



Virtualization Management the **oVirt way**

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

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

What is oVirt?

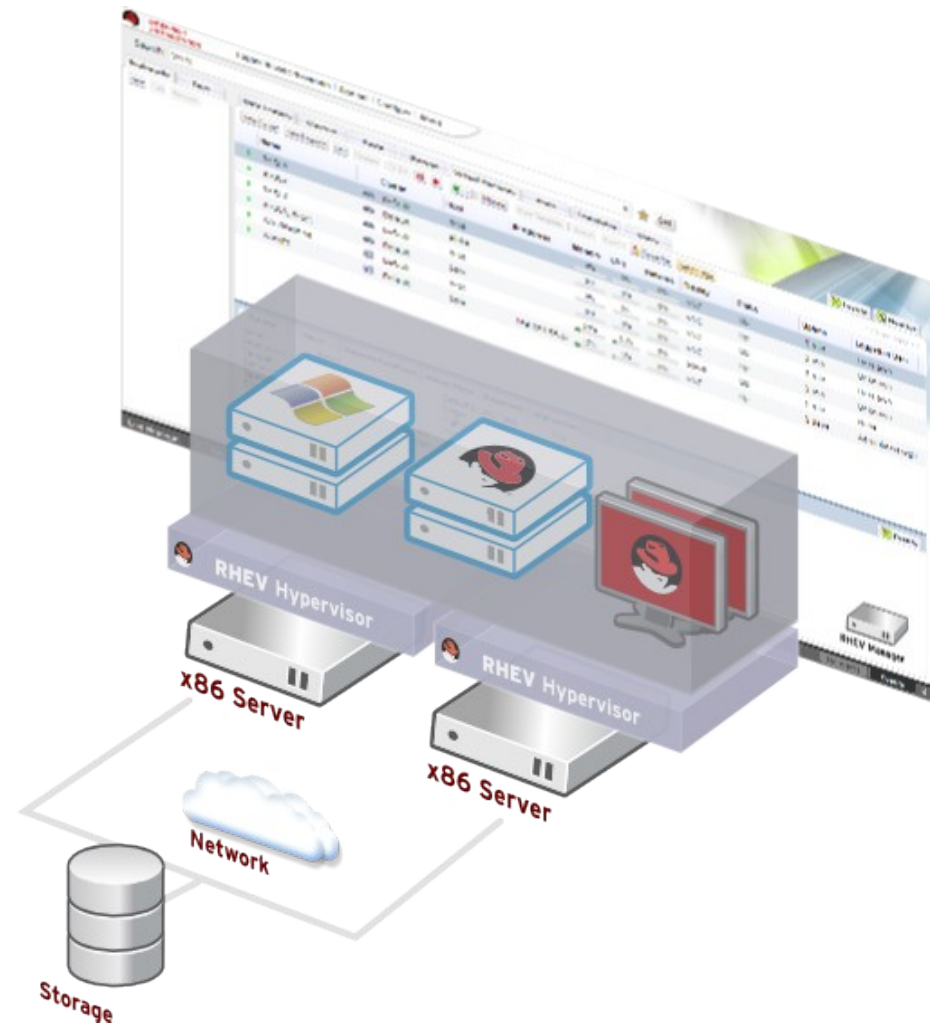
Large scale, centralized management for server and desktop virtualization

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?



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

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	

Competitive Landscape

Test Center Scorecard						
	Management	Performance	Reliability	Scalability	Installation	Overall Score
	25%	20%	20%	20%	15%	
Citrix XenServer 5.6.1	7	8	8	7	9	7.7 GOOD
	25%	20%	20%	20%	15%	
Microsoft Windows Server 2008 R2 Hyper-V	8	8	9	8	7	8.1 VERY GOOD
	25%	20%	20%	20%	15%	
Red Hat Enterprise Virtualization for Servers 2.2	8	8	8	9	9	8.4 VERY GOOD
	25%	20%	20%	20%	15%	
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



Search: Vms:

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

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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

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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

Application Name	Version	Architecture	Installation Date
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Search Results



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

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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



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 - nott-vds3.qa.lab.tlv.r
 - VMs
 - NFS-RC-DC
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 - 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:

Power Management

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



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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 Networks



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 - VMs
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New Edit Remove Activate Maintenance Configure Local Storage Assign Tags

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

Or Bonds

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

New Edit Remove Activate Maintenance Configure Local Storage Assign Tags

Name	Host/MP	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

Add / Edit Edit Management Network Bond Detach Save Network Configuration

Name	IP Address	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



Search: Host:

Data Centers Clusters Hosts Storage

Bond Network Interfaces

Bond Name:

Network:

Bonding Mode:

None
 DHCP
 Static

IP:

Subnet Mask:

Save network configuration

OK Cancel

Name	Host/UP
nott-vds2.qa.lab.tlv.redhat.com	nott-vds2.qa.lab.tlv.r
nott-vds3.qa.lab.tlv.redhat.com	nott-vds3.qa.lab.tlv.r
nott-vdsa.qa.lab.tlv.redhat.com	nott-vdsa.qa.lab.tlv.r



General Virtual Machines Network Interfaces

Name	Address
<input checked="" type="checkbox"/> em1	10.35.115.11
<input checked="" type="checkbox"/> em2	

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


Drops (Pkts)	Bond	Vlan	Network Name
0			ovirtmgmt
0			




Configure Storage Once for Entire Cluster

Activities  Fri 22:18  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#storage-general   Google 

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

Search: Storage:

Data Centers **Clusters**

New Domain Import Domain Edit

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%

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Events

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

Edit Domain

Name: hateya-ovirt-rc-1

Domain Function / Storage Type: Data / iSCSI

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

<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	

Targets > LUNs

LUNs > Targets

OK Cancel

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

Add Servers or Desktops



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 - VMs
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 - 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:

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Name
kaka
myVm1
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myVm11
myVm12
myVm13
myVm15
myVm16
myVm17
myVm18
myVm19
myVm2
myVm20
myVm21
myVm22
myVm23
myVm24
myVm25
myVm26
myVm27

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

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

Migratable or Not



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
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 - 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

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

New Server Virtual Machine

Highly Available

Priority for Run/Migration queue:

Low
 Medium
 High

OK Cancel

Control Allocated Resources (Disk, Memory)



Tree

- Expand All Collapse All
- System
 - Default
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 - 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 **Storage Allocation:** (Available only when a template is selected)

Windows Sysprep Storage Domain

Console Provisioning Clone

Host

High Availability

Resource Allocation **Memory Allocation:** Physical Memory Guaranteed 256 MB

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



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oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox

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oVirt Enterprise Virtualization E...

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

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

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 - nott-vds3.qa.lab.tlv.r
 - 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 Custom Properties

Windows Sysprep

Console

Host

High Availability

Resource Allocation

Boot Options

Custom Properties

OK Cancel

Assign Permissions to Objects by Roles



Search: Vms:

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

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

Events

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

Events

Define Your Own 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

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

Events

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

Events

User Portal



Activities Firefox Sat 11:27 en Itamar Heim

oVirt User Portal - Mozilla Firefox

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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: admin@internal | Sign out | Guide | About Basic Extended

kaka myVm1 repro up-vm2

Machine is Down Machine is Ready Machine is Down Machine is Down

kaka

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



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

	kaka					
	myVm1					
	repro					
	up-vm2					

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

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

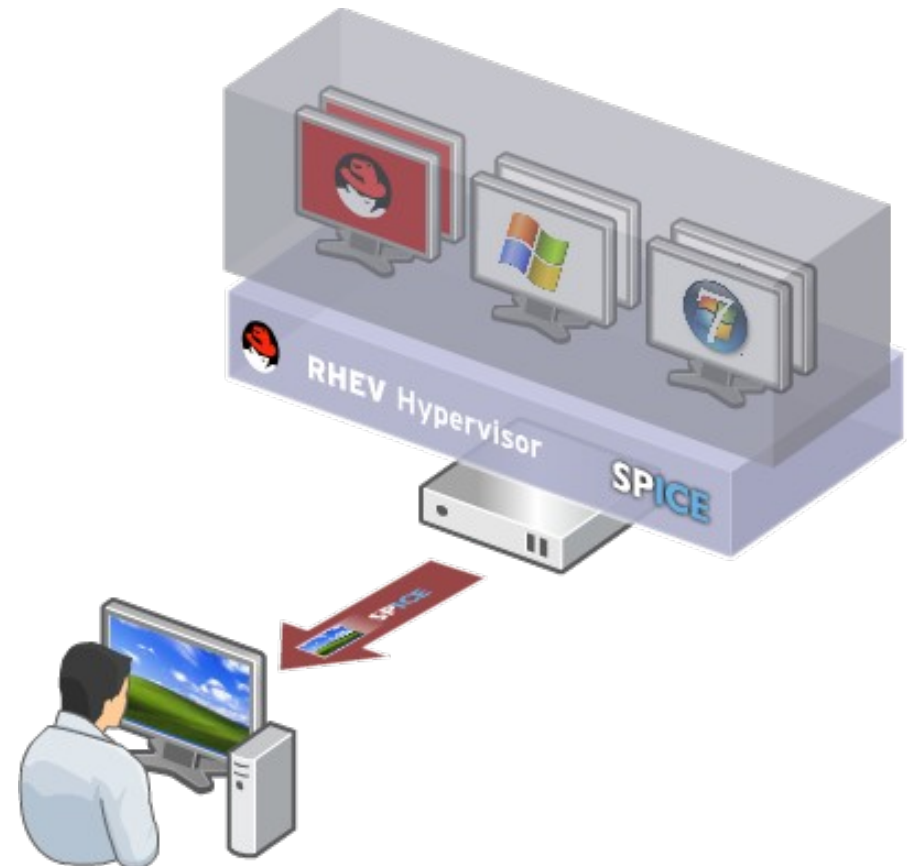
HD quality video

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

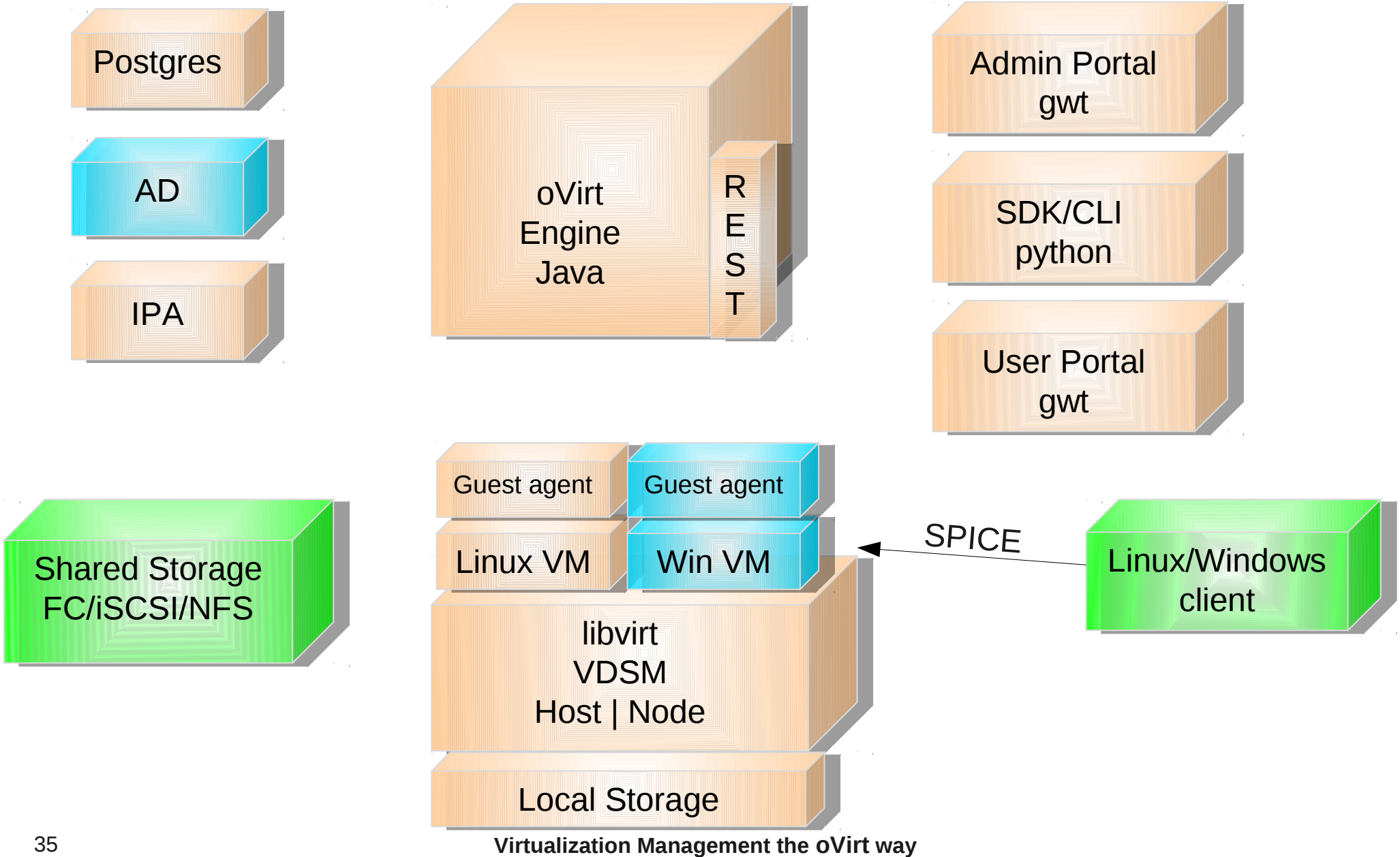
Smartcard support

USB support

Industry leading density of virtual
desktops/server



oVirt High Level Architecture



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://10.35.1.1...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>
  </iscsi>
  </host>
</hosts>
```

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.

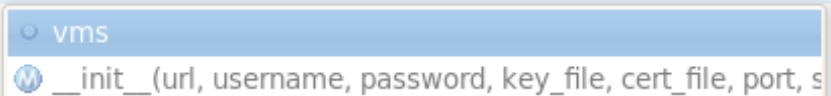
```
-<host_nics>
- <host_nic id="dbb39d06-3aef-468c-83e6-88eae0a3f346" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/dbb39d06-3aef-468c-83e6-88eae0a3f346">
  <name>eth0</name>
  -<actions>
    <link rel="attach" href="/rhev-api/hosts/15896dce-edd0-415c-a524-c9b02f278895/nics/dbb39d06-3aef-468c-83e6-88eae0a3f346/attach"/>
    <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.

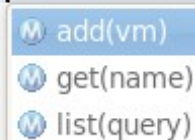
```
#create proxy  
api = API(url='http://localhost:8080', username='user@domain', password='password')
```

```
api.
```



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

```
api.vms.
```



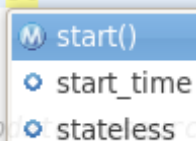
```
M add(vm)  
M get(name)  
M list(query)
```

```
#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
```

- 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.

```
vm.n
  name
  nics

vm.nics.
  add(nic)

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

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

nic.u
  update()
```


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



The screenshot displays the Talend ETL Designer interface. The main workspace shows a job design for 'Job HistoryETL 3.0'. The job is divided into three sections: Prejob, Main, and Postjob. The Prejob section includes components like 'tPrejob_1', 'tRowGenerator_1', 'tFileDelete_1', 'tFileInputProperties_1', 'tContextLoad_1', and 'tLogRow_2'. The Main section contains a complex flow with 'tJavaFlex_1', 'tJavaFlex_2', 'tJavaFlex_3', 'tWaitForFile_1', 'tRowGenerator_1', and 'tLogRow_1'. The Postjob section includes 'tPostjob_1', 'tRollbackCloseOvirt', 'tRollbackCloseSampleHistory', 'tRollbackCloseHourlyHistory', 'tRollbackCloseDailyHistory', and 'tRollbackCloseDeleteHistory'. The interface includes a 'Repository' pane on the left with 'Business Models' and 'Job Designs' sections. The 'Job Designs' section lists various jobs like 'AggregationToDaily 3.0', 'AggregationToHourly 3.0', 'ConfigurationSync 3.0', 'DailyTimeKeepingJob 3.0', 'DeleteTimeKeepingJob 3.0', 'HistoryDelete 3.0', 'HistoryETL 3.0', 'HostConfigCheck 3.0', 'HourlyTimeKeepingJob 3.0', 'MinimalVersionCheck 3.0', 'ParallelRun 3.0', 'SampleRunJobs 3.0', and 'SampleTimeKeepingJob 3.0'. The 'Outline' pane at the bottom left shows a tree view of the job components. The 'Code Viewer' pane at the bottom right shows the job's code. The 'Designer' pane at the bottom center shows the job's status: '0 errors, 0 warnings, 0 infos'. The 'Resource' pane at the bottom right shows a table with columns 'Description' and 'Resource'. The table contains three rows: 'Errors (0 items)', 'Warnings (0 items)', and 'Infos (0 items)'. The 'Job(HistoryETL 3.0)' pane at the bottom center shows the job's name and the 'Run (Job HistoryETL)' button. The 'Problems' pane at the bottom center shows the job's status: '0 errors, 0 warnings, 0 infos'. The 'Job Hierarchy' pane at the bottom center shows the job's hierarchy. The 'Progress' pane at the bottom center shows the job's progress. The 'Talend Exchange' pane at the bottom center shows the job's exchange status. The 'Contexts(Job Histor)' pane at the bottom center shows the job's contexts. The 'Component' pane at the bottom center shows the job's components. The 'Run (Job HistoryETL)' button at the bottom center is highlighted. The 'Talend Exchange' button at the bottom center is highlighted. The 'Problems' button at the bottom center is highlighted. The 'Job Hierarchy' button at the bottom center is highlighted. The 'Progress' button at the bottom center is highlighted. The 'Talend Exchange' button at the bottom center is highlighted. The 'Contexts(Job Histor)' button at the bottom center is highlighted. The 'Component' button at the bottom center is highlighted. The 'Run (Job HistoryETL)' button at the bottom center is highlighted.

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

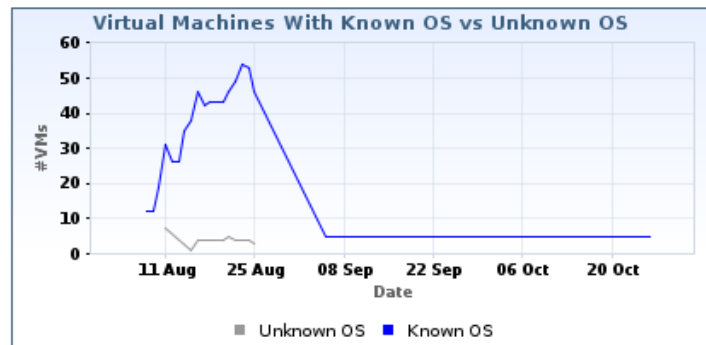
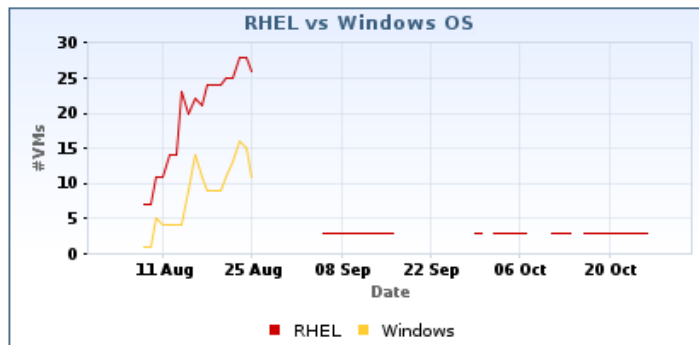
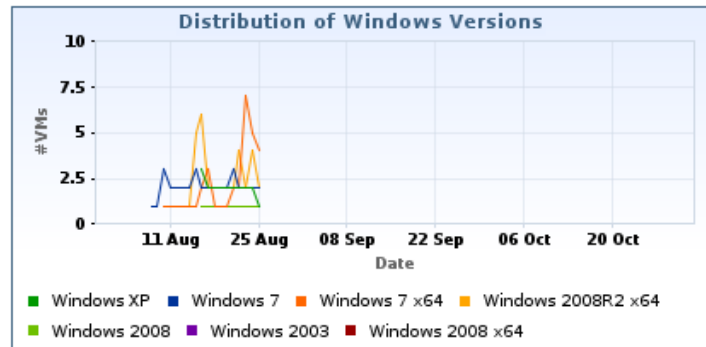
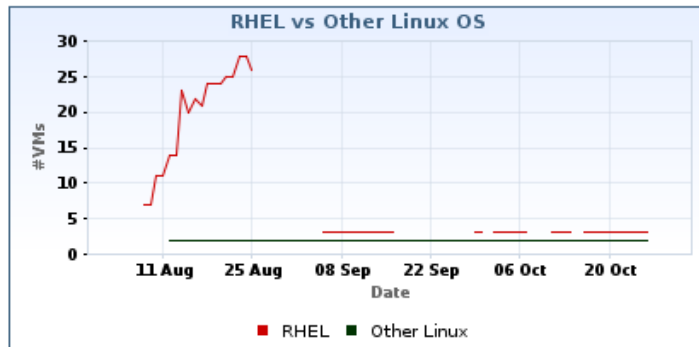


oVirt Reports

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

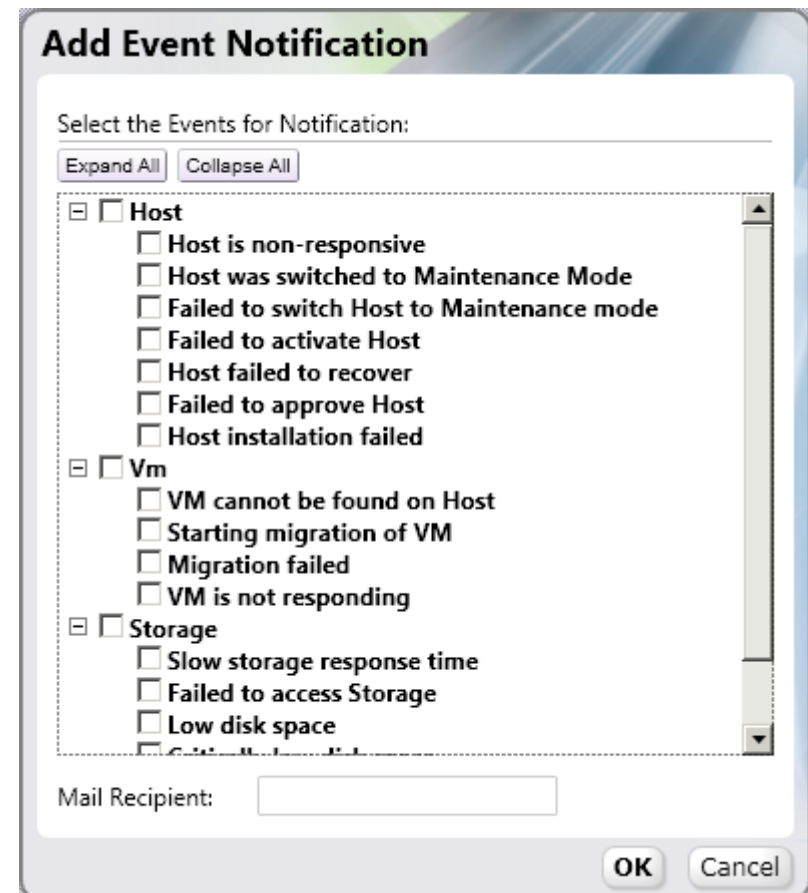
* Start Date: 2011-08-01

* End Date: 2011-08-31

Apply OK Reset Cancel

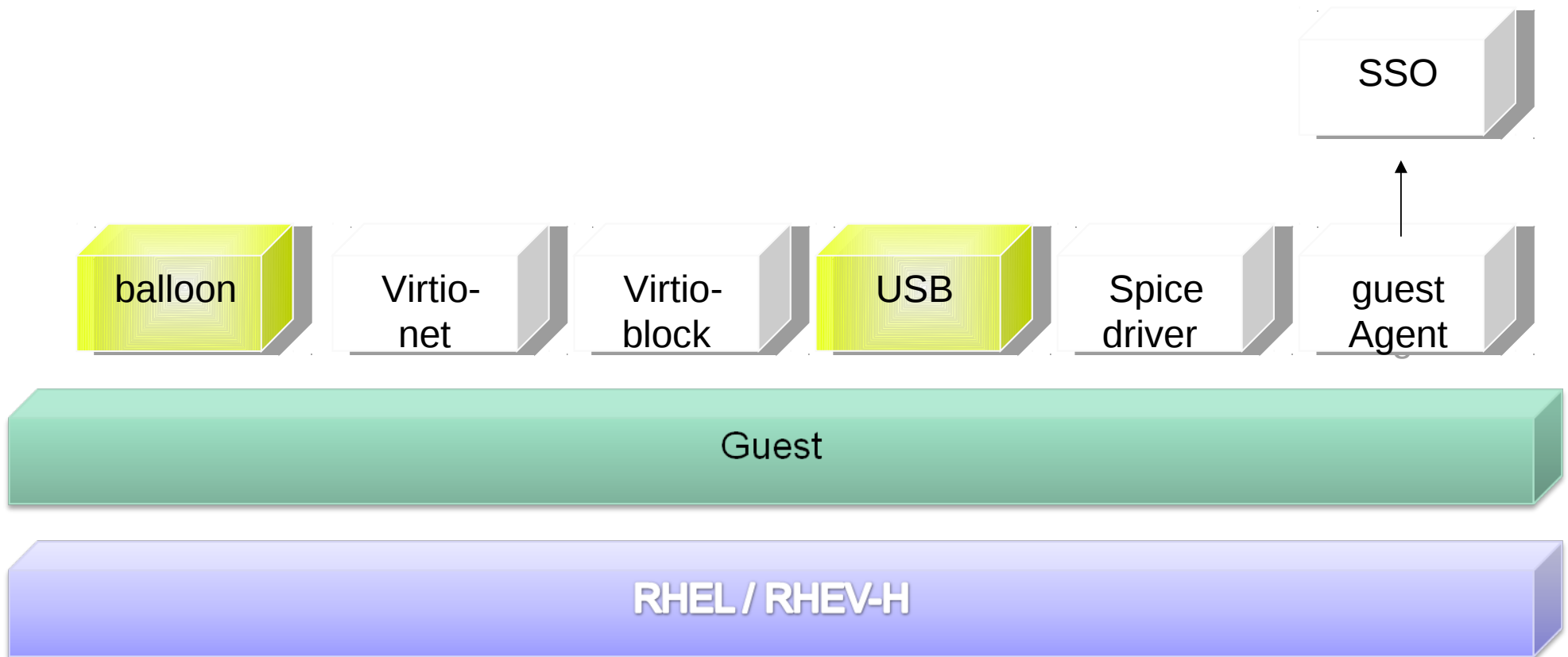
Notification Service

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

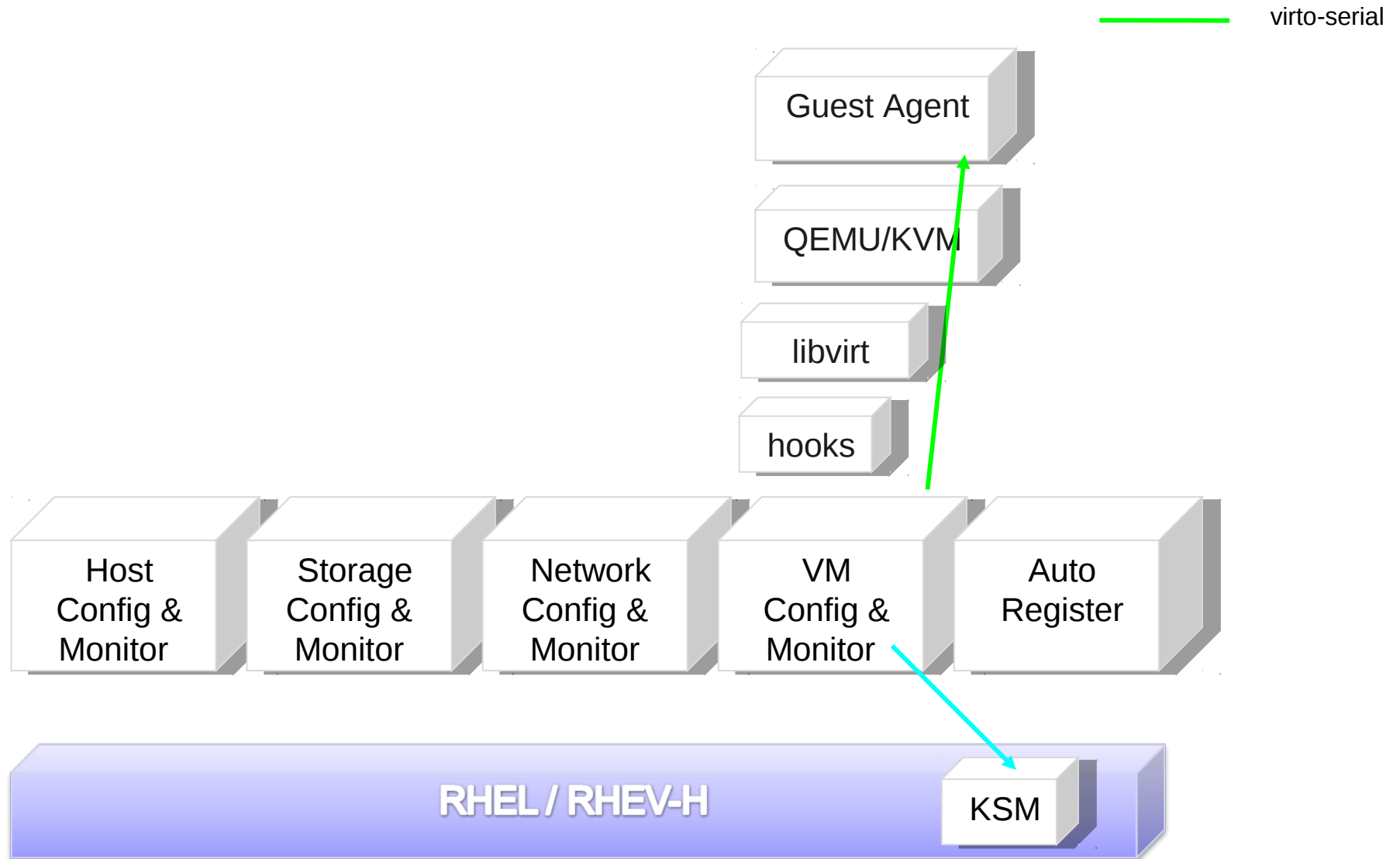


oVirt Guest Agent

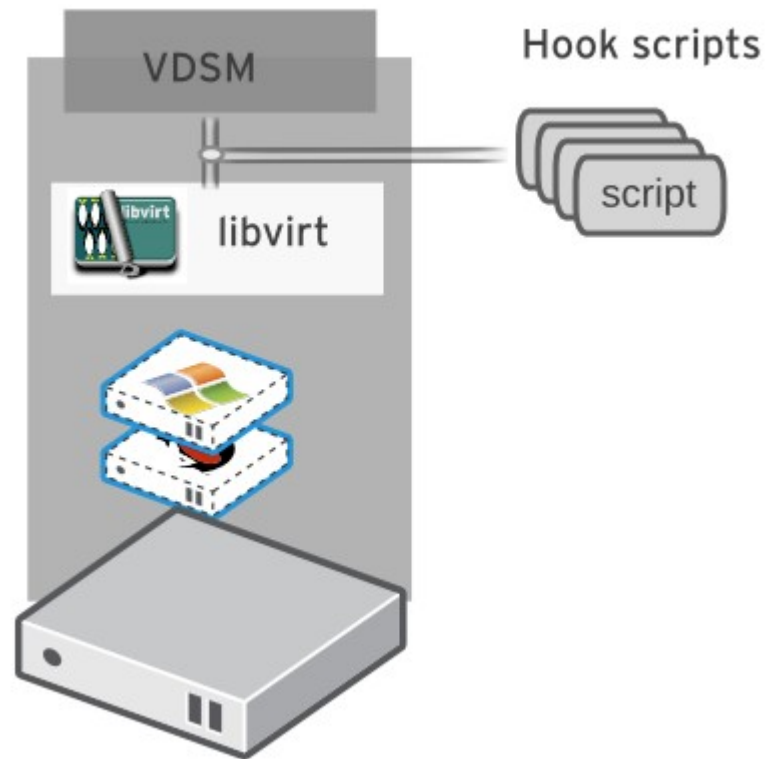
- The guest agent provides additional information to oVirt Engine, such as guest memory usage, guest ip address, installed applications and sso.
- Python code, available for both linux and windows guests
- Communication is done over virtio-serial
- SSO for windows is based on a gina module for XP and a credential provider for windows 7
- SSO for RHEL 6 is based on a PAM module with support for both KDE and Gnome



oVirt Host Agent - VDSM



- “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



- 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/>

oVirt

THANK YOU !

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