

RED HAT
SUMMIT

LEARN. NETWORK.
EXPERIENCE OPEN SOURCE.

June 11-14, 2013
Boston, MA



RED HAT
SUMMIT

RED HAT ENTERPRISE VIRTUALIZATION ROADMAP DEEP DIVE

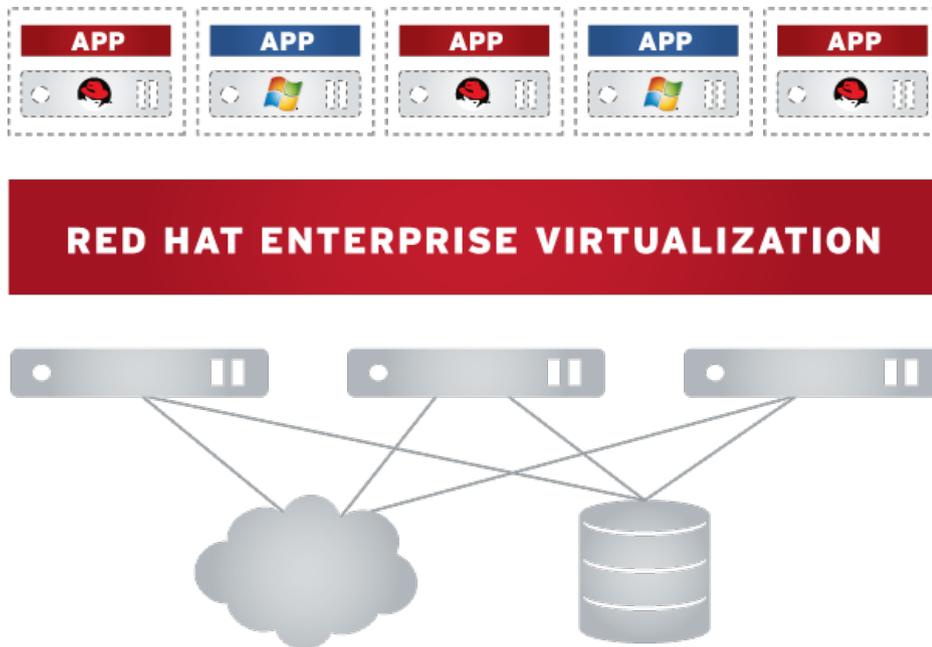
Andrew Cathrow

Red Hat, Inc.

Thursday, June 13th, 2013

DATACENTER VIRTUALIZATION

COMPLETE DATACENTER VIRTUALIZATION SOLUTION



- **Leading performance:** Top virtualization benchmarks for performance and scalability
- **Affordable:** Lower TCO and higher ROI than competitive platforms
- **Enterprise-ready:** Powerful mix of enterprise features and a rich set of partners
- **Open:** Offers choice and interoperability with no proprietary lock-in
- **Cross-platform:** Optimized for Microsoft Windows and Linux guests

DATACENTER VIRTUALIZATION

The screenshot displays the RHEV web interface. At the top, it shows the user is logged in as 'admin@internal' and provides navigation links for 'Configure', 'Guide', 'About', and 'Sign Out'. A search bar is present with the text 'Host: cluster = Default'. The main content area is divided into two sections: 'Hosts' and 'Network Interfaces'.

Hosts Table:

Name	Hostname/IP	Cluster	Data Center	Status	Virtual Machines	Memory	CPU	Network	SPM
alpha	10.16.53.11	Default	Default	Up	0	3%	0%	0%	SPM
beta	10.16.53.12	Default	Default	Up	3	14%	0%	0%	Normal
gamma	10.16.53.13	Default	Default	Up	1	20%	0%	0%	Normal

Network Interfaces Table:

Name	Address	MAC	Speed (Mbps)	Rx (Mbps)	Tx (Mbps)	Drops (Pkts)	Bond	VLAN	Network Name
eth0	10.16.53.13	5c:f3:fc:98:26:40	1000	< 1	< 1	0			* rhevm
eth1		5c:f3:fc:98:26:42	1000	< 1	< 1	0			DMZ

- Centralized Management
- High Availability
- Live Migration
- Storage Live migration
- Load Balancing
- Power Management
- Templates, thin provisioning, snapshots
- V2V & P2V Migration tools
- Self Service User Portal
- Reporting Engine

**BUT SHOULDN'T I BE
RUNNING OPENSTACK ?**

SERVICE MODELS / WORKLOADS



TRADITIONAL WORKLOADS



CLOUD WORKLOADS

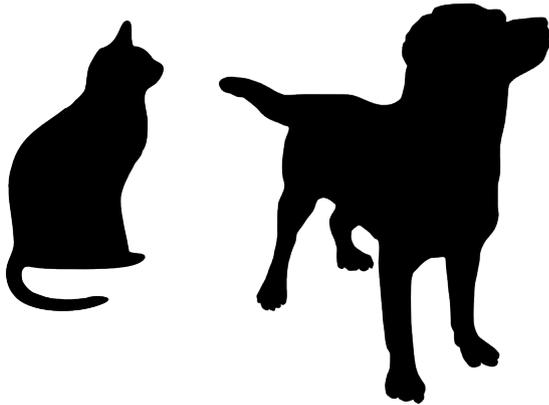
- Stateful VMs: Application defined in VM
- Application SLA = SLA of VM
- SLA requires enterprise virtualization features to keep VMs highly available
- VMs scale up: add vCPU, vRAM, etc.
- Lifecycle may be measured in years
- Applications not designed to tolerate failure of VMs

- Stateless VMs : Application distributed
- Application SLA not dependent on any one VM
- SLA requires ability to create and destroy VMs when needed
- Applications scale out: add more Vms
- Lifecycle measured in hours to months
- Applications designed to tolerate failure of VMs

SERVICE MODELS / WORKLOADS



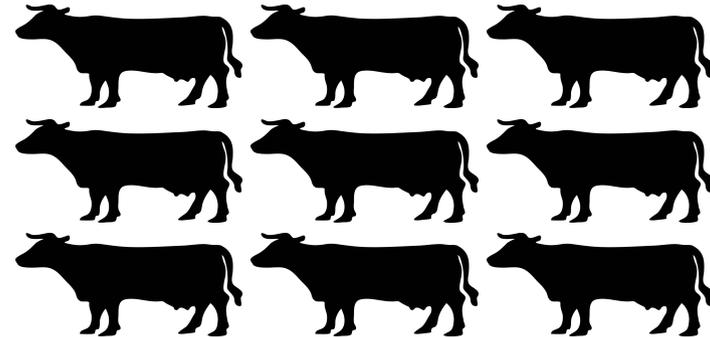
TRADITIONAL WORKLOADS



- Pets are unique, lovingly hand raised and cared for
- They are given names
- When they get ill you nurse them back to health

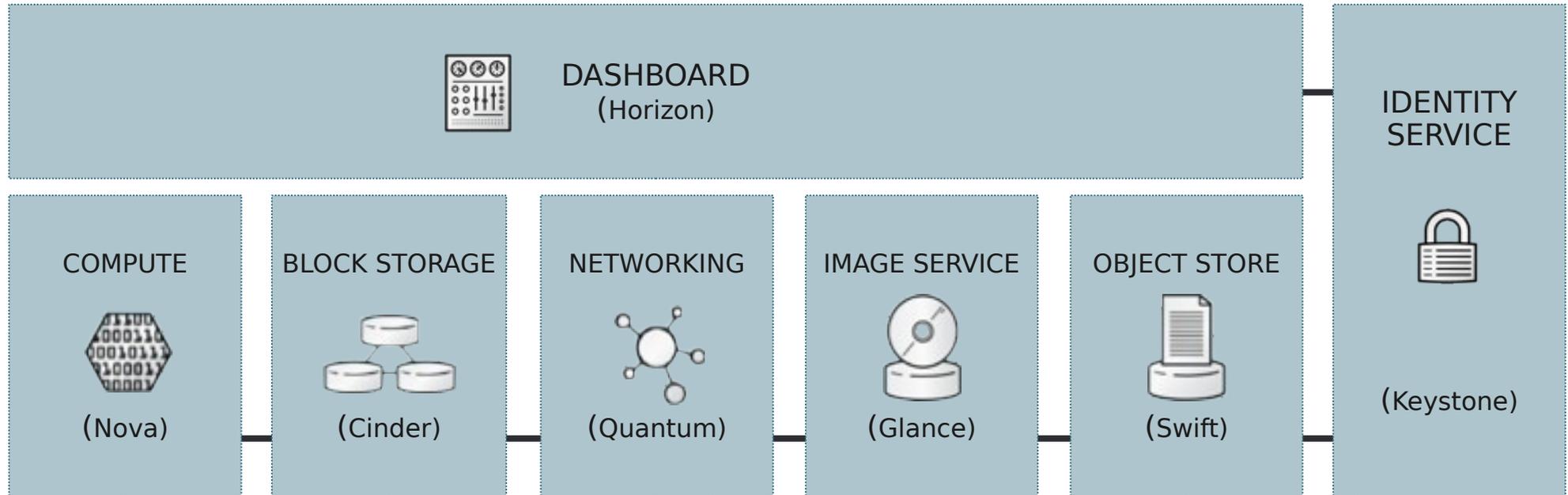


CLOUD WORKLOADS



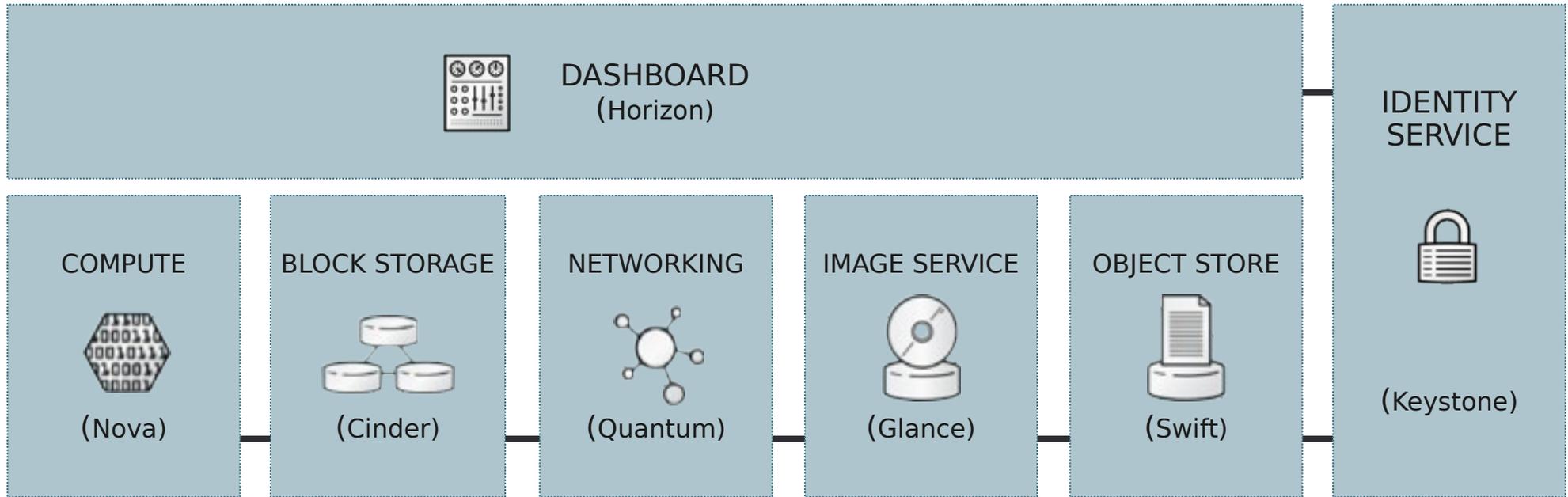
- Cattle are almost identical to each other
- They are given numbers
- When they get ill you get another one

PRIVATE CLOUD



- Building blocks for creating a cloud
- Set of modular services with well defined APIs
- Designed for massive scale
 - Scale out to thousands of nodes
- Designed for 'cloud workloads'

OPENSTACK ARCHITECTURE



- Building blocks for creating a cloud
- **Set of modular services with well defined APIs**
- Designed for massive scale
 - Scale out to thousands of nodes
- Designed for “cloud workloads”

OPENSTACK SERVICES

IMAGE SERVICE



(Glance)

- Stores disk images
 - ISOs, Templates, etc
- Simple API to upload, download and query images

NETWORKING



(Quantum)

- Provides framework for Software Defined Network
- Plugin Architecture
 - Allows integration of 3rd party hardware and software based network infrastructure

BLOCK STORAGE



(Cinder)

- Block Storage for virtual machines
- Plugin Architecture for vendor extensions

COMMON SERVICES LAYER

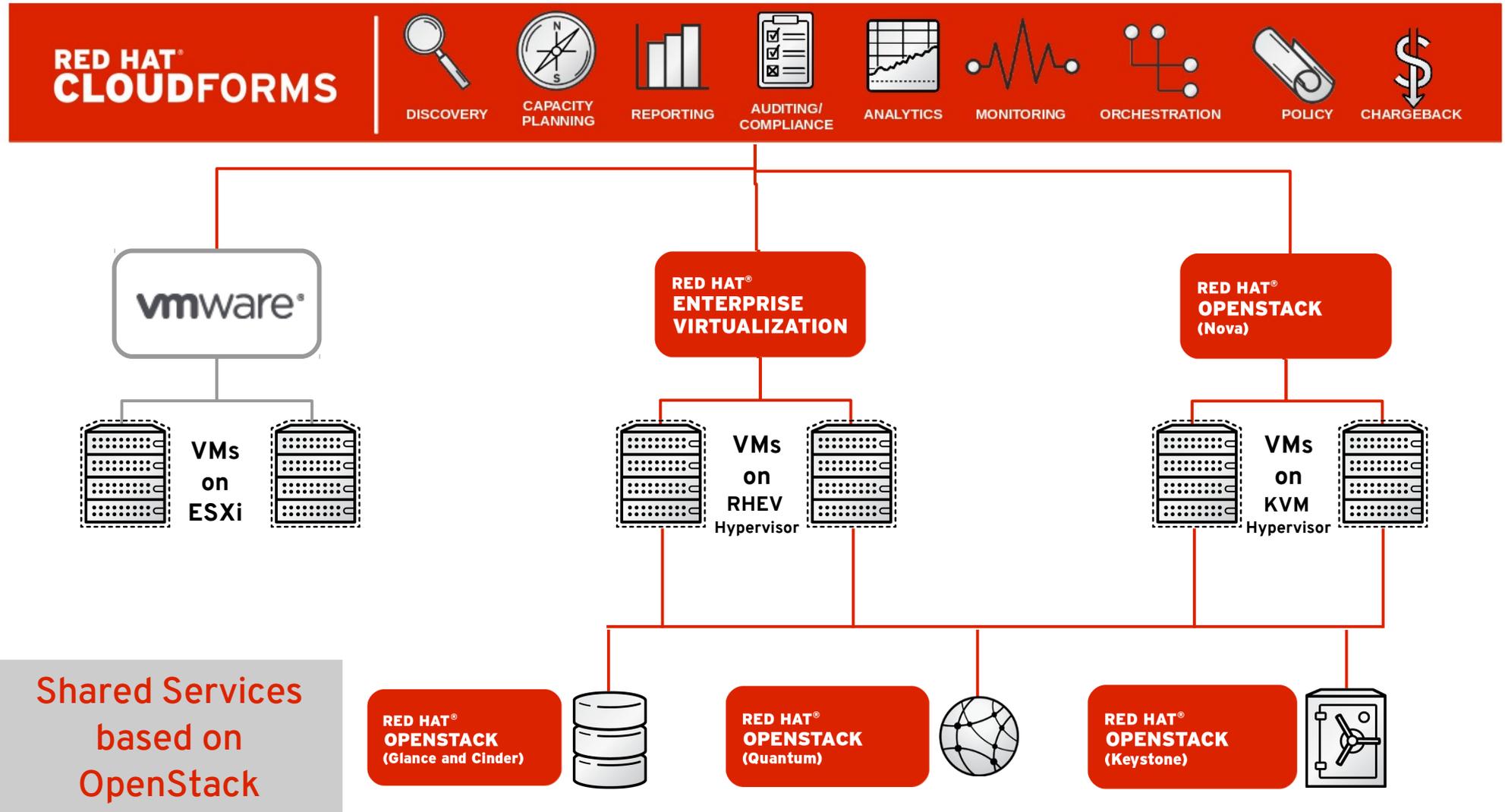
GOALS

- Break down silos between cloud & datacenter
- Prevent duplication of infrastructure
 - Different storage, network and management platforms
- Simplify architecture
- Facilitate the transition from traditional to cloud/elastic workloads
- Optimize development / community resources

COMMON SERVICES LAYER

- Integrating OpenStack services with oVirt / RHEV
- Deploy common set of shared services
 - KVM Based Hypervisor
 - OpenStack Image Store (Glance)
 - OpenStack Network Service (Quantum)
 - OpenStack Volume Service (Cinder)
- Deploy “Pets and Cattle” on common infrastructure without compromising on SLAs, features or scalability

COMMON SERVICES LAYER



RED HAT CLOUD INFRASTRUCTURE

RED HAT[®] CLOUD INFRASTRUCTURE

RED HAT[®]
CLOUDFORMS

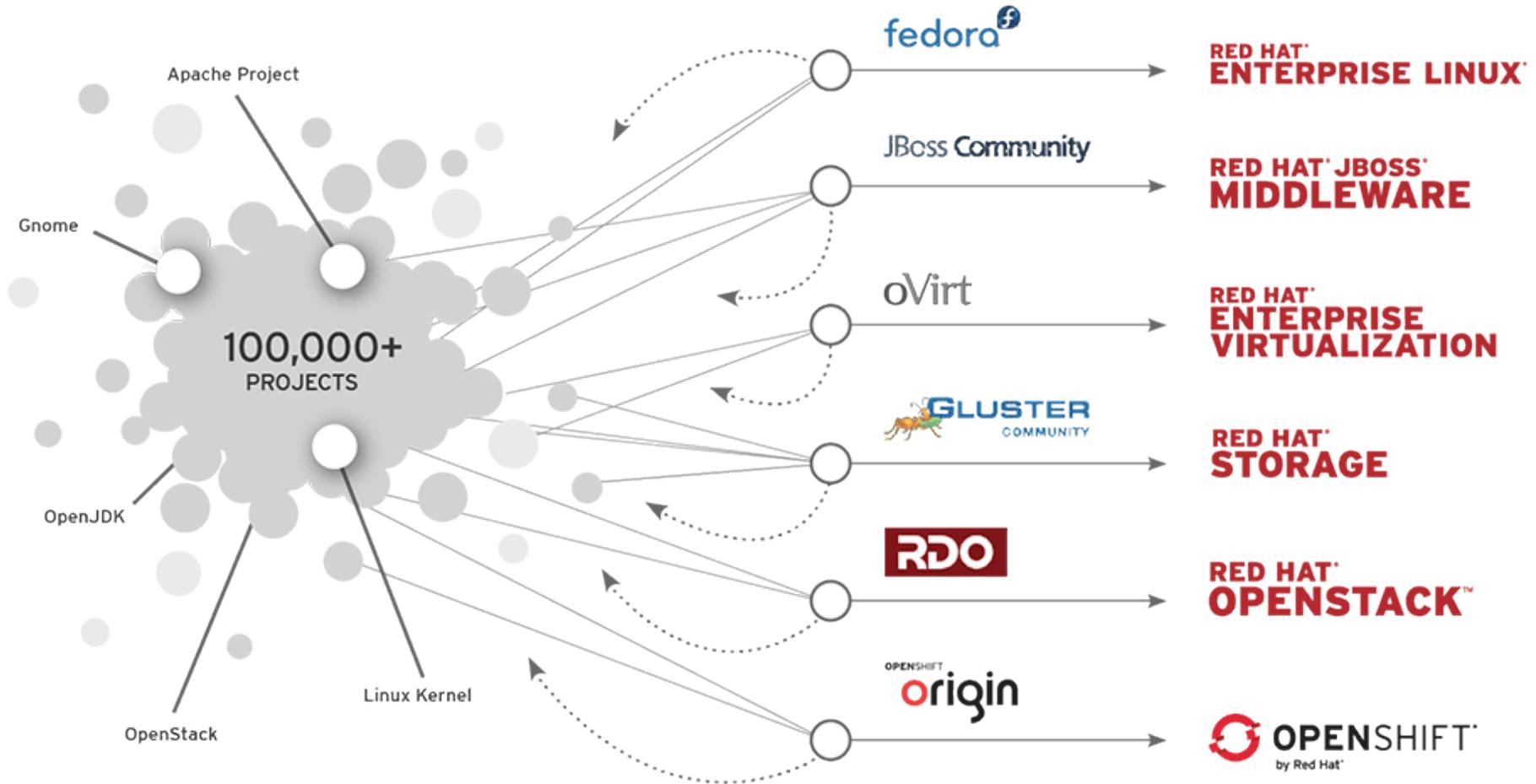
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LINUX[®]

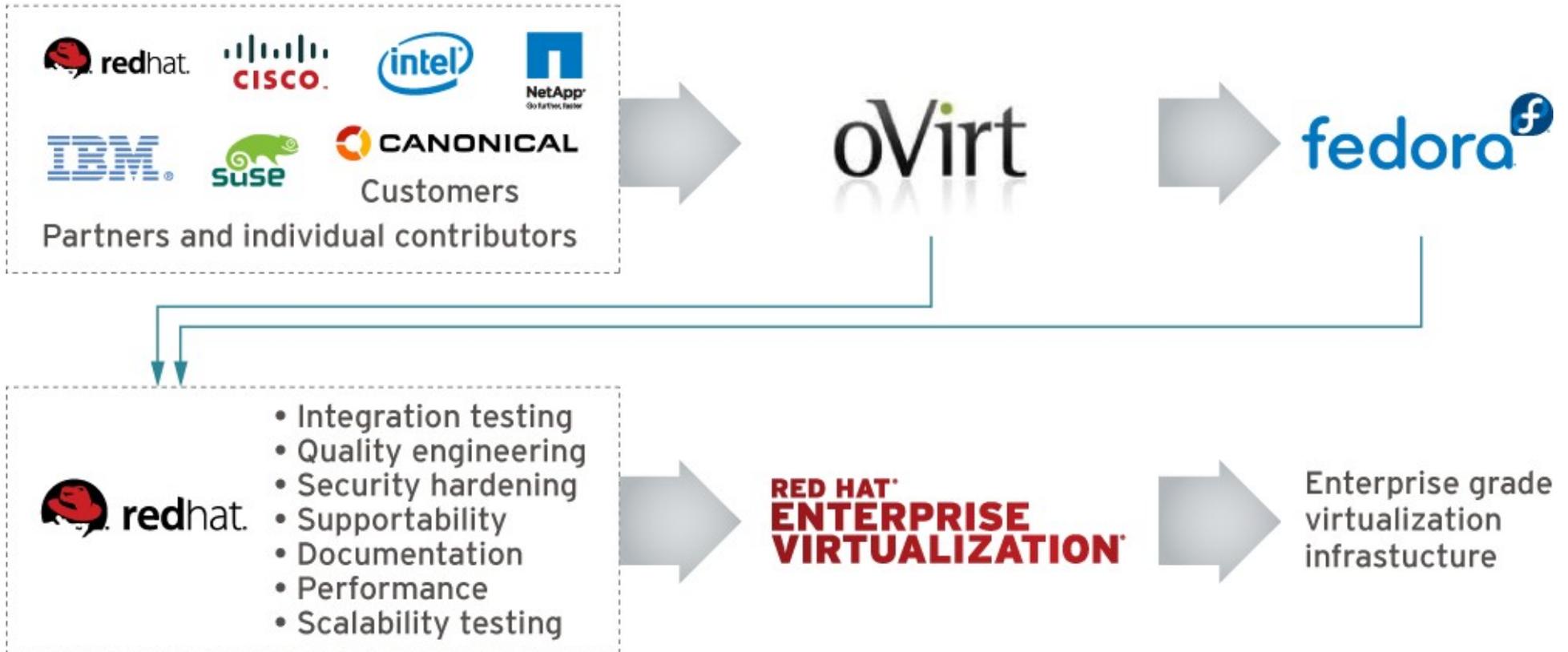
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ENTERPRISE
VIRTUALIZATION

- Single subscription that provides an open cloud solution
- Bridges traditional and cloud/elastic workloads
- Provides both virtualization and cloud services
- Policy-based cloud management
- Available with or without RHEL guests
- General availability July 2013

OPEN INNOVATION



OPEN INNOVATION



TIMELINES

December 2012

Red Hat Enterprise Virtualization 3.1

February 2013

Red Hat Enterprise Linux 6.4

April 2013

CloudForms 2.0

June 2013

Red Hat Enterprise Virtualization 3.2

July 2013

Red Hat Cloud Infrastructure (RHCI)

CloudForms 2.0

Red Hat OpenStack 3.0 (Grizzly)

Red Hat Enterprise Virtualization 3.2

November 2013

Red Hat Enterprise Virtualization 3.3

December 2013

Red Hat OpenStack 4.0 (Havana)

April 2014

Red Hat Enterprise Virtualization 3.4

RED HAT ENTERPRISE VIRTUALIZATION

RHEV 3.1 - HIGHLIGHTS

RHEV 3.1 – December 2012

Web Admin

- Full HTML based Web Admin

Improved Scalability

- 160 Virtual CPUs per VM
- 2 TB Virtual RAM per VM

P2V

- Quickly migrate physical machines to virtual machines

Quotas

- Quotas for storage, CPU and memory

Live Snapshots

- Live snapshots of Virtual Machine (configuration and disk)

Storage Migration

- Live migration of virtual machine disk between storage domains

Tech Preview

Hotplug Disk

- Hot plug/unplug virtual machine disk image

Disk Management

- New UI for managing internal and external (direct lun) disks

Hot plug NIC

- Hot plug/unplug virtual machine's network interface

Gluster Integration

- Manage Red Hat Storage from within RHEV Manager

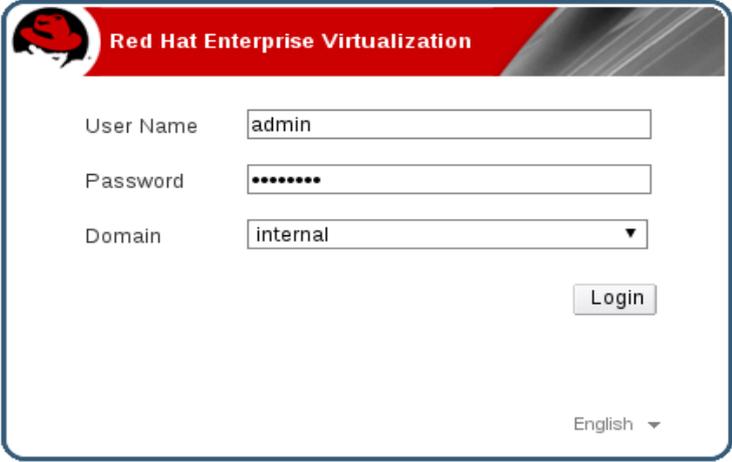
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User Interface

Internationalization

- Localization of Web admin portal, user portal, documentation and landing page ^{New}
- Automatically detected from browser preferences
- Supports manual selection to override browser default

- Localization
 - English (US)
 - French
 - German
 - Japanese
 - Portuguese
 - Simplified Chinese
 - Spanish



Red Hat Enterprise Virtualization

User Name

Password

Domain

Login

English

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User Interface

UI Plugins

- Framework for 3rd party UI plugins for RHEV Manager
- Allows end users and vendors to extend management platform

- Commercial Vendors shipping ~ RHEV 3.2
HP, NetApp & Symantec

- Community Plugins
Foreman, Nagios, Shellbox and others.

RED HAT ENTERPRISE VIRTUALIZATION 3.2

User Interface

UI Plugins

- Framework for 3rd party UI plugins for RHEV Manager
- Allows end users and vendors to extend management platform

The screenshot displays the RHEV Manager web interface. The top navigation bar includes tabs for Data Centers, Clusters, Hosts, Networks, Storage, Disks, Virtual Machines, Pools, Templates, Volumes, Users, and HP Insight Control. The 'Hosts' tab is active, showing a table of hosts:

Name	Hostname/IP	Cluster	Data Center	Status	Virtual Machines	Memory	CPU	Network	SPM
local_host	vsr19u28.hpcs.net	local_cluster	local_datacenter	Up	2	14%	0%	0%	SPM
vsr19e1b12	vsr19e1b12.hpcs.net	Default	Default	Up	7	9%	33%	0%	SPM
vsr19e1b13	vsr19e1b13.hpcs.net	Default	Default	Up	11	22%	33%	0%	Normal
vsr19u27	vsr19u27.hpcs.net	Default	Default	Up	0	2%	0%	0%	Normal

Below the table, the 'HP Insight Control' tab is selected, showing a list of hardware components with their status and temperature gauges:

Status	Component	Current Temperature	Warning Temperature	Critical Temperature
Not Installed	IO Board 26-LOM Card Zn	-	-	-
Not Installed	IO Board 26-Mezz 1	-	-	-
Not Installed	IO Board 27-Mezz 1 Inlet	-	-	-
Not Installed	IO Board 28-Mezz 2	-	-	-
Not Installed	IO Board 28-Mezz 2 Inlet	-	-	-
Normal	System 30-System Board	40°C	80°C	85°C
Normal	System 31-System Board	39°C	80°C	85°C
Normal	System 32-Sys Exhaust	39°C	75°C	80°C
Normal	System 33-Sys Exhaust	39°C	75°C	80°C
Not Installed	IO Board 34-GPU 1	-	-	-
Not Installed	IO Board 35-GPU 2	-	-	-

The Integrated Management Log at the bottom shows the following entries:

Severity	Class	Count	Description	Last Update	Initial Update
Informational	Maintenance	1	Maintenance note: IML cleared through hpsasnci	03/15/2013 09:56	03/15/2013 09:56
Caution	POST Message	1	POST Error: 1785-Slot X Drive Array Not Configured	12/14/2012 00:03	12/14/2012 00:03
Informational	System Revision	1	Firmware flashed (LO 4.1.20.56)	12/14/2012 02:04	12/14/2012 02:04

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User Interface

UI Plugins

- Framework for 3rd party UI plugins for RHEV Manager
- Allows end users and vendors to extend management platform

Ask Shadowman

Data Center Failure Open/Edit Support Case

RHEV 2.2 StoragePoolMasterNotFound: Cannot find master domain

[How to export virtual machines from RHEV 2.2 to 3.0 environment?](#)

Is it possible to add an export domain in read only mode to multiple data centers at the same time?

[RHEV] Host becomes Non-Operational with alert "can't access the storage domain"

Move VM to another Datacenter with different storage attached

Why is "add" button not available under "Quota" tab in Data Center?

[RHEV] How do I remove a master storage domain from the Data Center to free the storage space?

[RHEV] Why there is no hosts available in the drop down menu when creating export storage domain?

RHEV 3.1 - Want to remove logical networks from a Cluster but there isn't any "remove network" button to do so

Storage is not accessible in RHEV-M

[RHEV] Data Center is non-responsive after the regular SAN failure testing.

How to export virtual machines from RHEV 2.2 to 3.0 environment?

Issue:

- As part of evaluating RHEV 3.0 Beta, trying to export some test virtual machines (VMs) from RHEV 2.2 environment and import them to RHEV 3.0 Beta environment. What are the steps to achieve it?

Environment:

- Red Hat Enterprise Virtualization (RHEV) v2.2
- Red Hat Enterprise Virtualization (RHEV) v3.0

Resolution:

In RHEV 2.2 environment :

1. [Create an export domain](#)
2. [Attach it to the data center](#)
3. [Export the required VMs](#)
4. [Detach the export domain from data center](#)

In RHEV 3.0 environment :

1. Add the same export domain from RHEV 2.2 environment. [Import an](#)

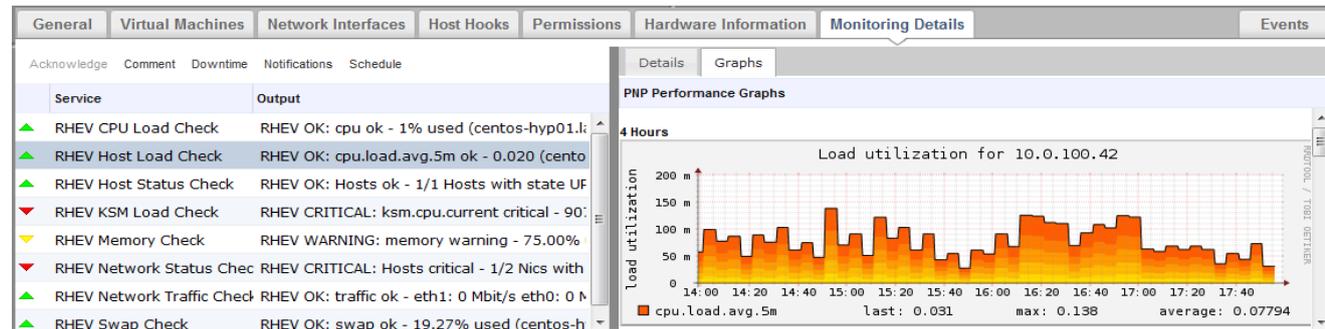
Close

RED HAT ENTERPRISE VIRTUALIZATION 3.2

User Interface

UI Plugins

- Framework for 3rd party UI plugins for RHEV Manager
- Allows end users and vendors to extend management platform



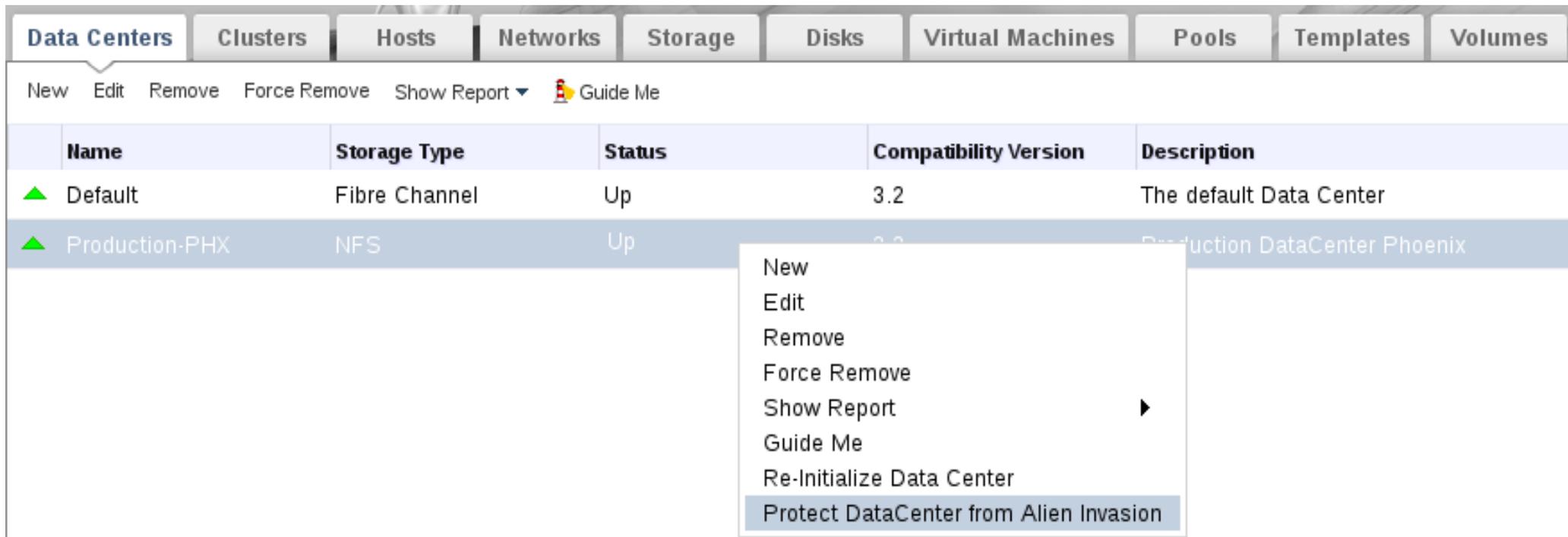
```
dhcp-1- login: root
root@dhcp-1- password:
Last login: Thu Jan 17 13:22:41 2013 from dhcp-1-
[root@dhcp-1- ~]# service shellinaboxd status
shellinaboxd (pid 30628) is running...
[root@dhcp-1- ~]# service vdsmd status
VDS daemon server is running
[root@dhcp-1- ~]#
```

RED HAT ENTERPRISE VIRTUALIZATION 3.2

User Interface

UI Plugins

- Framework for 3rd party UI plugins for RHEV Manager
- Allows end users and vendors to extend management platform



The screenshot displays the RHEV Manager web interface. At the top, there is a navigation bar with tabs for Data Centers, Clusters, Hosts, Networks, Storage, Disks, Virtual Machines, Pools, Templates, and Volumes. Below the navigation bar, there is a toolbar with buttons for New, Edit, Remove, Force Remove, Show Report, and Guide Me. The main content area shows a table of Data Centers. The table has columns for Name, Storage Type, Status, Compatibility Version, and Description. Two data centers are listed: 'Default' (Fibre Channel, Up, 3.2) and 'Production-PHX' (NFS, Up, 3.2). A context menu is open over the 'Production-PHX' row, showing options: New, Edit, Remove, Force Remove, Show Report, Guide Me, Re-Initialize Data Center, and Protect DataCenter from Alien Invasion.

Name	Storage Type	Status	Compatibility Version	Description
Default	Fibre Channel	Up	3.2	The default Data Center
Production-PHX	NFS	Up	3.2	Production DataCenter Phoenix

RED HAT ENTERPRISE VIRTUALIZATION 3.2

User Interface

UI Plugins

- Framework for 3rd party UI plugins for RHEV Manager
- Allows end users and vendors to extend management platform

The screenshot displays the RHEV Manager web interface. The top navigation bar includes tabs for Data Centers, Clusters, Hosts, Networks, Storage, Disks, Templates, and Volumes. Below the navigation, there are action buttons: New, Edit, Remove, Force Remove, Show Report, and Guide Me. A table lists data centers with columns for Name, Storage Type, Status, and Capacity. The table contains two entries: 'Default' with 'Fibre Channel' storage and 'Up' status, and 'Production-PHX' with 'NFS' storage and 'Up' status. A context menu is open over the table, listing actions: New, Edit, Remove, Force Remove, Show Report, Guide Me, Re-Initialize D, and Protect Data. A large, semi-transparent window titled 'Datacenter under attack' is overlaid on the right side of the interface. This window features a space-themed background with a rocket at the bottom, a large orange sun, and several green alien-like creatures. A score '00000500' is displayed at the top left of the window. At the bottom of the window, there are two buttons: 'Get me outta here' and 'Call Support'.

Name	Storage Type	Status	Co
▲ Default	Fibre Channel	Up	3.2
▲ Production-PHX	NFS	Up	2.1

RED HAT ENTERPRISE VIRTUALIZATION 3.2

Networking

Network Main Tab

- New top level network management UI

The screenshot shows the Red Hat Enterprise Virtualization (oVirt) Network Main Tab interface. The top navigation bar includes the Red Hat logo, the text "Red Hat Enterprise Virtualization", and user information: "Logged in user: admin@internal | Configure | Guide | About | Sign Out". A search bar contains the text "Network: datacenter = Default".

The main content area is titled "Networks" and features a table with the following columns: Name, Data Center, Description, Role, and VLAN tag. The table lists several networks:

Name	Data Center	Description	Role	VLAN tag
Data	Default	DB network - vlan 125	VM	125
DMZ	Default	DMZ Network	VM	-
Private	Default	vlan 120 - Prod ops #1	VM	120
Public	Default	Public network - vlan 130	VM	130
rhev	Default	Management Network	VM	-

Below the table, there are tabs for "General", "Clusters", "Hosts", "Virtual Machines", "Templates", and "Permissions". The "General" tab is active, showing details for the "Public" network:

- Name: Public
- Id: c7372961-3d3d-444f-acb9-1068825f0a92
- Description: Public network - vlan 130
- Role: VM
- VLAN tag: 130
- MTU: host's default

The interface also includes a left sidebar with a "System" tree view showing "Default", "Storage", "Networks", "rhev", "DMZ", "Private", "Public", "Data", "Templates", and "Clusters". At the bottom, there is a status bar with "Last Task: 2013-Jun-1, 08:51 Activating Host gamma" and icons for "Alerts", "Events", and "Tasks (0)".

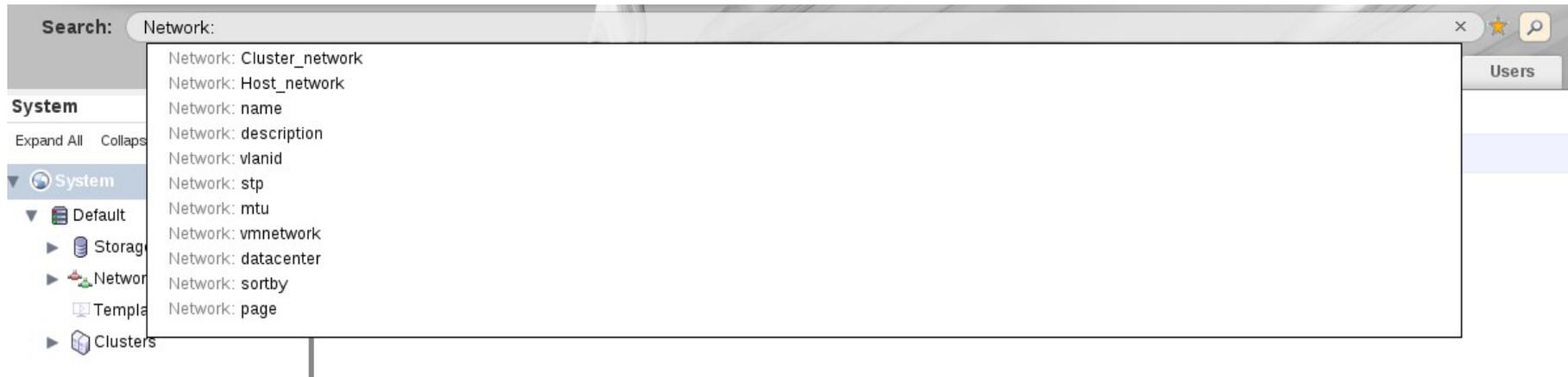
oVirt <http://wiki.ovirt.org/wiki/Feature/NetworkMainTab>

RED HAT ENTERPRISE VIRTUALIZATION 3.2

Networking

Network Main Tab

- New top level network management UI



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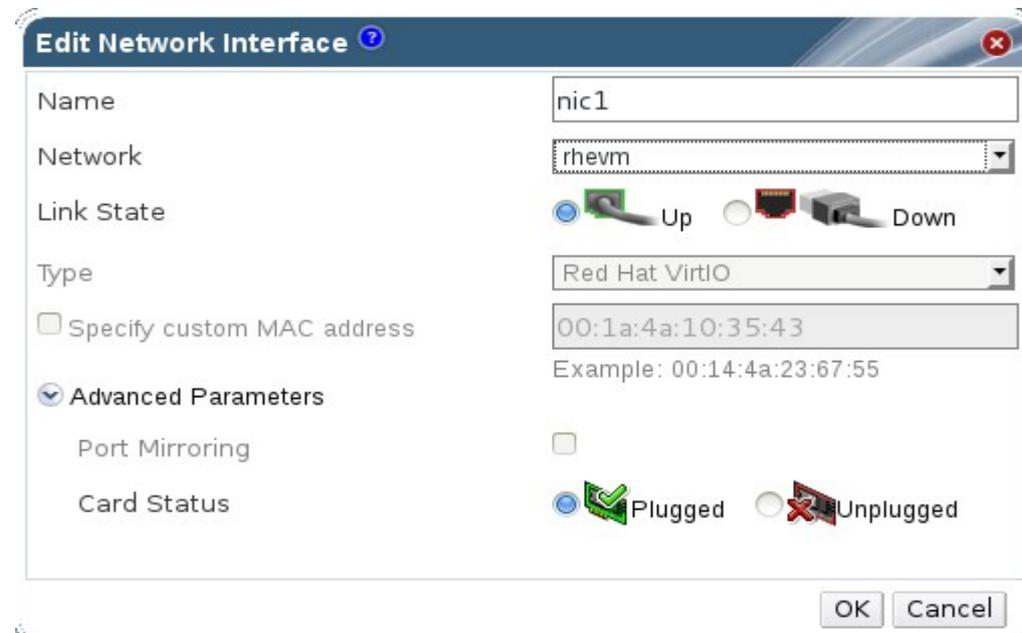
Networking

Network ACLs

- Apply Permissions / ACLs on logical networks
- New role "NetworkUser"

Hot Switch

- Switch virtual/logical network on running vNic



RED HAT ENTERPRISE VIRTUALIZATION 3.2

Networking

Statistics

- Enhanced statistic and configuration collection from guest
- Report all guest network interfaces
- Report IPV6 addresses in addition to IPV4

The screenshot displays the Red Hat Enterprise Virtualization 3.2 web interface. The top navigation bar shows the user is logged in as 'admin@internal' and provides links for 'Configure', 'Guide', 'About', 'Sign Out', and 'Market Place'. A search bar is present with the query 'Vms: cluster = Default'. The main content area is titled 'Virtual Machines' and features a table with columns for Name, Host, IP Address, Cluster, Data Center, Memory, CPU, Network, Display, Status, and Uptime. Below this, the 'Network Interfaces' tab is active, showing a table with columns for Name, Plugged, Network Name, Link State, Type, MAC, and Speed (Mbps). The 'Statistics' and 'Guest Agent Data' tabs are also visible, with the latter showing a table for network interface statistics including Name, IPv4, IPv6, and MAC.

Name	Host	IP Address	Cluster	Data Center	Memory	CPU	Network	Display	Status	Uptime
rhel6	beta	10.16.53.39	Default	Default	10%	5%	1%	SPICE	Up	2 min
rhel-desktop			Default	Default	0%	0%	0%		Down	
win2k8	gamma	10.16.53.51	Default	Default	14%	1%	0%	SPICE	Up	11 min
Win7			Default	Default	0%	0%	0%		Down	
Win8			Default	Default	0%	0%	0%		Down	

Name	Plugged	Network Name	Link State	Type	MAC	Speed (Mbps)
nic1	<input checked="" type="checkbox"/>	rhev	Up	Red Hat VirtIO	00:1a:4a:10:35:47	1000

Name	IPv4	IPv6	MAC
eth0	10.16.53.39	fe80::21a:4aff:fe10:3547	00:1a:4a:10:35:47

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Networking

Windows e1000

- Support E1000 nic for Windows VMs (in addition to VirtIO & RTL8139)

Hotplug Hook

- VDSM Hook for hot-plug events

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Storage

Storage Migration

- Move to full support from tech preview in 3.1

- Support migrating multiple disks from same virtual machine

Storage domain scan

- Scan storage domain for new (orphaned) images
- Import images into storage domain

API ONLY

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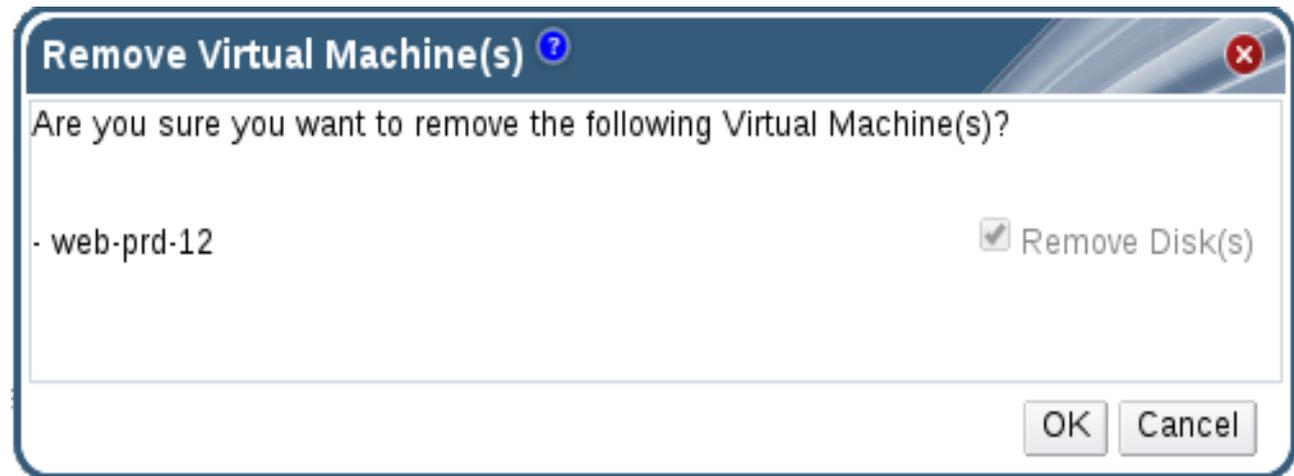
Storage

Disks sub-tab

- View/Manager all disks on storage domain

Remove VM

- Remove VM without deleting virtual disks

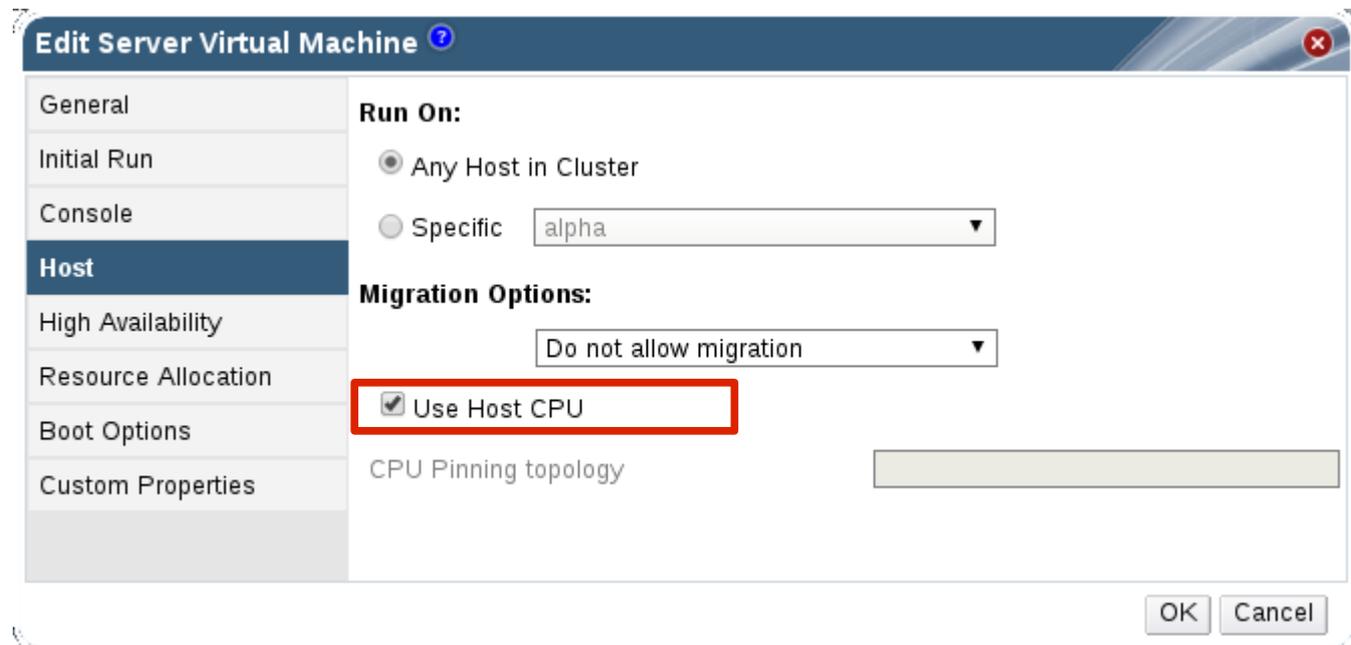


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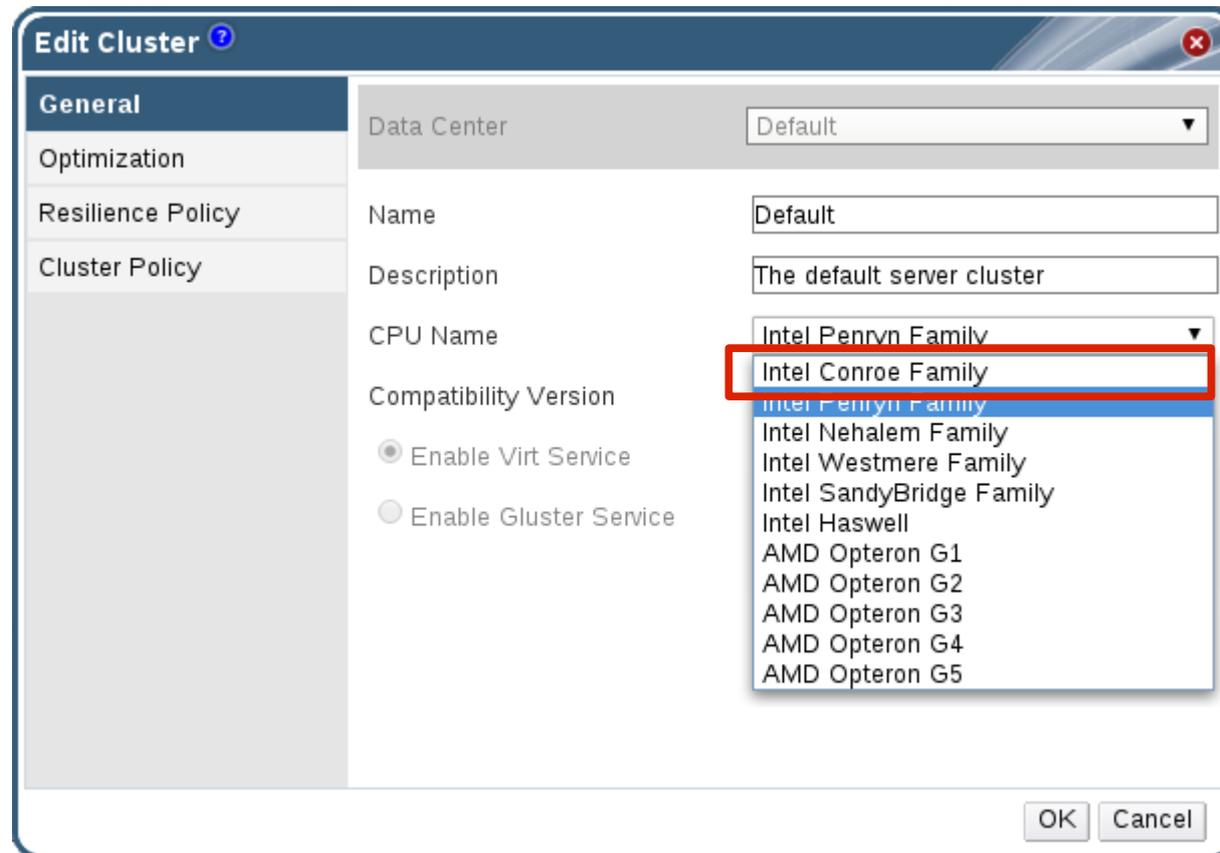
SLA

CPU Passthrough

- Support host CPU pass through
- Delivers optimal performance at the expense of migration



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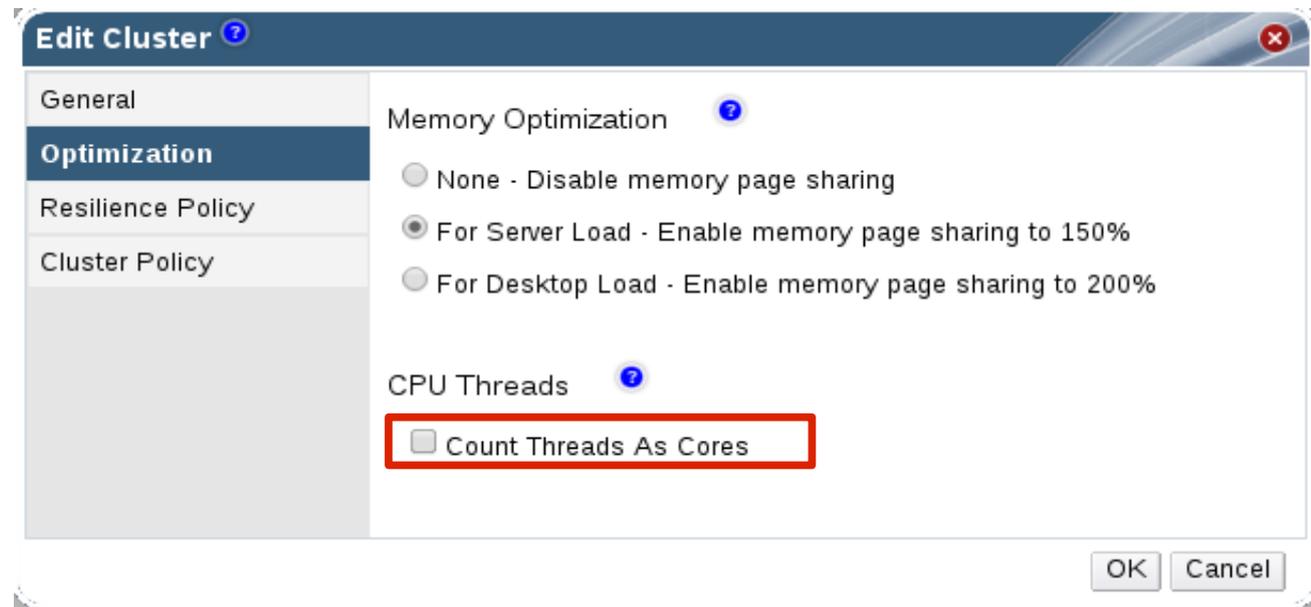


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SLA

Hyperthread Policy

- Define handling of Hyperthreads



RED HAT ENTERPRISE VIRTUALIZATION 3.2

SLA

Quota in User Portal

- All user to see breakdown of quota consumption in self service portal

The screenshot displays the Red Hat Enterprise Virtualization User Portal interface. The top navigation bar includes the Red Hat logo, the text "Red Hat Enterprise Virtualization", and user information: "Logged in user: jdoe | Sign Out | Guide | About". There are two tabs: "Basic" (selected) and "Extended".

The main content area is divided into several sections:

- Virtual Machines** (left sidebar menu)
- Templates** (left sidebar menu)
- Resources** (left sidebar menu)
- Virtual CPUs** (top left panel): Shows a "Quota Summary" with 11% usage. Below are "Student-quota" (25%), "Gold-quota" (0%), and "Staff-quota" (0%).
- Storage** (top right panel): Shows a "Quota Summary" with 24% usage. Below are "Student-quota" (15%), "Gold-quota" (0%), and "Staff-quota" (0%) which is marked as "Exceeded". To the right, summary statistics are shown: Total Size: 1GB, Number of Snapshots: 2, Total Size of Snapshots: <1GB.
- Memory** (bottom left panel): Shows a "Quota Summary" as "Unlimited". Below are "Student-quota" (25%), "Gold-quota" (Unlimited), and "Staff-quota" (0%).
- Virtual Machines' Disks & Snapshots** (bottom right table):

Description	Disks	Virtual Size	Actual Size	Snapshots
vm1	0	0GB	0GB	0
vm-pool-2	1	1GB	0GB	2

A tooltip is visible over the "Gold-quota" bar in the Memory section, showing a detailed breakdown:

Quota	2048MB
Total usage	50% 1024MB
Used by You	25% 512MB
Used by Others	25% 512MB
Free	50% 1024MB

RED HAT ENTERPRISE VIRTUALIZATION 3.2

Virtualization / Compute

New Guest Support

- Windows Server 2012

- Windows 8

New CPU Support

- New Intel Core i3, i5, i7, Xeon E3 (code named “Haswell”)

- New AMD Opteron G5 processors (code named “Seoul”)

Guest Tuning

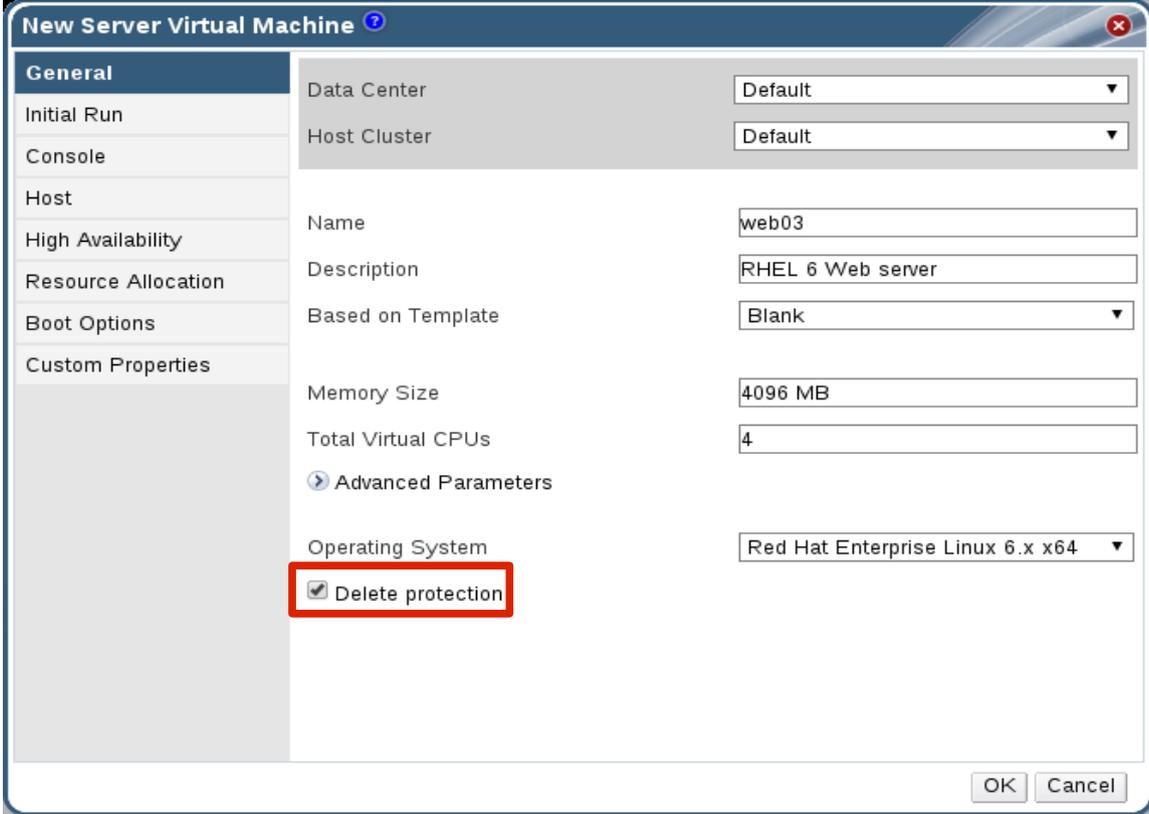
- Automatically apply tuned guest profile on RHEL guests

RED HAT ENTERPRISE VIRTUALIZATION 3.2

Virtualization / Compute

Delete Protection

- Allow admin to set 'do not delete' on virtual machine
Prevents accidental deletion through UI and API



The screenshot shows the 'New Server Virtual Machine' dialog box with the following configuration:

Property	Value
Data Center	Default
Host Cluster	Default
Name	web03
Description	RHEL 6 Web server
Based on Template	Blank
Memory Size	4096 MB
Total Virtual CPUs	4
Operating System	Red Hat Enterprise Linux 6.x x64
Delete protection	<input checked="" type="checkbox"/>

RED HAT ENTERPRISE VIRTUALIZATION 3.2

VDI

Spice Proxy

- Configure proxy server for Spice protocol

Smartcard

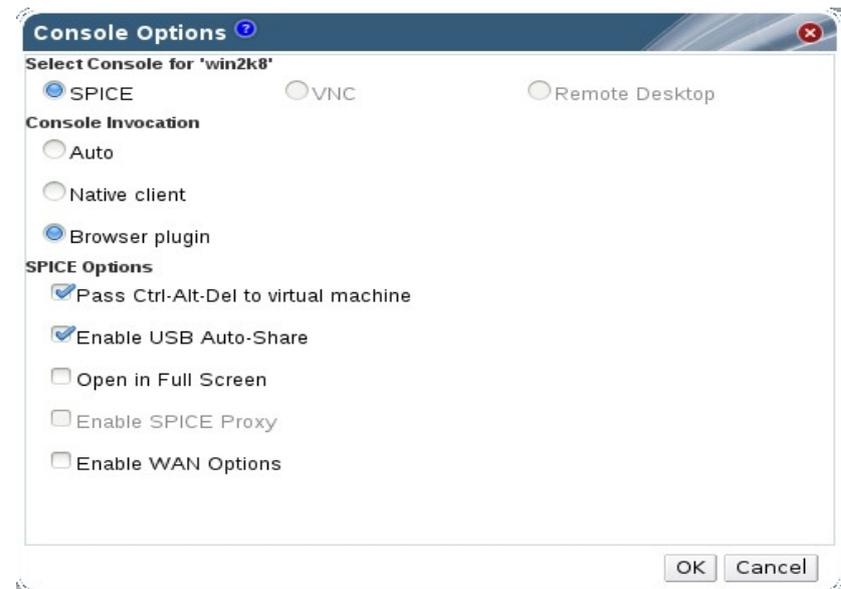
- UI / API support for Smartcard (CAC & PIV)

Dynamic Resolution

- Dynamically change guest resolution by resizing client window

Console Options

- Set per-device settings for console (VNC, Spice & RDP)



RED HAT ENTERPRISE VIRTUALIZATION 3.2

Platform Infrastructure

New Bootstrap

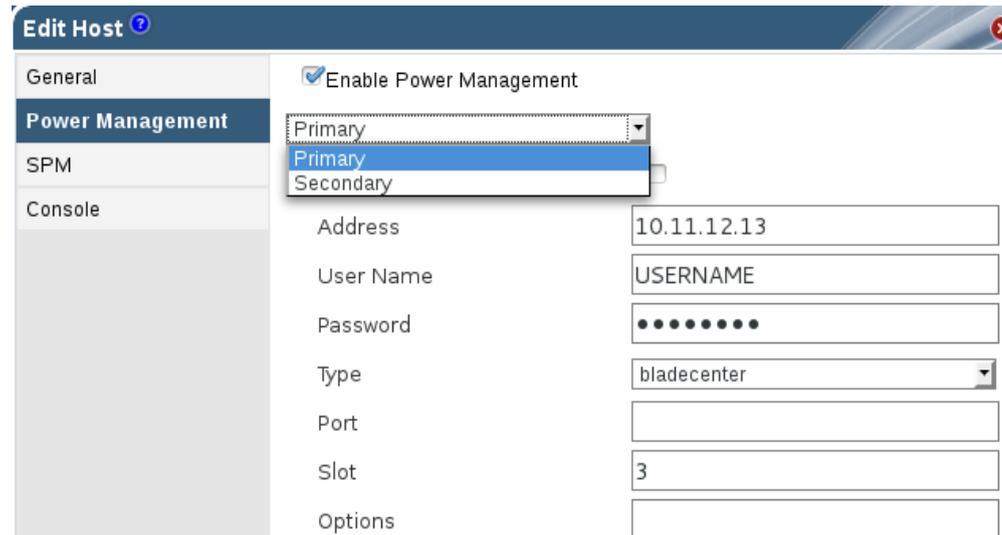
- New host bootstrap infrastructure (otopi)

Reports

- New reports including storage inventory, cloud provider utilization & VDI

Power Management

- Support for multiple Power Management (fencing) agents per host
- Configure proxy selection for Power Management at DC/Cluster level



The screenshot shows the 'Edit Host' configuration window with the 'Power Management' tab selected. The 'Enable Power Management' checkbox is checked. A dropdown menu is open, showing 'Primary' selected. Below the dropdown are input fields for Address (10.11.12.13), User Name (USERNAME), Password (masked with dots), Type (bladecenter), Port, Slot (3), and Options.

Field	Value
Enable Power Management	<input checked="" type="checkbox"/>
Power Management Agent	Primary
Address	10.11.12.13
User Name	USERNAME
Password
Type	bladecenter
Port	
Slot	3
Options	

TIMELINES

December 2012

Red Hat Enterprise Virtualization 3.1

February 2013

Red Hat Enterprise Linux 6.4

April 2013

CloudForms 2.0

June 2013

Red Hat Enterprise Virtualization 3.2

July 2013

Red Hat Cloud Infrastructure (RHCI)

CloudForms 2.0

Red Hat OpenStack 3.0 (Grizzly)

Red Hat Enterprise Virtualization 3.2

November 2013

Red Hat Enterprise Virtualization 3.3

December 2013

Red Hat OpenStack 4.0 (Havana)

April 2014

Red Hat Enterprise Virtualization 3.4

RED HAT ENTERPRISE VIRTUALIZATION

RHEV 3.3 – Q4 2013

Networking

- OpenStack Network Service (Quantum) Integration
- Define migration network
- Define gateway per logical network
- Custom Properties on vNics



Storage

- OpenStack Image Service (Glance) Integration
- VirtioSCSI (paravirtualized SCSI)
- Online resize virtual disk
- New Backup API



RED HAT ENTERPRISE VIRTUALIZATION

RHEV 3.3 – Q4 2013

Virtualization

- Major changes to VM creation dialogs
- Support for 'Instance types'
- Integrate with 'cloud-init' for VM metadata
- Support 'mime-type' launching for VM Consoles
- Add guest memory to live snapshots
- Add support for NoVNC (HTML based VNC client)
- Specify host to run VM using “run once”

RED HAT ENTERPRISE VIRTUALIZATION

RHEV 3.3 – Q4 2013

Infrastructure

- 'Hosted Engine' – self hosting RHEV-M as highly available VM
- OpenLDAP support

SLA / Performance

- Service Level (QoS) Manager
Define VM policies for:
 - CPU
 - Memory
 - Network

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April 2014

Red Hat Enterprise Virtualization 3.4

THANK YOU

DON'T MISS

Time	Title
9:00 AM – 11:00 AM	Lab/Hands on : Deploying OpenStack
9:45 AM - 10:45 PM	Hypervisor Technology Comparison & Migration
11:00 AM - 12:00 PM	Network Virtualization & Software-defined Networkingg