



Intro to oVirt

Itamar Heim
iheim@redhat.com

- oVirt Workshops
 - Barcelona – 7-9 November 2012
<http://kvmforumovirtworkshop2012.sched.org/>
 - Wednesday – oVirt for Users
 - Thursday – oVirt for Integrators
 - Friday – oVirt for Developers
 - Sunnyvale, California - 22-24 January 2013
(hosted by NetApp)

What is oVirt?

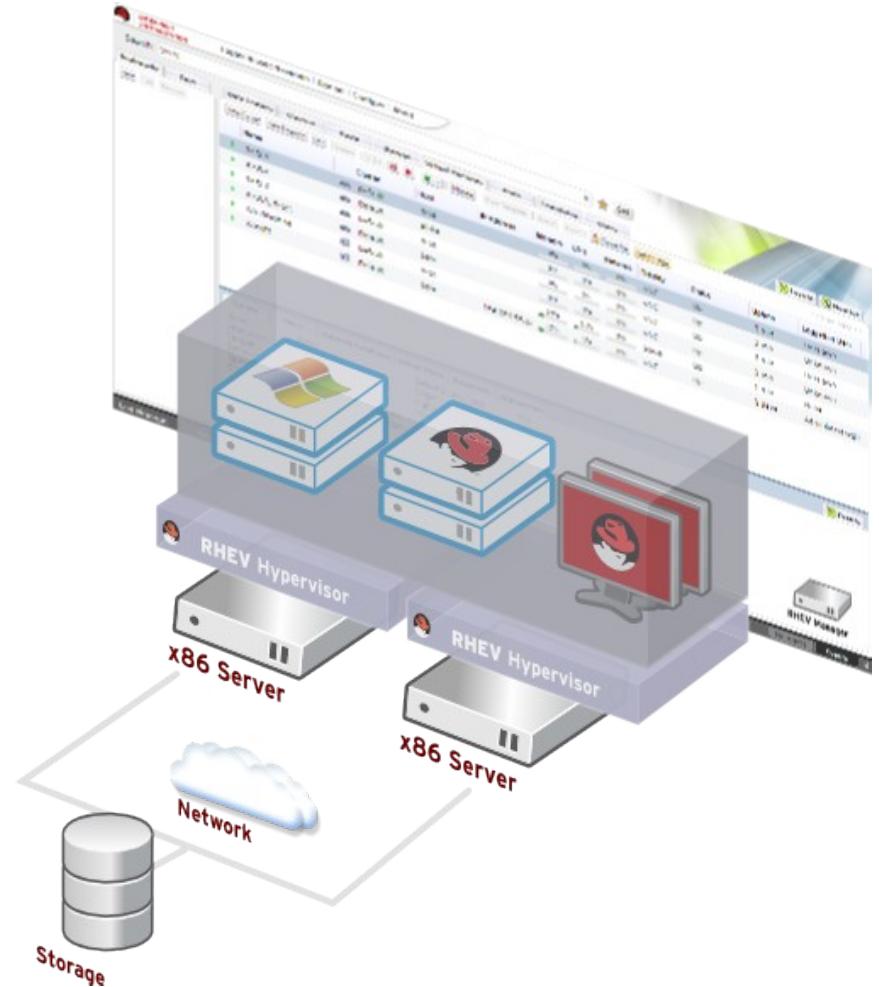
Large scale, centralized management for server and desktop virtualization

Based on leading performance, scalability and security infrastructure technologies

Provide an open source alternative to vCenter/vSphere

Two key components

- Hypervisor -> oVirt Node
- Management Server -> oVirt Engine



oVirt Open Virtualization Manager

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

Search: Vms: x ★ 🔍

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

New Server New Desktop Edit Remove Run Once ▶ ⏸ ⏹ ⏏ Migrate Cancel Migration Make Template Export Change CD Assign Tags 💡 Guide Me

Events 1-14

Tree

Expand All Collapse All

- System
 - dc-30
 - dc-30-with-various-clusters
 - Storage
 - data5-dc-30-cluster-31
 - Networks
 - ovirtmgmt
 - Templates
 - Clusters
 - cluster-30-on-dc-30
 - Hosts
 - VMs
 - cluster-31-on-dc-30
 - cluster-32-on-dc-30
 - dc-30-with-vlan-51
 - dc-31
 - dc-31-vlan-ovirtmgmt
 - Default
 - demo-dc-32
 - test-net-on-31-dc
 - test-net-on-32-dc
 - test-vlan

Virtual Machines

Name	Host	IP Address	Cluster	Data Center	Memory	CPU	Network	Display	Status	Uptime	Logged-in User
demo-vm	zeus02		cluster-32	demo-dc-32	0%	6%	0%	Spice	Up	2 days	
demo-vm-2			Default	Default	0%	0%	0%		Down		
linux-vm			cluster-32	demo-dc-32	0%	0%	0%		Down		
nw-filter-vm-1			cluster-31	dc-31	0%	0%	0%		Down		
nwfilter-vm-32-rhel-6	zeus02	10.35.18.154	cluster-32	demo-dc-32	34%	0%	0%	Spice	Up	2 h	
rhel63-vm	zeus02		cluster-32	demo-dc-32	32%	6%	0%	Spice	Up	2 h	
vm-1-dc-30-cluster-3			cluster-30-on-dc-30	dc-30-with-various-cl	0%	0%	0%		Down		
vm-del-net-2			cluster-30	dc-30	0%	0%	0%		Down		
vm-del-net-bug			cluster-30	dc-30	0%	0%	0%		Down		
vm-tempalte-test-1			Default	Default	0%	0%	0%		Down		
vm-tempalte-test-2			Default	Default	0%	0%	0%		Down		
vm-tempalte-test-3			Default	Default	0%	0%	0%		Down		
vm-tempalte-test-4			Default	Default	0%	0%	0%		Down		
win2008			cluster-31	dc-31	0%	0%	0%		Down		

General Network Interfaces Disks Snapshots Applications Permissions Events

Name: demo-vm Defined Memory: 1024 MB Origin: oVirt

Description: Physical Memory Guaranteed: 256 MB Run On: Any Host in Cluster

Template: Blank Number of CPU Cores: 1 (1 Socket(s), 1 Core(s) per Socket) Custom Properties: Not-Configured

Operating System: Red Hat Enterprise Linux 6.x x64 Number of Monitors: 1 Cluster Compatibility Version: 3.2

Default Display Type: Spice USB Policy: Disabled

Bookmarks

Tags

Last Message: 2012-Nov-06, 11:39 User admin@internal logged in.

Alerts (1) Events Tasks (0)

Virtualization Management the oVirt way

Goals of the oVirt project

- Build a community around all levels of the virtualization stack – hypervisor, manager, GUI, API, etc.
- To deliver both a cohesive complete stack and discretely reusable components for open virtualization management
- Provide a release of the project on a well defined schedule
- Focus on management of the KVM hypervisor, with exceptional guest support beyond Linux
- Provide a venue for user and developer communication and coordination

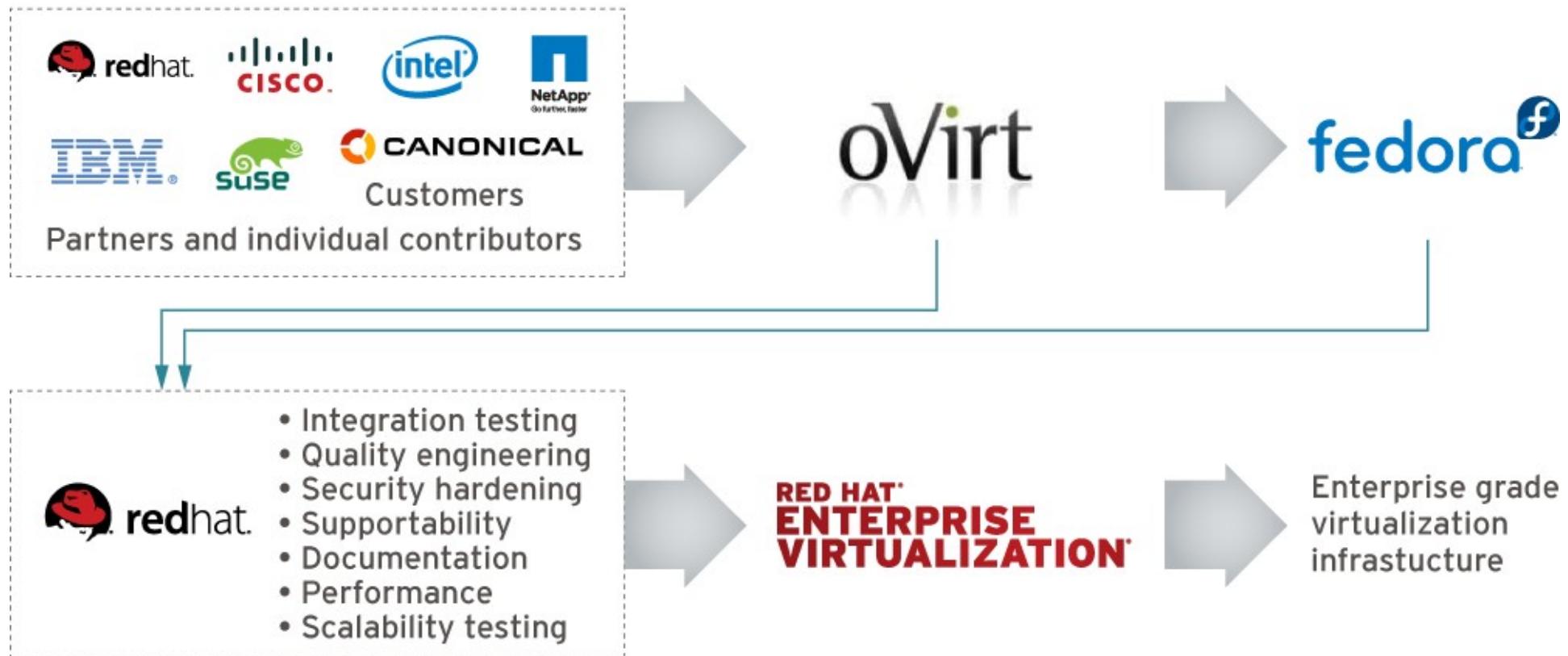
Governance



- Merit based, open governance model
- Built using the best concepts taken from Apache and Eclipse Foundations
- Governance split between board and projects
 - oVirt Board
 - Multiple projects under the oVirt brand

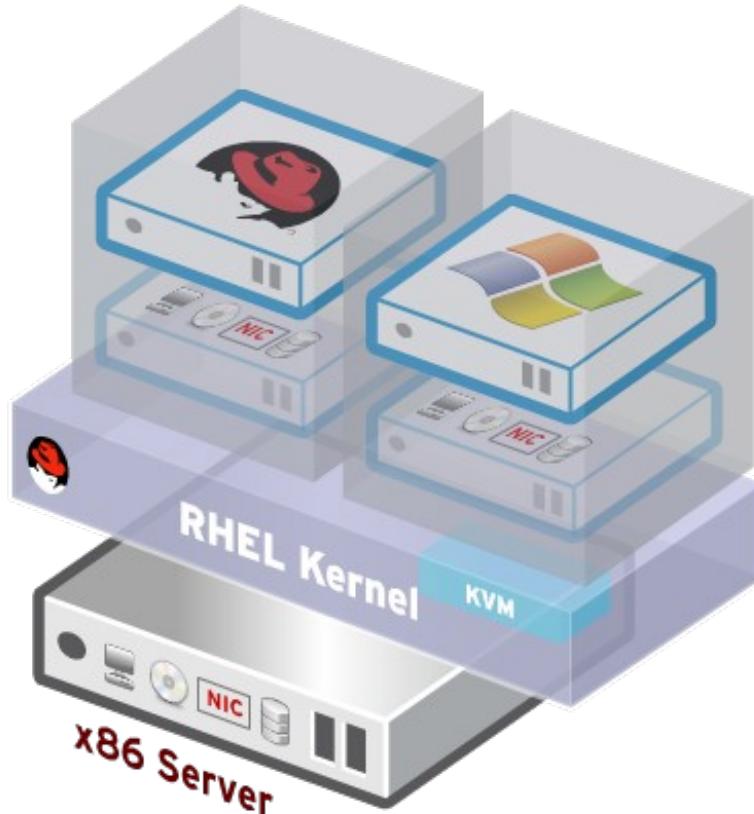
OPEN VIRTUALIZATION MANAGEMENT

oVirt

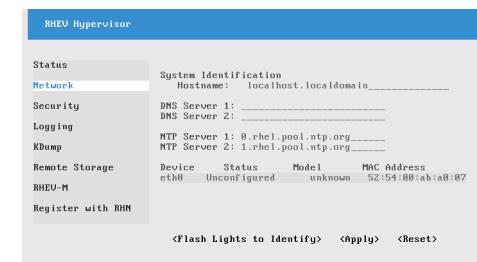


oVirt Node

oVirt



- Standalone hypervisor
 - Small footprint ~ 170MB
 - Customized 'spin' of Fedora + KVM
 - 'Just enough' Fedora to run virtual machines
 - Runs on all RHEL hardware with Intel VT/AMD-V CPUs
- Easy to install, configure and upgrade
 - PXE boot, USB boot, CD or Hard drive



Management Features

Feature	Description
High Availability	Restart guest VMs from failed hosts automatically on other hosts
Live Migration	Move running VM between hosts with zero downtime
System Scheduler	Continuously load balance VMs based on resource usage/policies
Power Saver	Concentrate virtual machines on fewer servers during off-peak hours
Maintenance Manager	No downtime for virtual machines during planned maintenance windows. Hypervisor patching
Image Management	Template based provisioning, thin provisioning and snapshots
Monitoring & Reporting	For all objects in system – VM guests, hosts, networking, storage etc.
OVF Import/Export	Import and export VMs and templates using OVF files
V2V & P2V	Convert Physical servers or VMs from Vmware and Xen
VDI	Virtual Desktop Infrastructure for Windows and Linux
Power User Portal	Self Service Portal

How to Start?



- Build from source..
- Or, just install
 - yum install ovirt-engine
 - ./ovirt-setup
 - Add managed hosts
- Or, New: All-in-one live usb
http://wiki.ovirt.org/wiki/OVirt_Live

Administration Console

oVirt

Activities Firefox Fri 22:13 Itamar Heim

File Edit View History Bookmarks Tools Help

oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox

oVirt Enterprise Virtualization E... + hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin/WebAdmin.html#vms Google

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Search: Vms: Events

Data Centers Clusters Hosts Storage Virtual Machines Pools Templates Users

New Server New Desktop Edit Remove Run Once Migrate Make Template Export Move Change CD Assign Tags Events

Tree

Expand All Collapse All Events

System

Default iSCSI-RC-DC Storage Templates Clusters intel-cluster Hosts nott-vds2.qa.lab.tlv.red nott-vds3.qa.lab.tlv.red VMs NFS-RC-DC Storage Templates Clusters Events

Bookmarks

Tags

Name	Cluster	Host	IP Address	Memory	CPU	Network	Display	Status	Uptime	Logged-in User
kaka	intel-cluster			0%	0%	0%		Down		
myVm1	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	6%	0%	Spice	Up	1 day	
myVm10	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm11	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm12	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm13	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm15	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm16	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm17	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm18	intel-cluster			0%	0%	0%		Down		
myVm19	intel-cluster			0%	0%	0%		Down		
myVm2	intel-cluster			0%	0%	0%		Down		
myVm20	intel-cluster			0%	0%	0%		Down		
myVm21	intel-cluster			0%	0%	0%		Down		
myVm22	intel-cluster			0%	0%	0%		Down		
myVm23	intel-cluster			0%	0%	0%		Down		
myVm24	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Paused	5 days	
myVm25	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	6%	0%	Spice	Paused	5 days	
myVm26	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Paused	5 days	
myVm27	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Paused	5 days	

Last Message: 2012-Jan-31, 23:18:41 User admin@internal logged in. 3 Alerts Events

Browser Firefox version 9 is currently not supported.

Search Auto Complete

The oVirt logo consists of the word "oVirt" in a bold, black, sans-serif font. The letter "o" has a small green dot above the top curve.

The screenshot shows the oVirt Enterprise Virtualization Engine Web Administration interface running in Mozilla Firefox. The browser title bar reads "oVirt Enterprise Virtualization Engine Web Administration – Mozilla Firefox". The top navigation bar includes links for File, Edit, View, History, Bookmarks, Tools, and Help. A search bar at the top left contains the query "Vms: name = my* and status =". The main content area displays a list of virtual machines (VMs) matching this search. On the left, a tree-based navigation pane shows the system structure under "System", including "Default", "iSCSI-RC", "Storage", "Templates", and "Clusters". Under "Clusters", there is an "intel-cluster" containing three VMs: "myVm13", "myVm15", and "myVm16". Each VM is listed with its name, cluster, host, and several status indicators (e.g., 0% progress bars). A "Applications" tab is selected in the bottom navigation bar. The bottom status bar shows the date and time as "2012-Jan-31, 23:18:41" and the user as "User admin@internal logged in.". The bottom right corner shows a notification for "3 Alerts".

Search Results

oVirt

Activities Firefox Fri 22:22 oVirt Enterprise Virtualization Engine Web Administration – Mozilla Firefox

File Edit View History Bookmarks Tools Help

oVirt Enterprise Virtualization E... + hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin/WebAdmin.html#vms Google

ovirt Open Virtualization Manager Logged in user: admin@internal | Configure | Guide | About | Sign Out

Search: Vms: name = my* and status = up

Data Centers Clusters Hosts Storage Virtual Machines Pools Templates Users Events

New Server New Desktop Edit Remove Run Once Migrate Make Template Export Move Change CD Assign Tags <> Prev Next >>

Name	Cluster	Host	IP Address	Memory	CPU	Network	Display	Status	Uptime	Logged-in User
myVm1	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm10	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm11	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	6%	0%	Spice	Up	1 day	
myVm12	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	6%	0%	Spice	Up	1 day	
myVm13	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm15	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm16	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	
myVm17	intel-cluster	nott-vds2.qa.lab.tlv.red		0%	0%	0%	Spice	Up	1 day	

Tree

Expand All Collapse All

System

- Default
- ISCSI-RC-DC
- Storage
- Templates
- Clusters
 - intel-cluster
 - Hosts
 - nott-vds2.qa.lab.tlv.red
 - nott-vds3.qa.lab.tlv.red
- VMs
- NFS-RC-DC
- Storage
- Templates
- Clusters

Bookmarks

Tags

Last Message: 2012-Jan-31, 23:18:41 User admin@internal logged in. 3 Alerts Events

Browser Firefox version 9 is currently not supported.

Add Host As Simple As

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Activities Firefox Fri 22:23 Itamar Heim

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oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox

oVirt Enterprise Virtualization E... + hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin/WebAdmin.html#hosts Google

oVirt Open Virtualization Manager Logged in user: admin@internal | Configure | Guide | About | Sign Out

Search: Host: Events

Data Centers Clusters Hosts Storage Virtual Machines Pools Templates Users

Tree

New Edit Remove Activate Maintenance Configure Local Storage Assign Tags

Name

System Default iSCSI-RC-DC Storage Templates Clusters intel-cluster Hosts nott-vds2.qa.lab.tlv.redhat.com nott-vds3.qa.lab.tlv.redhat.com nott-vdsa.qa.lab.tlv.redhat.com

Events

Memory CPU Network SpmStatus

8 VMs	25%	0%	0%	SPM
0 VMs	0%	0%	0%	None
0 VMs	0%	0%	0%	None

New Host General Power Management

Data Center: Default Host Cluster: Default

Name: Address: Root Password: Override IP tables:

OK Cancel

Bookmarks Tags

Last Message: 2012-Jan-31, 23:18:41 User admin@internal logged in. 3 Alerts Events

Browser Firefox version 9 is currently not supported.

Power Management

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oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox

oVirt Enterprise Virtualization E... + hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin/WebAdmin.html#hosts Google

oVirt Open Virtualization Manager Logged in user: admin@internal | Configure | Guide | About | Sign Out

Search: Host: Events

Data Centers Clusters Hosts Storage Virtual Machines Pools Templates Users

Tree

New Edit Remove Activate Maintenance Configure Local Storage Assign Tags

Name

Hosts

Address

User Name

Password

Type

Port

Slot

Options

Please use a comma-separated list of 'key=value' or 'key'

Secure

Test

OK Cancel

Memory CPU Network SpmStatus

8 VMs 25% 0% 0% SPM

0 VMs 0% 0% 0% None

0 VMs 0% 0% 0% None

Events

System

Default

iSCSI-RC-DC

Storage

Templates

Clusters

intel-cluster

Hosts

nott-vds2.qa.lab.tlv.redhat.com

nott-vds3.qa.lab.tlv.redhat.com

nott-vdsa.qa.lab.tlv.redhat.com

VMs

NFS-RC-DC

Storage

Templates

Clusters

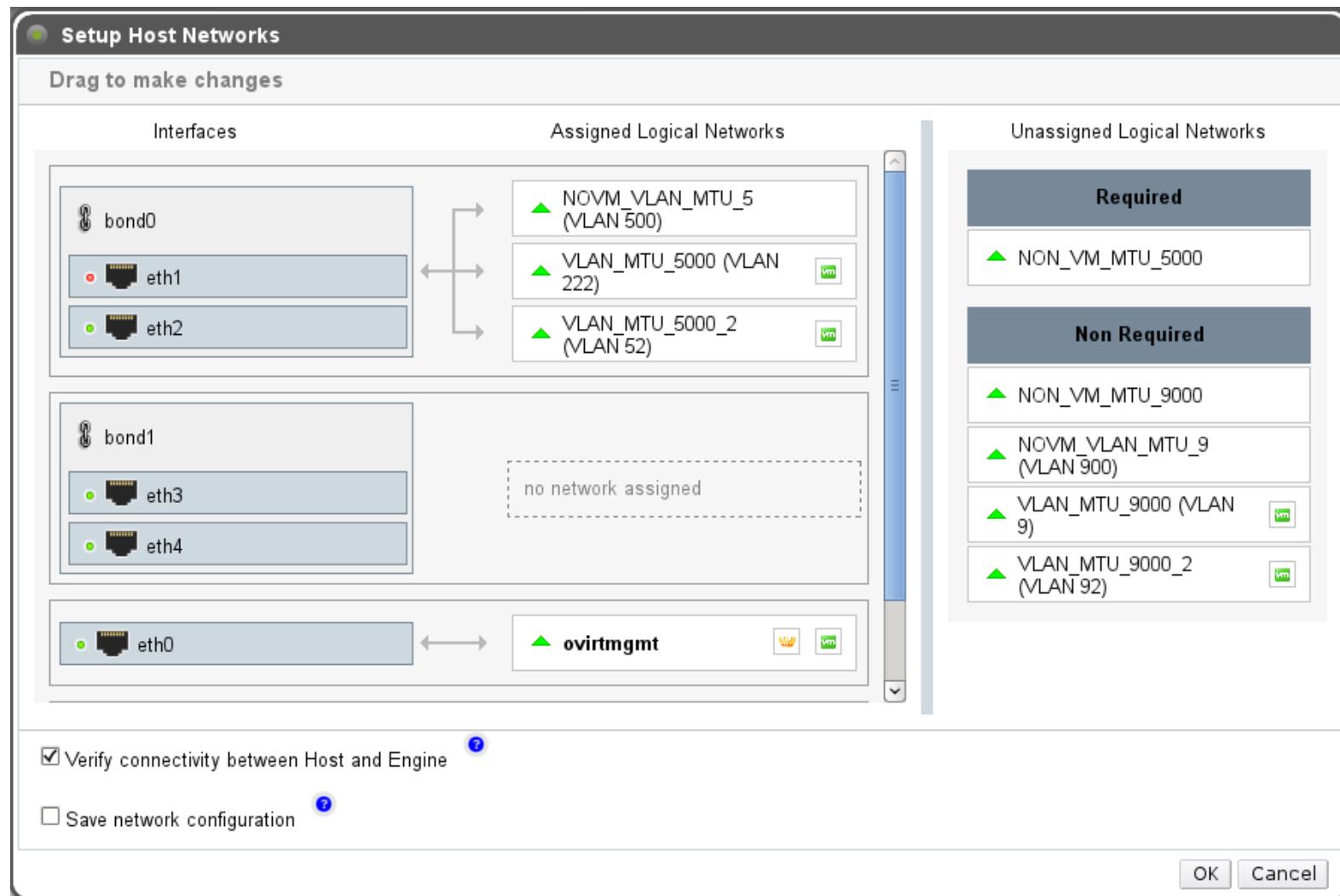
Bookmarks

Tags

Last Message: 2012-Jan-31, 23:18:41 User admin@internal logged in. 3 Alerts Events

Browser Firefox version 9 is currently not supported.

Setup Networks: Dialog



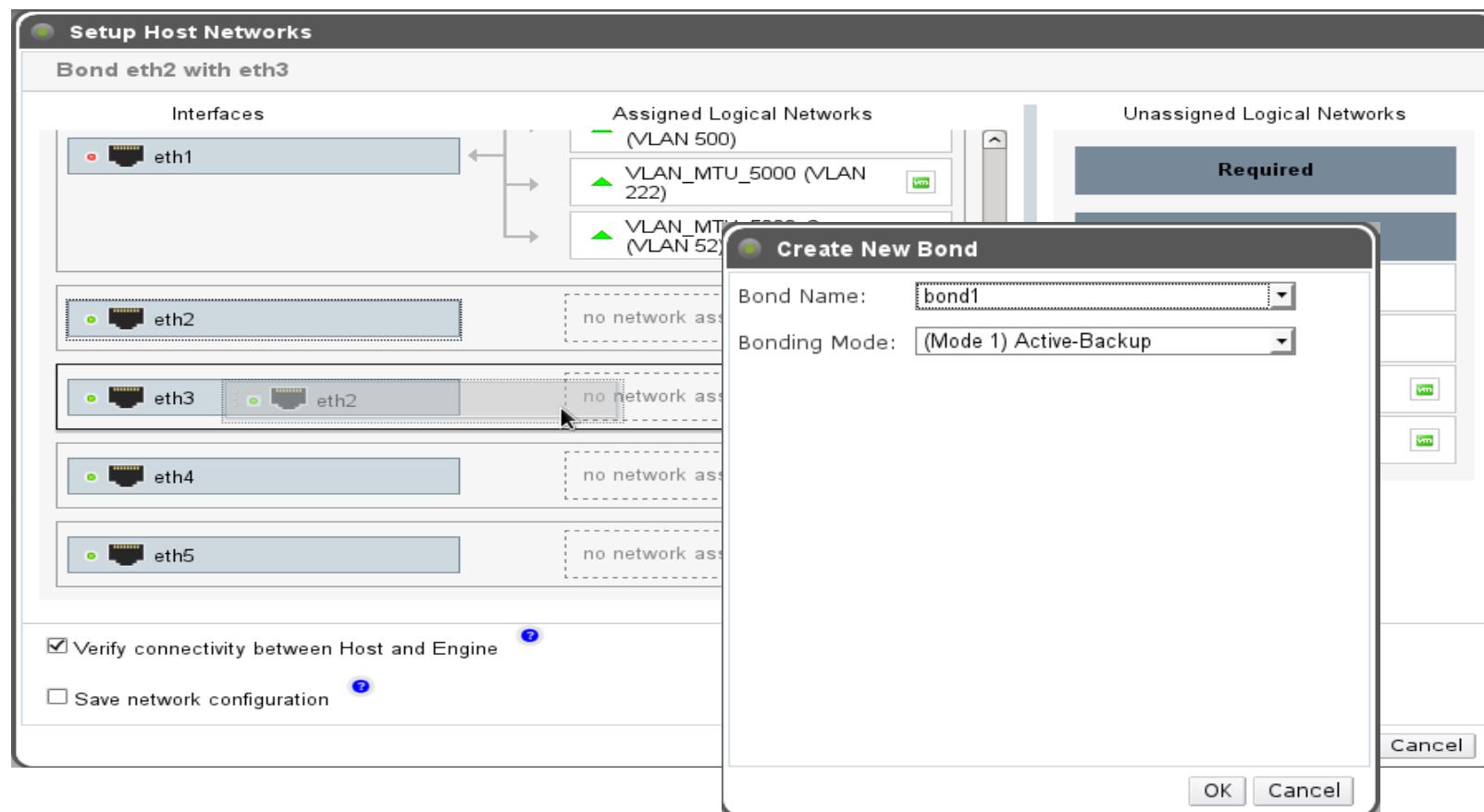
Setup Networks: Create Bond

- Drag an interface on top of another interface to bond the interfaces or to extend an existing bond



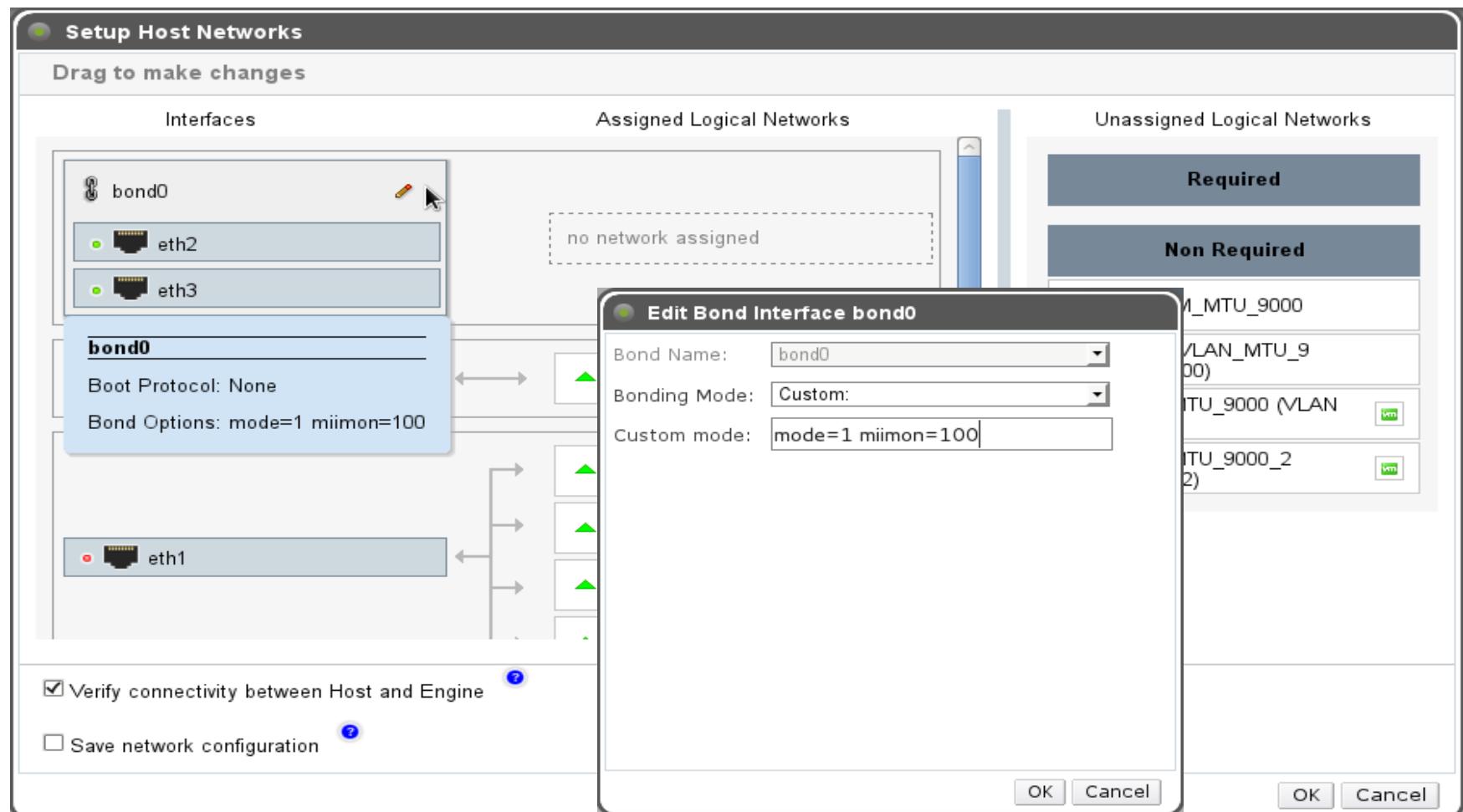
Setup Networks: Create Bond

- Drag an interface on top of another interface to bond the interfaces or to extend an existing bond



Setup Networks: Edit Bond

- Click the pencil icon to edit bond configuration



Setup Networks: Attach Network

- Drag a network from the unassigned networks list to the interface/bond to be attached



Configure Storage Once for Entire Cluster

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File Edit View History Bookmarks Tools Help

oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox

oVirt Enterprise Virtualization E... +

hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin/WebAdmin.html#storage-general

Google

ovirt Open Virtualization Manager Logged in user: admin@internal | Configure | Guide | About | Sign Out

Search: Storage

Data Centers Clusters

New Domain Import Domain Edit

Tree

Expand All Collapse All

System

- Default
- iSCSI-RC-DC
 - Storage
 - Templates
- Clusters
 - hateya-ovirt-rc-1
 - export_test
 - hateya-ovirt-rc-2
 - nfs-ovirt-rc-2
 - nfs-ovirt-rc-4
 - OvirtShareIso
- Hosts
 - nott-vds2.qa.lab.tlv.redhat.com
 - nott-vds3.qa.lab.tlv.redhat.com
- VMs
- NFS-RC-DC
 - Storage
 - Templates
- Clusters

General Data Center Vir

Targets > LUNs

LUNs > Targets

Edit Domain

Name: hateya-ovirt-rc-1

Domain Function / Storage Type: Data / iSCSI

Use Host: nott-vds2.qa.lab.tlv.redhat.com

LUN ID	Dev. Size	#path	Vendor ID	Product ID	Serial
1hateya-ovirt-rc11	75GB	0	IET	VIRTUAL-C SIET_VIRTUAL-DISK	
1hateya-ovirt-rc31	75GB	1	IET	VIRTUAL-C SIET_VIRTUAL-DISK	
1hateya-ovirt-rc41	75GB	1	IET	VIRTUAL-C SIET_VIRTUAL-DISK	

OK Cancel

Cross Data-Center Status Free Space

Status	Free Space
Active	326 GB
Active	18 GB
Active	20 GB
Inactive	357 GB
Unattached	< 1 GB
Active	29 GB

Events

Events

Extend with More LUNs as Needed

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Activities Firefox Fri 22:18 oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox

File Edit View History Bookmarks Tools Help

oVirt Enterprise Virtualization E... +

hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin/WebAdmin.html#storage-general

Google

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Search: Storage

Data Centers Clusters

New Domain Import Domain Edit

Tree

Expand All Collapse All

System

- Default
- iSCSI-RC-DC
 - Storage
 - Templates
- Clusters
 - hateya-ovirt-rc-1
 - Targets > LUNS
 - hateya-ovirt-rc-2
 - nfs-ovirt-rc-2
 - nfs-ovirt-rc-4
 - OvirtShareIso
- Hosts
 - nott-vds2.qa.lab.tlv.redhat.com
 - nott-vds3.qa.lab.tlv.redhat.com
- VMs
- NFS-RC-DC
 - Storage
 - Templates
- Clusters

General Data Center Vir

Name: hateya-ovirt-rc-1

Domain Function / Storage Type: Data / iSCSI

Use Host: nott-vds2.qa.lab.tlv.redhat.com

Discover Targets

Address: Port: 3260

User Authentication:
CHAP username: CHAP password:

Discover

Targets > LUNS

Target Name	Address	Port
hateya-ovirt-rc1	10.35.64.81	3260
hateya-ovirt-rc3	10.35.64.81	3260
hateya-ovirt-rc4	10.35.64.81	3260

OK Cancel

Cross Data-Center Status Free Space

Status	Free Space
Active	326 GB
Active	18 GB
Active	20 GB
Inactive	357 GB
Unattached	< 1 GB
Active	29 GB

Events

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3 Alerts Events

Browser Firefox version 9 is currently not supported.

Guide Me Dialogs



Manager Logged in user: admin@internal | Configure | Guide | About |

New Edit Remove Force Remove Guide Me

1-1

Name	Storage Type	Status	Compatibility Version	Description
dc-30	NFS	Non-Responsive	3.1	
dc-30-with-various-cluster	NFS	Non-Responsive	3.0	
dc-30-with-vlan-51	NFS	Uninitialized	3.0	
dc-31	NFS			
dc-31-vlan-ovirtmgmt	NFS			
Default	NFS			
demo-dc-32	NFS			
test-net-on-31-dc	NFS			
test-net-on-32-dc	NFS			
test-vlan	NFS			

New Data Center - Guide Me

There are still unconfigured entities:

- [Configure Cluster](#)
- [Configure Host](#)
- [Configure Storage](#)
- [Attach Storage](#)

Optional actions:

- [+ Attach ISO Library](#)

There should be at least one active Host in the Data Center

Configure Later

Storage Logical Networks Clusters Permissions

Attach Data Attach ISO Attach Export Detach Activate M

Domain Name	Domain Type	Status	Free Space	Used Space	Total Space
-------------	-------------	--------	------------	------------	-------------

Add Servers or Desktops

oVirt

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New Server New Desktop Edit Remove Run Once Migrate Cancel Migration Make Template Export Change CD Assign Tags Guide Me

New Server Virtual Machine

General

Name	Host
demo-vm	zeus02
demo-vm-2	
linux-vm	
nw-filter-vm-1	
nwfilter-vm-32-rhel-6	zeus02
rhel63-vm	zeus02
vm-1-dc-30-cluster-3	
vm-del-net-2	
vm-del-net-bug	
vm-tempalte-test-1	
vm-tempalte-test-2	
vm-tempalte-test-3	
vm-tempalte-test-4	
win2008	

Data Center: demo-dc-32
Host Cluster: cluster-32

Name:
Description:
Based on Template: Blank

Memory Size: 512 MB
Total Virtual CPUs: 1

Operating System: Unassigned

Advanced Parameters

General Network Interfaces

Name: nwfilter-vm
Description:
Template: Blank
Operating System: Red Hat Ent
Default Display Type: Spice
Priority: Low

OK Cancel

Status Uptime Logged-in User

Status	Uptime	Logged-in User
Up	2 days	
Down		
Down		
Up	2 h	
Up	2 h	
Down		

Origin: oVirt
Run On: Any Host in Cluster
Custom Properties: Not-Configured
Cluster Compatibility Version: 3.2

Even Windows via Sysprep

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New Server New Desktop Edit Remove Run Once Migrate Cancel Migration Make Template Export Change CD Assign Tags Guide Me

New Server Virtual Machine

General Initial Run General Time Zone (GMT-12:00) GMT-12:00

Console Host Domain

High Availability

Resource Allocation

Boot Options

Custom Properties

General Network Interfaces

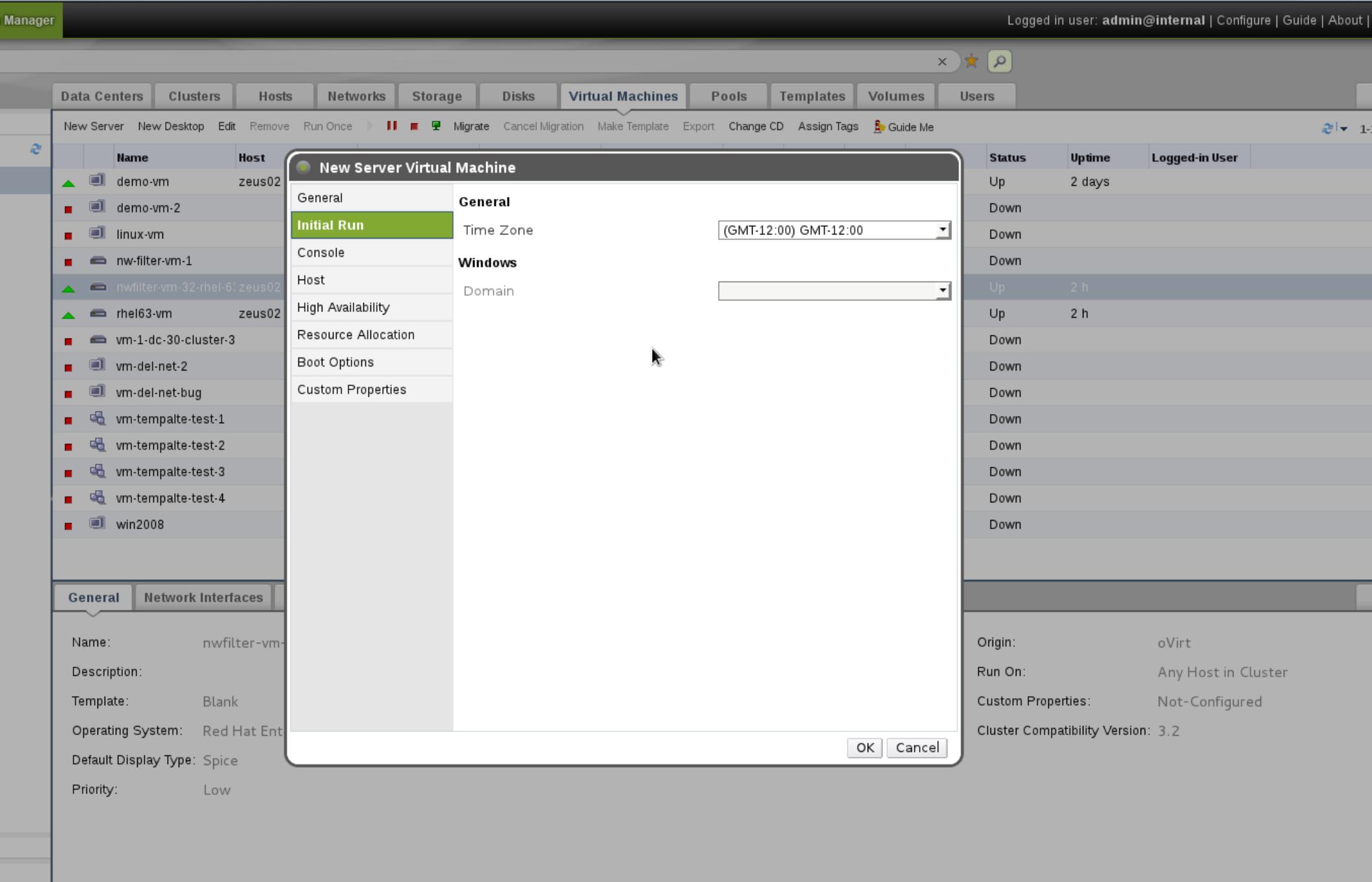
Name: nwfilter-vm- Description: Template: Blank Operating System: Red Hat Ent Default Display Type: Spice Priority: Low

Status Uptime Logged-in User

Up	2 days	
Down		
Down		
Up	2 h	
Up	2 h	
Down		

Origin: oVirt
Run On: Any Host in Cluster
Custom Properties: Not-Configured
Cluster Compatibility Version: 3.2

OK Cancel



Console Details (SPICE or VNC)

oVirt

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New Server New Desktop Edit Remove Run Once Migrate Cancel Migration Make Template Export Change CD Assign Tags Guide Me

New Server Virtual Machine

Name	Host
demo-vm	zeus02
demo-vm-2	
linux-vm	
nw-filter-vm-1	
nwfilter-vm-32-rhel-6'	zeus02
rhel63-vm	zeus02
vm-1-dc-30-cluster-3	
vm-del-net-2	
vm-del-net-bug	
vm-tempalte-test-1	
vm-tempalte-test-2	
vm-tempalte-test-3	
vm-tempalte-test-4	
win2008	

General **Protocol**: Spice

Initial Run **USB Support**: Disabled

Console Smartcard enabled

Host

High Availability

Resource Allocation

Boot Options

Custom Properties

General **Network Interfaces**

Name: nwfilter-vm-
Description:
Template: Blank
Operating System: Red Hat Ent
Default Display Type: Spice
Priority: Low

OK Cancel

Status	Uptime	Logged-in User
Up	2 days	
Down		
Down		
Up	2 h	
Up	2 h	
Down		

Origin: oVirt
Run On: Any Host in Cluster
Custom Properties: Not-Configured
Cluster Compatibility Version: 3.2

Host Aspects

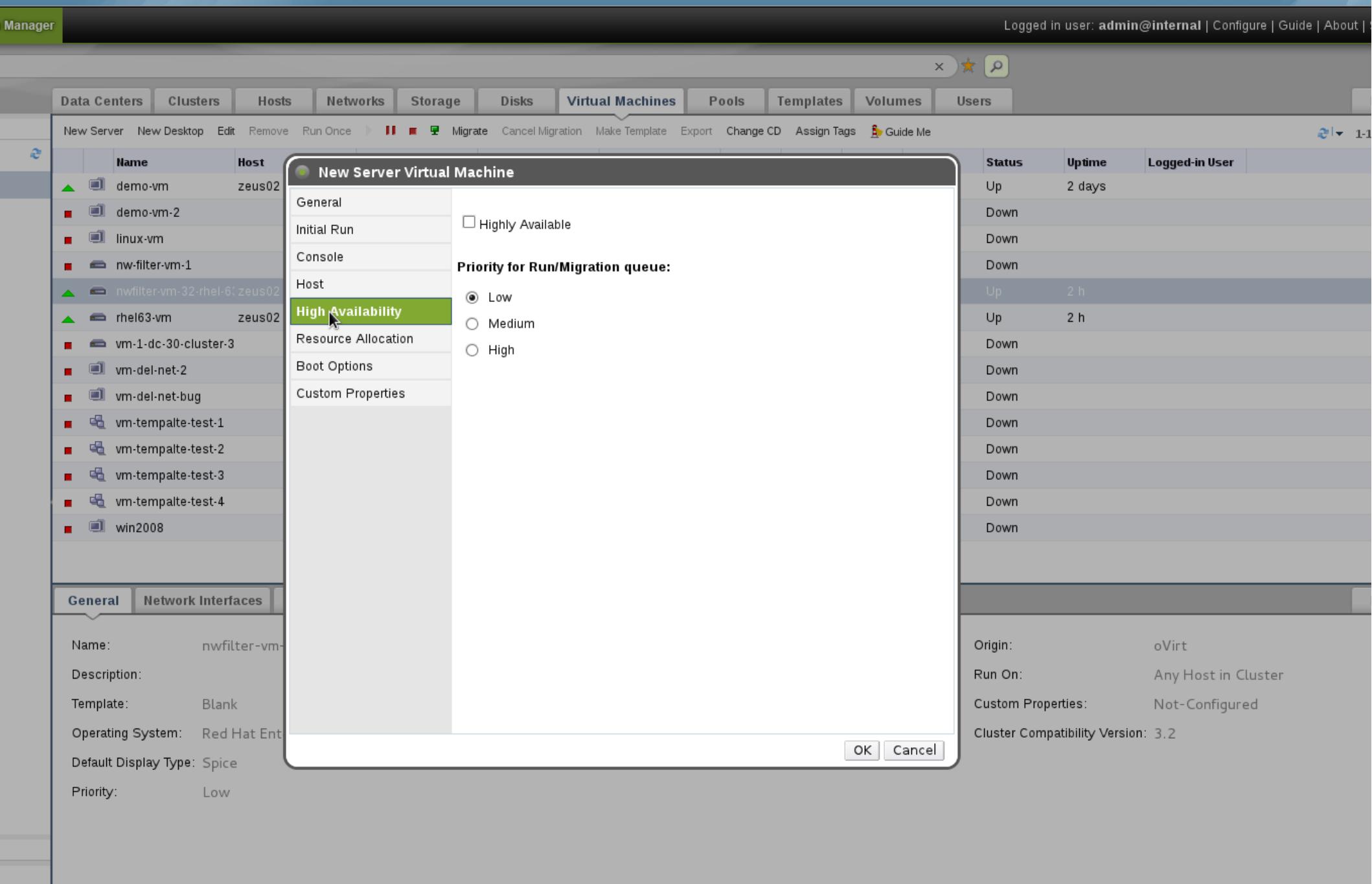
oVirt

Manage

Logged in user: **admin@internal** | [Configure](#) | [Guide](#) | [About](#) |

High Availability

oVirt



Control Allocated Resources (Disk, Memory)

Manager Logged in user: admin@internal | Configure | Guide | About |

New Server New Desktop Edit Remove Run Once Migrate Cancel Migration Make Template Export Change CD Assign Tags Guide Me

New Server Virtual Machine

Name	Host
demo-vm	zeus02
demo-vm-2	
linux-vm	
nw-filter-vm-1	
nwfilter-vm-32-rhel-6	zeus02
rhel63-vm	zeus02
vm-1-dc-30-cluster-3	
vm-del-net-2	
vm-del-net-bug	
vm-tempalte-test-1	
vm-tempalte-test-2	
vm-tempalte-test-3	
vm-tempalte-test-4	
win2008	

Memory Allocation:
Physical Memory Guaranteed

Storage Allocation: (Available only when a template is selected)
Template Provisioning Thin Clone

Resource Allocation

General

Name: nwfilter-vm- Description: Template: Blank Operating System: Red Hat Ent Default Display Type: Spice Priority: Low

Network Interfaces

Origin: oVirt Run On: Any Host in Cluster Custom Properties: Not-Configured Cluster Compatibility Version: 3.2

OK Cancel

Boot Devices

oVirt

Manager Logged in user: admin@internal | Configure | Guide | About |

New Server New Desktop Edit Remove Run Once Migrate Cancel Migration Make Template Export Change CD Assign Tags Guide Me

New Server Virtual Machine

Name	Host
demo-vm	zeus02
demo-vm-2	
linux-vm	
nw-filter-vm-1	
nwfilter-vm-32-rhel-6	zeus02
rhel63-vm	zeus02
vm-1-dc-30-cluster-3	
vm-del-net-2	
vm-del-net-bug	
vm-tempalte-test-1	
vm-tempalte-test-2	
vm-tempalte-test-3	
vm-tempalte-test-4	
win2008	

General

Boot Sequence:

First Device: Hard Disk

Second Device: [None]

Attach CD:

Linux Boot Options:

kernel path:

initrd path:

kernel parameters:

Custom Properties

OK **Cancel**

General **Network Interfaces**

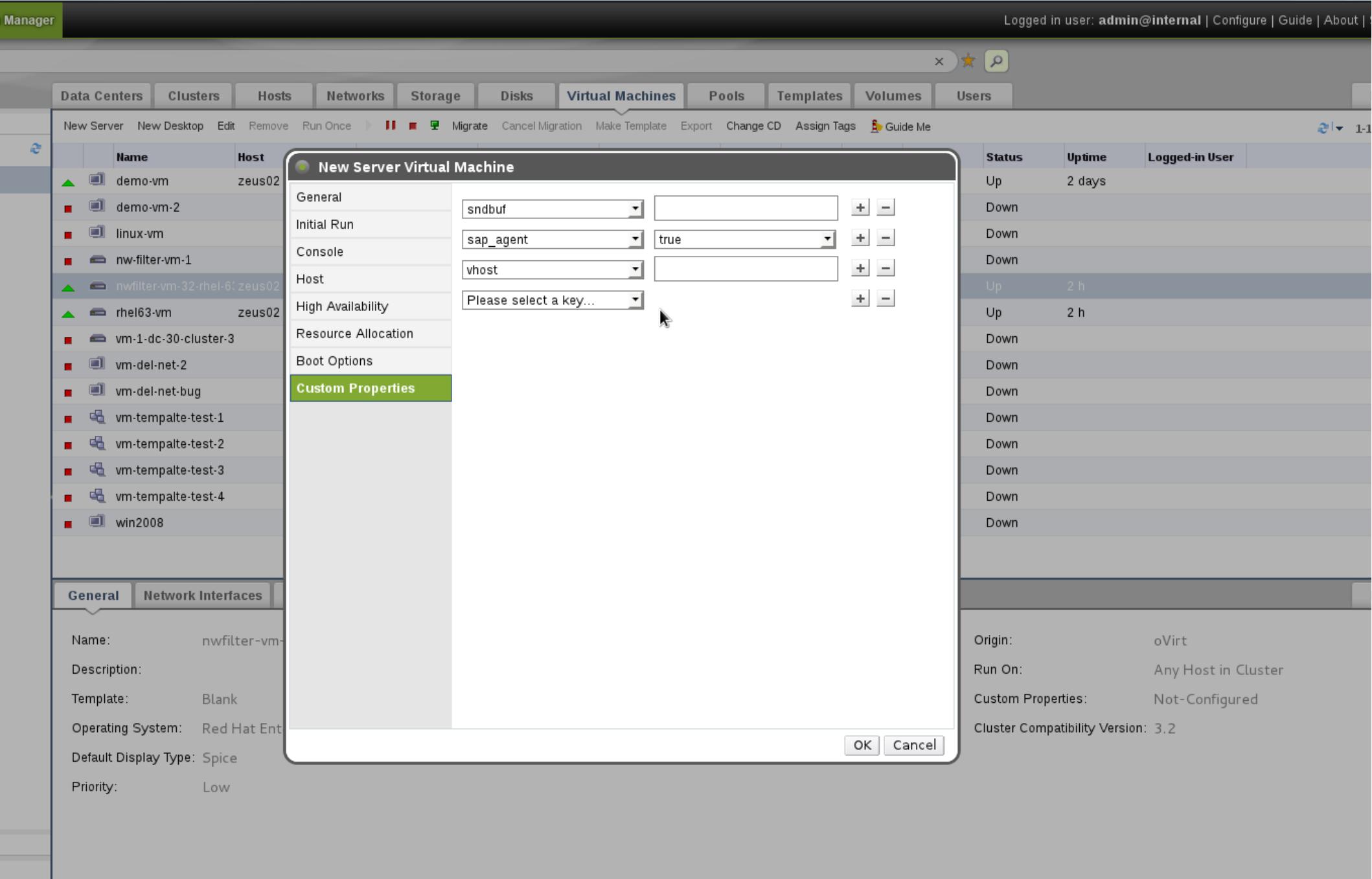
Name: nwfilter-vm-
Description:
Template: Blank
Operating System: Red Hat Ent
Default Display Type: Spice
Priority: Low

Status	Uptime	Logged-in User
Up	2 days	
Down		
Down		
Up	2 h	
Up	2 h	
Down		

Origin: oVirt
Run On: Any Host in Cluster
Custom Properties: Not-Configured
Cluster Compatibility Version: 3.2

Advanced Options via Custom Properties

The oVirt logo consists of the word "oVirt" in a bold, black, sans-serif font. The letter "o" has a small green dot positioned above and to the right of the top curve of the letter.



[Data Centers](#) [Clusters](#) [Hosts](#) [Networks](#) [Storage](#) [Disks](#) [Virtual Machines](#) [Pools](#) [Templates](#) [Volumes](#) [Users](#)

New Edit Remove

Name	Assigned VMs
rhel-pool-2-nics	0
sysprep-win-xp	0
vm-tempalte-test	4

Edit Pool

General

Data Center	<input type="button" value="Default"/>
Host Cluster	<input type="button" value="Default"/>
Name	vm-tempalte-test
Description	<input type="text"/>
Prestarted VMs <small>?</small>	0 out of 4 VMs in pool
Increase number of VMs in pool by	<input type="button" value="0 VMs"/>
Based on Template	<input type="button" value="test-vm-pool"/>
Memory Size	<input type="text" value="512 MB"/>
Total Virtual CPUs	<input type="text" value="1"/>
<small>Advanced Parameters</small>	
Operating System	<input type="button" value="Unassigned"/>

General **Virtual Machines** **Pools**

Name: vm-tempalte-test
 Description:
 Template: test-vm-pool
 Operating System: Unassigned
 Default Display Type: Spice

Resides on Storage Domain: data3-default

Assign Permissions to Objects by Roles

oVirt

Activities Firefox Fri 22:21 oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox Itamar Heim

File Edit View History Bookmarks Tools Help

oVirt Enterprise Virtualization E... + hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin.html#vms-application Google

oVirt Open Virtualization Manager Logged in user: admin@internal | Configure | Guide | About | Sign Out

Search: Vms: Events

Tree Data Center New Session

Expand All Collapse All System

Default iSCSI-RC-DC Storage Templates Clusters intel-cluster Hosts nott-vds2.qa.lab.tlv.r nott-vds3.qa.lab.tlv.r VMs NFS-RC-DC Storage Templates Clusters

General Installed

Configure

Roles Show All Roles Administrator Roles User Roles

New Edit Copy Remove

	Name	Description
🔒	UserRole	Standard User Role
🔒	PowerUserRole	User Role, allowed to create/manage Vms and Templates
🔒	UserVmManager	User Role, with permission for any operation on Vms
🔒	TemplateAdmin	Administrator Role, permission for all operations on a specific Template
🔒	UserTemplateBasedVm	User Role, with permissions only to use Templates
🔒	SuperUser	System Administrators with permission for all operations
🔒	ClusterAdmin	Administrator Role, permission for all the objects underneath a specific Cluster
🔒	DataCenterAdmin	Administrator Role, permission for all the objects underneath a specific Data Center
🔒	StorageAdmin	Administrator Role, permission for all operations on a specific Storage Domain
🔒	HostAdmin	Administrator Role, permission for all operations on a specific Host
🔒	NetworkAdmin	Administrator Role, permission for all operations on a specific Logical Network
🔒	VmPoolAdmin	Administrator Role, permission for all operations on a specific VM Pool

Events

Uptime Logged-in User

1 day 1 day

Events

Close

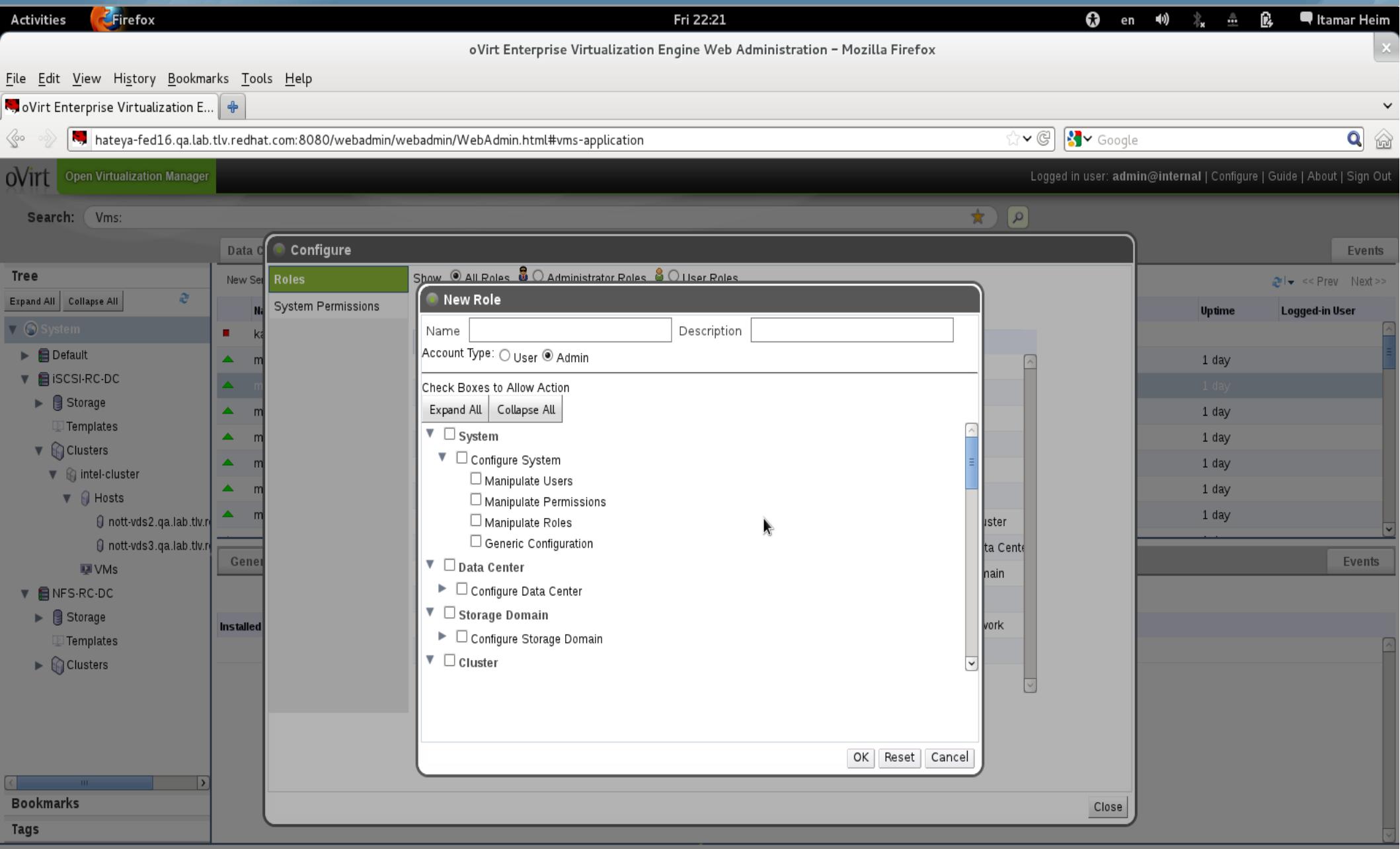
Bookmarks Tags

Last Message: 2012-Jan-31, 23:18:41 User admin@internal logged in. 3 Alerts Events

Browser Firefox version 9 is currently not supported.

Define Your Own Roles

oVirt



Gluster Management

oVirt

File Edit View History Bookmarks Tools Help

oVirt Engine Web Administrati... +

127.0.1.1:8080/webadmin/webadmin.html#volumes

oVirt Open Virtualization Manager

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

Search: Volumes:

Clusters Hosts Volumes Users

Create Volume Remove Start Stop

Tree

Expand All Collapse All

System

Clusters

Default

Hosts

data

Hosts

server1

server2

Volumes

Events

Create Volume

Name	Volume Cluster	Transport Types	Status
data	data	TCP	

Volume Cluster: data

Name: data

Type: Distribute

Transport Type: TCP

Bricks: Add Bricks (0 bricks selected)

Access Protocols:

- Gluster:
- NFS:
- CIFS:

Allow Access From: *

(Comma separated list of IP addresses/hostnames)

OK Cancel

Bookmarks

Tags

Last Message: 2012-Aug-22, 16:55:53 Warning, Low disk space. Host server2 has less than 1000 MB of free space left on: /var/run/vdsm/.

0 Alerts Events Tasks (0)

Virtualization Management the oVirt way

Create Volume – Add Bricks

Screenshot of the oVirt Engine Web Administration interface showing the "Add Bricks" dialog for creating a Gluster volume.

The dialog is titled "Add Bricks" and shows the following configuration:

- Volume Type:** Distribute
- Bricks:**
 - Server:** 10.16.159.18
 - Brick Directory:** /export/data
- Brick Details:**

Server	Brick Directory
10.16.159.228	/export/data
10.16.159.18	/export/data
- Buttons:** Move Up, Move Down, Remove, Remove All, OK, Cancel

The background shows the oVirt interface with the "Volumes" tab selected. The tree view on the left shows the system structure, including Clusters, Hosts, and Volumes. A message at the bottom indicates that the creation of a Gluster Volume data failed.

User Portal

oVirt

The screenshot shows a Firefox browser window displaying the oVirt User Portal. The URL is <https://hateya-fed16.qa.lab.tlv.redhat.com:8443/UserPortal/org.ovirt.engine.ui.userportal.UserPortal.html>. The interface includes a top bar with activities, file menu, and system status. The main area shows four virtual machines: 'kaka' (Machine is Down), 'myVm1' (Machine is Ready), 'repro' (Machine is Down), and 'up-vm2' (Machine is Down). A detailed configuration panel on the right is open for 'kaka', showing:

- Operating System :** Unassigned
- Defined Memory :** 1GB
- Number of Cores :** 1 (1 Socket(s), 1 Core(s) per Socket)
- Drives :** Disk 1: 10GB
- Console :** Spice (Edit)

Self Provisioning Portal

oVirt

Activities Firefox Sat 11:27 Itamar Heim

File Edit View History Bookmarks Tools Help

oVirt User Portal Mozilla Firefox

oVirt User Portal redhat.com https://hateya-fed16.qa.lab.tlv.redhat.com:8443/UserPortal/org.ovirt.engine.ui.userportal.UserPortal/UserPortal.html Google

oVirt User Portal Basic Extended

New Server | New Desktop | Edit | Remove | Run Once | Change CD | Make Template

Virtual Machines

Icon	Name	Actions
	kaka	
	myVm1	
	repro	
	up-vm2	

Templates

Resources

General Network Interfaces Virtual Disks Snapshots Permissions Events Applications Monitor

Name: kaka	Defined Memory: 1024 MB	Origin: RHEV
Description: fed16	Physical Memory Guaranteed: 512 MB	Run On: Any Host in Cluster
Template: fed16	Number of CPU Cores: 1 (1 Socket(s), 1 Core(s) per Socket)	Custom Properties: Not-Configured
Operating System: Unassigned	Highly Available: false	
Default Display Type: Spice	USB Policy: Enabled	
Priority: Low	Resides on Storage Domain: hateya-ovirt-rc-1	

User Resource View

oVirt

Activities Firefox Sat 11:27 oVirt User Portal - Mozilla Firefox Itamar Heim

File Edit View History Bookmarks Tools Help

oVirt User Portal redhat.com https://hateya-fed16.qa.lab.tlv.redhat.com:8443/UserPortal/org.ovirt.engine.ui.userportal.UserPortal.html Google

oVirt User Portal Basic Extended

Virtual Machines:
Defined VMs: 4
Running VMs: 1

Virtual CPUs:
Defined vCPUs: 4
Used vCPUs: 1

Memory:
Defined Memory: 3328MB
Memory Usage: 256MB

Storage:
Total Size: 70GB
Number of Snapshots: 5
Total Size of Snapshots: 15GB

Virtual Machine	Disk	Virtual Size	Actual Size	Snapshots
kaka	Disk1	10GB	1GB	1
myVm1	Disk1	40GB	3GB	1
repro	Disk1	10GB	10GB	1
up-vm2	Disk1	10GB	1GB	1

oVirt Reports

oVirt

oVirt Reports



ovirt-admin | Log Out

View ▾ Manage ▾

Folders

- root
- Organizations
- oVirt Reports
- Reports
 - Executive
 - Inventory
 - Service Level
 - Trend
- Resources
- temp

Themes

default

oVirt-reports-theme

Repository

Sort By: Name | Modified Date

Run Edit Open Copy Cut Paste Delete

Active Virtual Machines by OS (BR18)
/organizations/ovirtreports/Reports/Executive/active_vms_by_os_br18

The report contains comparative measurements number of running virtual machines and OS usage in for a selected cluster and a selected virtual machine's type within the requested period.

Report

October 18

Cluster Capacity Vs Usage (BR19)
/organizations/ovirtreports/Reports/Executive/cluster_capacity_vs_usage_br19

This report contains charts displaying host's resources usage measurements (CPU core; physical Memory) and charts displaying virtual machine's resources usage measurements (virtual machine's total vCPU; Virtual Memory size) for a selected cluster.

Report

October 18

Host OS Break Down (BR22)
/organizations/ovirtreports/Reports/Executive/host_os_break_down_BR22

This report contains a table and a chart displaying the number of hosts for each OS version for a selected cluster within a requested period.

Report

October 18

Summary of Host Usage Resources (BR17)
/organizations/ovirtreports/Reports/Executive/summary_of_host_usage_resources_br17

The report contains a scattered chart of CPU and memory usage data within a requested period and for a selected cluster.

Report

October 18

oVirt Reports

oVirt



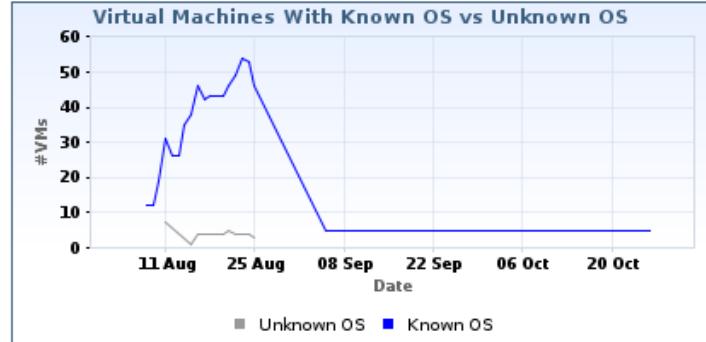
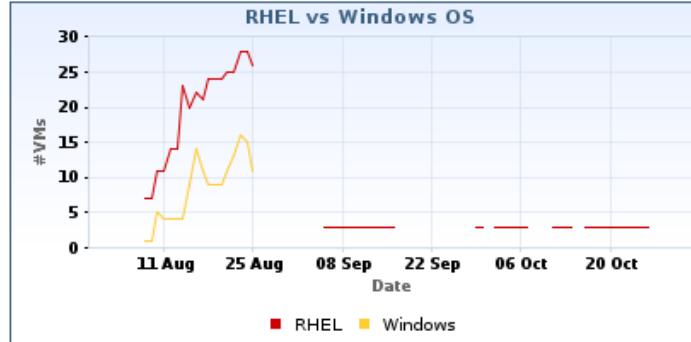
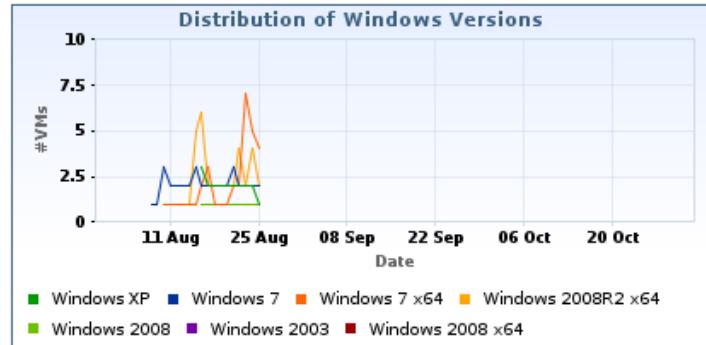
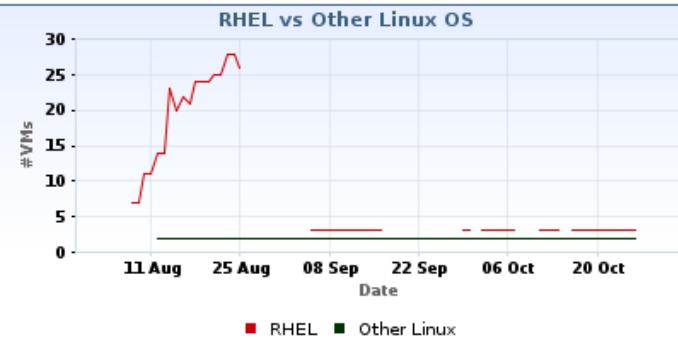
oVirt Reports

Oct 31, 2011

Active Virtual Machines by OS in Clusters of Data Center Default

Criteria: Datacenter: Default
Cluster: All

Date Range: 2011-08-01 - 2011-10-31 **VM Type:** All
Period: Quarterly **Show Deleted Virtual Machines:** Yes



Input Controls

* Show Deleted Entities?: Yes

* Data Center: RHEVM-3

* Cluster: RHEVM-3

* VM Type: Server

* Period Range: Monthly

* Select Month: August 2011

* Start Date: 2011-08-01

* End Date: 2011-08-31

Buttons: Apply, OK, Reset, Cancel

- The guest agent provides additional information to oVirt Engine, such as guest memory usage, guest ip address, installed applications and sso.
- Python code, available for both linux and windows guests
- Communication is done over virtio-serial
- SSO for windows is based on a gina module for XP and a credential provider for windows 7
- SSO for Linux is based on a PAM module with support for both KDE and Gnome

RESTful Web Service

- Stands for Representational State Transfer
- Modeling entity actions around HTTP verbs
 - GET
 - PUT
 - POST
 - DELETE
- Still uses 'actions' for some state changes
- Self describes – entity navigation and actions

REST API

oVirt

Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://10.35.1.171/rhevm-api

http://10.35.1.171/rhevm-api

```
-<api>
<link rel="capabilities" href="/rhevm-api/capabilities"/>
<link rel="clusters" href="/rhevm-api/clusters"/>
<link rel="clusters/search" href="/rhevm-api/clusters?search={query}"/>
<link rel="datacenters" href="/rhevm-api/datacenters"/>
<link rel="datacenters/search" href="/rhevm-api/datacenters?search={query}"/>
<link rel="events" href="/rhevm-api/events"/>
<link rel="events/search" href="/rhevm-api/events?search={query}"/>
<link rel="hosts" href="/rhevm-api/hosts"/>
<link rel="hosts/search" href="/rhevm-api/hosts?search={query}"/>
<link rel="networks" href="/rhevm-api/networks"/>
<link rel="roles" href="/rhevm-api/roles"/>
<link rel="storagedomains" href="/rhevm-api/storagedomains"/>
<link rel="storagedomains/search" href="/rhevm-api/storagedomains?search={query}"/>
<link rel="tags" href="/rhevm-api/tags"/>
<link rel="templates" href="/rhevm-api/templates"/>
<link rel="templates/search" href="/rhevm-api/templates?search={query}"/>
<link rel="users" href="/rhevm-api/users"/>
<link rel="groups" href="/rhevm-api/groups"/>
<link rel="domains" href="/rhevm-api/domains"/>
<link rel="vmpools" href="/rhevm-api/vmpools"/>
<link rel="vmpools/search" href="/rhevm-api/vmpools?search={query}"/>
<link rel="vms" href="/rhevm-api/vms"/>
<link rel="vms/search" href="/rhevm-api/vms?search={query}"/>
<system_version revision="428" build="0" minor="6" major="4"/>
-<summary>
-<vms>
  <total>22</total>
  <active>5</active>
</vms>
-<hosts>
  <total>6</total>
  <active>5</active>
</hosts>
-<users>
  <total>2</total>
</users>
```

Done

Hosts Collection



Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://10.35.1.171/rhevm-api/hosts

http://10.35.1.171/rhevm-api/hosts +

```
--<hosts>
- <host id="15896dce-edd0-415c-a524-c9b02f278895" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895">
  <name>nari11</name>
  -<actions>
    <link rel="install" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/install"/>
    <link rel="activate" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/activate"/>
    <link rel="fence" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/fence"/>
    <link rel="deactivate" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/deactivate"/>
    <link rel="approve" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/approve"/>
    <link rel="iscsilogin" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/iscsilogin"/>
    <link rel="iscsidiscover" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/iscsidiscover"/>
    <link rel="commitnetconfig" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/commitnetconfig"/>
  </actions>
  <link rel="storage" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/storage"/>
  <link rel="nics" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics"/> // This link is circled in red
  <link rel="tags" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/tags"/>
  <link rel="permissions" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/permissions"/>
  <link rel="statistics" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/statistics"/>
  <address>nari11.eng.lab.tlv.redhat.com</address>
  <status>UP</status>
  <cluster id="4a5baf0e-7c6d-4d75-9aba-d60f3a188d0b" href="/rhevm-api/clusters/4a5baf0e-7c6d-4d75-9aba-d60f3a188d0b"/>
  <port>54321</port>
  <storage_manager>false</storage_manager>
  -<power_management>
    <enabled>false</enabled>
    <options/>
  </power_management>
  -<ksm>
    <enabled>false</enabled>
  </ksm>
  -<transparent_hugepages>
    <enabled>true</enabled>
  </transparent_hugepages>
  -<iscsi>
    <initiator>iqn.1994-05.com.redhat:a7afc41a35b0</initiator>
  </iscsi>
</host>
```

Done

Host networks collection



Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://10.35.1.171/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics

http://10.35.1.1...b02f278895/nics +

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<-<host_nics>
-<host_nic id="dbb39d06-3aef-468c-83e6-88eae0a3f346" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/dbb39d06-3aef-468c-83e6-88eae0a3f346">
  <name>eth0</name>
  --<actions>
    <link rel="attach" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/dbb39d06-3aef-468c-83e6-88eae0a3f346/attach"/>
    <link rel="detach" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/dbb39d06-3aef-468c-83e6-88eae0a3f346/detach"/>
  --<actions>
    <link rel="statistics" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/dbb39d06-3aef-468c-83e6-88eae0a3f346/statistics"/>
  <host id="15896dce-edd0-415c-a524-c9b02f278895" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895"/>
  --<network>
    <name>rhevm</name>
  --<network>
    <mac address="78:E7:D1:E4:8E:92"/>
    <ip netmask="255.255.252.0" address="10.35.16.151"/>
  --</host_nic>
-<host_nic id="0d98b08c-9b42-45a4-a226-b7dd3f0854cf" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/0d98b08c-9b42-45a4-a226-b7dd3f0854cf">
  <name>eth1</name>
  --<actions>
    <link rel="attach" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/0d98b08c-9b42-45a4-a226-b7dd3f0854cf/attach"/>
    <link rel="detach" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/0d98b08c-9b42-45a4-a226-b7dd3f0854cf/detach"/>
  --<actions>
    <link rel="statistics" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/0d98b08c-9b42-45a4-a226-b7dd3f0854cf/statistics"/>
  <host id="15896dce-edd0-415c-a524-c9b02f278895" href="/rhevm-api/hosts/15896dce-edd0-415c-a524-c9b02f278895"/>
  <mac address="78:E7:D1:E4:8E:93"/>
  <ip netmask="" address="" />
  --</host_nic>
-</host_nics>
```

Done

Python SDK



- Creating the proxy
- Listing all collections

```
#create proxy
api = API(url='http://localhost:8080', username='user@domain', password='password')

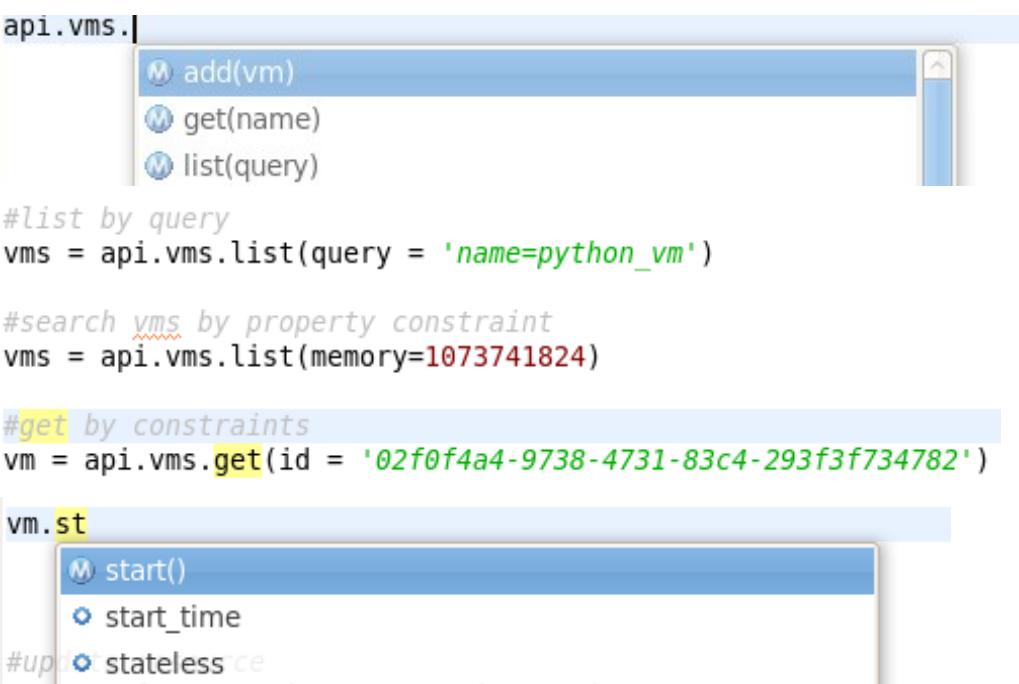
api.
```



- Listing collection's methods.

- Querying collection with oVirt search engine.
- Querying collection by custom constraint.
- Querying collection for specific resource.
- Accessing resource methods and properties.

```
api.vms.|  
        M add(vm)  
        M get(name)  
        M list(query)  
  
#list by query  
vms = api.vms.list(query = 'name=python_vm')  
  
#search vms by property constraint  
vms = api.vms.list(memory=1073741824)  
  
#get by constraints  
vm = api.vms.get(id = '02f0f4a4-9738-4731-83c4-293f3f734782')  
  
vm.st|  
        M start()  
        O start_time  
        up| O stateless
```



oVirt CLI



AVAILABLE COMMANDS

* action	execute an action on an object
* cd	change directory
* clear	clear the screen
* connect	connect to a RHEV manager
* console	open a console to a VM
* create	create a new object
* delete	delete an object
* disconnect	disconnect from RHEV manager
* exit	quit this interactive terminal
* getkey	dump private ssh key
* help	show help
* list	list or search objects
* ping	test the connection
* pwd	print working directory
* save	save configuration variables
* set	set a configuration variable
* show	show one object
* status	show status
* update	update an object

(oVirt cli) > help connect

USAGE

```
connect  
connect <url> <username> <password>
```

DESCRIPTION

Connect to a RHEV manager. This command has two forms. In the first form, no arguments are provided, and the connection details are read from their respective configuration variables (see 'show'). In the second form, the connection details are provided as arguments.

The arguments are:

- | | |
|------------|--|
| * url | - The URL to connect to. |
| * username | - The user to connect as. Important: this needs to be in the user@domain format. |
| * password | - The password to use. |

CLI - Smart Auto Completion

```
[oVirt shell (connected)]#  
EOF      connect    create    disconnect  exit      list      shell      status  
action    console    delete    echo       help      ping      show      update  
[oVirt shell (connected)]#  
[oVirt shell (connected)]#  
[oVirt shell (connected)]# create  
cdrom      datacenter   group     network     permission   role      storagedomain  template    vm  
cluster    disk        host      nic        permit      snapshot   tag       user      vmpool  
[oVirt shell (connected)]#  
[oVirt shell (connected)]#  
[oVirt shell (connected)]# create vm  
cluster-id           high_availability-enabled  
cluster-name         high_availability-priority  
cpu-topology-cores  memory  
cpu-topology-sockets name  
custom_properties-custom_property--LIST origin  
description          os-boot-dev  
display-monitors    os-cmdline  
display-type         os-initRd  
domain-name          os-kernel  
os-type  
placement_policy-affinity  
stateless  
template-id  
template-name  
timezone  
type  
usb-enabled  
[oVirt shell (connected)]#  
[oVirt shell (connected)]#  
[oVirt shell (connected)]#  
[oVirt shell (connected)]#  
[oVirt shell (connected)]# create nic  
host  vm
```

CLI - Smart Help



```
[oVirt shell (connected)]# help create host
```

```
create <type> [base identifiers] [attribute options]
```

DESCRIPTION

Create a new object with type host. See 'help create' for generic help on creating objects.

ATTRIBUTE OPTIONS

The following options are available for objects with type host:

```
* --name: string  
* --address: string  
* --root_password: string  
* --cluster-id: string  
* [--port: int]  
* [--storage_manager-priority: int]  
* [--power_management-type: string]  
* [--power_management-enabled: boolean]  
* [--power_management-address: string]  
* [--power_management-user_name: string]  
* [--power_management-password: string]  
* [--power_management-options-option--LIST: {name:string,value:string}]
```

RETURN VALUES

```
* 002 (COMMAND_ERROR)  
* 003 (INTERRUPTED)  
* 011 (NOT_FOUND)  
* 000 (OK)  
* 010 (REMOTE_ERROR)  
* 001 (SYNTAX_ERROR)  
* 004 (UNKNOWN_ERROR)
```

```
[oVirt shell (connected)]# help create vm
```

```
create <type> [base identifiers] [attribute options]
```

DESCRIPTION

Create a new object with type vm. See 'help create' for generic help on creating objects.

ATTRIBUTE OPTIONS

The following options are available for objects with type vm:

```
* --name: string  
* --template-id|name: string  
* --cluster-id|name: string  
* [--timezone: string]  
* [--os-boot-dev: string]  
* [--custom_properties-custom_property--LIST: {name:string,value:string}]  
* [--os-type: string]  
* [--usb-enabled: boolean]  
* [--type: string]  
* [--os-initRd: string]  
* [--display-monitors: int]  
* [--display-type: string]  
* [--os-cmdline: string]  
* [--cpu-topology-cores: int]  
* [--memory: long]  
* [--high_availability-priority: int]  
* [--high_availability-enabled: boolean]  
* [--domain-name: string]  
* [--description: string]  
* [--stateless: boolean]  
* [--cpu-topology-sockets: int]  
* [--placement_policy-affinity: string]
```

CLI – Create

USAGE

```
create <type> [base identifiers] [attribute options]
```

DESCRIPTION

Create a new object with type vm. See 'help create' for generic help on creating objects.

ATTRIBUTE OPTIONS

The following options are available for objects with type vm:

```
* --name: string
* --template-id|name: string
* --cluster-id|name: string
* [--timezone: string]
* [--os-boot-dev: string]
* [--custom_properties-custom_property--LIST: {name:string,value:string}]
* [--os-type: string]
* [--usb-enabled: boolean]
* [--type: string]
* [--os-initRd: string]
* [--display-monitors: int]
* [--display-type: string]
* [--os-cmdline: string]
* [--cpu-topology-cores: int]
* [--memory: long]
* [--high_availability-priority: int]
* [--high_availability-enabled: boolean]
* [--domain-name: string]
* [--description: string]
* [--stateless: boolean]
* [--cpu-topology-sockets: int]
* [--placement_policy-affinity: string]
```

:■

CLI – Update

```
[oVirt shell (connected)]# update vm iscsi_desktop --description myvm  
  
id : f4a51ae1-4f31-45ee-ab6d-d5965e3bcf71  
name : iscsi_desktop  
description : myvm  
cluster-id : e8861726-0b88-11e1-bd8c-27fb0a7aaa76  
cpu-topology-cores : 1  
cpu-topology-sockets : 1  
creation_time : 2012-01-04T13:27:05.266+02:00  
display-monitors : 4  
display-type : spice  
high_availability-enabled : True  
high_availability-priority: 7  
memory : 1073741824  
memory_policy-guaranteed : 1073741824  
origin : rhev  
os-boot-dev : hd  
os-type : unassigned  
placement_policy-affinity : migratable  
start_time : 2012-02-27T15:40:57.480Z  
stateless : False  
status-state : down  
template-id : 9c42b69e-daa3-48d7-bf97-779603892f15  
type : desktop  
usb-enabled : True
```



CLI – Delete

```
(oVirt cli) > list clusters
```

id	name	description
80eed02c-ac7d-11e0-b702-0bf21e6d33af	b	
7073b1ac-ef46-11e0-aa7c-d3e6f6b5731d	bb	
82b1c018-ac7d-11e0-ac42-5b8d8dc7c92	c	
63bc09b0-8b8b-11e0-bdc2-4356942887b3	Default_iscsi	
99408929-82cf-4dc7-a532-9d998063fa95	Default_nfs	The default server cluster
ffb2d112-8cf0-11e0-b34b-7f61455e6a71	Test_iscsi	
ada1672a-8cf1-11e0-9d3e-b75c5a33ec19	Test_nfs	
ad9bd996-a893-11e0-b174-e3232e67a091	Test_vlans	

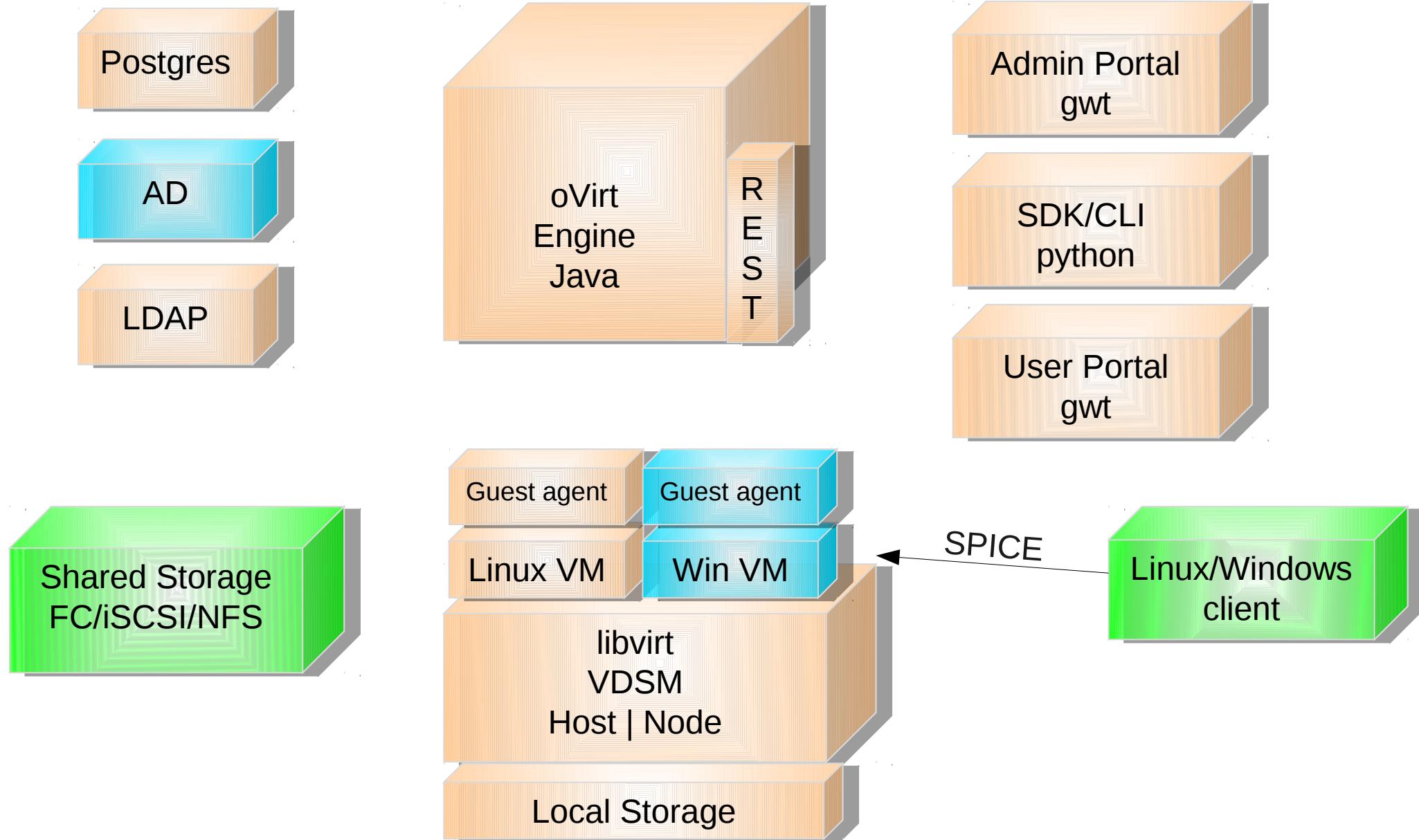
```
(oVirt cli) > delete cluster bb
```

```
(oVirt cli) > list clusters
```

id	name	description
80eed02c-ac7d-11e0-b702-0bf21e6d33af	b	
82b1c018-ac7d-11e0-ac42-5b8d8dc7c92	c	
63bc09b0-8b8b-11e0-bdc2-4356942887b3	Default_iscsi	
99408929-82cf-4dc7-a532-9d998063fa95	Default_nfs	The default server cluster
ffb2d112-8cf0-11e0-b34b-7f61455e6a71	Test_iscsi	
ada1672a-8cf1-11e0-9d3e-b75c5a33ec19	Test_nfs	
ad9bd996-a893-11e0-b174-e3232e67a091	Test_vlans	

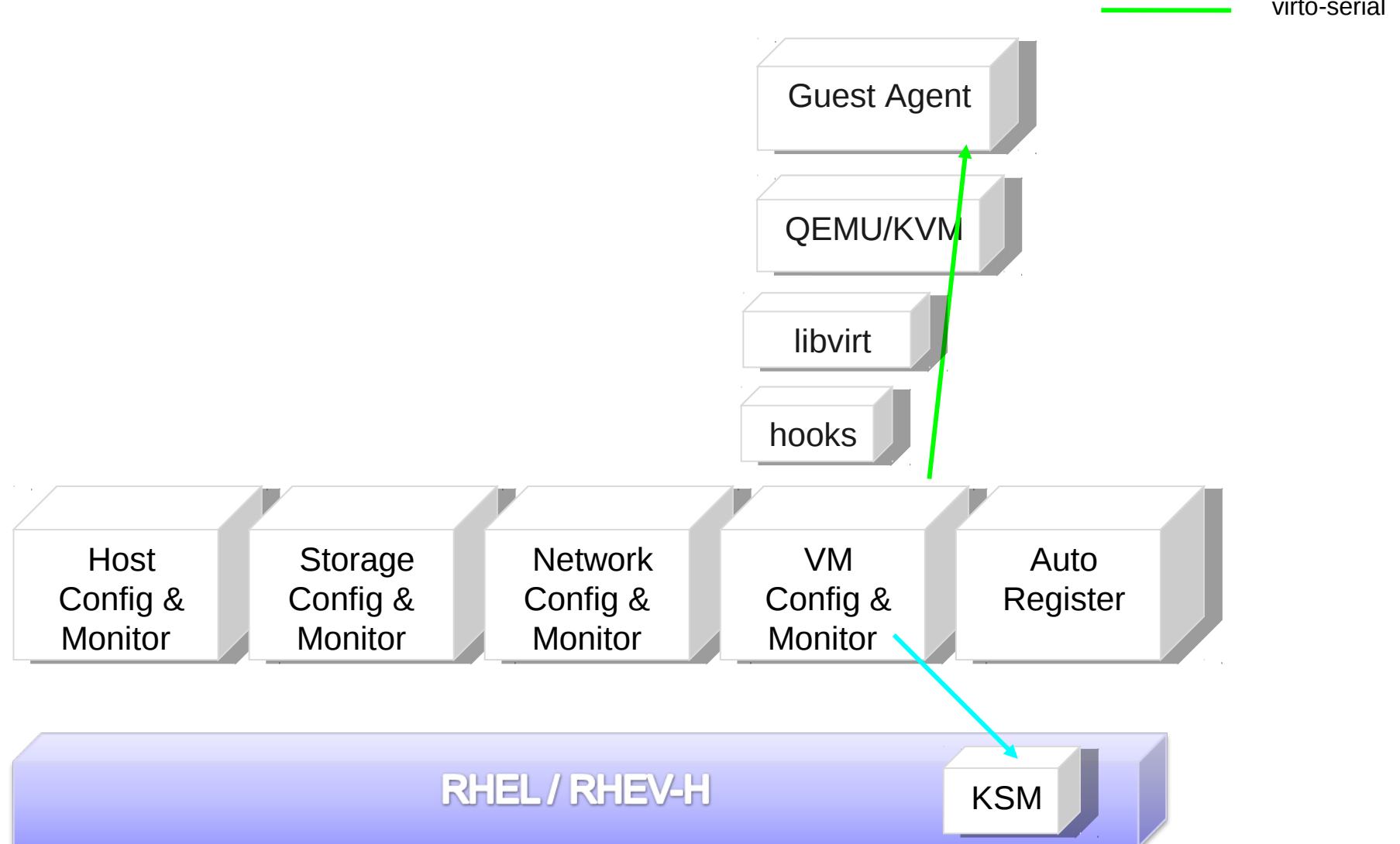
oVirt High Level Architecture

oVirt



oVirt Host Agent - VDSM

oVirt

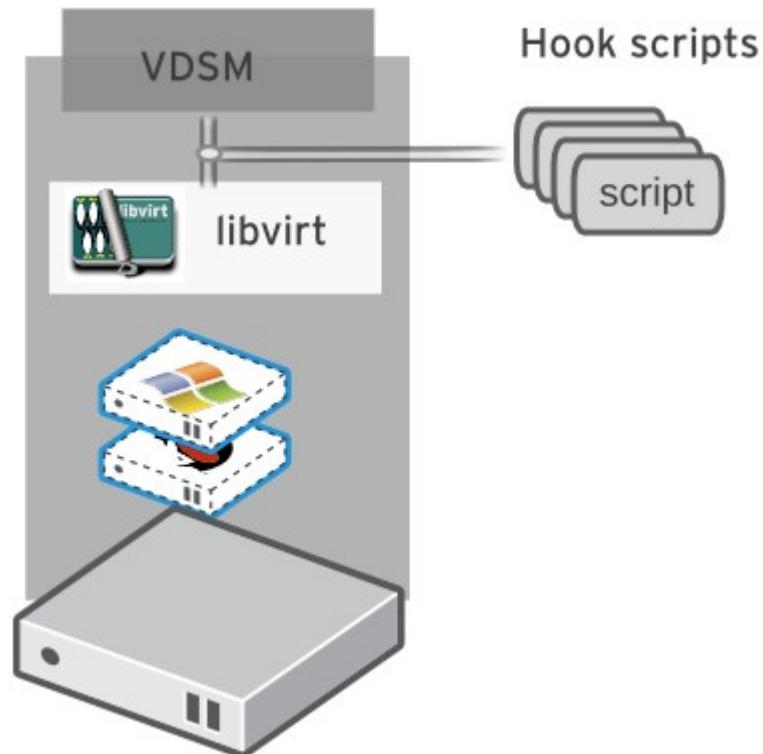


Hooks



- “Hook” mechanism for customization
 - Allows administrator to define scripts to modify VM operation
 - eg. Extend or modify VM configuration

Hooks



Hooks

- Hook scripts are called at specific VM lifecycle events
 - VDSM (management agent) Start
 - Before VM start
 - After VM start
 - Before VM migration in/out
 - After VM migration in/out
 - Before and After VM Pause
 - Before and After VM Continue
 - Before and After VM Hibernate
 - Before and After VM resume from hibernate
 - Before and After VM set ticket New in 3.1
 - On VM stop
 - On VDSM Stop
- Hooks can modify a virtual machines XML definition before VM start
- Hooks can run system commands – eg. Apply firewall rule to VM

Hooks

oVirt

Manager Logged in user: admin@internal | Configure | Guide | About |

New Server New Desktop Edit Remove Run Once Migrate Cancel Migration Make Template Export Change CD Assign Tags Guide Me

New Server Virtual Machine

Name	Host
demo-vm	zeus02
demo-vm-2	
linux-vm	
nw-filter-vm-1	
nwfilter-vm-32-rhel-6	zeus02
rhel63-vm	zeus02
vm-1-dc-30-cluster-3	
vm-del-net-2	
vm-del-net-bug	
vm-tempalte-test-1	
vm-tempalte-test-2	
vm-tempalte-test-3	
vm-tempalte-test-4	
win2008	

General Initial Run Console Host High Availability Resource Allocation Boot Options Custom Properties

Name: nwfilter-vm- Description: Template: Blank Operating System: Red Hat Ent Default Display Type: Spice Priority: Low

Status Uptime Logged-in User

Status	Uptime	Logged-in User
Up	2 days	
Down		
Down		
Up	2 h	
Up	2 h	
Down		

Origin: oVirt
Run On: Any Host in Cluster
Custom Properties: Not-Configured
Cluster Compatibility Version: 3.2

OK Cancel

Hooks

Hooks installed in /usr/libexec/vdsm/hooks

```
[root@host1 ~]# cd /usr/libexec/vdsm/hooks/
[root@host1 hooks]# ls -l
total 68
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 after_vdsm_stop
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 after_vm_cont
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 after_vm_dehibernate
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 after_vm_destroy
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 after_vm_hibernate
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 after_vm_migrate_destination
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 after_vm_migrate_source
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 after_vm_pause
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 after_vm_start
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 before_vdsm_start
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 before_vm_cont
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 before_vm_dehibernate
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 before_vm_hibernate
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 before_vm_migrate_destination
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 before_vm_migrate_source
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 before_vm_pause
drwxr-xr-x. 2 root root 4096 Apr 12 03:55 before_vm_start
[root@host1 hooks]#
```

Host Hooks				
Event Name	Script Name	Property Name	Property Value	
before_vm_start	10_faqemu	md5	2c352c04ecf994	

Hooks



```
1 #!/usr/bin/python
2
3 import os
4 import sys
5 import hooking
6 import traceback
7 from xml.dom import minidom
8
9 '''
10 watchdog vdsd hook
11 adding to domain xml
12 <watchdog model='i6300esb' action='reset' />
13 '''
14
15 if os.environ.has_key('watchdog'):
16     try:
17         sys.stderr.write('watchdog: adding watchdog support\n')
18         domxml = hooking.read_domxml()
19
20         devices = domxml.getElementsByTagName('devices')[0]
21         card = domxml.createElement('watchdog')
22         card.setAttribute('model', 'i6300esb')
23         card.setAttribute('action', 'reset')
24
25         devices.appendChild(card)
26
27         hooking.write_domxml(domxml)
28     except:
29         sys.stderr.write('watchdog: [unexpected error]: %s\n' % traceback.format_exc())
30         sys.exit(2)
```

Release Cadence



- 02/2012 – oVirt 3.0 released
- 08/2012 – oVirt 3.1 released
- 12/2012 – oVirt 3.2 planned
- oVirt Workshops
 - Barcelona – 7-9 November 2012
 - Wednesday – oVirt for Users
 - Thursday – oVirt for Integrators
 - Friday – oVirt for Developers
 - California - 22-24 January 2013

How To Contribute or Download



- **Website and Repository:**
 - <http://www.ovirt.org>
 - <http://www.ovirt.org/wiki>
 - <http://www.ovirt.org/project/subprojects/>
- **Mailing lists:**
 - <http://lists.ovirt.org/mailman/listinfo>
- **IRC:**
 - #ovirt on OFTC



THANK YOU !

<http://www.ovirt.org>