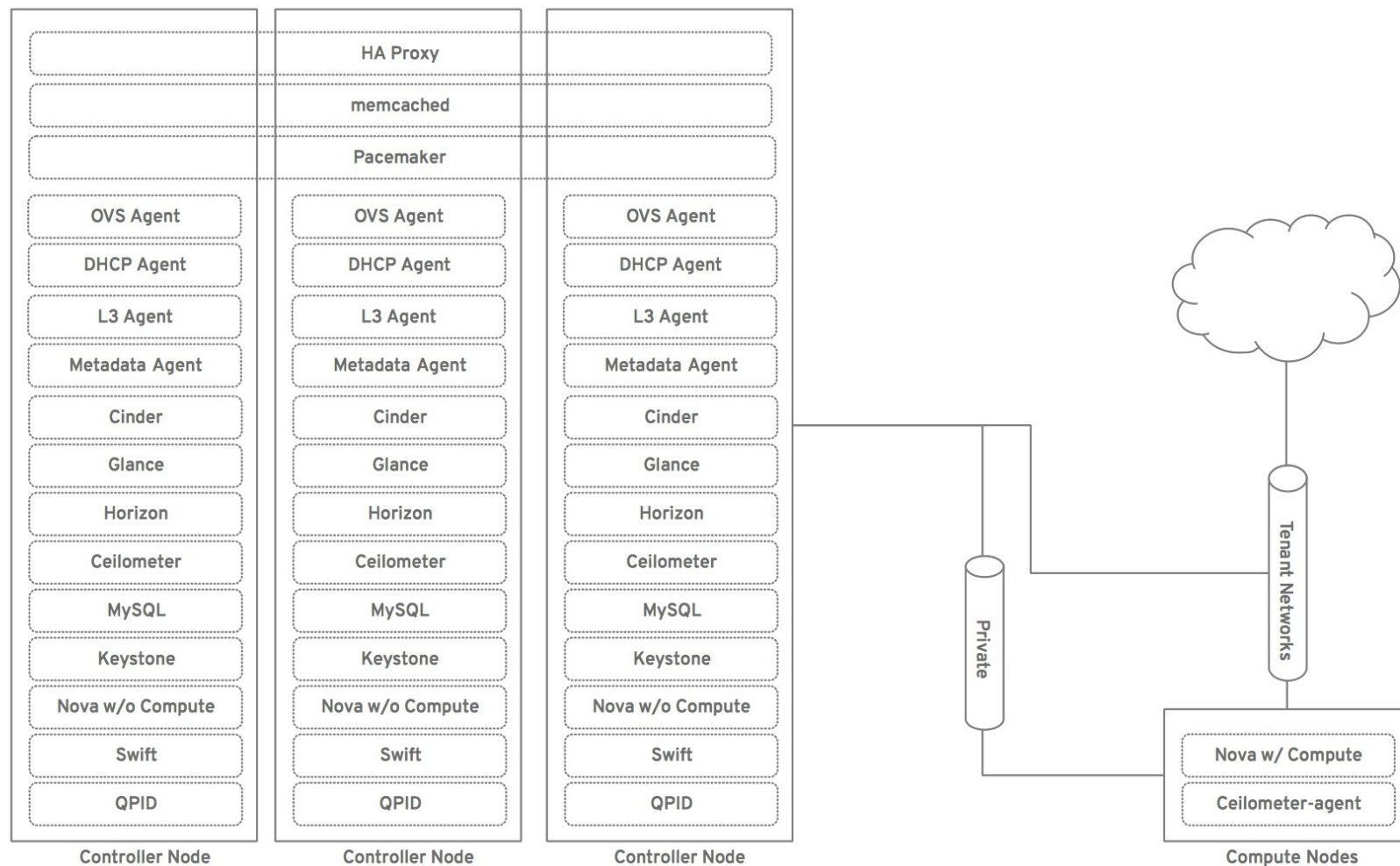
Highly Available (Nova)



Non-Highly Available (Neutron)



Highly Available (Neutron)



Walkthrough

Sandbox Environment on RHEV

Red Hat Enterprise Virtualization

Logged in user: admin@internal | Configure | Guide | About | Sign Out

Market Place

Search: Vms: name = openstack* OR name = staypuft*

Data Centers Clusters Hosts Networks Storage Disks Virtual Machines Pools Templates Volumes Users Events

System

Expand All Collapse All

New VM Edit Remove Run Once Migrate Cancel Migration Make Template Export Create Snapshot Change CD Assign Tags Guide Me Red Hat Access: Support

Name	Host	IP Address	Cluster	Data Center	Memory	CPU	Network	Display	Status	Uptime
openstack01	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	9 min
openstack02	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	24 min
openstack03	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	24 min
openstack04	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	24 min
openstack05	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	23 min
openstackdb01	rhc-06.rhc.lab.eng.bos.r	10.16.132.138 192.1	Marketing	Boston	26%	1%	0%	SPICE	Up	20 h
openstackmb01	rhc-06.rhc.lab.eng.bos.r	10.16.132.182 192.1	Marketing	Boston	23%	1%	0%	SPICE	Up	14 h
staypuft003	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	1%	0%	SPICE	Up	13 days

System

- Data Centers
 - Boston
 - Storage
 - Networks
 - Templates
 - Clusters
 - Default
 - Storage
 - Networks
 - Templates
 - Clusters
 - External Providers
 - GLANCE17

OpenStack Infrastructure

OpenStack Foreman
Installer Live Image



Sandbox Environment on RHEV

Red Hat Enterprise Virtualization

Logged in user: admin@internal | [Configure](#) | [Guide](#) | [About](#) | [Sign Out](#) [Market Place](#)

Search: Vms: name = openstack* OR name = staypuft*

System

Expand All Collapse All

Data Centers

- Boston
 - Storage
 - Networks
 - Templates
 - Clusters
- Default
 - Storage
 - Networks
 - Templates
 - Clusters
- External Providers
 - GLANCE17

Virtual Machines

Name	Host	IP Address	Cluster	Data Center	Memory	CPU	Network	Display	Status	Uptime
openstack01	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	16 min
openstack02	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	1%	0%	SPICE	Up	31 min
openstack03	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	31 min
openstack04	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	30 min
openstack05	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	29 min
openstackdb01	rhc-06.rhc.lab.eng.bos.r	10.16.132.138 192.1	Marketing	Boston	26%	1%	0%	SPICE	Up	20 h
openstackmb01	rhc-06.rhc.lab.eng.bos.r	10.16.132.182 192.1	Marketing	Boston	23%	1%	0%	SPICE	Up	14 h
staypuft003	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	2%	0%	SPICE	Up	13 days

Network Interfaces

Name	Plugged	Network Name	Profile Name	Link State	Type	MAC
nic1	<input checked="" type="checkbox"/>	private	private	Up	VirtIO	00:01:a4:af:9a:a7

Statistics

Rx (Mbps)	Tx (Mbps)
< 1	< 1

Private Network



Sandbox Environment on RHEV

Red Hat Enterprise Virtualization

Logged in user: admin@internal | [Configure](#) | [Guide](#) | [About](#) | [Sign Out](#) [Market Place](#)

Search: Vms: name = openstack* OR name = staypuft*

System

Expand All Collapse All

Data Centers

- Boston
 - Storage
 - Networks
 - Templates
 - Clusters
- Default
 - Storage
 - Networks
 - Templates
 - Clusters
- External Providers
 - GLANCE17

Virtual Machines

Name	Host	IP Address	Cluster	Data Center	Memory	CPU	Network	Display	Status	Uptime
openstack01			Marketing	Boston	0%	0%	0%		Down	
openstack02			Marketing	Boston	0%	0%	0%		Down	
openstack03			Marketing	Boston	0%	0%	0%		Down	
openstack04			Marketing	Boston	0%	0%	0%		Down	
openstack05			Marketing	Boston	0%	0%	0%		Down	
openstackdb01	rhc-06.rhc.lab.eng.bos.r	10.16.132.138 192.1	Marketing	Boston	26%	1%	0%	SPICE	Up	20 h
openstackmb01	rhc-06.rhc.lab.eng.bos.r	10.16.132.182 192.1	Marketing	Boston	23%	1%	0%	SPICE	Up	14 h
staypuft003	rhc-06.rhc.lab.eng.bos.r		Marketing	Boston	0%	0%	0%	SPICE	Up	13 days

Network Interfaces

Name	Plugged	Network Name	Profile Name	Link State	Type	MAC	Speed
nic2	<input checked="" type="checkbox"/>	rhev	rhev	Up	VirtIO	00:01:a4:af:9a:07	10 Gbps
nic3	<input checked="" type="checkbox"/>	private	private	Up	VirtIO	00:01:a4:af:9a:08	10 Gbps

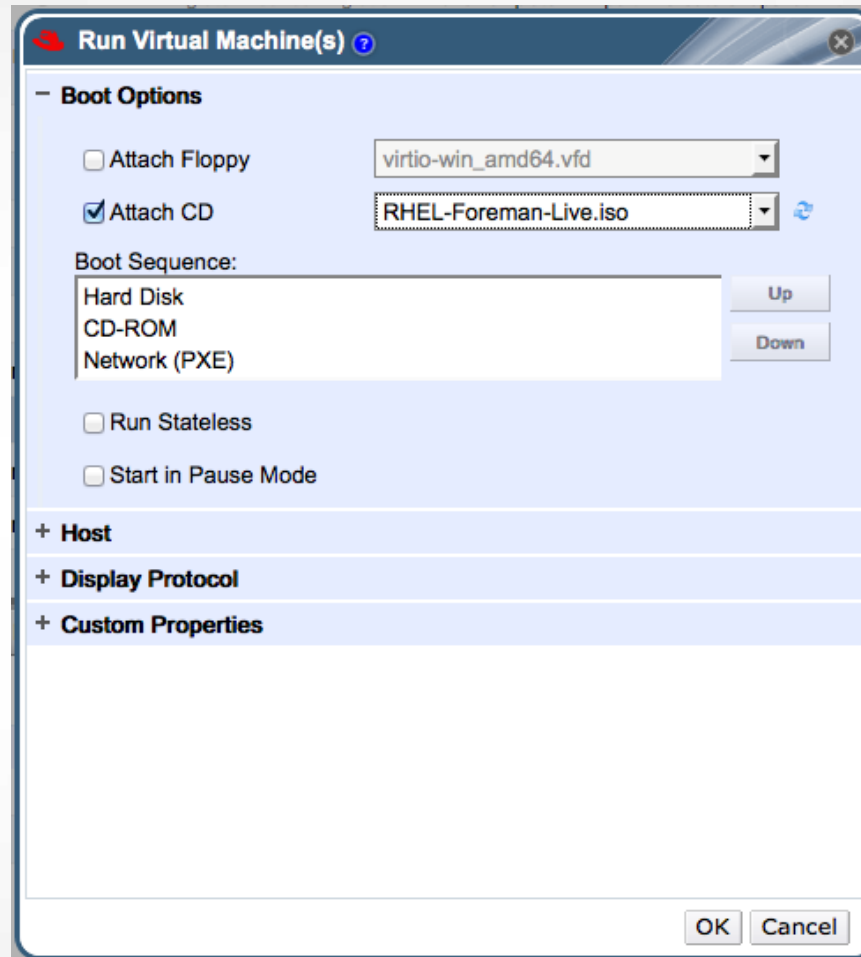
Statistics

Rx (Mbps)	Tx (Mbps)
< 1	< 1

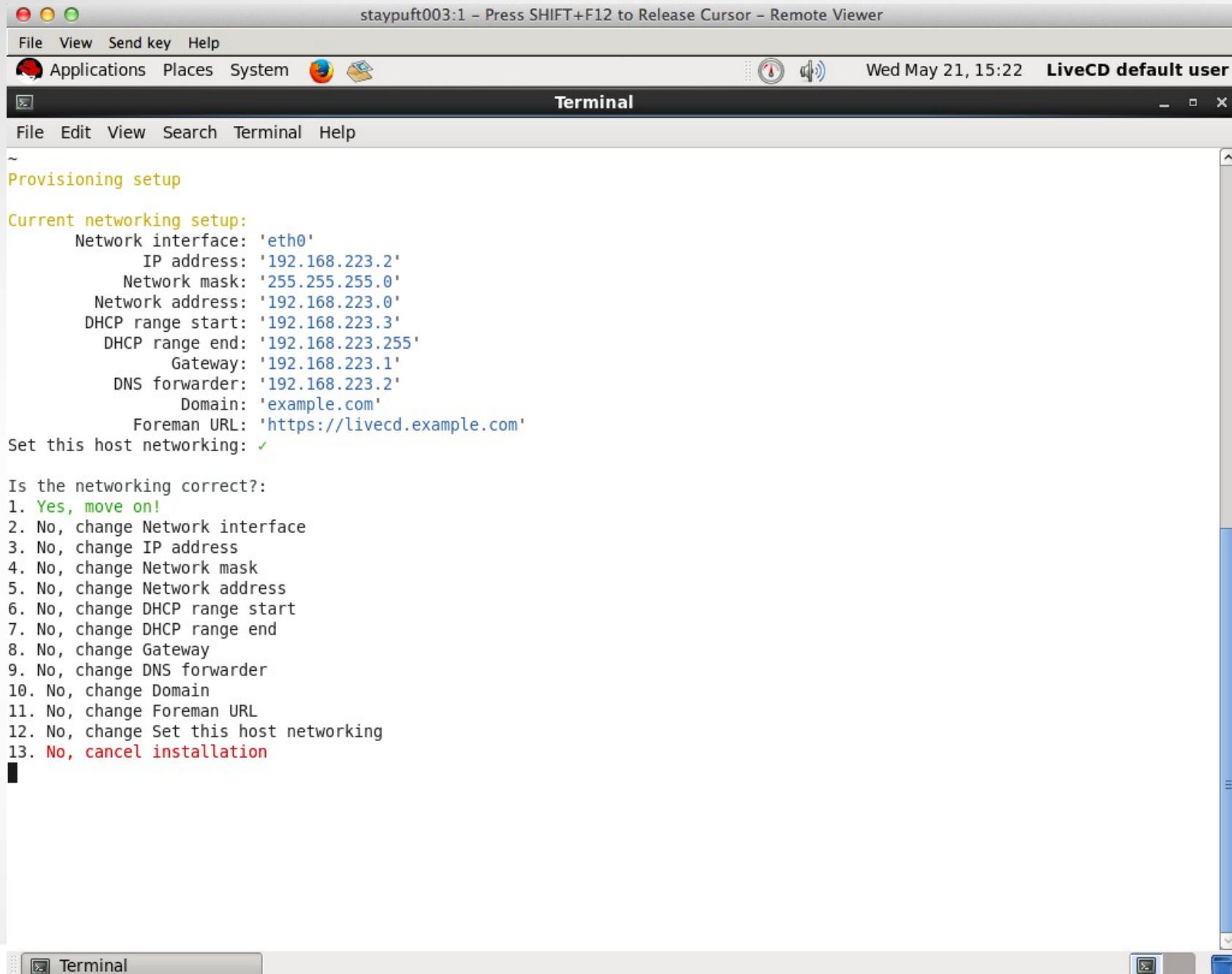
Multi-homed OpenStack Foreman Installer live image acting as Linux router



Boot OpenStack Foreman Installer VM from live image



Console of OpenStack Foreman Installer live image



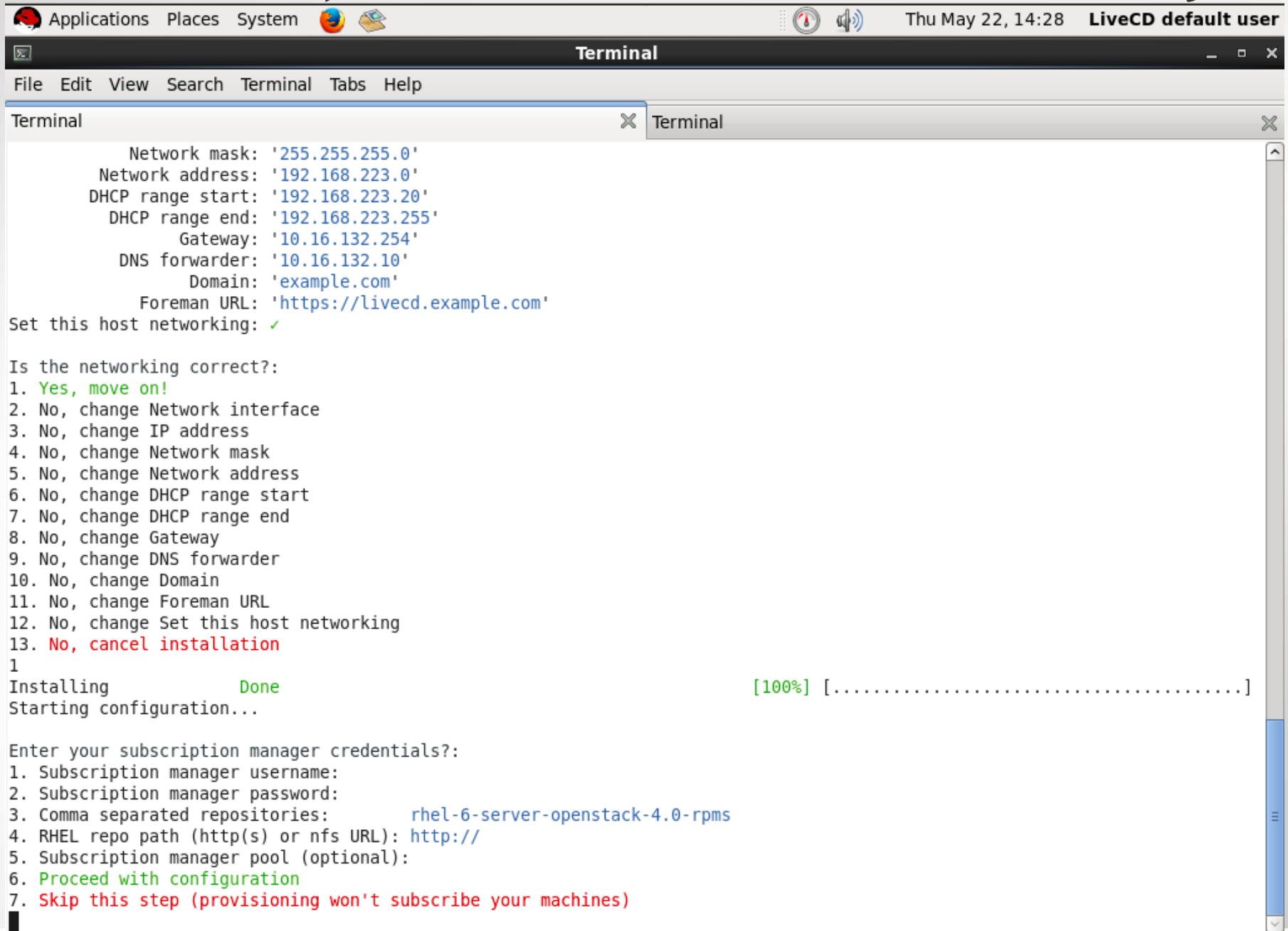
```
staypuft003:1 - Press SHIFT+F12 to Release Cursor - Remote Viewer
File View Send key Help
Applications Places System Wed May 21, 15:22 LiveCD default user
Terminal
File Edit View Search Terminal Help
~
Provisioning setup

Current networking setup:
  Network interface: 'eth0'
    IP address: '192.168.223.2'
    Network mask: '255.255.255.0'
    Network address: '192.168.223.0'
    DHCP range start: '192.168.223.3'
    DHCP range end: '192.168.223.255'
    Gateway: '192.168.223.1'
    DNS forwarder: '192.168.223.2'
    Domain: 'example.com'
    Foreman URL: 'https://livecd.example.com'
Set this host networking: ✓

Is the networking correct?:
1. Yes, move on!
2. No, change Network interface
3. No, change IP address
4. No, change Network mask
5. No, change Network address
6. No, change DHCP range start
7. No, change DHCP range end
8. No, change Gateway
9. No, change DNS forwarder
10. No, change Domain
11. No, change Foreman URL
12. No, change Set this host networking
13. No, cancel installation
█
```



Console of OpenStack Foreman Installer live image



The screenshot shows a terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Tabs, Help). The terminal output displays the configuration of network settings for the OpenStack Foreman installer. The settings are as follows:

```
Network mask: '255.255.255.0'
Network address: '192.168.223.0'
DHCP range start: '192.168.223.20'
DHCP range end: '192.168.223.255'
Gateway: '10.16.132.254'
DNS forwarder: '10.16.132.10'
Domain: 'example.com'
Foreman URL: 'https://livecd.example.com'
```

Set this host networking: ✓

Is the networking correct?:

1. Yes, move on!
2. No, change Network interface
3. No, change IP address
4. No, change Network mask
5. No, change Network address
6. No, change DHCP range start
7. No, change DHCP range end
8. No, change Gateway
9. No, change DNS forwarder
10. No, change Domain
11. No, change Foreman URL
12. No, change Set this host networking
13. No, cancel installation

1

Installing Done [100%] [.....]

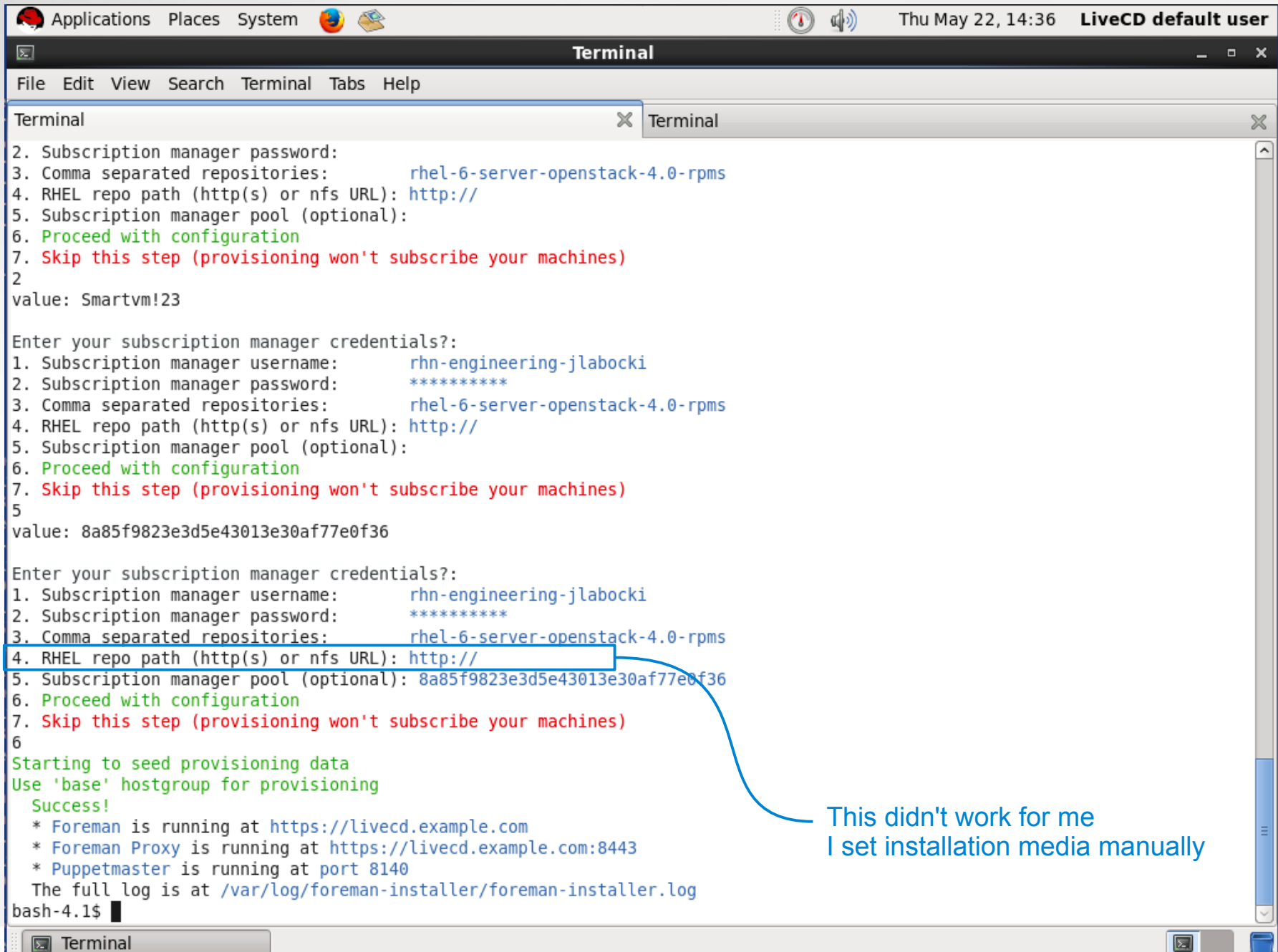
Starting configuration...

Enter your subscription manager credentials?:

1. Subscription manager username:
2. Subscription manager password:
3. Comma separated repositories: rhel-6-server-openstack-4.0-rpms
4. RHEL repo path (http(s) or nfs URL): http://
5. Subscription manager pool (optional):
6. Proceed with configuration
7. Skip this step (provisioning won't subscribe your machines)



Console of OpenStack Foreman Installer live image



The screenshot shows a terminal window titled "Terminal" with a menu bar (File, Edit, View, Search, Terminal, Tabs, Help). The terminal output shows the configuration steps for the OpenStack Foreman installer. The user is prompted to enter subscription manager credentials and repositories. The user enters "rhel-6-server-openstack-4.0-rpms" for the RHEL repo path and "8a85f9823e3d5e43013e30af77e0f36" for the subscription manager pool. The installer then starts seeding provisioning data and reports success. A blue box highlights the RHEL repo path, and a blue arrow points from a text annotation to it.

```
Applications Places System Thu May 22, 14:36 LiveCD default user

Terminal

File Edit View Search Terminal Tabs Help

Terminal

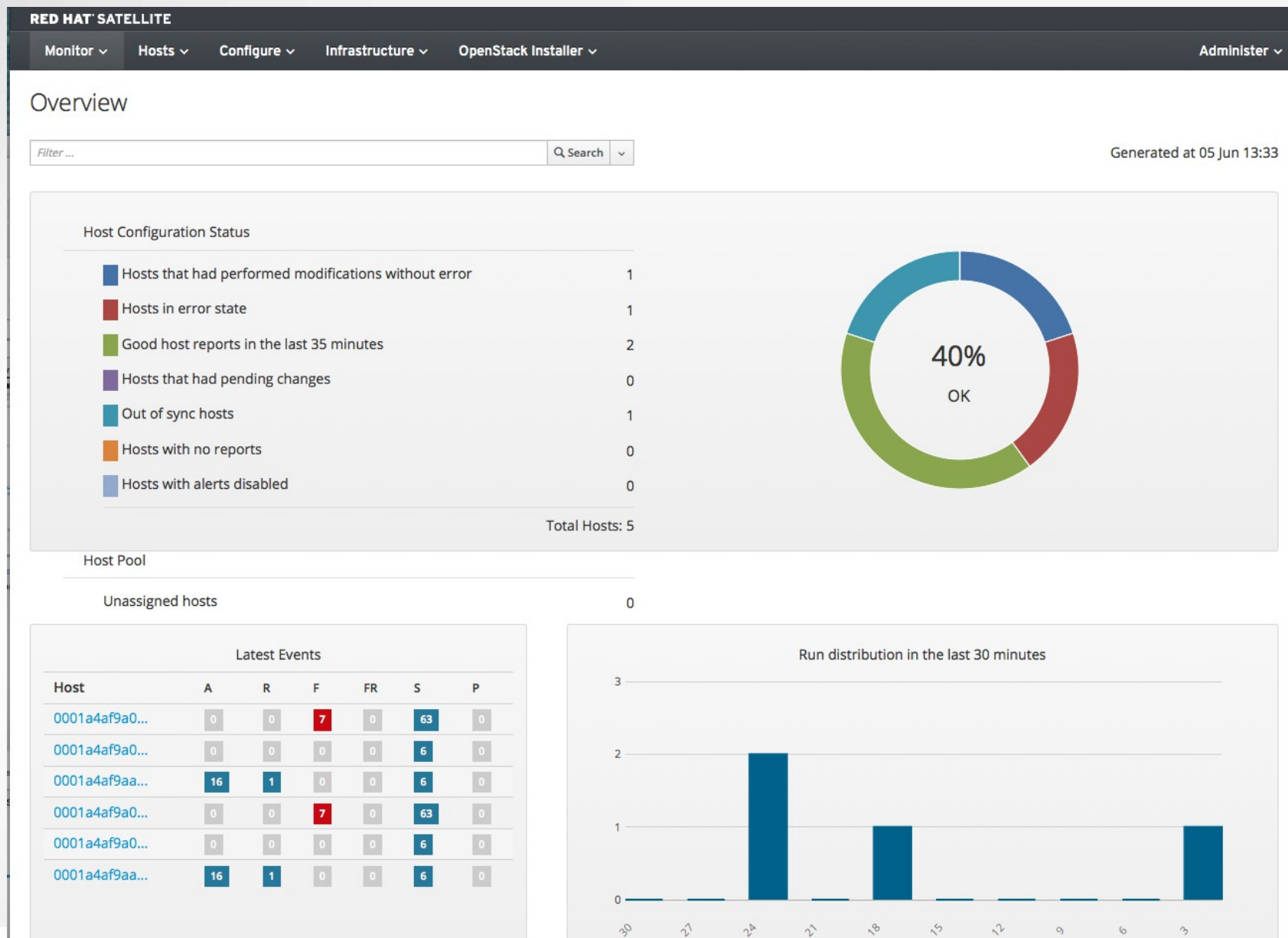
2. Subscription manager password:
3. Comma separated repositories: rhel-6-server-openstack-4.0-rpms
4. RHEL repo path (http(s) or nfs URL): http://
5. Subscription manager pool (optional):
6. Proceed with configuration
7. Skip this step (provisioning won't subscribe your machines)
2
value: Smartvm!23

Enter your subscription manager credentials?:
1. Subscription manager username: rhn-engineering-jlabocki
2. Subscription manager password: *****
3. Comma separated repositories: rhel-6-server-openstack-4.0-rpms
4. RHEL repo path (http(s) or nfs URL): http://
5. Subscription manager pool (optional):
6. Proceed with configuration
7. Skip this step (provisioning won't subscribe your machines)
5
value: 8a85f9823e3d5e43013e30af77e0f36

Enter your subscription manager credentials?:
1. Subscription manager username: rhn-engineering-jlabocki
2. Subscription manager password: *****
3. Comma separated repositories: rhel-6-server-openstack-4.0-rpms
4. RHEL repo path (http(s) or nfs URL): http://
5. Subscription manager pool (optional): 8a85f9823e3d5e43013e30af77e0f36
6. Proceed with configuration
7. Skip this step (provisioning won't subscribe your machines)
6
Starting to seed provisioning data
Use 'base' hostgroup for provisioning
Success!
* Foreman is running at https://livecd.example.com
* Foreman Proxy is running at https://livecd.example.com:8443
* Puppetmaster is running at port 8140
The full log is at /var/log/foreman-installer/foreman-installer.log
bash-4.1$
```

This didn't work for me
I set installation media manually

Web Console of OpenStack Foreman Installer live image



Creating a New OpenStack Deployment

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾

Administer ▾

OpenStack Deployments

Filter ...

Q Search ▾

Deployment Name

myDeployment2

Delete

Displaying 1 entry



Deployment Settings

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾

Administer ▾

New OpenStack Deployment

1 Deployment Settings

2 Services Selection

3 Services Configuration

Name

myDeployment

Description

Deployment Layout

- ☒ Distributed, Nova Networking
- ☐ Distributed, Neutron Networking
- ☐ Distributed with High Availability, Nova Networking
- ☐ Distributed with High Availability, Neutron Networking

Cancel

Next >



Selecting Services

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾

Administer ▾

New OpenStack Deployment

1 Deployment Settings

2 Services Selection

3 Services Configuration

Host Groups & Available Services

Distributed - Nova Networking

Controller (Nova)

- ☒ qpid (non-HA)
- ☒ MySQL
- ☒ Keystone (non-HA)
- ☒ Nova (Controller)
- ☒ Glance (non-HA)
- ☒ Cinder
- ☒ Heat
- ☒ Ceilometer

LVM Block Storage

- ☒ Cinder

Swift Storage Node

- ☒ Swift (node)

Compute (Nova)

- ☒ Nova-compute

◀ Back

Cancel

Next ▶



Services Configuration

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾

Administer ▾

New OpenStack Deployment

1 Deployment Settings

2 Services Selection

3 Services Configuration

Services

Ceilometer

Cinder

Cinder

Glance (non-HA)

Heat

Ceilometer Service Configuration

Ceilometer metering secret

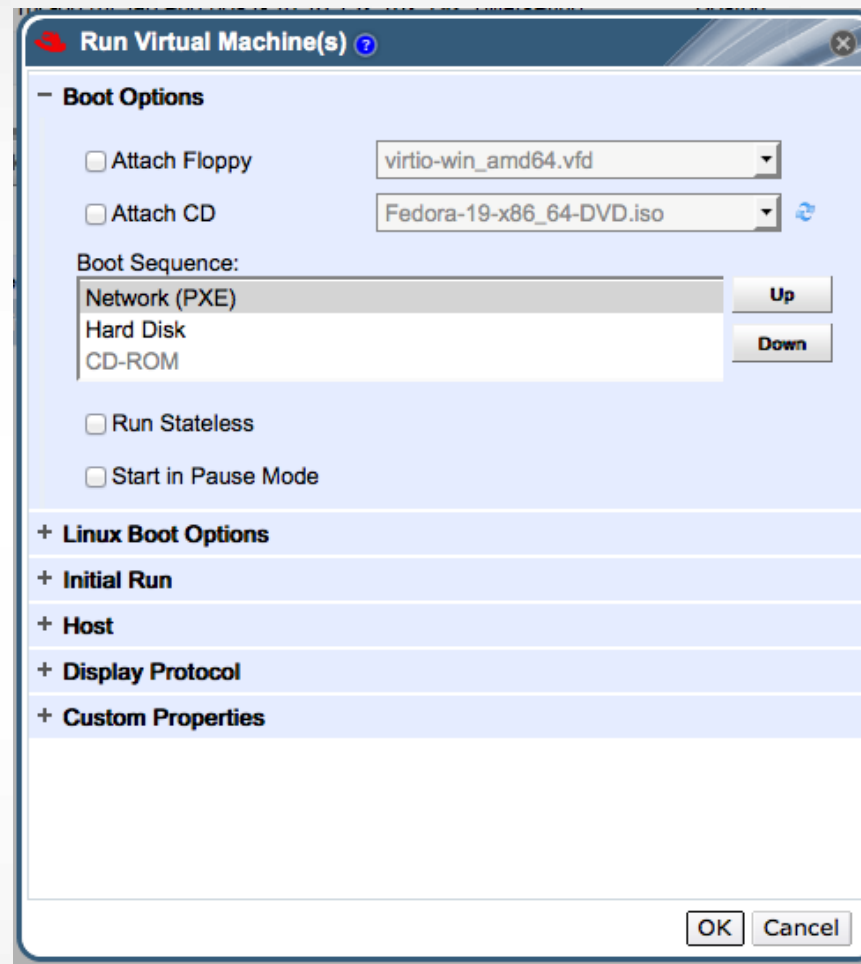
defcf3595a685fc77043388d57863796

Ceilometer user password

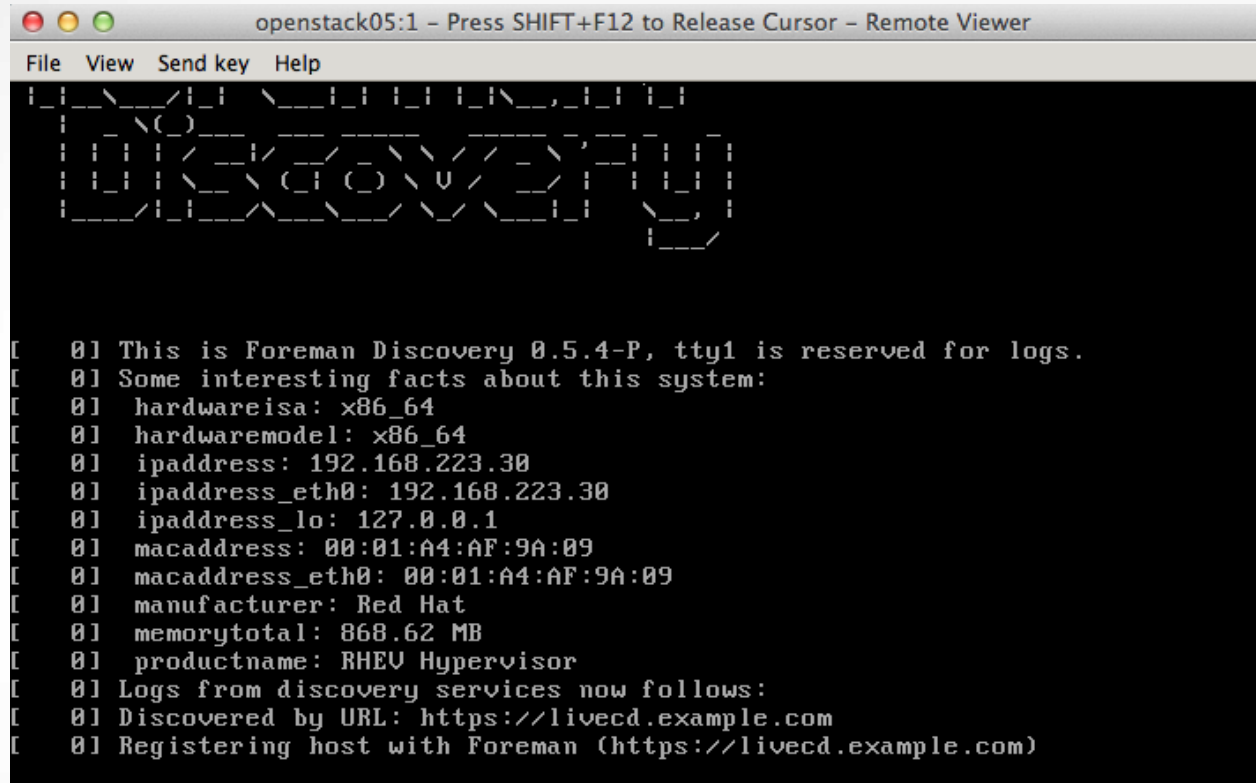
6ee28d01879c08c859a01b4997def3da



PXE boot remaining hosts for auto-discovery



Foreman Discovery Image



The screenshot shows a terminal window titled "openstack05:1 - Press SHIFT+F12 to Release Cursor - Remote Viewer". The terminal displays the ASCII art logo for "Foreman Discovery" at the top. Below the logo, a series of messages are printed, starting with "[0]" for each line. The messages provide system information and the discovery process details.

```
[ 0] This is Foreman Discovery 0.5.4-P, tty1 is reserved for logs.
[ 0] Some interesting facts about this system:
[ 0]   hardwareisa: x86_64
[ 0]   hardwaremodel: x86_64
[ 0]   ipaddress: 192.168.223.30
[ 0]   ipaddress_eth0: 192.168.223.30
[ 0]   ipaddress_lo: 127.0.0.1
[ 0]   macaddress: 00:01:A4:AF:9A:09
[ 0]   macaddress_eth0: 00:01:A4:AF:9A:09
[ 0]   manufacturer: Red Hat
[ 0]   memorytotal: 868.62 MB
[ 0]   productname: RHEV Hypervisor
[ 0] Logs from discovery services now follows:
[ 0] Discovered by URL: https://livecd.example.com
[ 0] Registering host with Foreman (https://livecd.example.com)
```



Discovered Hosts

RED HAT SATELLITE

Monitor ▾

Hosts ▾

Configure ▾

Infrastructure ▾

OpenStack Installer ▾

Administer ▾

Discovered hosts

Filter ...

Q Search ▾

Delete hosts

<input checked="" type="checkbox"/>	Name	Model	Subnet	Last facts upload	
<input type="checkbox"/>	0001a4af9a02		default (192.168.223.0/24)	1 minute ago	Provision ▾
<input type="checkbox"/>	0001a4af9a09		default (192.168.223.0/24)	less than a minute ago	Provision ▾

Displaying all 2 entries



Hosts Assigned to Host Groups

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾ Administer ▾

myDeployment2

Edit Configuration Summary Deploy

Host Groups

✓ 0	⚠ 1	🕒 0	Controller (Nova)
✓ 0	⚠ 0	🕒 1	LVM Block Storage
✓ 0	⚠ 0	🕒 1	Swift Storage Node
✓ 0	⚠ 1	🕒 0	Compute (Nova)

Hosts

Assign

<input type="checkbox"/>	Name	MAC Address	Type
<input type="checkbox"/>	livecd.example.com	00:01:a4:af:9a:08	Host::Managed
<input checked="" type="checkbox"/>	0001a4af9aa7.example.com	00:01:a4:af:9a:a7	Host::Managed



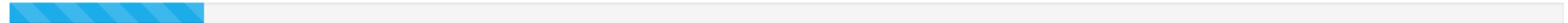
Deploying

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾

Administer ▾

Id: 47a6a0d8-82af-475c-82f8-fa7ccccdd4e4
Label: Actions::Staypuft::Deployment::Deploy
Name: Deploy
Owner: admin
Started at: 2014-06-06 11:09:11 UTC
Ended at:
State: running
Result: pending
Params: myDeployment3
Progress:



Output:

```
Hostgroup: Controller (Nova)
  50% Host: 0001a4af9aa7.example.com
Hostgroup: LVM Block Storage
  0% Host: 0001a4af9a09.example.com
Hostgroup: Swift Storage Node
  0% Host: 0001a4af9a02.example.com
Hostgroup: Compute (Nova)
  0% Host: 0001a4af9aa6.example.com
```

Raw input:

```
{"id"=>15, "name"=>"myDeployment3", "current_user_id"=>1}
```

Raw output:

```
{}
```

External Id: 807f5d00-5ef0-4684-920e-f479e4689bf5



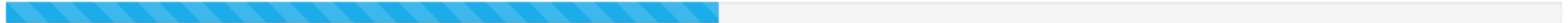
Deploying

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾

Administer ▾

Id: 47a6a0d8-82af-475c-82f8-fa7ccccdd4e4
Label: Actions::Staypuft::Deployment::Deploy
Name: Deploy
Owner: admin
Started at: 2014-06-06 11:09:11 UTC
Ended at:
State: running
Result: pending
Params: myDeployment3
Progress:



Output:

```
Hostgroup: Controller (Nova)
 100% Host: 0001a4af9aa7.example.com
Hostgroup: LVM Block Storage
 83% Host: 0001a4af9a09.example.com
Hostgroup: Swift Storage Node
 0% Host: 0001a4af9a02.example.com
Hostgroup: Compute (Nova)
 0% Host: 0001a4af9aa6.example.com
```

Raw input:

```
{"id"=>15, "name"=>"myDeployment3", "current_user_id"=>1}
```

Raw output:

```
{}
```

External Id: 807f5d00-5ef0-4684-920e-f479e4689bf5



Deploying

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾

Administer ▾

Id: 47a6a0d8-82af-475c-82f8-fa7ccccdd4e4
Label: Actions::Staypuft::Deployment::Deploy
Name: Deploy
Owner: admin
Started at: 2014-06-06 11:09:11 UTC
Ended at: 2014-06-06 12:14:43 UTC
State: stopped
Result: success
Params: myDeployment3
Progress:



Output:

```
Hostgroup: Controller (Nova)
 100% Host: 0001a4af9aa7.example.com
Hostgroup: LVM Block Storage
 100% Host: 0001a4af9a09.example.com
Hostgroup: Swift Storage Node
 100% Host: 0001a4af9a02.example.com
Hostgroup: Compute (Nova)
 100% Host: 0001a4af9aa6.example.com
```

Raw input:

```
{"id"=>15, "name"=>"myDeployment3", "current_user_id"=>1}
```

Raw output:

```
{}
```

External Id: 807f5d00-5ef0-4684-920e-f479e4689bf5



Deploying

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾

Administer ▾

Id: 47a6a0d8-82af-475c-82f8-fa7ccccdd4e4
Label: Actions::Staypuft::Deployment::Deploy
Name: Deploy
Owner: admin
Started at: 2014-06-06 11:09:11 UTC
Ended at: 2014-06-06 12:14:43 UTC
State: stopped
Result: success
Params: myDeployment3
Progress:



Output:

```
Hostgroup: Controller (Nova)
 100% Host: 0001a4af9aa7.example.com
Hostgroup: LVM Block Storage
 100% Host: 0001a4af9a09.example.com
Hostgroup: Swift Storage Node
 100% Host: 0001a4af9a02.example.com
Hostgroup: Compute (Nova)
 100% Host: 0001a4af9aa6.example.com
```

Raw input:

```
{"id"=>15, "name"=>"myDeployment3", "current_user_id"=>1}
```

Raw output:

```
{}
```

External Id: 807f5d00-5ef0-4684-920e-f479e4689bf5



Post Deployment Status

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾








Administer ▾

Overview

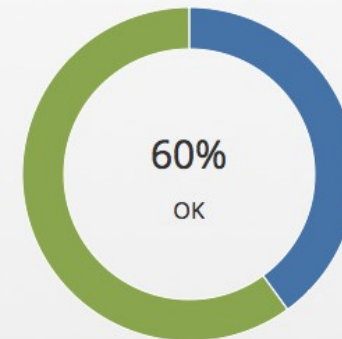
Filter ... Q Search ▾

Generated at 06 Jun 15:02

Host Configuration Status

	Hosts that had performed modifications without error	2
	Hosts in error state	0
	Good host reports in the last 35 minutes	3
	Hosts that had pending changes	0
	Out of sync hosts	0
	Hosts with no reports	0
	Hosts with alerts disabled	0

Total Hosts: 5



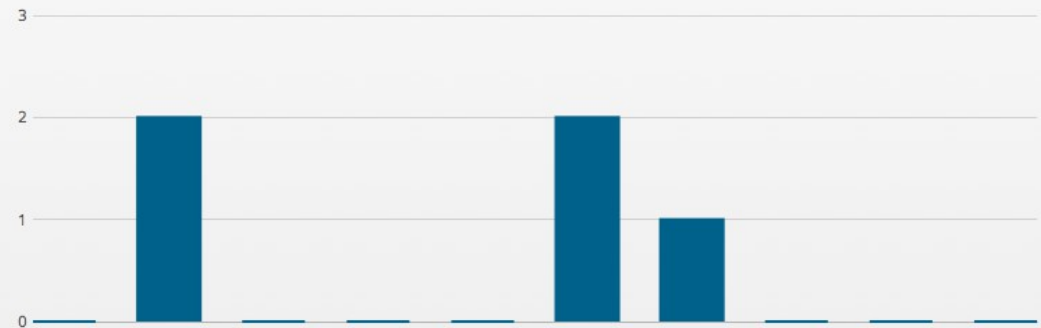
Host Pool

Unassigned hosts 0

Latest Events

Host	A	R	F	FR	S	P
0001a4af9aa...	6	1	0	0	6	0
0001a4af9a0...	0	0	0	0	6	0
0001a4af9a0...	12	0	0	0	6	0
0001a4af9aa...	0	0	0	0	6	0
0001a4af9aa...	6	1	0	0	6	0
0001a4af9a0...	0	0	0	0	6	0

Run distribution in the last 30 minutes



Host Status Post Deployment

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾ Administer ▾

Hosts

▾

New Host

<input type="checkbox"/>	Name	Operating system	Environment	Model	Host group	Last report	
<input type="checkbox"/>	A 0001a4af9a02.example.com	RHEL Serve...	production	RHEV Hyperv...	base/...Swift Storage Node	26 minutes ago	Edit ▾
<input type="checkbox"/>	O 0001a4af9a09.example.com	RHEL Serve...	production	RHEV Hyperv...	base/m...LVM Block Storage	14 minutes ago	Edit ▾
<input type="checkbox"/>	O 0001a4af9aa6.example.com	RHEL Serve...	production	RHEV Hyperv...	base/myDe...Compute (Nova)	27 minutes ago	Edit ▾
<input type="checkbox"/>	A 0001a4af9aa7.example.com	RHEL Serve...	production	RHEV Hyperv...	base/m...Controller (Nova)	11 minutes ago	Edit ▾
<input type="checkbox"/>	O livecd.example.com	RHEL Serve...	production	RHEV Hyperv...		16 minutes ago	Edit ▾

Displaying all 5 entries - 0 selected



Host Details (Controller)

RED HAT SATELLITE

Monitor ▾ Hosts ▾ Configure ▾ Infrastructure ▾ OpenStack Installer ▾

Administer ▾

0001a4af9aa7.example.com

Show log messages:

[Back](#)

[Delete](#)

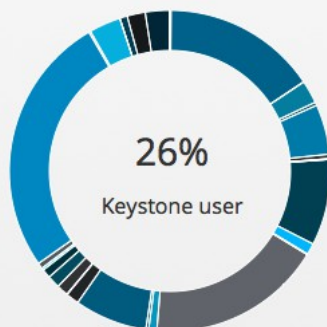
[Host details](#)

[Other reports for this host](#)

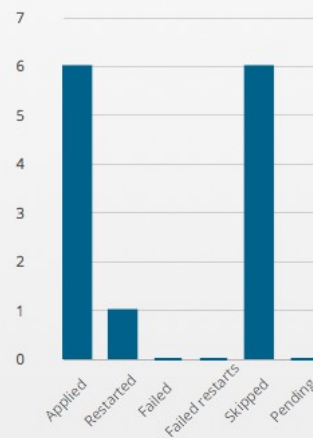
Reported at 2014-06-06 14:52:33 -0400

Level	Resource	message
notice	/Stage[main]/Apache::Service/Service[httpd]	Triggered 'refresh' from 3 events
notice	/Stage[main]/Quickstack::Controller_common /File_line[undo_httpd_listen_on_bind_address_80]/ensure	created
notice	/Stage[main]/Horizon/File_line[httpd_listen_on_bind_address_80]/ensure	created
notice	/Stage[main]/Swift::Proxy/Service[swift-proxy]/ensure	ensure changed 'stopped' to 'running'
notice	/Stage[main]/Quickstack::Swift::Proxy/Quickstack::Rsync::Simple[swift_server] /Exec[restart-xinetd-swift_server]/returns	executed successfully
notice	/File[/etc/httpd/conf/httpd.conf]/content	content changed '{md5}52b4bf63a2e748456bbf398a9705e960' to '{md5}90b0a587ce50ad25bde67f7b1401279c'
notice	/Stage[main]/Mongodb/Notify[An attempt has been made below to automatically apply your custom settings to mongodb::server. Please verify this works in a safe test environment.]/message	defined 'message' as 'An attempt has been made below to automatically apply your custom settings to mongodb::server. Please verify this works in a safe test environment.'
notice	Puppet	An attempt has been made below to automatically apply your custom settings to mongodb::server. Please verify this works in a safe test environment.

Report Metrics



Report Status



anchor	0.0017
ceilometer_config	0.7506
cinder_api_paste_ini	0.0281
cinder_config	0.7258
config_retrieval	8.819
database	1.3825
database_grant	2.8535
database_user	4.1506
exec	0.6642
file	1.0359
file_line	0.0188
firewall	0.1853
glance_api_config	0.1586



Host Details (Controller)

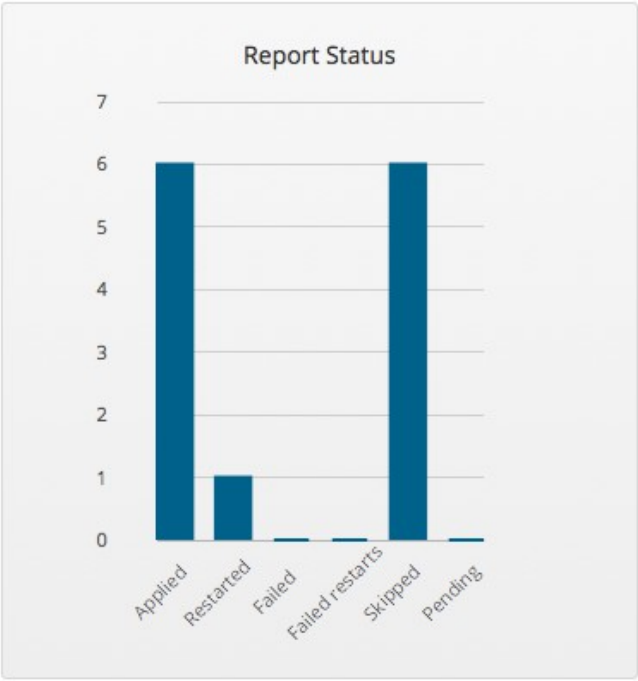
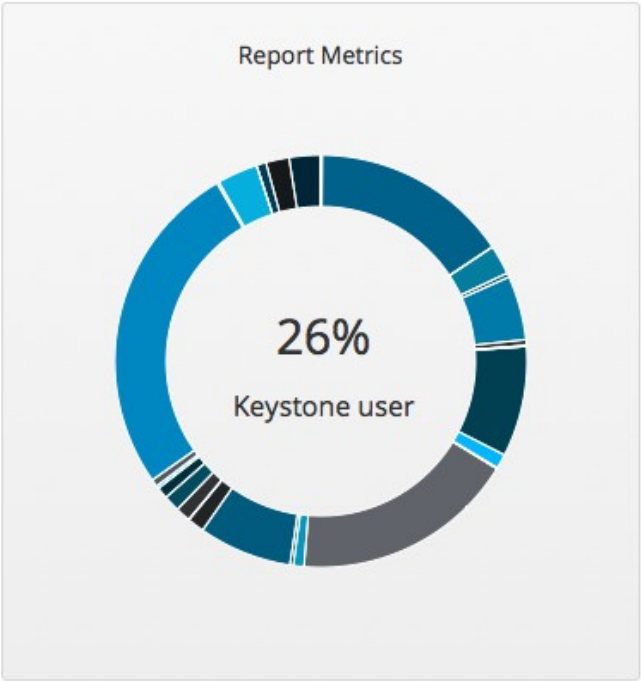
0001a4af9aa7.example.com

Show log messages: Errors only ▾

BackDeleteHost detailsOther reports for this host

Reported at 2014-06-06 14:52:33 -0400

Level	Resource	message
Nothing to show		



anchor	0.0017
ceilometer_config	0.7506
cinder_api_paste_ini	0.0281
cinder_config	0.7258
config_retrieval	8.819
database	1.3825
database_grant	2.8535
database_user	4.1506
exec	0.6642
file	1.0359
file_line	0.0188
firewall	0.1853
glance_api_config	0.1586



Controller and Compute

```
[root@0001a4af9aa7 ~]# openstack-status
```

```
== Nova services ==
openstack-nova-api:           active
openstack-nova-cert:          active
openstack-nova-compute:       dead      (disabled on boot)
openstack-nova-network:       dead      (disabled on boot)
openstack-nova-scheduler:     active
openstack-nova-conductor:     active
== Glance services ==
openstack-glance-api:         active
openstack-glance-registry:    active
== Keystone service ==
openstack-keystone:           active
== Horizon service ==
openstack-dashboard:          active
== Swift services ==
openstack-swift-proxy:        dead
openstack-swift-account:      dead      (disabled on boot)
openstack-swift-container:    dead      (disabled on boot)
openstack-swift-object:       dead      (disabled on boot)
== Cinder services ==
openstack-cinder-api:         active
openstack-cinder-scheduler:   active
openstack-cinder-volume:      active
openstack-cinder-backup:      inactive  (disabled on boot)
== Ceilometer services ==
openstack-ceilometer-api:     active
openstack-ceilometer-central: active
openstack-ceilometer-compute: dead      (disabled on boot)
openstack-ceilometer-collector: active
== Heat services ==
openstack-heat-api:           active
openstack-heat-api-cfn:       inactive  (disabled on boot)
openstack-heat-api-cloudwatch: inactive  (disabled on boot)
openstack-heat-engine:        active
== Support services ==
messagebus:                   active
tgt:                          active
qpidd:                        active
memcached:                    active
== Keystone users ==
Warning keystonecli not sourced
```

```
[root@0001a4af9aa6 ~]# openstack-status
```

```
== Nova services ==
openstack-nova-api:           inactive  (disabled on boot)
openstack-nova-compute:       active
openstack-nova-network:       active
openstack-nova-scheduler:     dead      (disabled on boot)
== Ceilometer services ==
openstack-ceilometer-api:     dead      (disabled on boot)
openstack-ceilometer-central: dead      (disabled on boot)
openstack-ceilometer-compute: active
openstack-ceilometer-collector: dead      (disabled on boot)
== Support services ==
libvirtd:                     active
messagebus:                   active
Warning novarc not sourced
```



Demonstration Video

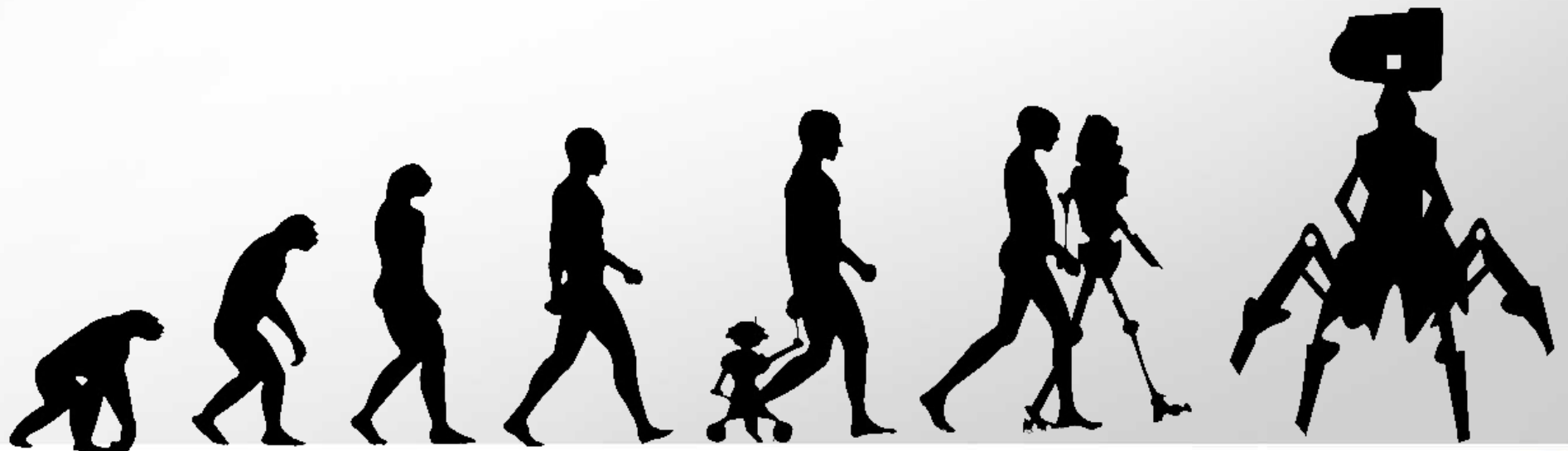
<https://www.youtube.com/watch?v=W1deqJz7q1w>



Roadmap

What's Next?

- Extensions for 3rd parties (Storage and Network)
- Dynamic Layouts
- Distributed High Availability



What's Next?

- Expansion of Foreman Plugin for common installation beyond OpenStack (RHCI)
- Association of Foreman (and Satellite) with TripleO for OpenStack deployments





slides available at
www.allthingsopen.com