



oVirt Introduction

James Rankin
Product Manager
Red Hat
jrankin@redhat.com

Agenda



- What is oVirt?
- What does it do?
- Architecture
- How To Contribute

What is oVirt?

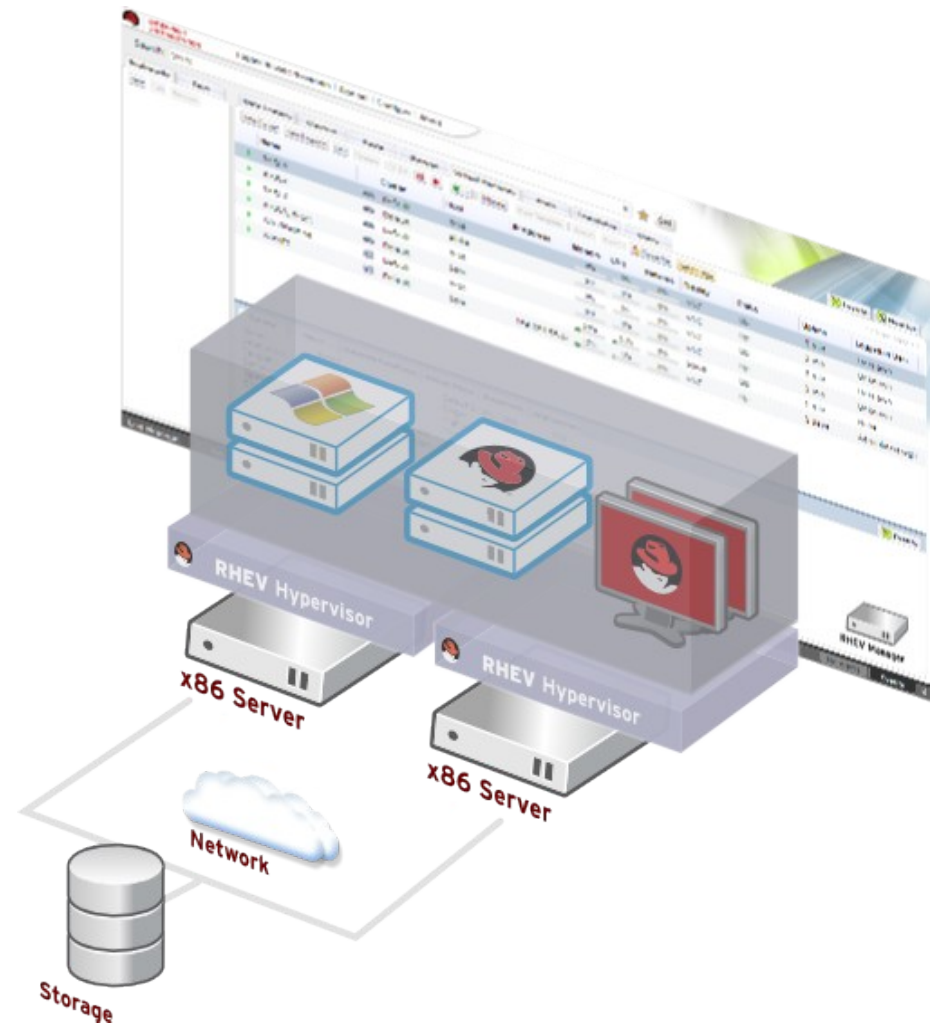
Large scale, centralized management for server and desktop virtualization

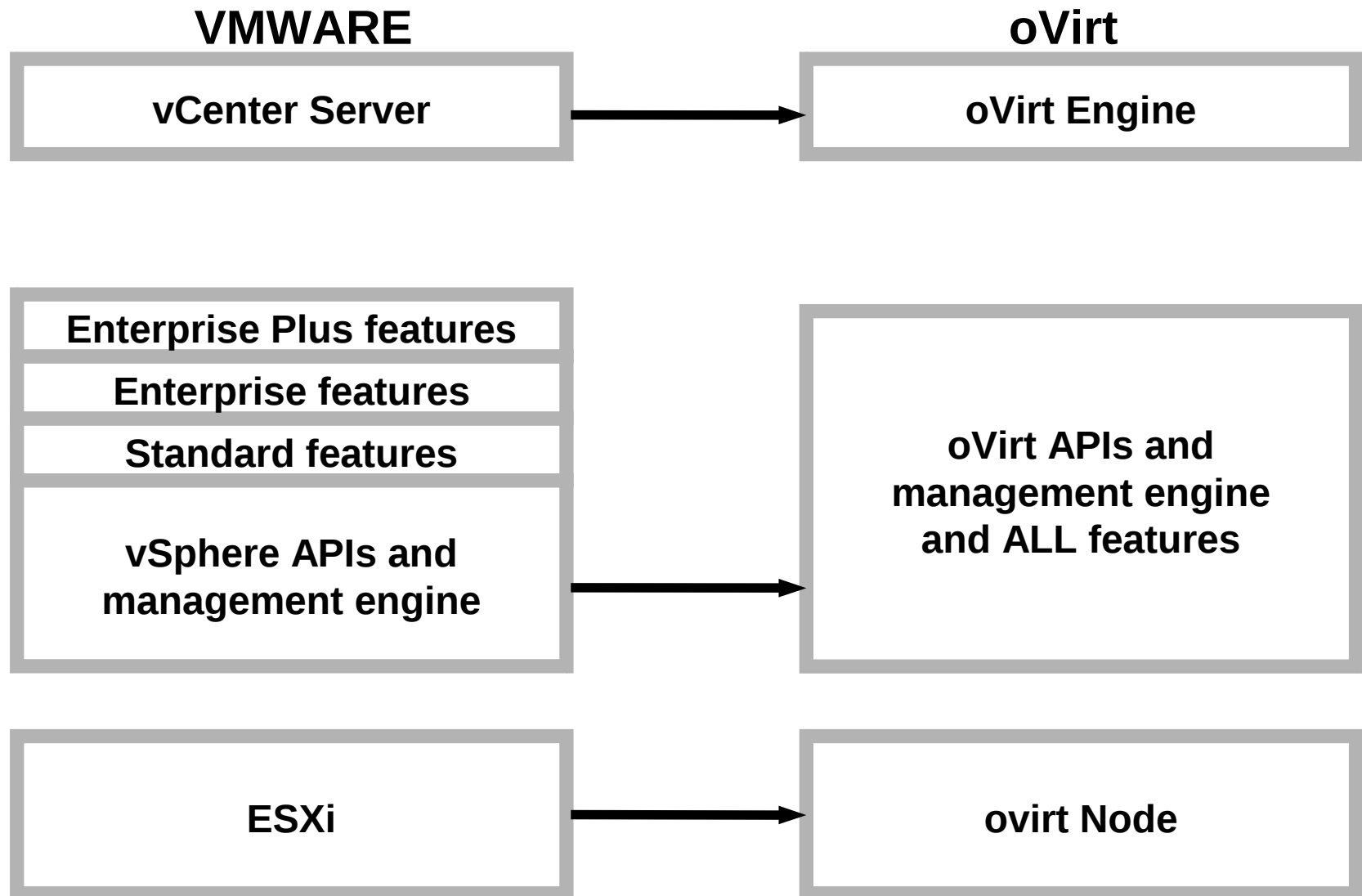
Based on leading performance, scalability and security infrastructure technologies

Provide an open source alternative to vCenter/vSphere

Two key components

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





Search: Vms:

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
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	

Tree

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

Bookmarks

Tags

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

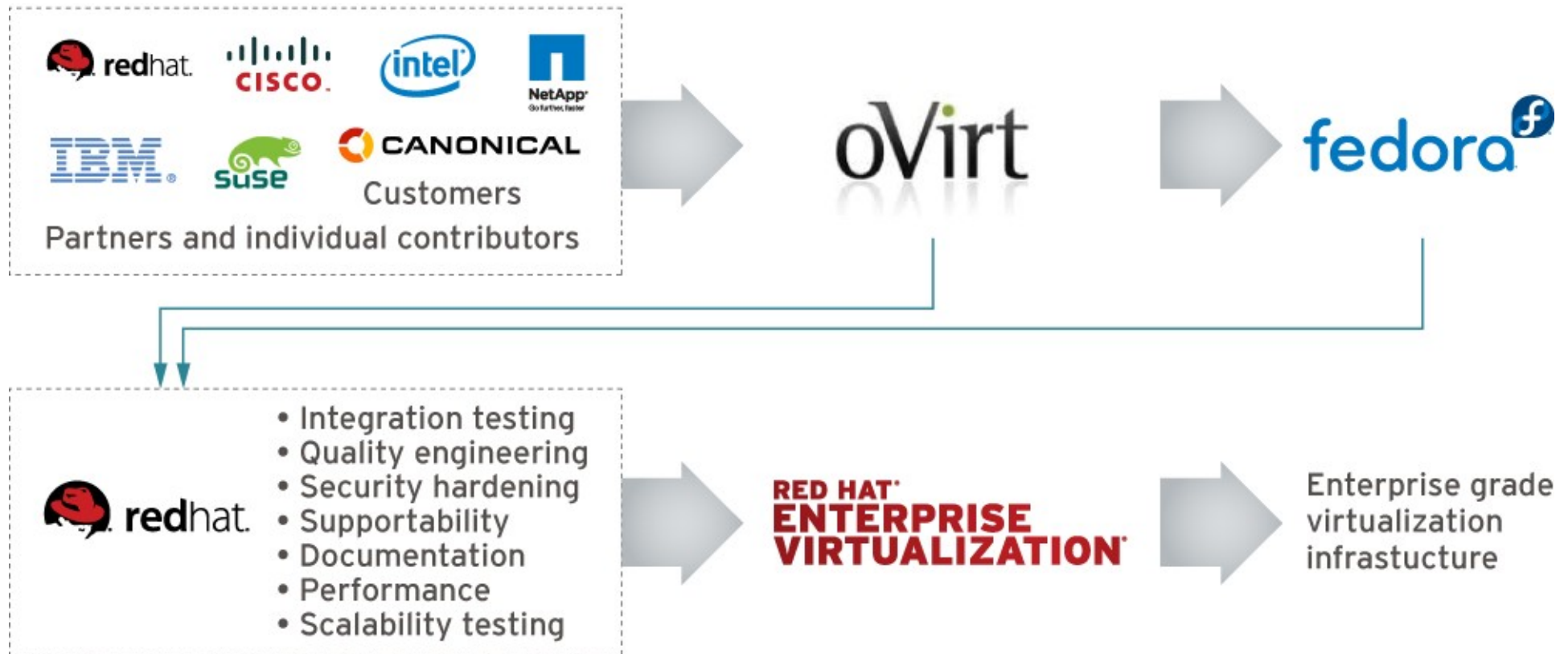
Governance

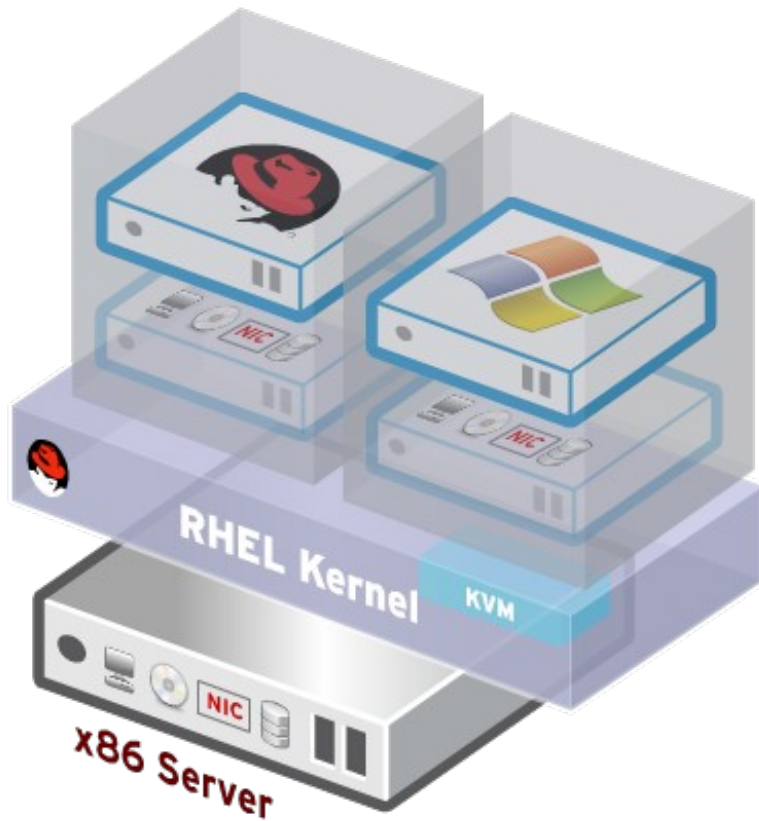
- Merit based, open governance model
- Built using the best concepts taken from Apache and Eclipse Foundations
- Governance split between board and projects
 - oVirt Board
 - Multiple projects under the oVirt brand

Governance (oVirt Board)

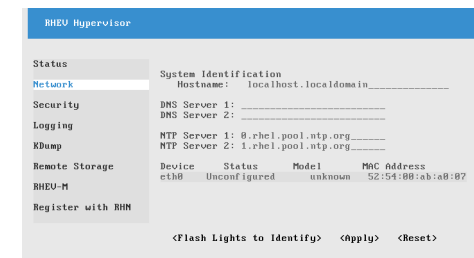
- Initial board
 - Canonical, Cisco, IBM, Intel, NetApp & SUSE
 - A few domain leaders from sub-projects
 - Mentors
 - There is no limit to the number of board seats
 - Additional seats are voted based on merit

OPEN VIRTUALIZATION MANAGEMENT





- 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



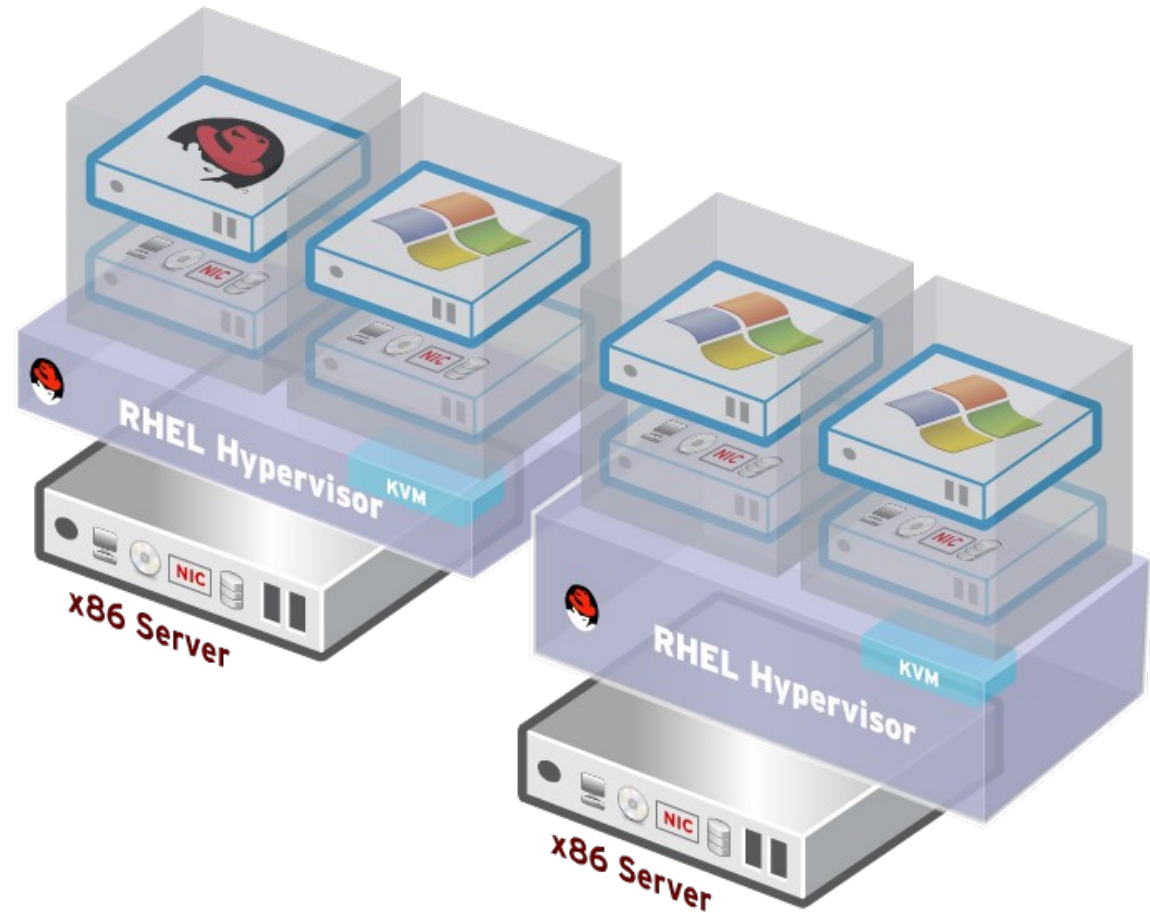
oVirt Node vs. Full Host

oVirt Node

- Small footprint
- Pre-configured, no Linux skills needed.

Full Host

- Flexible
- Add monitoring agents, scripts etc. Leverage existing Fedora infrastructure.
- Hybrid mode capable



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

Administration Console



Search: Vms:

Data Centers Clusters Hosts Storage Virtual Machines Pools Templates Users

Events

Tree

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

Bookmarks

Tags

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

Search Auto Complete



Search: Vms: name = my* and status =

- Vms: name = my* and status = unassigned
- Vms: name = my* and status = down
- Vms: name = my* and status = up
- Vms: name = my* and status = poweringup
- Vms: name = my* and status = powereddown
- Vms: name = my* and status = paused
- Vms: name = my* and status = migratingfrom
- Vms: name = my* and status = migratingto
- Vms: name = my* and status = unknown
- Vms: name = my* and status = notresponding
- Vms: name = my* and status = waitforlaunch
- Vms: name = my* and status = rebootinprogress

Tree

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

Work	Display	Status	Uptime	Logged-in User
0%		Down		
0%	Spice	Up	1 day	
0%	Spice	Up	1 day	
0%	Spice	Up	1 day	
0%	Spice	Up	1 day	
0%	Spice	Up	1 day	
0%	Spice	Up	1 day	

General Network Interfaces Virtual Disks Snapshots Applications Permissions Events

Installed Applications

Search Results



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

- Data Centers
- Clusters
- Hosts
- Storage
- Virtual Machines**
- Pools
- Templates
- Users

Tree

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

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

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	

Add Host As Simple As



Search: Host:

Data Centers Clusters Hosts Storage Virtual Machines Pools Templates Users Events

Tree

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

New Edit Remove Activate Maintenance Configure Local Storage Assign Tags

Name
nott-vds2.qa.lab.tlv.redhat.com
nott-vds3.qa.lab.tlv.redhat.com
nott-vdsa.qa.lab.tlv.redhat.com

New Host

General

Data Center: Default

Host Cluster: Default

Name:

Address:

Root Password:

Override IP tables:

OK Cancel

	Memory	CPU	Network	SpmStatus
8 VMs	25%	0%	0%	SPM
0 VMs	0%	0%	0%	None
0 VMs	0%	0%	0%	None

Power Management



Search: Host:

- Data Centers
- Clusters
- Hosts
- Storage
- Virtual Machines
- Pools
- Templates
- Users

Tree

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

New Edit Remove Activate Maintenance Configure Local Storage Assign Tags

Name
nott-vds2.qa.lab.tlv.redhat.com
nott-vds3.qa.lab.tlv.redhat.com
nott-vdsa.qa.lab.tlv.redhat.com

New Host

Enable Power Management

Power Management

Address

User Name

Password

Type

Port

Slot

Options

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

Secure

	Memory	CPU	Network	SpmStatus
8 VMs	25%	0%	0%	SPM
0 VMs	0%	0%	0%	None
0 VMs	0%	0%	0%	None

Configure Storage Once for Entire Cluster

Activities Firefox Fri 22:18 en Itamar Heim

oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox

File Edit View History Bookmarks Tools Help

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

oVirt Open Virtualization Manager

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

Search: Storage:

Edit Domain

Name:

Domain Function / Storage Type:

Use Host:

<input type="checkbox"/>	LUN ID	Dev Size	#path	Vendor ID	Product ID	Serial
<input checked="" type="checkbox"/>	1hateya-ovirt-rc11	75GB	0	IET	VIRTUAL-C SIET_VIRTUAL-DISK	
<input type="checkbox"/>	1hateya-ovirt-rc31	75GB	1	IET	VIRTUAL-C SIET_VIRTUAL-DISK	
<input type="checkbox"/>	1hateya-ovirt-rc41	75GB	1	IET	VIRTUAL-C SIET_VIRTUAL-DISK	

OK Cancel

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

Domain Name

- export_test
- hateya-ovirt-rc-1
- hateya-ovirt-rc-2
- nfs-ovirt-rc-2
- nfs-ovirt-rc-4
- OvirtSharelso

General Data Center Vir

Size: 74 GB

Available: 18 GB

Used: 56 GB

Over Allocation Ratio: 2100%

Cross Data-Center Status Free Space

Active	326 GB
Active	18 GB
Active	20 GB
Inactive	357 GB
Unattached	< 1 GB
Active	29 GB

Events

Extend with More LUNs as Needed



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

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

Search: Storage:

Edit Domain

Name: hateya-ovirt-rc-1

Domain Function / Storage Type: Data / iSCSI

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

Discover Targets

Address: User Authentication:

Port: 3260 CHAP username: CHAP password:

Discover Login All

Target Name	Address	Port	
<input checked="" type="checkbox"/> hateya-ovirt-rc1	10.35.64.81	3260	Login
<input type="checkbox"/> LUN ID	Dev. Size	#path	Vendor ID
<input checked="" type="checkbox"/> 1hateya-ovirt-rc	75GB	0	IET
<input type="checkbox"/> hateya-ovirt-rc3	10.35.64.81	3260	Login
<input type="checkbox"/> hateya-ovirt-rc4	10.35.64.81	3260	Login

OK Cancel

Tree: System > ISCSI-RC-DC > Storage > Clusters > intel-cluster > Hosts > nott-vds2.qa.lab.tlv.r... > VMs > NFS-RC-DC > Storage > Clusters

Domain Name: export_test, hateya-ovirt-rc-1, hateya-ovirt-rc-2, nfs-ovirt-rc-2, nfs-ovirt-rc-4, OvirtSharelso

General Data Center Vir... Size: 74 GB Available: 18 GB Used: 56 GB Over Allocation Ratio: 2100%

Cross Data-Center Status Free Space: Active 326 GB, Active 18 GB, Active 20 GB, Inactive 357 GB, Unattached < 1 GB, Active 29 GB

Bookmarks Tags

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

3 Alerts Events

Add Servers or Desktops



Search: Vms:

- Data Centers
- Clusters
- Hosts
- Storage
- Virtual Machines
- Pools
- Templates
- Users

Events

Tree

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

Name	Host	Work	Display	Status	Uptime	Logged-in User
kaka		0%		Down		
myVm1		0%	Spice	Up	1 day	
myVm10		0%	Spice	Up	1 day	
myVm11		0%	Spice	Up	1 day	
myVm12		0%	Spice	Up	1 day	
myVm13		0%	Spice	Up	1 day	
myVm15		0%	Spice	Up	1 day	
myVm16		0%	Spice	Up	1 day	
myVm17		0%	Spice	Up	1 day	
myVm18		0%		Down		
myVm19		0%		Down		
myVm2		0%		Down		
myVm20		0%		Down		
myVm21		0%		Down		
myVm22		0%		Down		
myVm23		0%		Down		
myVm24		0%	Spice	Paused	5 days	
myVm25	intel-cluster	0%	0%	0%	Spice	Paused 5 days
myVm26	intel-cluster	0%	0%	0%	Spice	Paused 5 days
myVm27	intel-cluster	0%	0%	0%	Spice	Paused 5 days

New Server Virtual Machine

General

Data Center: iSCSI-RC-DC

Host Cluster: intel-cluster

Name:

Description:

Based on Template: Blank

Memory Size: 512 MB

Total Cores: 2

CPU Sockets: 1

Operating System: Windows 2008 R2

OK Cancel

Even Windows via Sysprep



Search: Vms:

- Data Centers
- Clusters
- Hosts
- Storage
- Virtual Machines
- Pools
- Templates
- Users

Tree

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

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

New Server Virtual Machine

General	Domain	
Windows Sysprep	Time Zone	(GMT) GMT Standard Time
Console		
Host		
High Availability		
Resource Allocation		
Boot Options		
Custom Properties		

OK Cancel

Name	Work	Display	Status	Uptime	Logged-in User
kaka	0%		Down		
myVm1	0%	Spice	Up	1 day	
myVm10	0%	Spice	Up	1 day	
myVm11	0%	Spice	Up	1 day	
myVm12	0%	Spice	Up	1 day	
myVm13	0%	Spice	Up	1 day	
myVm15	0%	Spice	Up	1 day	
myVm16	0%	Spice	Up	1 day	
myVm17	0%	Spice	Up	1 day	
myVm18	0%		Down		
myVm19	0%		Down		
myVm2	0%		Down		
myVm20	0%		Down		
myVm21	0%		Down		
myVm22	0%		Down		
myVm23	0%		Down		
myVm24	0%	Spice	Paused	5 days	
myVm25	0%	Spice	Paused	5 days	
myVm26	0%	Spice	Paused	5 days	
myVm27	0%	Spice	Paused	5 days	

SPICE or VNC



Search: Vms:

- Data Centers
- Clusters
- Hosts
- Storage
- Virtual Machines**
- Pools
- Templates
- Users

Tree

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
 - NFS-RC-DC
 - Storage
 - Templates
 - Clusters

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

New Server Virtual Machine

General	Protocol	Spice
Windows Sysprep	USB Policy	Enabled
Console		
Host		
High Availability		
Resource Allocation		
Boot Options		
Custom Properties		

OK Cancel

Name	Work	Display	Status	Uptime	Logged-in User
kaka	0%		Down		
myVm1	0%	Spice	Up	1 day	
myVm10	0%	Spice	Up	1 day	
myVm11	0%	Spice	Up	1 day	
myVm12	0%	Spice	Up	1 day	
myVm13	0%	Spice	Up	1 day	
myVm15	0%	Spice	Up	1 day	
myVm16	0%	Spice	Up	1 day	
myVm17	0%	Spice	Up	1 day	
myVm18	0%		Down		
myVm19	0%		Down		
myVm2	0%		Down		
myVm20	0%		Down		
myVm21	0%		Down		
myVm22	0%		Down		
myVm23	0%		Down		
myVm24	0%	Spice	Paused	5 days	
myVm25	0%	Spice	Paused	5 days	
myVm26	0%	Spice	Paused	5 days	
myVm27	0%	Spice	Paused	5 days	

Search: Vms:

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

Tree

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

Name	Work	Display	Status	Uptime	Logged-in User
kaka			Down		
myVm1	0%	Spice	Up	1 day	
myVm10	0%	Spice	Up	1 day	
myVm11	0%	Spice	Up	1 day	
myVm12	0%	Spice	Up	1 day	
myVm13	0%	Spice	Up	1 day	
myVm15	0%	Spice	Up	1 day	
myVm16	0%	Spice	Up	1 day	
myVm17	0%	Spice	Up	1 day	
myVm18	0%		Down		
myVm19	0%		Down		
myVm2	0%		Down		
myVm20	0%		Down		
myVm21	0%		Down		
myVm22	0%		Down		
myVm23	0%		Down		
myVm24	0%	Spice	Paused	5 days	
myVm25	0%	Spice	Paused	5 days	
myVm26	0%	Spice	Paused	5 days	
myVm27	0%	Spice	Paused	5 days	

New Server Virtual Machine

General

Windows Sysprep

Console

Host

High Availability

Resource Allocation

Boot Options

Custom Properties

Run On:

Any Host in Cluster Specific

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

Run/Migration Options:

Run VM on the selected host (no migration allowed)

Allow VM migration only upon Administrator specific request (system will not trigger automatic migration of this VM)

OK Cancel

Highly Available?

Search: Vms:

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

Tree 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

Name	Work	Display	Status	Uptime	Logged-in User
kaka			Down		
myVm1	0%	Spice	Up	1 day	
myVm10	0%	Spice	Up	1 day	
myVm11	0%	Spice	Up	1 day	
myVm12	0%	Spice	Up	1 day	
myVm13	0%	Spice	Up	1 day	
myVm15	0%	Spice	Up	1 day	
myVm16	0%	Spice	Up	1 day	
myVm17	0%	Spice	Up	1 day	
myVm18	0%		Down		
myVm19	0%		Down		
myVm2	0%		Down		
myVm20	0%		Down		
myVm21	0%		Down		
myVm22	0%		Down		
myVm23	0%		Down		
myVm24	0%	Spice	Paused	5 days	
myVm25	0%	Spice	Paused	5 days	
myVm26	0%	Spice	Paused	5 days	
myVm27	0%	Spice	Paused	5 days	

New Server Virtual Machine

Highly Available

Priority for Run/Migration queue:

Low
 Medium
 High

OK Cancel

Control Allocated Resources (Disk, Memory)



Tree

- 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

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

New Server Virtual Machine

General

Storage Allocation: (Available only when a template is selected)

Storage Domain:

Provisioning:

Host:

High Availability:

Memory Allocation:

Physical Memory Guaranteed:

Boot Options:

Custom Properties:

OK Cancel

Boot Devices



Search: Vms:

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

Tree

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

Bookmarks

Tags

Name	Work	Display	Status	Uptime	Logged-in User
kaka			Down		
myVm1	0%	Spice	Up	1 day	
myVm10	0%	Spice	Up	1 day	
myVm11	0%	Spice	Up	1 day	
myVm12	0%	Spice	Up	1 day	
myVm13	0%	Spice	Up	1 day	
myVm15	0%	Spice	Up	1 day	
myVm16	0%	Spice	Up	1 day	
myVm17	0%	Spice	Up	1 day	
myVm18	0%		Down		
myVm19	0%		Down		
myVm2	0%		Down		
myVm20	0%		Down		
myVm21	0%		Down		
myVm22	0%		Down		
myVm23	0%		Down		
myVm24	0%	Spice	Paused	5 days	
myVm25	0%	Spice	Paused	5 days	
myVm26	0%	Spice	Paused	5 days	
myVm27	0%	Spice	Paused	5 days	

New Server Virtual Machine

General

Windows Sysprep

Console

Host

High Availability

Resource Allocation

Boot Options

Custom Properties

Boot Sequence:

First Device: Hard Disk

Second Device: [None]

Attach CD

OK Cancel

Advanced Options via Custom Properties



Search: Vms:

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

Tree 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
 - NFS-RC-DC
 - Storage
 - Templates
 - Clusters

Name	Work	Display	Status	Uptime	Logged-in User
kaka			Down		
myVm1	0%	Spice	Up	1 day	
myVm10	0%	Spice	Up	1 day	
myVm11	0%	Spice	Up	1 day	
myVm12	0%	Spice	Up	1 day	
myVm13	0%	Spice	Up	1 day	
myVm15	0%	Spice	Up	1 day	
myVm16	0%	Spice	Up	1 day	
myVm17	0%	Spice	Up	1 day	
myVm18	0%		Down		
myVm19	0%		Down		
myVm2	0%		Down		
myVm20	0%		Down		
myVm21	0%		Down		
myVm22	0%		Down		
myVm23	0%		Down		
myVm24	0%	Spice	Paused	5 days	
myVm25	0%	Spice	Paused	5 days	
myVm26	0%	Spice	Paused	5 days	
myVm27	0%	Spice	Paused	5 days	

New Server Virtual Machine

General	Custom Properties
Windows Sysprep	
Console	
Host	
High Availability	
Resource Allocation	
Boot Options	
Custom Properties	

OK Cancel

Assign Permissions to Objects by Roles



Search: Vms:

Tree

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

Bookmarks

Tags

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

Close

Events

Uptime	Logged-in User
1 day	
1 day	
1 day	
1 day	
1 day	
1 day	
1 day	

Events

Define Your Own Roles



Activities Firefox Fri 22:21 en Itamar Heim

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-application Google

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

Search: Vms: ☆ 🔍

Configure

Roles Show All Roles Administrator Roles User Roles

System Permissions

New Role

Name: _____ Description: _____

Account Type: User Admin

Check Boxes to Allow Action

Expand All Collapse All

- System
 - Configure System
 - Manipulate Users
 - Manipulate Permissions
 - Manipulate Roles
 - Generic Configuration
 - Data Center
 - Configure Data Center
 - Storage Domain
 - Configure Storage Domain
 - Cluster

OK Reset Cancel

Close

Gluster Management

New Cluster

General

Data Center: Production

Add Bricks

Volume Type: Distribute

Bricks

Server: 10.16.159.159 [Add]

Brick Directory: []

Create Volume

Server	Volume Cluster
<input type="checkbox"/> 10.16.159.159	data
<input type="checkbox"/> 10.16.159.161	

Name: []

Type: Distribute

Transport Types: TCP RDMA

Bricks: [Add Bricks] (0 bricks selected)

Access Protocols

Gluster:

NFS:

Allow Access From: *

[Comma separated list of IP addresses/hostnames]

[Remove] [Remove All] [OK] [Cancel]

User Portal



Self Provisioning Portal



	kaka					CONSOLE ...
	myVm1					CONSOLE ...
	repro					CONSOLE ...
	up-vm2					CONSOLE ...

General Network Interfaces **Virtual Disks** Snapshots Permissions Events Applications Monitor

Name:	kaka	Defined Memory:	1024 MB	Origin:	RHEV
Description:		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



Virtual Machines: 25%
Defined VMs: 4
Running VMs: 1

Virtual CPUs: 25%
Defined vCPUs: 4
Used vCPUs: 1

Memory: 7%
Defined Memory: 3328MB
Memory Usage: 256MB

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

Virtual Machine	Disks	Virtual Size	Actual Size	Snapshots
[-] kaka	1	10GB	1GB	1
Disk1		10GB	1GB	1
[-] myVm1	2	40GB	3GB	1
Disk1		10GB	2GB	1
Disk2		30GB	1GB	1
[-] repro	1	10GB	10GB	1
Disk1		10GB	10GB	1
[-] up-vm2	1	10GB	1GB	1
Disk1		10GB	1GB	1

oVirt Reports



View Manage

Folders

- root
 - Organizations
 - oVirt Reports
 - Reports
 - Executive**
 - Inventory
 - Service Level
 - Trend
 - Resources
 - temp
 - Themes
 - default
 - ovirt-reports-them

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

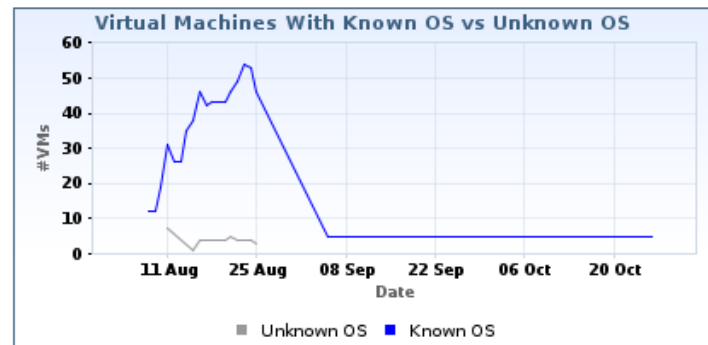
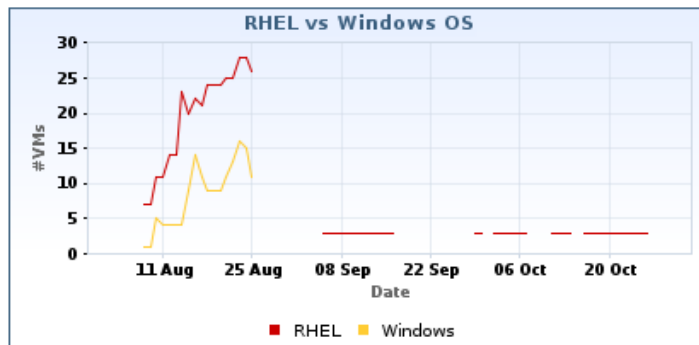
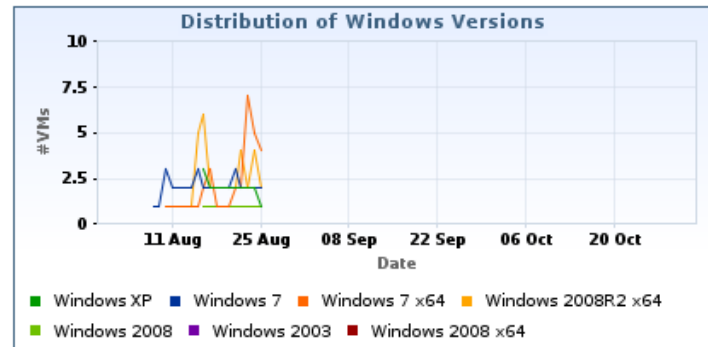
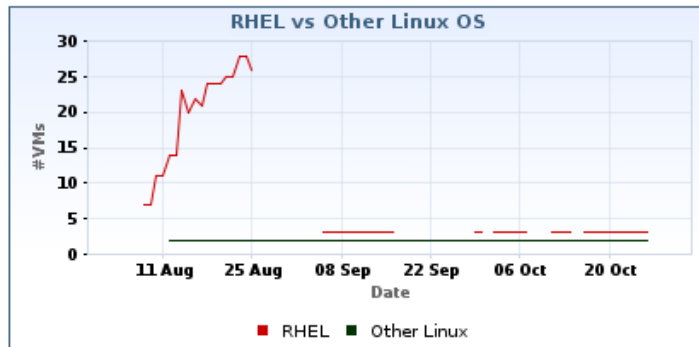


oVirt Reports

Oct 31, 2011

Active Virtual Machines by OS in Clusters of Data Center Default

Criteria: Datacenter: Default Date Range: 2011-08-01 - 2011-10-31 VM Type: All
Cluster: 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

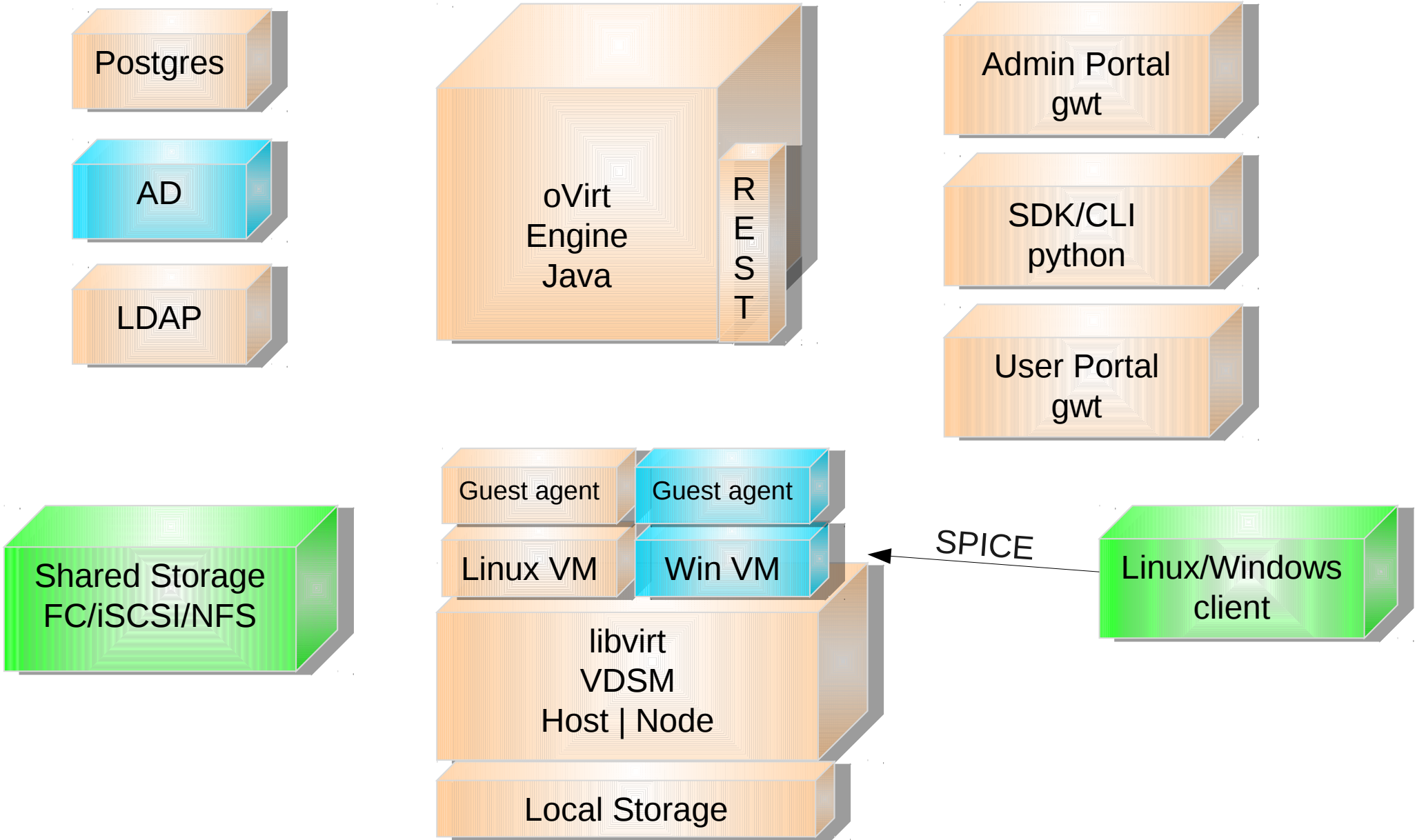
* End Date: 2011-08-31

Apply OK Reset Cancel

oVirt Guest Agent

- 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

oVirt High Level Architecture



Authentication

- Builtin user `admin@internal`
- AD, IPA, RHDS, ITDS integration
 - Kerberos authentication
 - LDAP - user info, group membership
 - Multiple domains, trusts, etc.
 - Cached for searches, not for login
- Next
 - Open LDAP (patch ready)
 - Internal users (picketlink?)
 - Linux users?

Database

- Postgres
- JDBC based
- Next
 - Hibernate
 - Scheme upgrade management

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



```
Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://10.35.1.171/rhev-api
http://10.35.1.171/rhev-api
- <api>
  <link rel="capabilities" href="/rhev-api/capabilities"/>
  <link rel="clusters" href="/rhev-api/clusters"/>
  <link rel="clusters/search" href="/rhev-api/clusters?search={query}"/>
  <link rel="datacenters" href="/rhev-api/datacenters"/>
  <link rel="datacenters/search" href="/rhev-api/datacenters?search={query}"/>
  <link rel="events" href="/rhev-api/events"/>
  <link rel="events/search" href="/rhev-api/events?search={query}"/>
  <link rel="hosts" href="/rhev-api/hosts"/>
  <link rel="hosts/search" href="/rhev-api/hosts?search={query}"/>
  <link rel="networks" href="/rhev-api/networks"/>
  <link rel="roles" href="/rhev-api/roles"/>
  <link rel="storagedomains" href="/rhev-api/storagedomains"/>
  <link rel="storagedomains/search" href="/rhev-api/storagedomains?search={query}"/>
  <link rel="tags" href="/rhev-api/tags"/>
  <link rel="templates" href="/rhev-api/templates"/>
  <link rel="templates/search" href="/rhev-api/templates?search={query}"/>
  <link rel="users" href="/rhev-api/users"/>
  <link rel="groups" href="/rhev-api/groups"/>
  <link rel="domains" href="/rhev-api/domains"/>
  <link rel="vmpools" href="/rhev-api/vmpools"/>
  <link rel="vmpools/search" href="/rhev-api/vmpools?search={query}"/>
  <link rel="vms" href="/rhev-api/vms"/>
  <link rel="vms/search" href="/rhev-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>
```

Hosts Collection



```
Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://10.35.1.171/rhev-api/hosts
http://10.35.1.171/rhev-api/hosts
- <hosts>
- <host id="15896dce-edd0-415c-a524-c9b02f278895" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895">
  <name>nari11</name>
  - <actions>
    <link rel="install" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/install"/>
    <link rel="activate" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/activate"/>
    <link rel="fence" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/fence"/>
    <link rel="deactivate" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/deactivate"/>
    <link rel="approve" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/approve"/>
    <link rel="iscsilogin" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/iscsilogin"/>
    <link rel="iscsidiscover" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/iscsidiscover"/>
    <link rel="commitnetconfig" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/commitnetconfig"/>
  </actions>
  <link rel="storage" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/storage"/>
  <link rel="nics" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics"/>
  <link rel="tags" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/tags"/>
  <link rel="permissions" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/permissions"/>
  <link rel="statistics" href="/rhev-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="/rhev-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>
  <target/>
</iscsi>
</host>
Done
```

Host networks collection



Firefox browser window showing the URL `http://10.35.1.171/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics`. The page content is an XML document tree representing host network information.

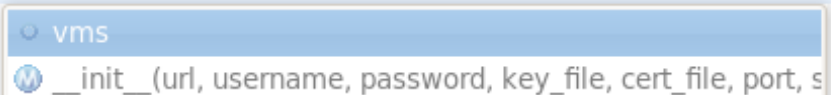
```
-<host_nics>
- <host_nic id="dbb39d06-3aef-468c-83e6-88eae0a3f346" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/dbb39d06-3aef-468c-83e6-88eae0a3f346">
  <name>eth0</name>
  -<actions>
    <link rel="attach" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/dbb39d06-3aef-468c-83e6-88eae0a3f346/attach"/>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

Done

- Creating the proxy
- Listing all collections
- 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.

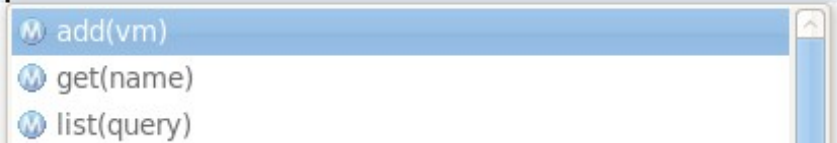
```
#create proxy  
api = API(url='http://localhost:8080', username='user@domain', password='password')
```

```
api.
```



```
o vms  
M __init__(url, username, password, key_file, cert_file, port, s
```

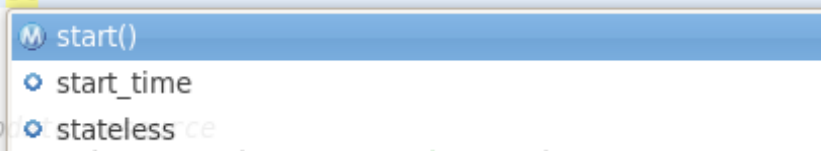
```
api.vms.
```



```
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  
o stateless ce
```

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        storedomain  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          os-type
cluster-name       high_availability-priority         placement_policy-affinity
cpu-topology-cores memory                             stateless
cpu-topology-sockets name                               template-id
custom_properties-custom_property--LIST origin                             template-name
description         os-boot-dev                       timezone
display-monitors   os-cmdline                         type
display-type       os-initRd                           usb-enabled
domain-name        os-kernel
[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
```

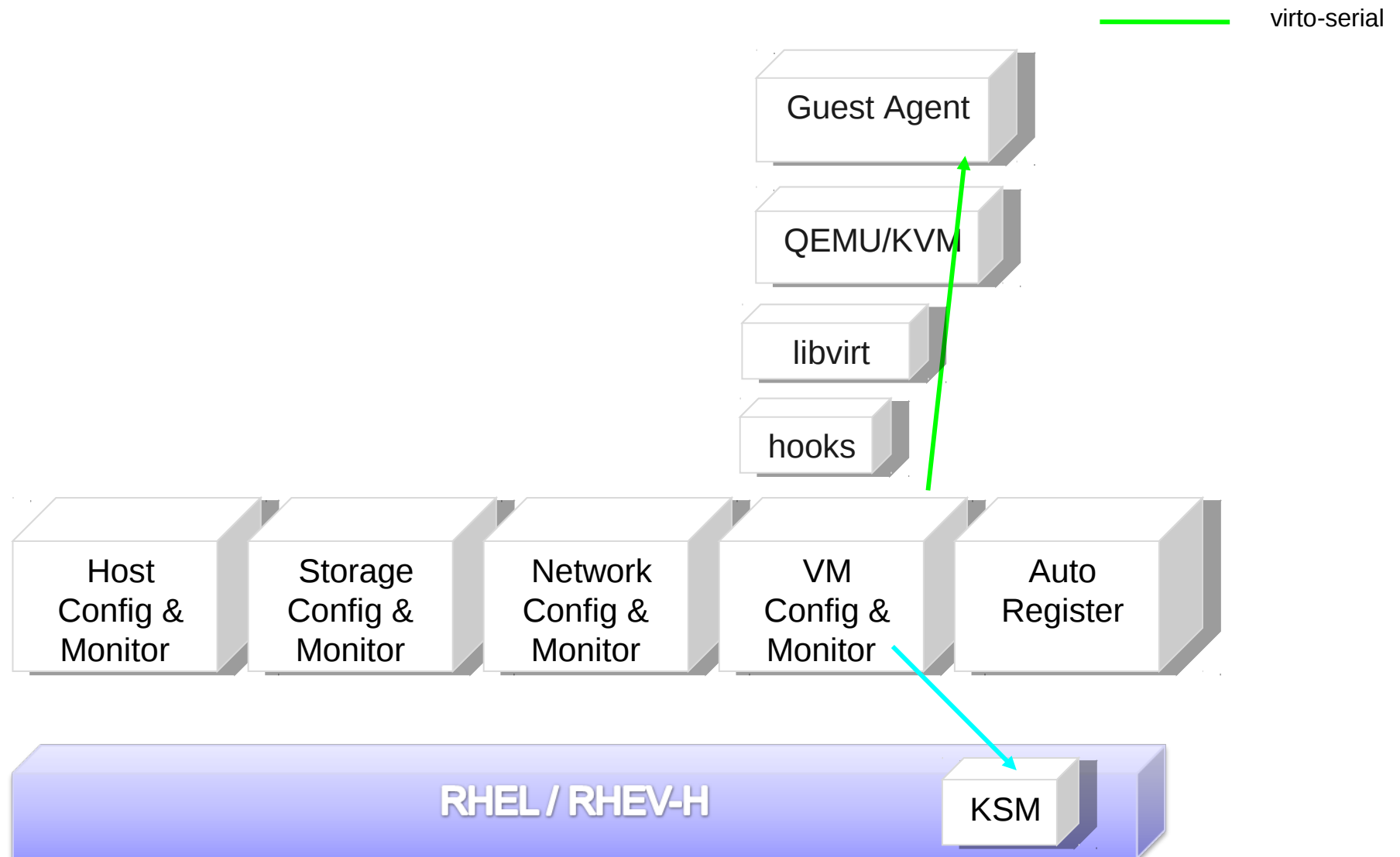
id	name	description
80eed02c-ac7d-11e0-b702-0bf21e6d33af	b	
7073b1ac-ef46-11e0-aa7c-d3e6f6b5731d	bb	
82b1c018-ac7d-11e0-ac42-5b8d8dcd7c92	c	
63bc09b0-8b8b-11e0-bdc2-4356942887b3	Default_iscsi	
99408929-82cf-4dc7-a532-9d998063fa95	Default_nfs	The default server cluster
ffb2d112-8cf0-11e0-b34b-7f61455e6a71	Test_iscsi	
ada1672a-8cf1-11e0-9d3e-b75c5a33ec19	Test_nfs	
ad9bd996-a893-11e0-b174-e3232e67a091	Test_vlans	

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

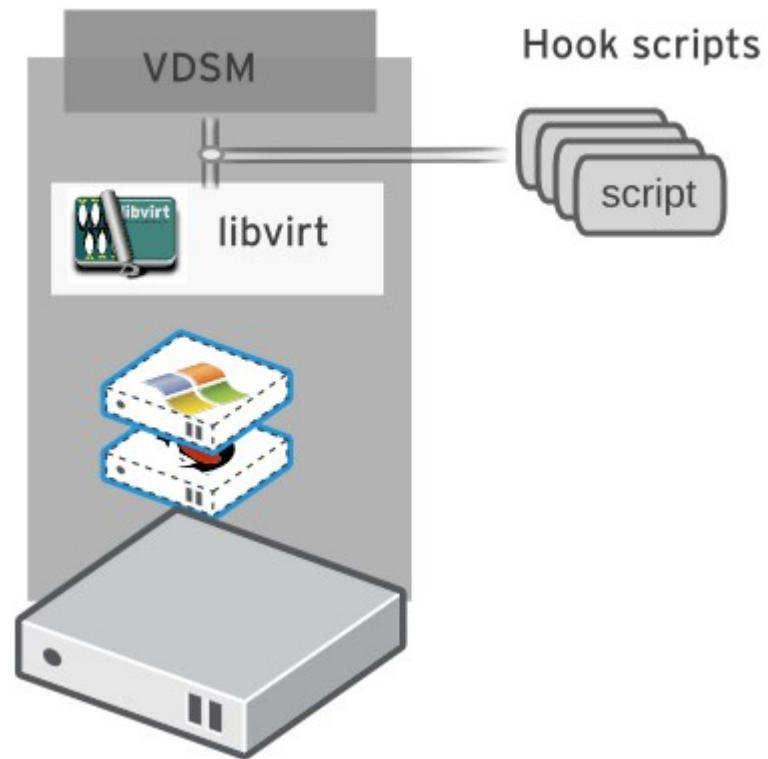
```
(oVirt cli) > list clusters
```

id	name	description
80eed02c-ac7d-11e0-b702-0bf21e6d33af	b	
82b1c018-ac7d-11e0-ac42-5b8d8dcd7c92	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	

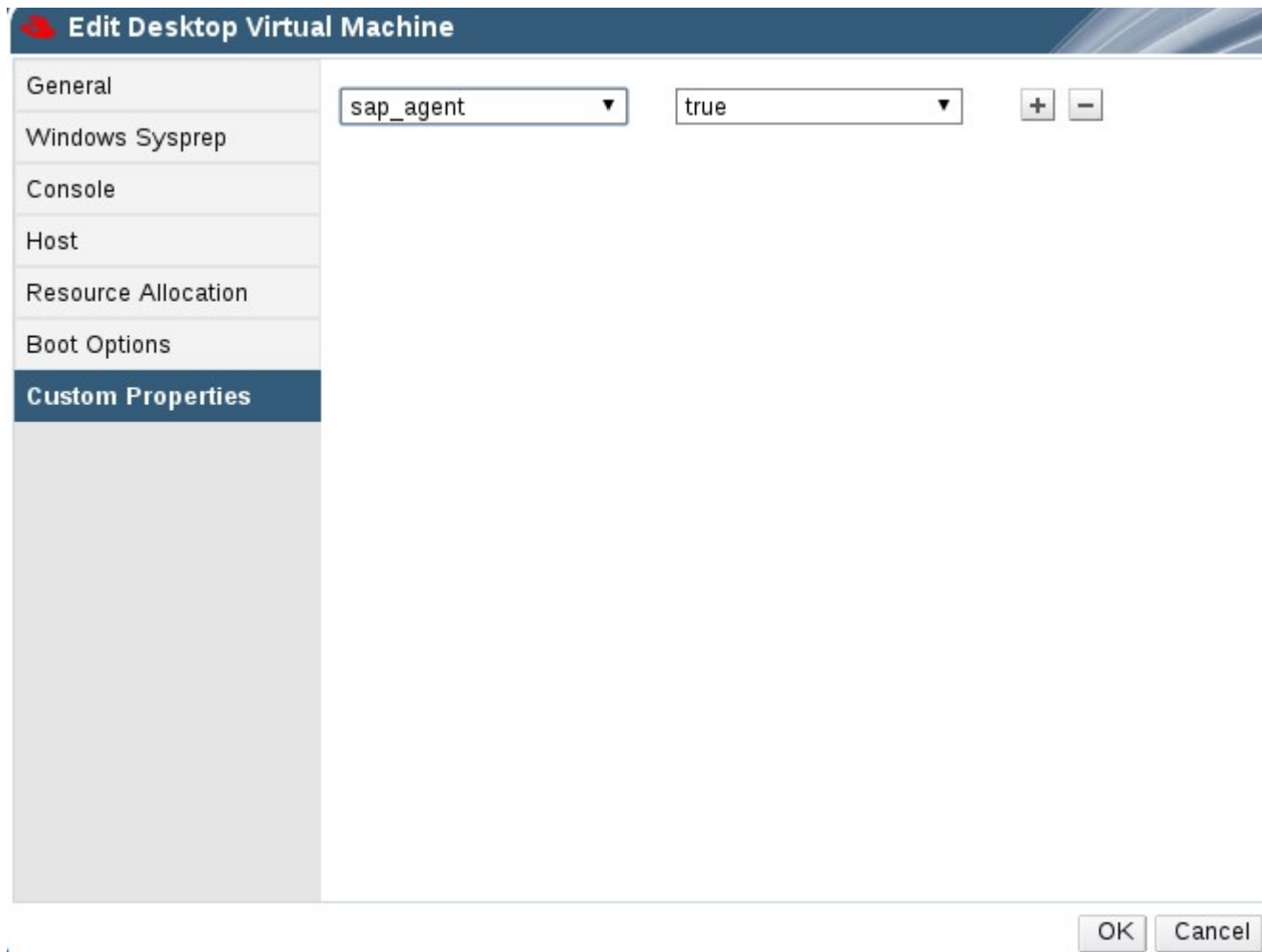
oVirt Host Agent - VDSM



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



- 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

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]#
```

General					Virtual Machines					Network Interfaces					Host Hooks					Permissions				
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 vdsm 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)
```

In the works (engine-devel@ovirt.org)

- Storage Live Migration
- Storage array integration
- SLA Manager
- Network Types
- Backup API
- NetStack/Quantum
- Libguestfs integration
- virt-resize, pv-resize

.....

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

oVirt

THANK YOU !

<http://www.ovirt.org>