



Virtualization Management the **oVirt way**

Itamar Heim
Director, RHEV Engineering
Red Hat
FOSDEM, February 2012

Agenda



- What is oVirt?
- Where did it come from?
- What does it do?
- Architecture
- Roadmap
- What's next?

What is oVirt?

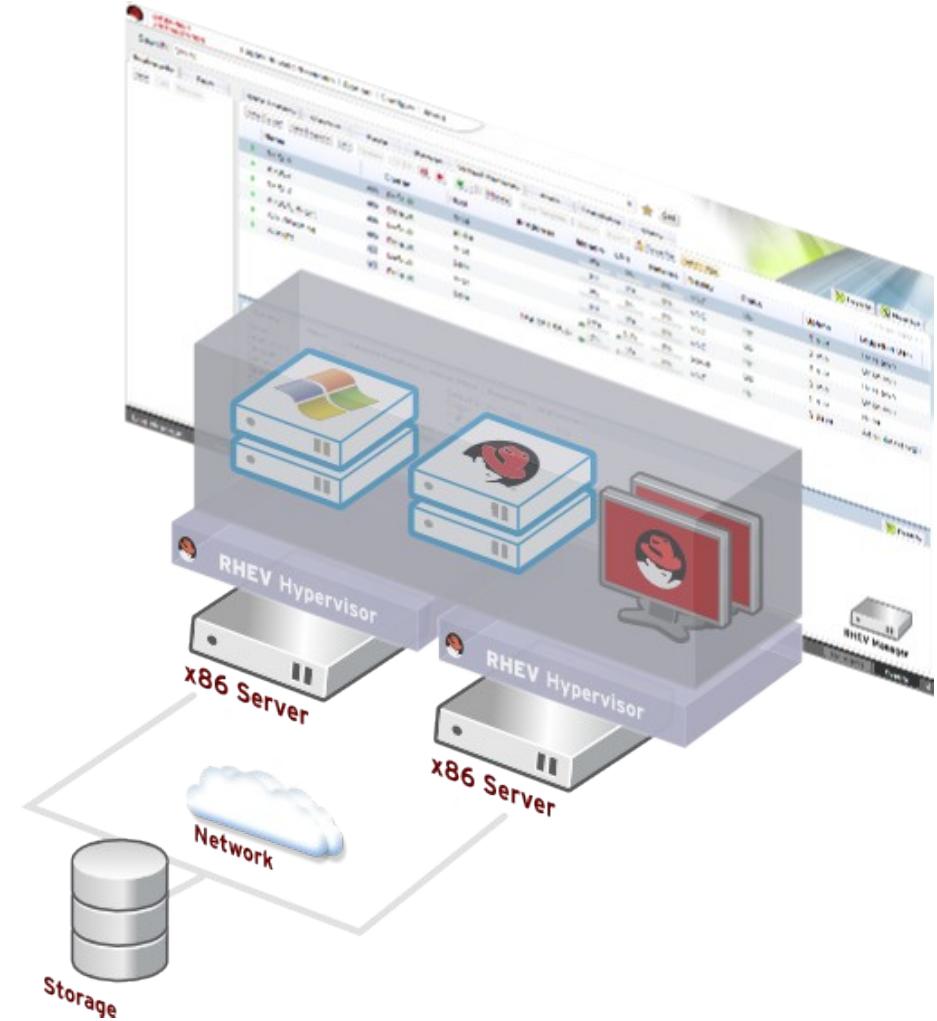
Large scale, centralized management for server and desktop virtualization

Based on leading performance, scalability and security infrastructure technologies

Provide an open source alternative to vCenter/vSphere

Focus on KVM for best integration/performance

Focus on ease of use/deployment



How Does It Look?

oVirt

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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	

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Competitive Landscape

	Test Center Scorecard						InfoWorld
	Management	Performance	Reliability	Scalability	Installation	Overall Score	
Citrix XenServer 5.6.1	7	8	8	7	9	7.7 GOOD	
Microsoft Windows Server 2008 R2 Hyper-V	8	8	9	8	7	8.1 VERY GOOD	
Red Hat Enterprise Virtualization for Servers 2.2	8	8	8	9	9	8.4 VERY GOOD	
VMware vSphere 4.1	9	9	9	9	9	9.0 EXCELLENT	

- InfoWorld “shootout” 2011
 - Independent analysis of leading virtualization platforms
 - 2nd place in management functionality

<http://bit.ly/virtshootout>

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
 - Red Hat, IBM, NetApp, Cisco, SUSE, Intel
 - 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

How to Start?



- Build from source
- Or, just install pre-packaged
 - yum install ovirt-engine
 - ./ovirt-setup
- Add managed hosts
 - from engine
 - use ovirt-node registr/approve flow

Administration Console

oVirt

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Tree

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System

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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	

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Events

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 = reboatinprogress

Tree

Expand All Collapse

System

- Default
- iSCSI-RC
- Storage
- Templ
- Clusters
 - intel-cluster
 - Hosts
 - nott-vds2.qa.lab.tlv.redhat.com
 - nott-vds3.qa.lab.tlv.redhat.com

VMs

NFS-RC-DC

- Storage
- Templates
- Clusters

Bookmarks

Tags

General Network Interfaces Virtual Disks Snapshots Applications Permissions Events

Installed Applications

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	
0%	Spice	Up	1 day	
0%	Spice	Up	1 day	

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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

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Add Host As Simple As

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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

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Power Management

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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

<> Prev Next >>

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

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Configure Networks

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

Tree

New Edit Remove Activate Maintenance Configure Local Storage Assign Tags

Events

Expand All Collapse All

System

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- Clusters
 - intel-cluster
 - Hosts
 - nott-vds2.qa.lab.tlv.redhat.com
 - nott-vds3.qa.lab.tlv.redhat.com
- VMs

iSCSI-RC-DC

Clusters

Hosts

Intel-cluster

Hosts

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

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

NFS-RC-DC

Clusters

VMs

Network Interfaces

Add / Edit Edit Management Network Bond Detach Save Network Configuration

Name	Address	MAC	Speed (Mbps)	Rx (Mbps)	Tx (Mbps)	Drops (Pkts)	Bond	Vlan	Network Name
em2	10.35.64.69	78:E7:D1:E4:89:FB	1000	< 1	< 1	0			ovirtmgmt
em1		78:E7:D1:E4:89:FA	1000	< 1	< 1	0			

Bookmarks Tags

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Or Bonds

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

Tree

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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
- VMs

NFS-RC-DC

- Storage
- Templates
- Clusters

New Edit Remove Activate Maintenance Configure Local Storage Assign Tags

Name	HostIP	Cluster	Status	Load	Memory	CPU	Network	SpmStatus
nott-vds2.qa.lab.tlv.redhat.com	nott-vds2.qa.lab.tlv.redhat.com	intel-cluster	Up	8 VMs	25%	0%	0%	SPM
nott-vds3.qa.lab.tlv.redhat.com	nott-vds3.qa.lab.tlv.redhat.com	intel-cluster	Non Responsive	0 VMs	0%	0%	0%	None
nott-vdsa.qa.lab.tlv.redhat.com	nott-vdsa.qa.lab.tlv.redhat.com	NFS-intel	Maintenance	0 VMs	0%	0%	0%	None

General Virtual Machines Network Interfaces Host Hooks Permissions Events

Add / Edit Edit Management Network **Bond** Detach Save Network Configuration

Name	Link Layer	MAC	Speed (Mbps)	Rx (Mbps)	Tx (Mbps)	Drops (Pkts)	Bond	Vlan	Network Name
em1	10.35.115.11	78:E7:D1:E4:8C:58	1000	< 1	< 1	0			ovirtmgmt
em2		78:E7:D1:E4:8C:59	0	< 1	< 1	0			

Bookmarks Tags

Without Scripts or Config Files

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Data Centers Clusters Hosts Storage

Tree

Expand All Collapse All 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

New Edit Remove Activate Maintenance Configure Local Storage

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

General Virtual Machines Network Interfaces

Add / Edit Edit Management Network Bond Detach Save Network

Name	Address
em1	10.35.115.11
em2	

Bond Network Interfaces

Bond Name: bond4

Network: ovirtnetmgmt

Bonding Mode: (Mode 1) Active-Backup

None DHCP Static

IP: 10.35.115.11

Subnet Mask: 255.255.255.0

Changes done to the Networking configuration are temporary until explicitly saved.
Check the check-box below to make the changes persistent.

Save network configuration

Load Memory CPU Network SPM Status

Load	Memory	CPU	Network	SPM Status
8 VMs	25%	0%	0%	SPM
0 VMs	0%	0%	0%	None
0 VMs	0%	0%	0%	None

Events				
0	Drops (Pkts)	Bond	Vlan	Network Name
0				ovirtnetmgmt

Events

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Configure Storage Once for Entire Cluster

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

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Search: Storage

Data Centers Clusters

New Domain Import Domain Edit

Tree

Expand All Collapse All

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

Google

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Data Centers Clusters

New Domain Import Domain Edit

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 - 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

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 Servers or Desktops

oVirt

Activities Firefox Fri 22:19 Itamar Heim

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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

Tree

Expand All Collapse All

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

New Server Virtual Machine

General

Data Center: iSCSI-RC-DC

Host Cluster: intel-cluster

Name: (empty)

Description: (empty)

Based on Template: Blank

Memory Size: 512 MB

Total Cores: 2

CPU Sockets: 1

Operating System: Windows 2008 R2

OK Cancel

work	Display	Status	Uptime	Logged-in User
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	
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	
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	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	

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.

Even Windows via Sysprep

oVirt

The screenshot shows the oVirt Enterprise Virtualization Engine Web Administration interface. The top bar displays the Firefox logo, the date and time (Fri 22:20), and the user (Itamar Heim). The main title is "oVirt Enterprise Virtualization Engine Web Administration – Mozilla Firefox". The menu bar includes File, Edit, View, History, Bookmarks, Tools, and Help. The address bar shows the URL "hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin/WebAdmin.html#vms". The top right corner shows system status icons.

The interface has a green header bar with the text "oVirt Open Virtualization Manager". Below it is a search bar with the placeholder "Search: Vms:" and a magnifying glass icon. The navigation tabs include Data Centers, Clusters, Hosts, Storage, Virtual Machines (which is selected and highlighted in blue), Pools, Templates, and Users. On the far right, there is an "Events" section with a dropdown and links for Configure, Guide, About, and Sign Out.

The left sidebar is titled "Tree" and contains a hierarchical list of resources under "System". It includes sections for Default, iSCSI-RC-DC, Storage, Templates, Clusters (with an "intel-cluster" entry), Hosts, and VMs. Under VMs, there are entries for myVm1 through myVm27.

The central part of the screen features a modal dialog box titled "New Server Virtual Machine". The dialog has several tabs: General, Windows Sysprep (which is currently selected and highlighted in green), Console, Host, High Availability, Resource Allocation, Boot Options, and Custom Properties. At the bottom of the dialog are "OK" and "Cancel" buttons.

The main content area shows a table of existing virtual machines. The columns are: Name, Workstation, Display, Status, Uptime, and Logged-in User. The table lists 27 entries, each with a progress bar indicating activity levels (0%, 0%, 0%) and a "Spice" display type. Most machines are listed as "Up" or "Paused" with a "1 day" uptime. The last three entries (myVm25, myVm26, myVm27) are listed as "Paused" with a "5 days" uptime.

SPICE or VNC

oVirt

Activities Firefox Fri 22:20 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.html#vms

Google

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

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.red
 - nott-vds3.qa.lab.tlv.red
- VMs
- NFS-RC-DC
 - Storage
 - Templates
- Clusters

New Server Virtual Machine

General Protocol Spice

Windows Sysprep USB Policy Enabled

Console (highlighted)

Host

High Availability

Resource Allocation

Boot Options

Custom Properties

OK Cancel

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

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.

Migratable or Not

oVirt

Activities Firefox Fri 22:20 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

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

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

Tree

Expand All Collapse All

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

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

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	
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	
0%	Spice	Up	1 day	
0%	Spice	Up	1 day	
0%	Spice	Up	1 day	
0%	Spice	Up	1 day	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	

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.

Highly Available?

oVirt

Activities Firefox Fri 22:20 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

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

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

Tree

Expand All Collapse All 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
- VMs
- NFS-RC-DC
 - Storage
 - Templates
- Clusters

New Server Virtual Machine

Name: kaka

General

Highly Available

Priority for Run/Migration queue:

Low

Medium

High

Resource Allocation

Boot Options

Custom Properties

OK Cancel

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	
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	
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	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	

Bookmarks Tags

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

Control Allocated Resources (Disk, Memory)

Virtual Reality

The screenshot shows the oVirt Enterprise Virtualization Engine Web Administration interface. The top bar displays the Firefox logo, the date and time (Fri 22:20), and the user name (Itamar Heim). The main title is "oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox". The navigation menu includes File, Edit, View, History, Bookmarks, Tools, and Help. The address bar shows the URL "hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin/WebAdmin.html#vms". The top right corner has a search bar and a Google link.

The interface features a left sidebar titled "Tree" with sections for System, Storage, Clusters, and VMs. The "VMs" section lists various virtual machines: kaka, myVm1, myVm10, myVm11, myVm12, myVm13, myVm15, myVm16, myVm17, myVm18, myVm19, myVm2, myVm20, myVm21, myVm22, myVm23, myVm24, myVm25, myVm26, and myVm27. The "Virtual Machines" tab is selected in the top navigation bar.

A modal dialog box titled "New Server Virtual Machine" is open in the center. It contains tabs for General, Windows Sysprep, Console, Host, High Availability, Resource Allocation (which is currently selected), Boot Options, and Custom Properties. Under "Resource Allocation", there is a "Storage Allocation" section with a dropdown for "Storage Domain" and a "Provisioning" dropdown set to "Clone". There is also a "Memory Allocation" section with a "Physical Memory Guaranteed" input field containing "256 MB".

To the right of the modal, a table lists the status of multiple virtual machines. The columns are: work, Display, Status, Uptime, and Logged-in User. The table shows several entries, mostly with "Spice" as the display type and "Up" as the status, though some are "Down" or "Paused". The "Uptime" column indicates times ranging from 1 day to 5 days.

Boot Devices

oVirt

Activities Firefox Fri 22:20 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

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

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

Tree

Expand All Collapse All

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 VMs NFS-RC-DC Storage Templates Clusters

Bookmarks

Tags

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

Name	Work	Display	Status	Uptime	Logged-in User
kaka	0%	Spice	Up	1 day	
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%	Spice	Down		
myVm19	0%	Spice	Down		
myVm2	0%	Spice	Down		
myVm20	0%	Spice	Down		
myVm21	0%	Spice	Down		
myVm22	0%	Spice	Down		
myVm23	0%	Spice	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	

Advanced Options via Custom Properties

oVirt

Activities Firefox Fri 22:20 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

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

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

Tree

Expand All Collapse All 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
- VMs
- NFS-RC-DC
 - Storage
 - Templates
- Clusters

New Server Virtual Machine

General Custom Properties

Windows Sysprep

Console

Host

High Availability

Resource Allocation

Boot Options

Custom Properties

OK Cancel

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	
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	
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	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	
0%	Spice	Paused	5 days	

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

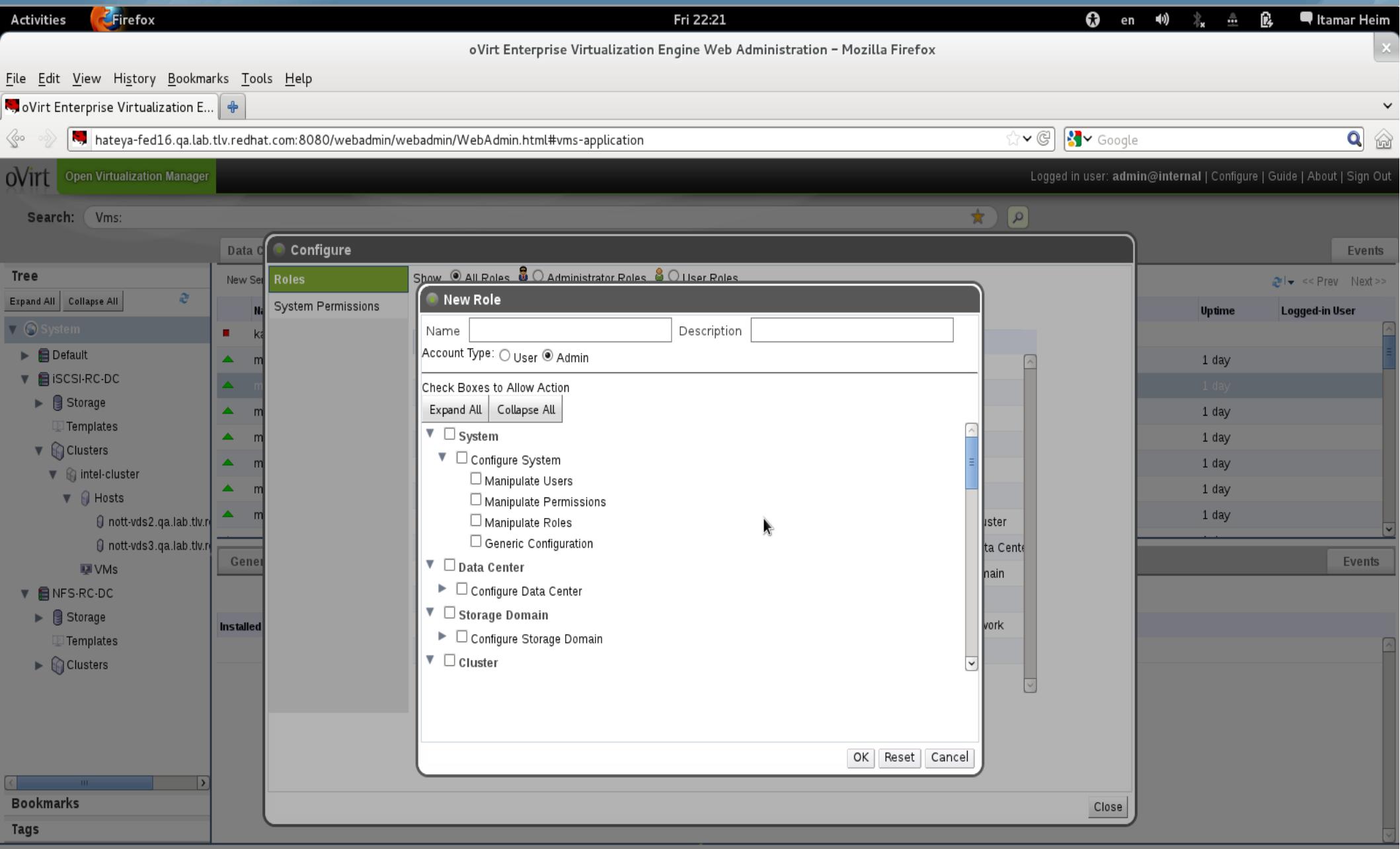
Bookmarks Tags

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

The oVirt logo consists of the word "oVirt" in a bold, sans-serif font. The letter "o" is blue, while "Virt" is dark grey. A small green dot is positioned above the letter "i".



User Portal

oVirt

The screenshot shows a Firefox browser window displaying the oVirt User Portal. The title bar reads "oVirt User Portal - Mozilla Firefox". The main content area shows four virtual machines: "kaka", "myVm1", "repro", and "up-vm2". Each machine has a status icon and a set of control buttons below it. The "kaka" machine is currently selected, and its details are shown in a modal dialog on the right side of the screen. The dialog contains the following information:

Setting	Value
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:	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

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	Convert VMs from VMware and RHEL/Xen to oVirt

Virtual Desktop Infrastructure (VDI)

Centralized management,
security and policy enforcement

Virtual desktops with user
experience of a physical PC

Multiple monitors

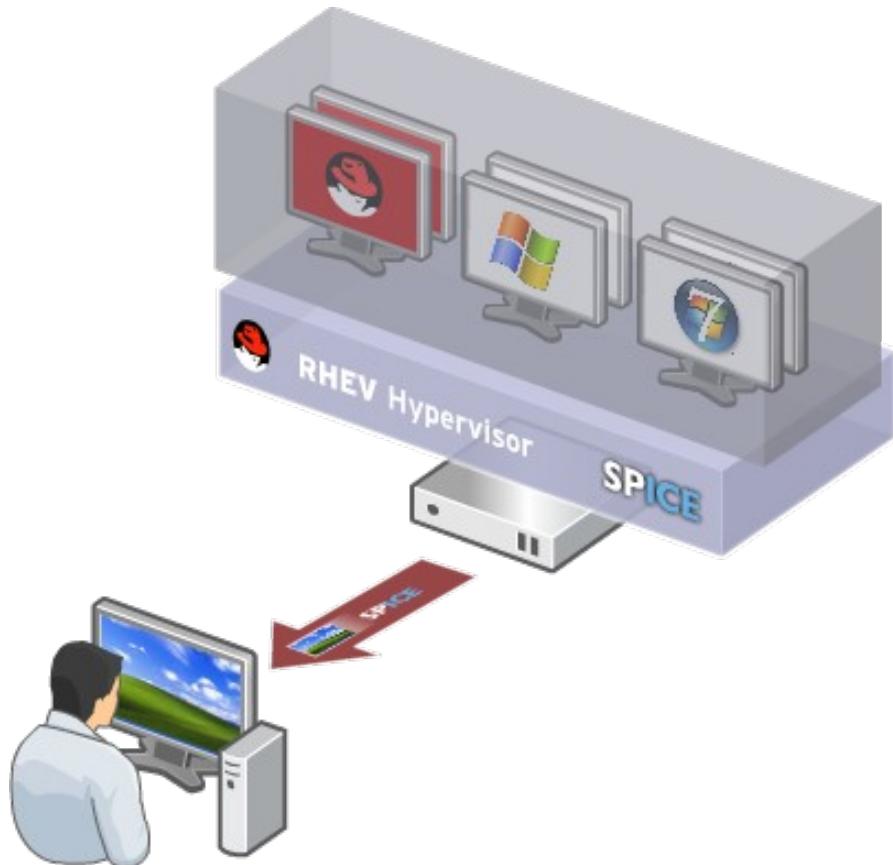
HD quality video

Bi-directional audio/video for
VoIP or video-conferencing

Smartcard support

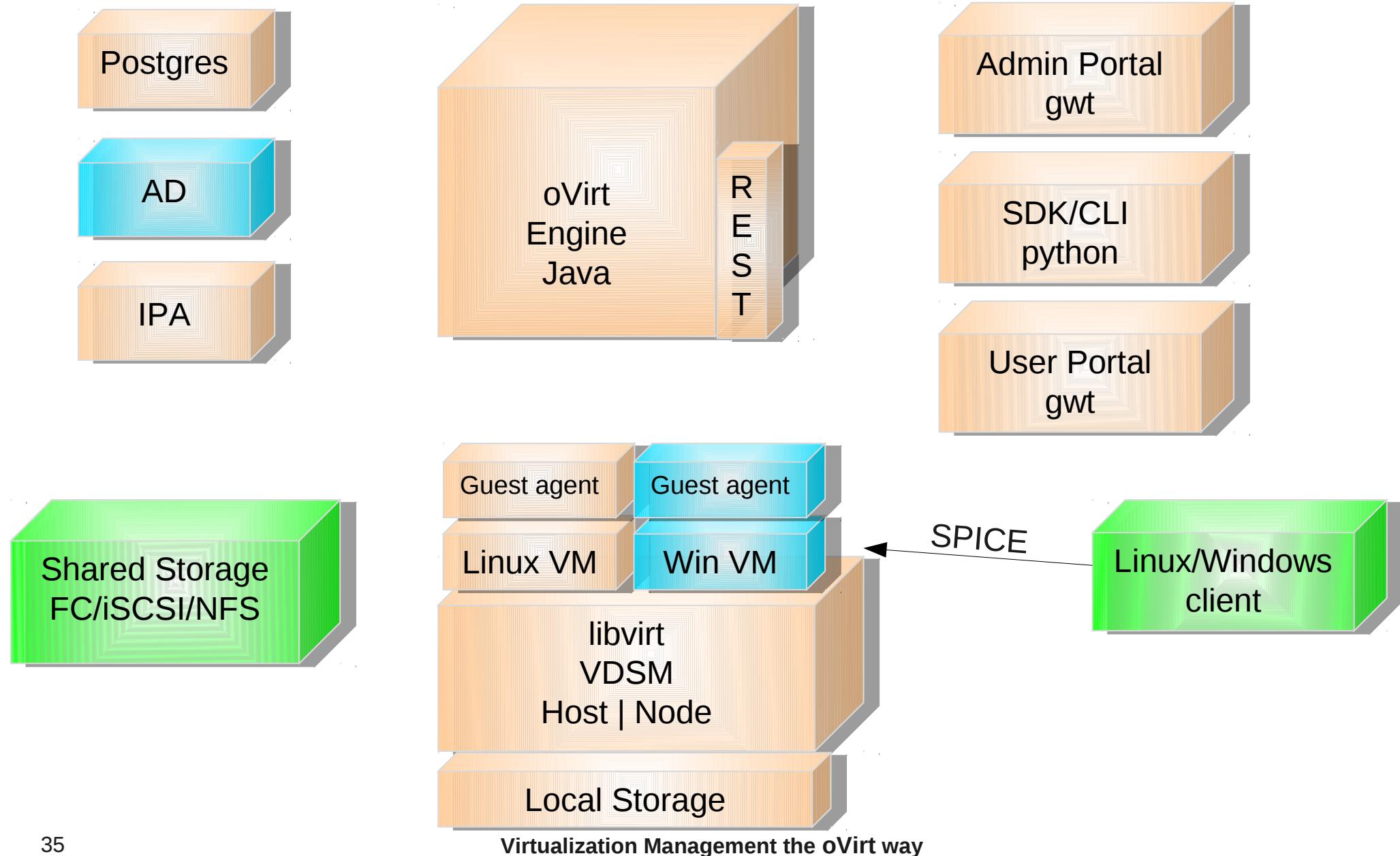
USB support

Industry leading density of virtual
desktops/server



oVirt High Level Architecture

oVirt



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}"/>
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-<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"/> circled
  <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')

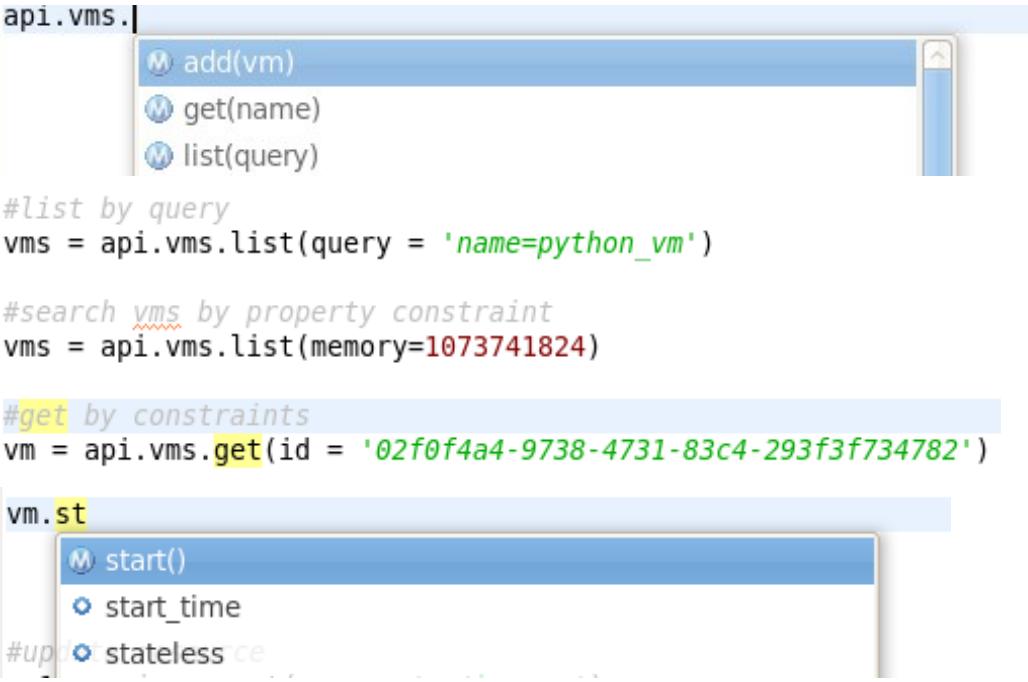
api.
```



- 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
```



Python SDK (cont.)



- Accessing resource properties and sub-collections.
- Accessing sub-collection methods.
- Querying sub-collection by custom constraint.
- Retrieving sub-collection resource.
- Accessing sub-collection resource properties and methods.

The screenshot shows a code editor with three snippets of Python code:

```
vm.n
  • name
  #update(resource)

vm.nics.
  M add(nic)
  ...
  ...

nics = vm.nics.list(interface='e1000')

nic = vm.nics.get(name='eth0')

nic.u
  M update()
```

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>
```

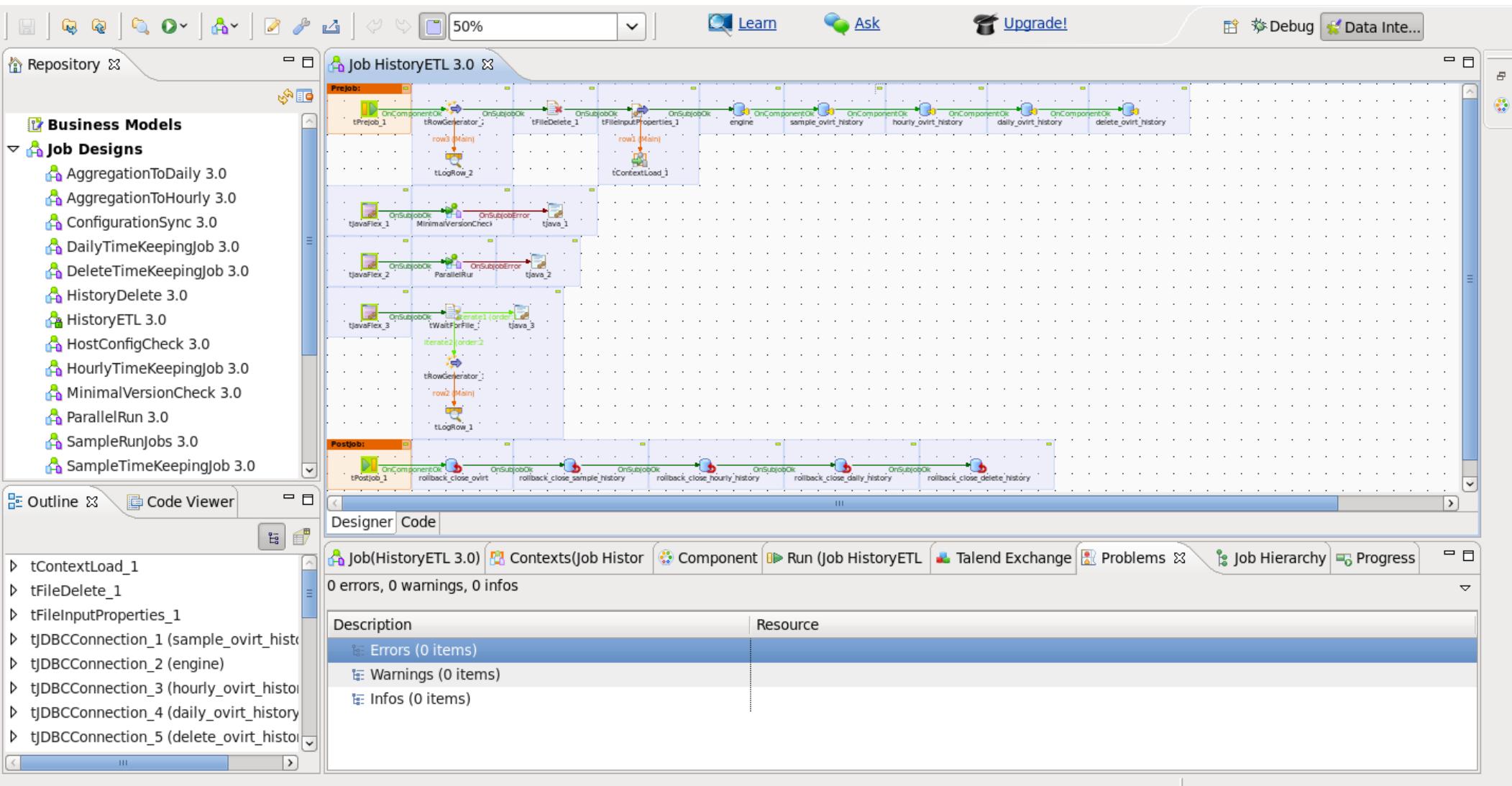
DESCRIPTION

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.

Data Warehouse based on Talend ETL



oVirt Reports

oVirt



ovirt-admin | Log Out

View ▾ Manage ▾

Sort By: Name | Modified Date

Report	October 18
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.
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.
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.
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.

oVirt Reports

oVirt



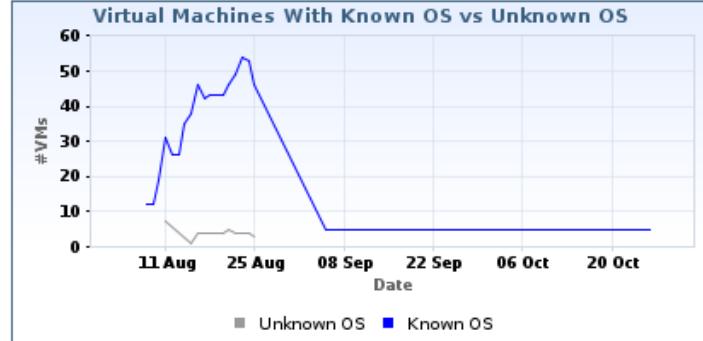
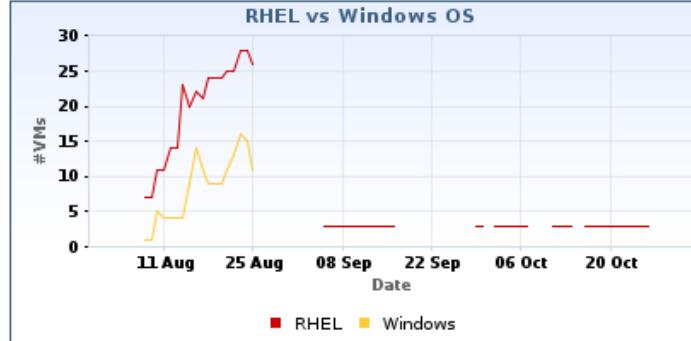
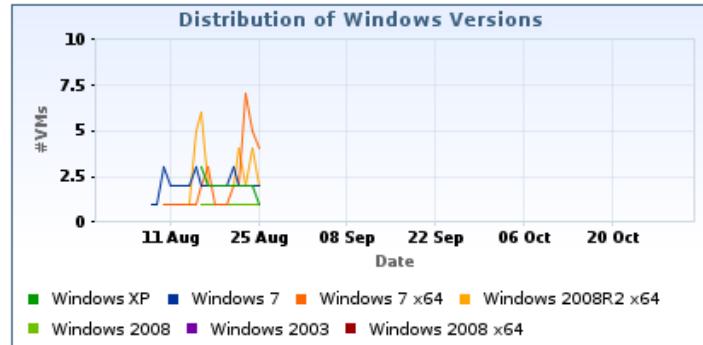
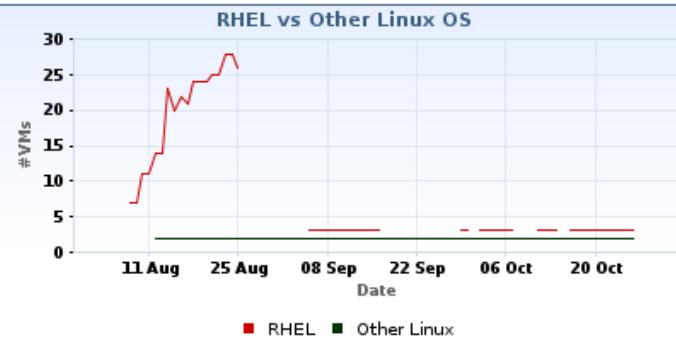
oVirt Reports

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

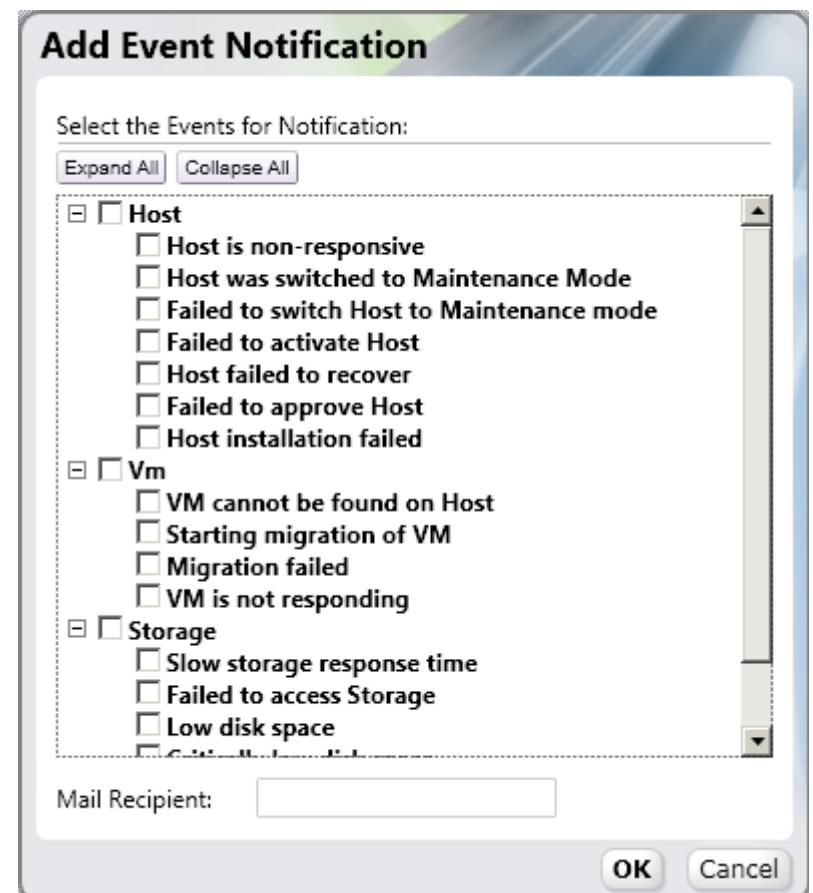
Buttons: Apply, OK, Reset, Cancel

Page 1 of 1

Notification Service

oVirt

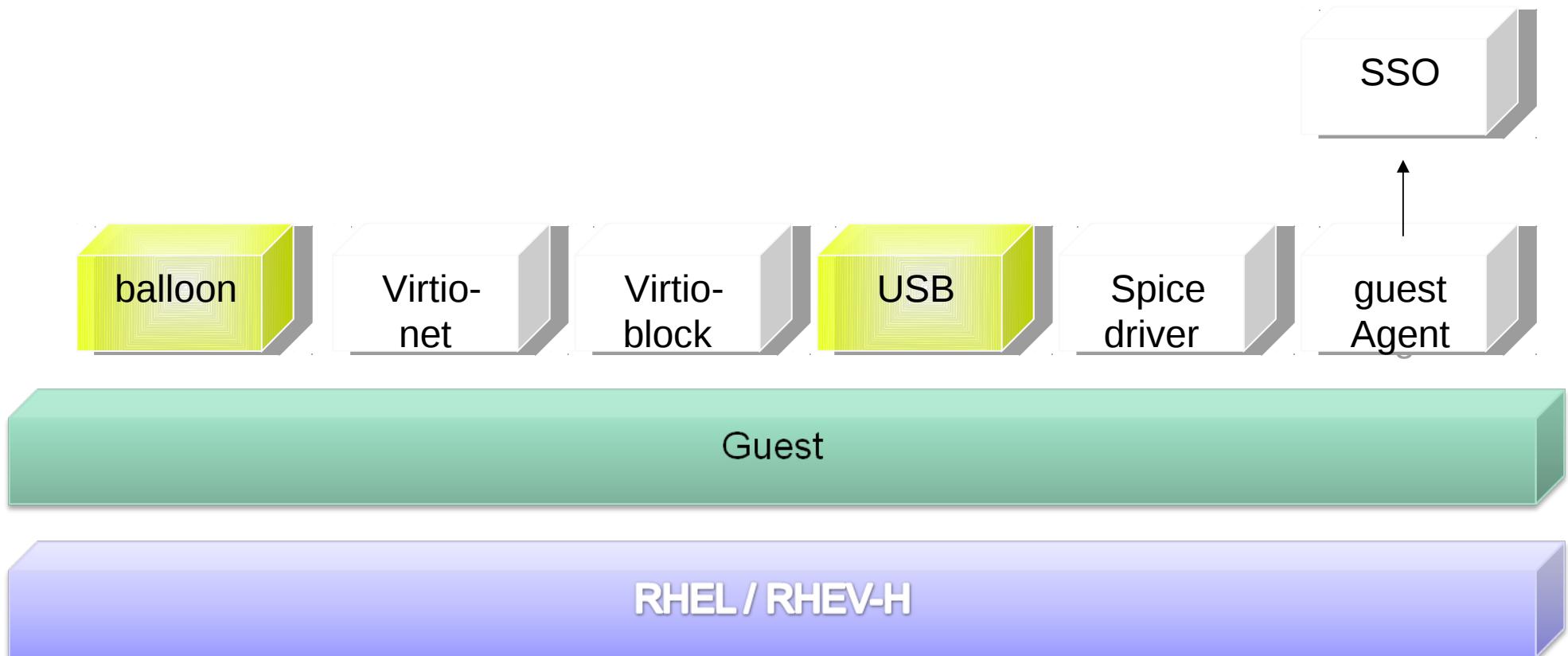
- oVirt allows registration to certain audit events
- The notification service sends emails per audit message to relevant users
- Also monitors engine itself



- 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 RHEL 6 is based on a PAM module with support for both KDE and Gnome

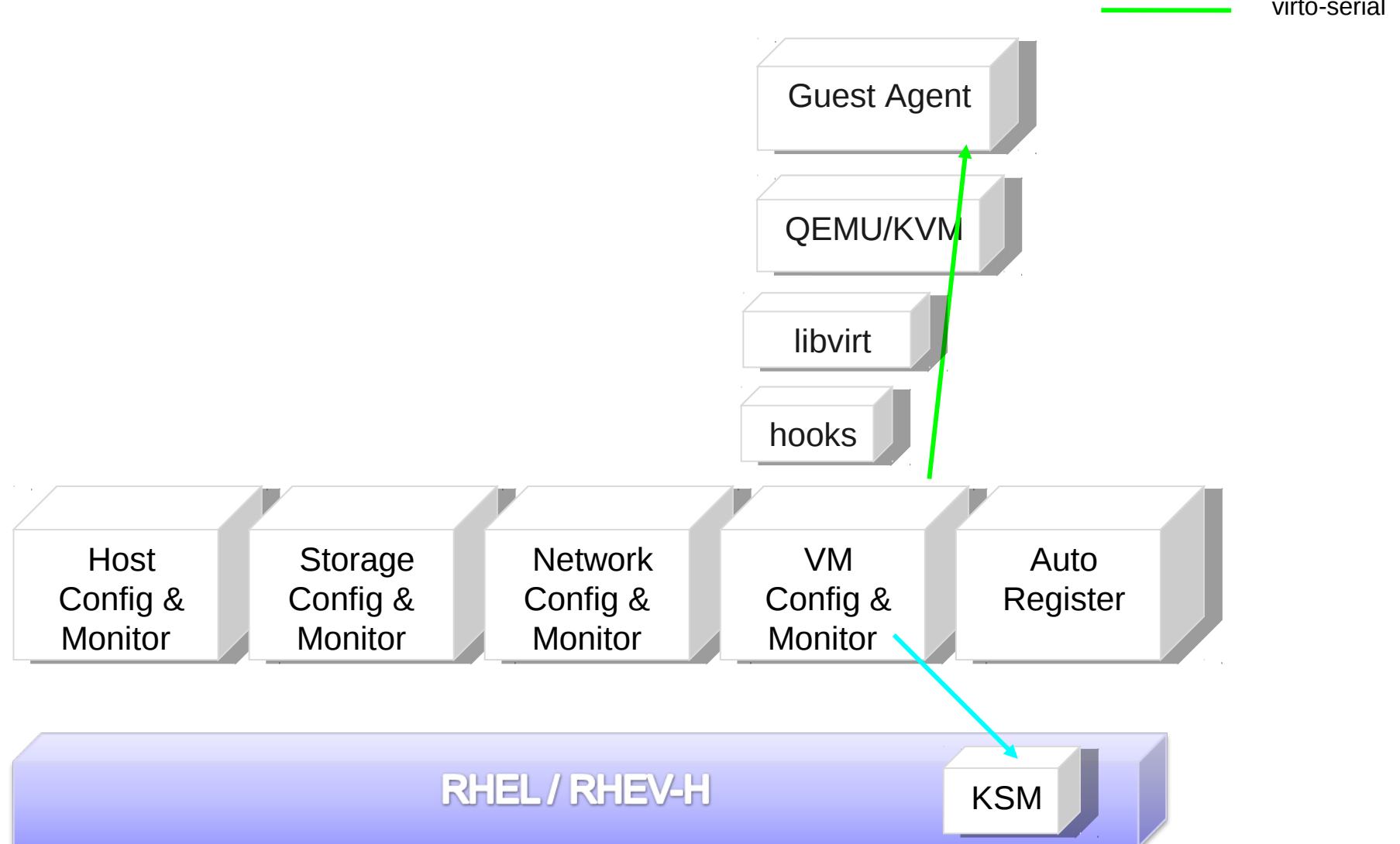
Guest

oVirt



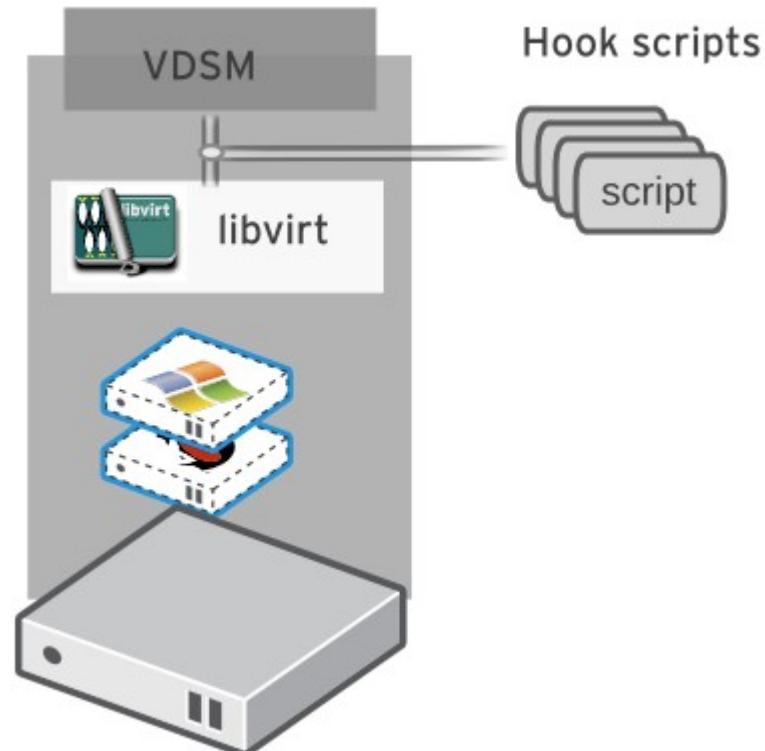
oVirt Host Agent - VDSM

oVirt



- “Hook” mechanism for customization
 - Allows administrator to define scripts to modify VM operation
 - eg. Add extra options such as CPU pinning, watchdog device, direct LUN access, etc
 - Allows oVirt to be extended for new KVM features before full integration is done
 - An easy way to test a new kvm/libvirt/linux feature

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
 - 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

Sample Hooks

- CPU pinning
- SR/IOV
- Smart card
- Direct LUN
- Hugepages
- Promiscuous mode network interface
- Cisco VN-Link
- Fileinject
- Floppy
- Hostusb
- Isolatedprivatevlan
- Numa
- Qos
- Scratchpad
- smbios

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

- Live snapshots
- Live storage migration
- Quotas
- Hot plug
- Multiple storage domains
- Shared disks
- iScsi disk
- Shared file system support
- Storage array integration
- Gluster support
- Qbg/Qbh
- virt-resize, pv-resize
- libguestfs integration
- Stable device addresses
- Network types
- Backup API
- SLA
- SDM
- Many many more...

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

- Next Version
 - Scheduled to be released later this week
- Next Workshop
 - Beijing – March 21st
 - Hosted by IBM in their Campus
 - <http://www.ovirt.org/news-and-events/workshop/>



THANK YOU !

<http://www.ovirt.org>
iheim@redhat.com