

The oVirt Way General Product Overview

Yaniv Bronhaim

Senior Software Engineer,
Maintainer @ RHEV
Red Hat IL
March 2016, FOSSASIA, Singapore



- Open source
- What is oVirt
- Utilizing Virt and KVM features
- Architecture
- Road-map
- Ovirt 4.0 and beyond



Open Source:

- It's not just for Linux
- It may or may not have support
- You don't have to be an expert to use it
- You have full access to the source code
- You're probably already using it

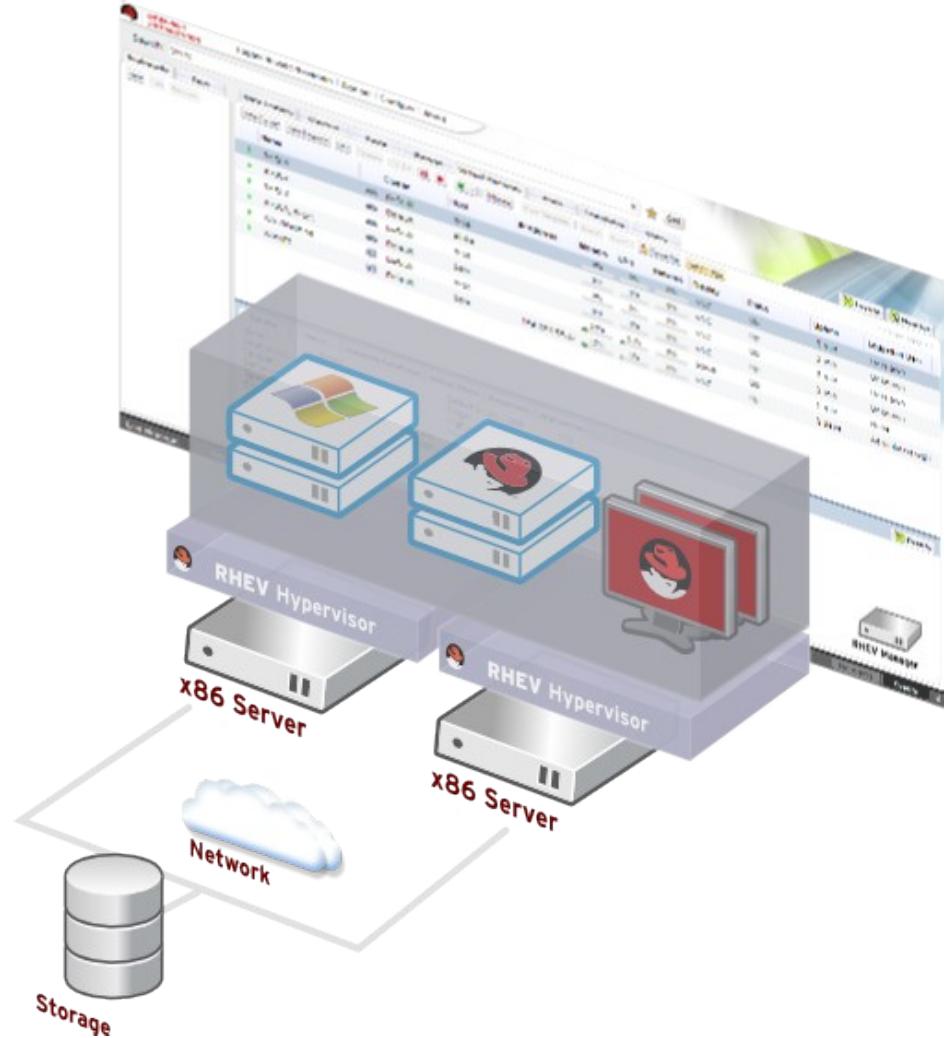
What is oVirt?

Provide an open source alternative
to vCenter/vSphere/Xen

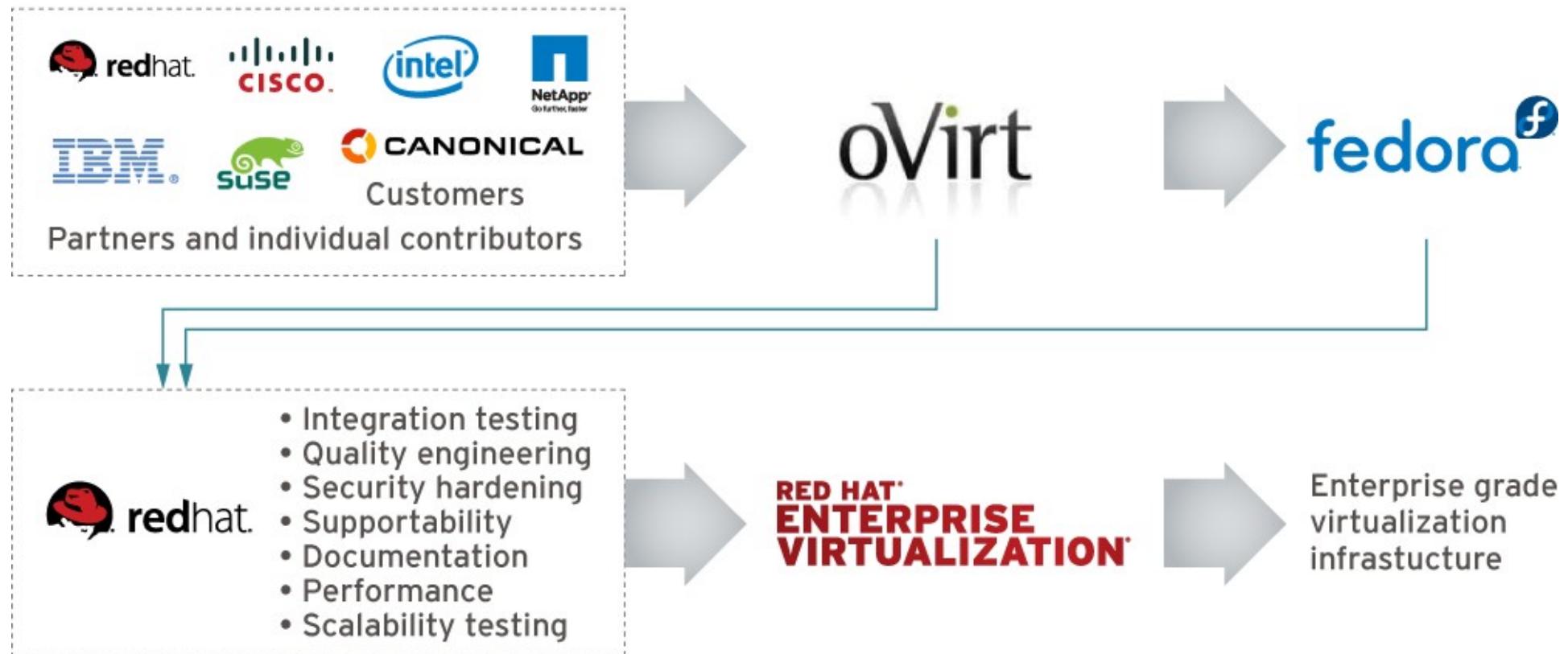
Large scale, centralized
management for server and
desktop virtualization

Based on leading performance,
scalability and security
infrastructure technologies

Focus on ease of use/deployment



Who is behind it



Core

- oVirt-Engine
- VDSM
- Host deploy
- oVirt-Node
- oVirt-Engine-SDK
 - ruby\java\python
- oVirt-Engine-CLI
- oVirt-Guest-Agent
- oVirt-Image-Uploader
- oVirt-iso-Uploader
- oVirt-Log-Collector
- oVirt-DWH

- oVirt-live
- Ovirt-Reports
- Otopi
- Hosted-Engine
- **KVM**

Tests Projects

- Ovirt-vdsmfake
- testenv

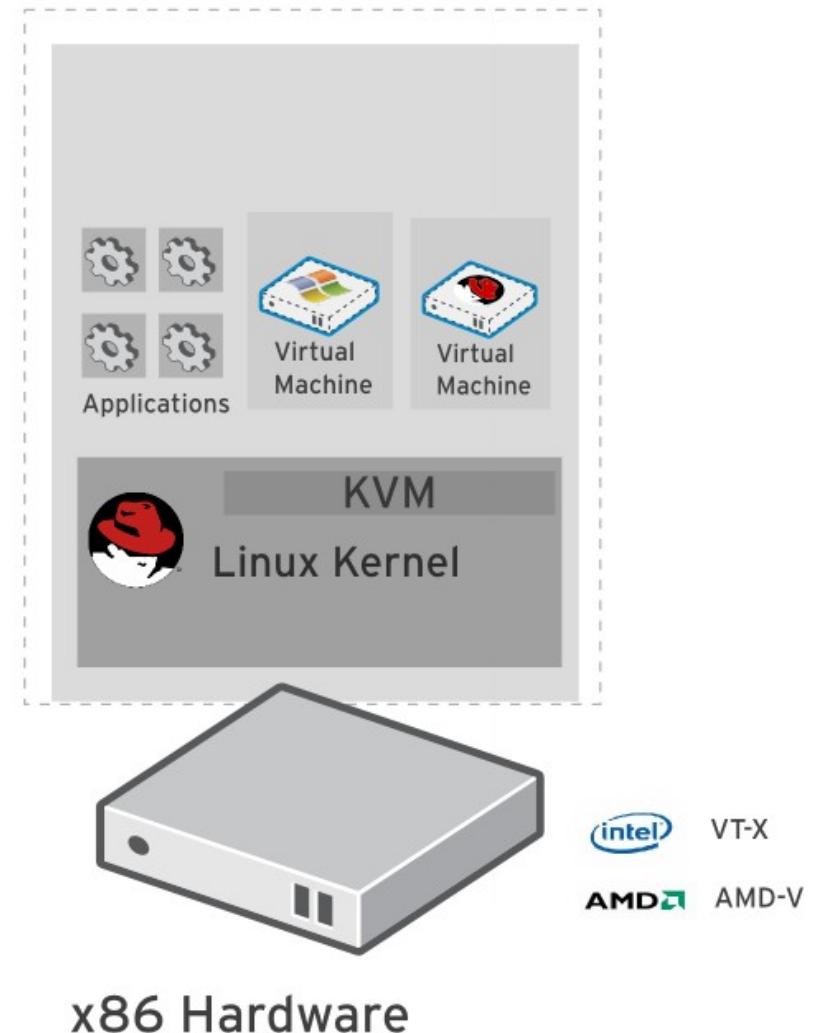
Python Infra

- cpopen
- pthreading
- loprocess
- safelease

And much more...

Kernel-based Virtual Machine

- Included in Linux kernel since 2006
- Runs Linux, Windows and other operating system guests
- Advanced features
 - Live migration
 - Memory page sharing
 - Thin provisioning
 - PCI Pass-through
- KVM architecture provides high “feature-velocity” – leverages the power of Linux



Using KVM

```
/usr/libexec/qemu-kvm -name vm-f16-buildmachine -S -M rhel6.4.0 -cpu  
Westmere -enable-kvm -m 2048 -smp 2,sockets=2,cores=1,threads=1 -uuid a8ccdb60-8a42-44f5-  
9669-d74c3b2eff43 -smbios type=1,manufacturer=Red Hat,product=RHEV  
Hypervisor,version=6Server-6.4.0.4.el6,serial=30353036-3837-4247-3831-  
30394635324C_78:e7:d1:22:46:d8,uuid=a8ccdb60-8a42-44f5-9669-d74c3b2eff43 -nodefconfig  
-nodefaults -chardev socket,id=charmonitor,path=/var/lib/libvirt/qemu/vm-f16-  
buildmachine.monitor,server,nowait -mon chardev=charmonitor,id=monitor,mode=control -rtc  
base=2013-10-08T12:16:16,driftfix=slew -no-shutdown -device piix3-usb-  
uhci,id=usb,bus=pci.0,addr=0x1.0x2 -device virtio-serial-pci,id=virtio-  
serial0,bus=pci.0,addr=0x4 -drive if=none,media=cdrom,id=drive-ide0-1-  
0,readonly=on,format=raw,serial= -device ide-drive,bus=ide.1,unit=0,drive=drive-ide0-1-  
0,id=ide0-1-0 -drive file=/rhev/data-center/f79b0b28-c82f-11e0-8739-78e7d1e48c4c/5bab6470-  
8825-4e3a-b408-ebcde93678b6/images/4c213cd2-c4d5-441b-a1ac-dfb1a6868699/11b3e132-50a5-481b-  
b48b-e3bf2879e69,if=none,id=drive-virtio-disk0,format=qcow2,serial=4c213cd2-c4d5-441b-a1ac-  
dfb1a6868699,cache=none,werror=stop,rerror=stop,aio=native -device virtio-blk-  
pci,scsi=off,bus=pci.0,addr=0x5,drive=drive-virtio-disk0,id=virtio-disk0,bootindex=1 -drive  
file=/rhev/data-center/f79b0b28-c82f-11e0-8739-78e7d1e48c4c/5bab6470-8825-4e3a-b408-  
ebcde93678b6/images/02330fa2-d1ff-48e0-a843-842c2376756f/5a283126-4d27-4eef-86dd-  
fb538d8d08e4,if=none,id=drive-virtio-disk1,format=qcow2,serial=02330fa2-d1ff-48e0-a843-  
842c2376756f,cache=none,werror=stop,rerror=stop,aio=native -device virtio-blk-  
pci,scsi=off,bus=pci.0,addr=0x6,drive=drive-virtio-disk1,id=virtio-disk1 -netdev  
tap,fd=31,id=hostnet0,vhost=on,vhostfd=32 -device virtio-net-  
pci,netdev=hostnet0,id=net0,mac=00:1a:4a:23:12:13,bus=pci.0,addr=0x3,bootindex=2 -chardev  
socket,id=charchannel0,path=/var/lib/libvirt/qemu/channels/vm-f16-  
buildmachine.com.redhat.rhevm.vds,server,nowait -device virtserialport,bus=virtio-  
serial0.0,nr=1,chardev=charchannel0,id=channel0,name=com.redhat.rhevm.vds -chardev  
socket,id=charchannel1,path=/var/lib/libvirt/qemu/channels/vm-f16-  
buildmachine.org.qemu.guest_agent.0,server,nowait -device virtserialport,bus=virtio-  
serial0.0,nr=2,chardev=charchannel1,id=channel1,name=org.qemu.guest_agent.0 -chardev  
spicevmc,id=charchannel2,name=vdagent -device virtserialport,bus=virtio-  
serial0.0,nr=3,chardev=charchannel2,id=channel2,name=com.redhat.spice.0 -spice port=5904,tls-  
port=5905,addr=10.35.16.4,x509-dir=/etc/pki/vdsm/libvirt-spice,tls-channel=main,tls-  
channel=display,tls-channel=inputs,tls-channel=cursor,tls-channel=playback,tls-  
channel=record,tls-channel=smartcard,tls-channel=usbredir,seamless-migration=on -k en-us -vga  
qxl -global qxl-vga.ram_size=67108864 -global qxl-vga.vram_size=67108864
```

How Does It Look?

Activities Firefox Fri 22:13 Itamar Heim

File Edit View History Bookmarks Tools Help

oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox

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

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

Search: Vms: Events

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

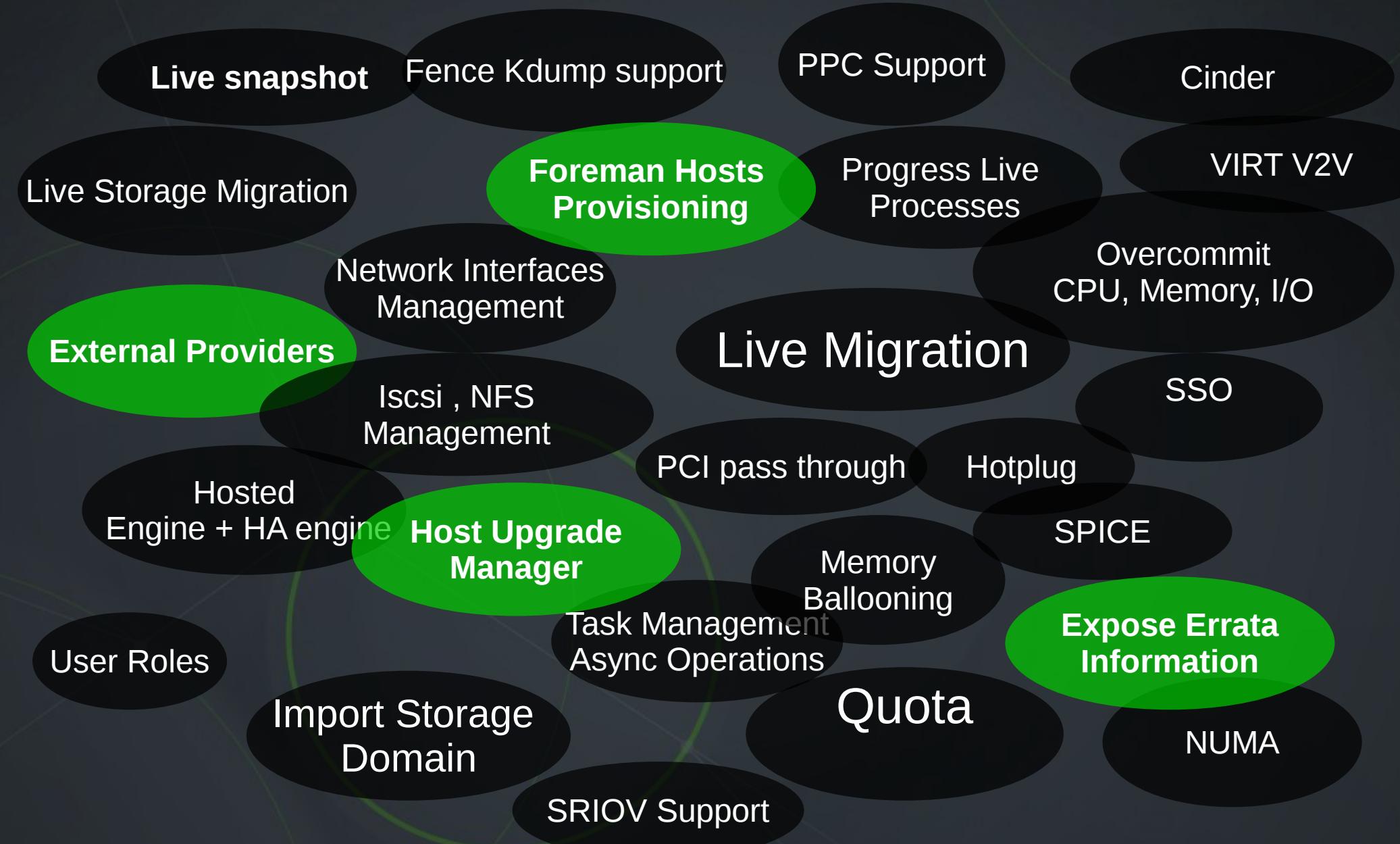
Tree

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

Bookmarks Tags

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

Browser Firefox version 9 is currently not supported.



The oVirt's Entities

Data Centers



Storage



Linux Hypervisors

Network



Virtual Clusters



Guest\VM



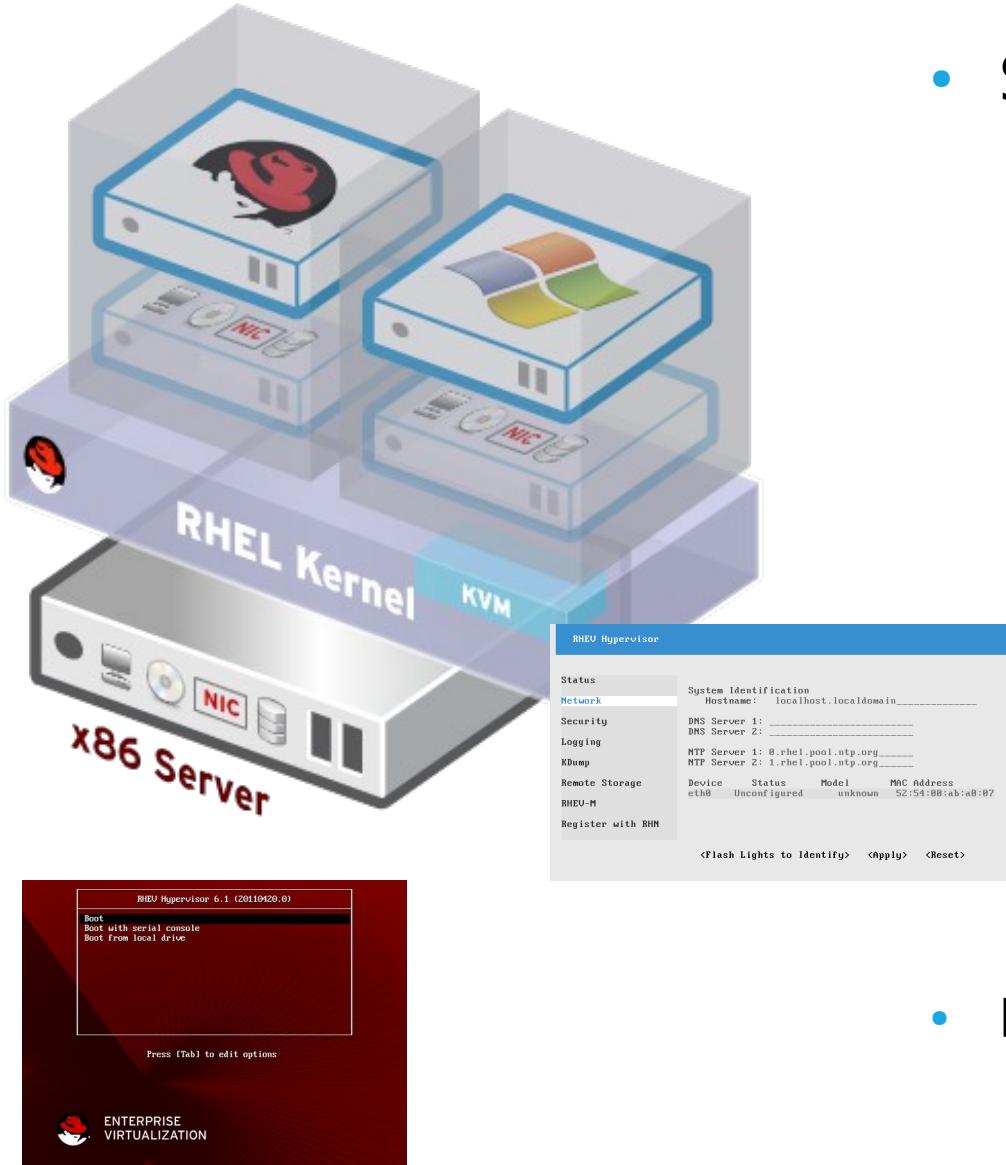
Guest\VM



Linux as a Hypervisor?

- What makes up a Hypervisor?
 - OS Fedora\Red Hat Enterprise Linux\CentOs\Ubuntu
 - VDSM
 - Hardware Management
 - Memory Manager
 - Storage Manipulations
 - Resource Management
 - Scheduling
 - Access Control
 - Power Management
 - Memory Manager
 - Device Model (emulation)
 - Virtual Machine Monitor

oVirt Node



- Standalone hypervisor
 - Small footprint < 100MB
 - Customized 'spin' of Fedora + KVM
 - 'Just enough' Fedora to run virtual machines
 - Runs on all RHEL hardware with Intel VT/AMD-V CPUs
 - Easy to install, configure and upgrade
 - PXE boot, USB boot, CD or Hard drive
 - Node 4.0 new generation

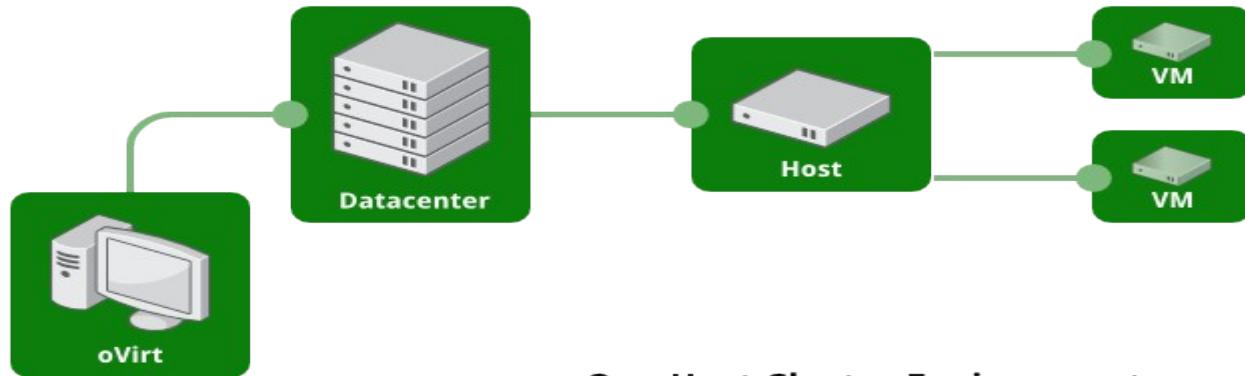
Cluster Of Hypervisors

- What makes up a cluster?
 - Group - Migration domain
 - Share Specification
 - Share Storage Array
 - Network Cluster
 - Provides Migration Abilities

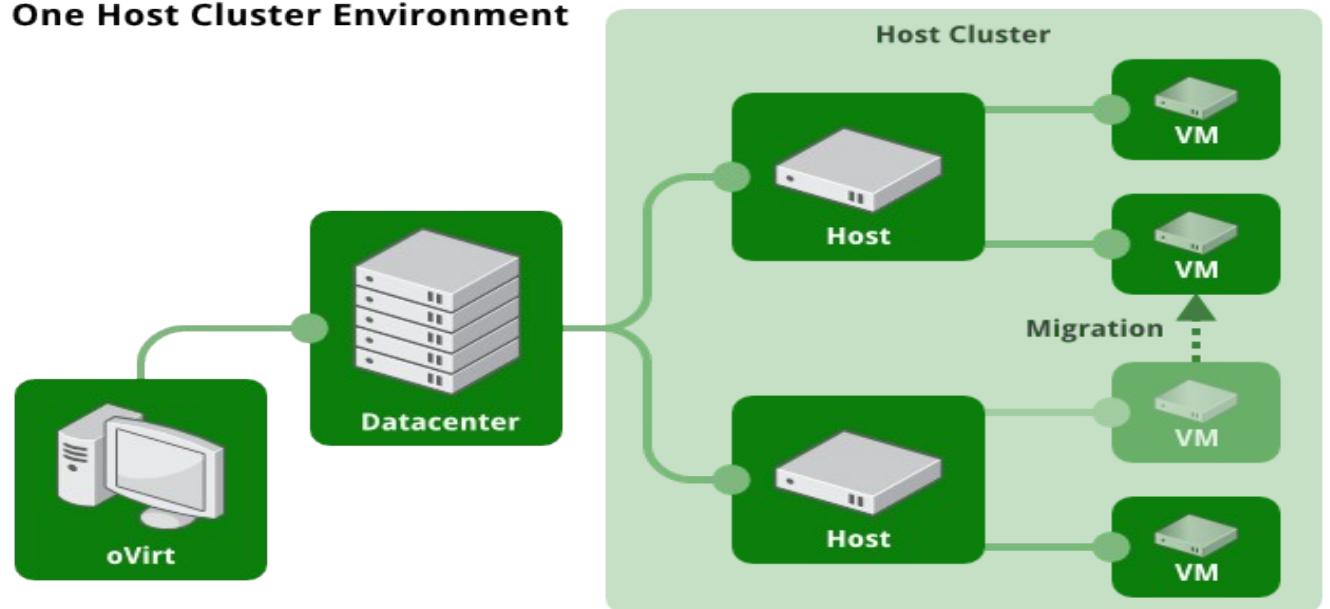
- What is a VM
 - User level process
 - Controls part of the hypervisor hardware
 - Attached to storage disk
 - Exposes VDI access control

The Environment - Why clusters?

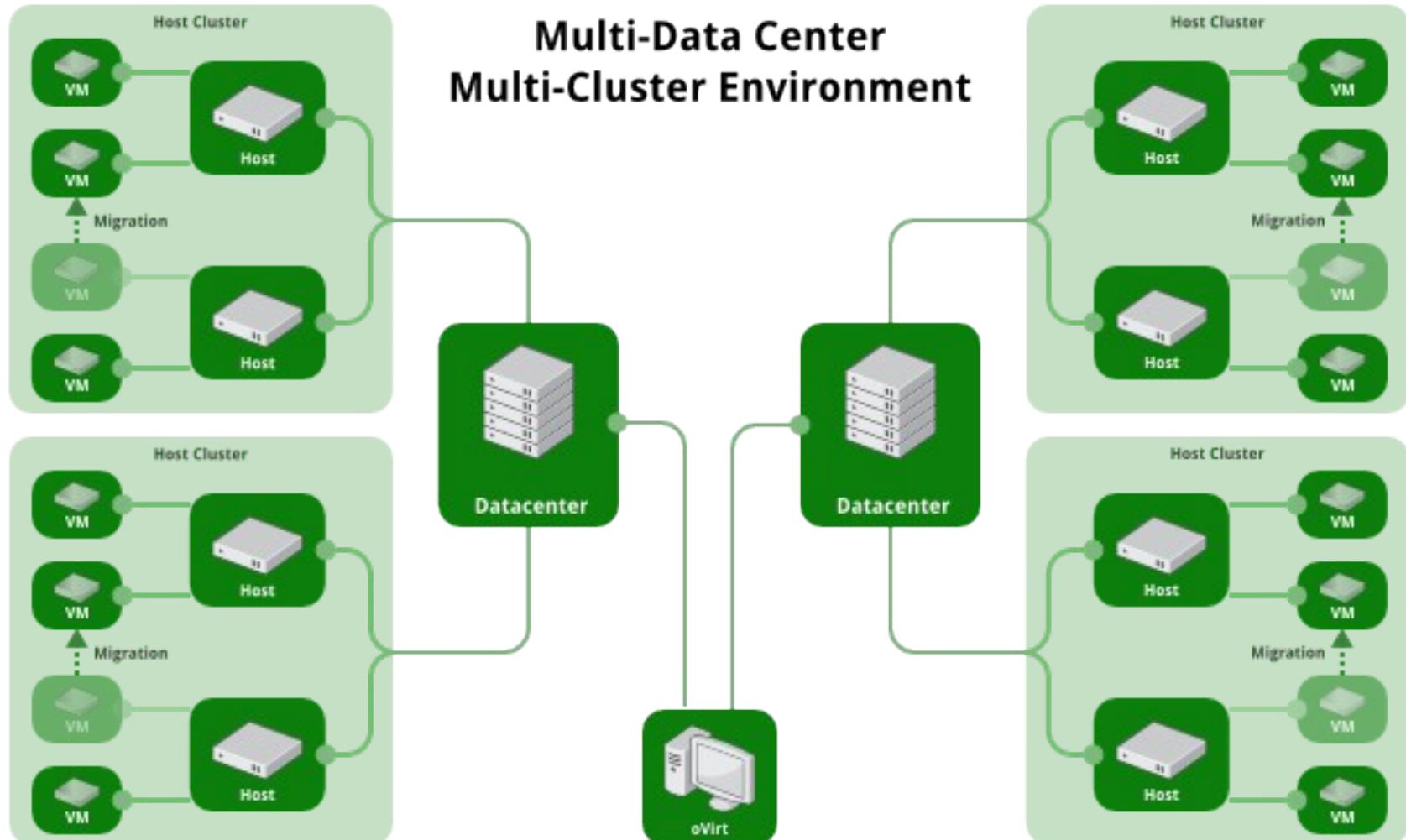
Basic One Host Environment



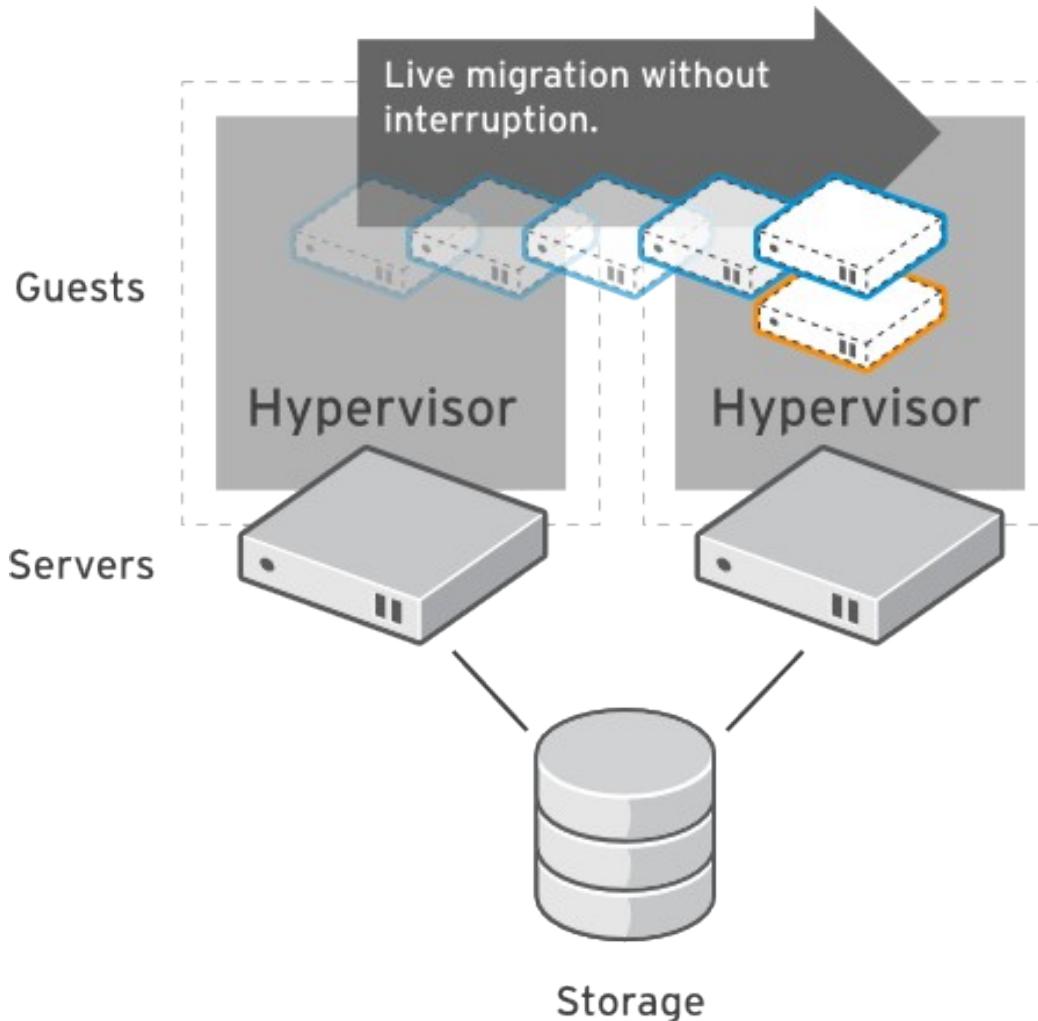
One Host Cluster Environment



Multi-Datacenter/Multi-Host

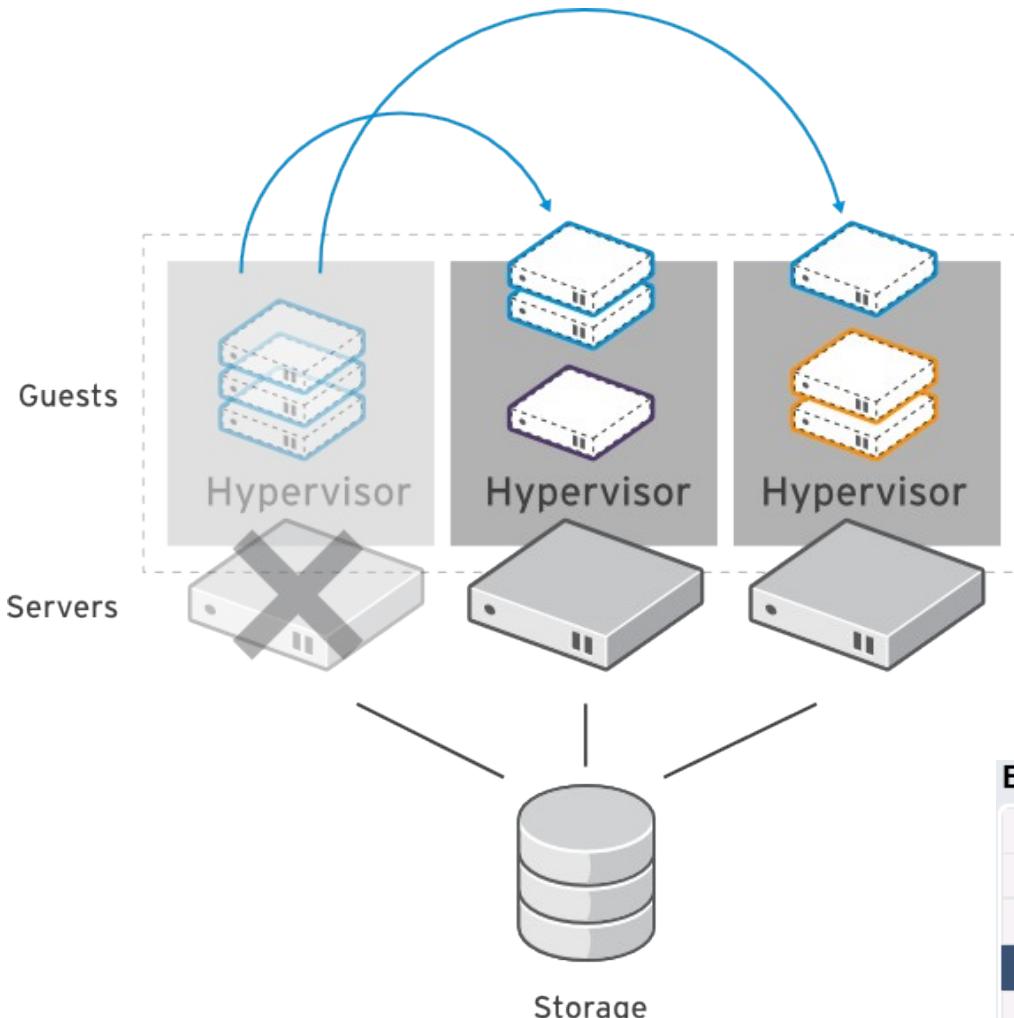


Live Migration

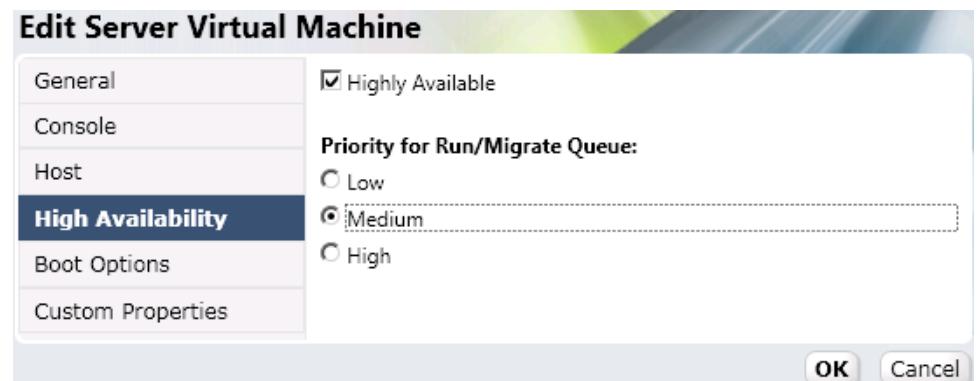


- Dynamically move virtual machines between hosts
 - No service interruption
 - Applications continue to run
- Migrate even I/O intensive workloads such as databases
- Perform hardware maintenance without application downtime
- Dynamically balance workloads between host systems

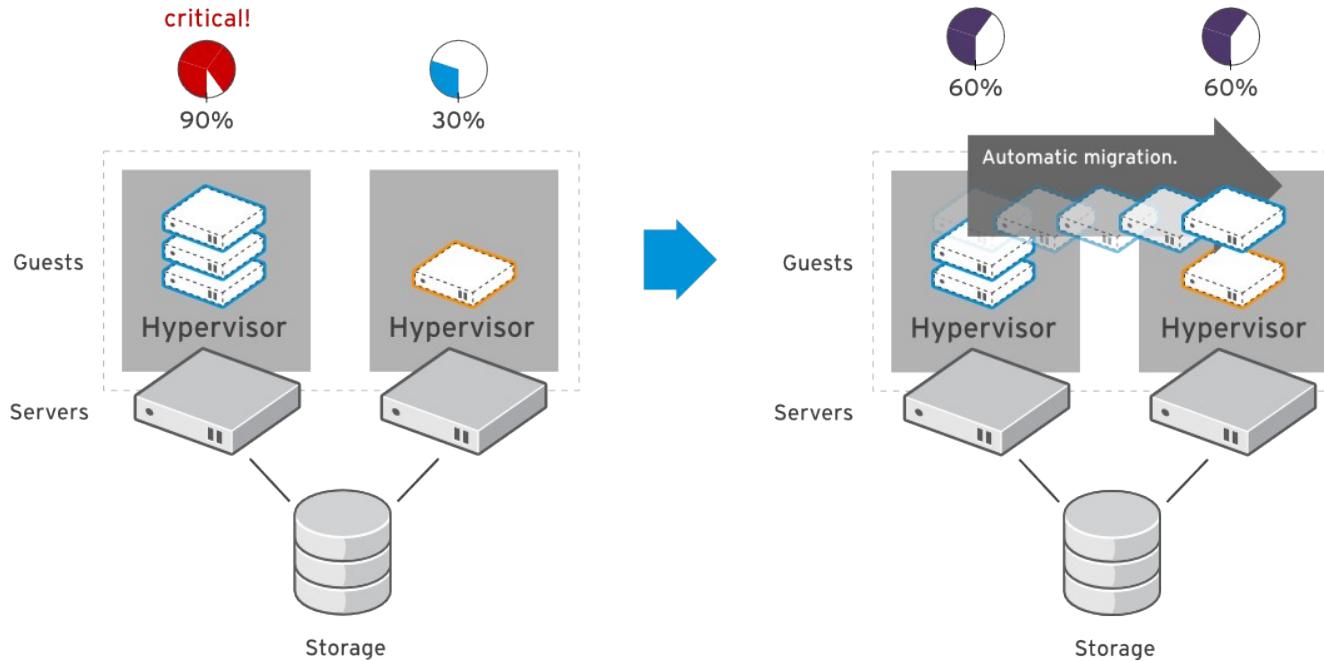
High Availability



- Build a highly available enterprise infrastructure
- Continually monitor host systems and virtual machines
- Automatically restart virtual machines in case of host failure
 - Restart virtual machine on another node in the cluster
- Use live migration to “fail-back” a VM to its original host when the server is restored



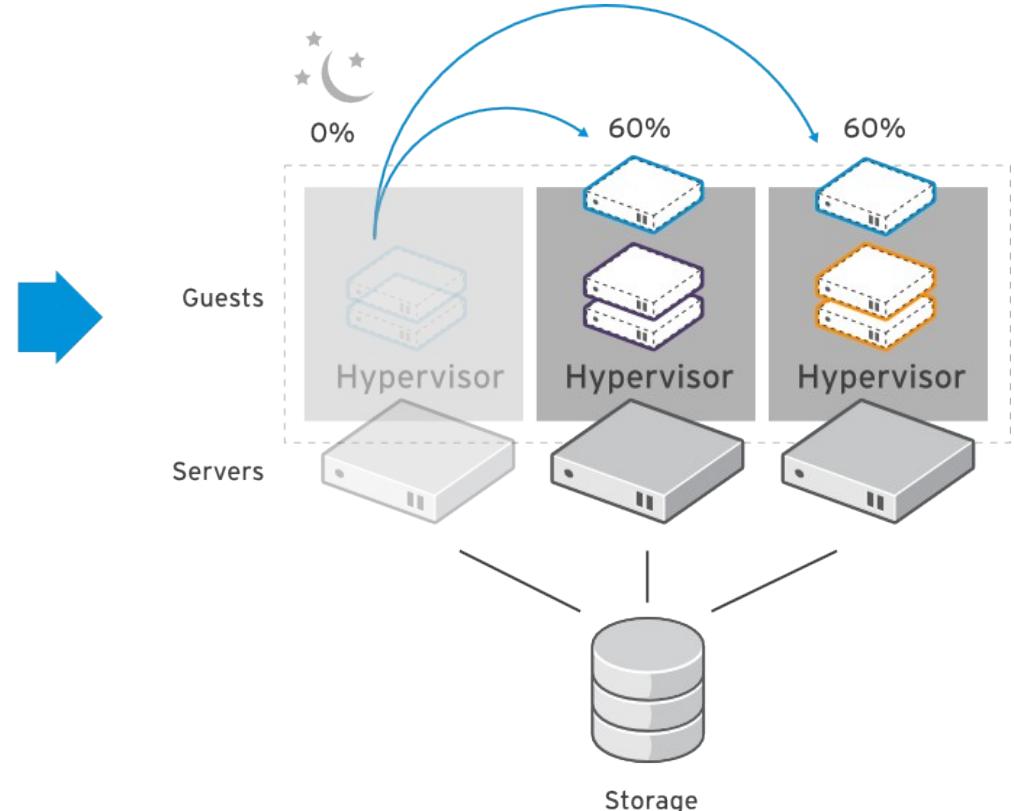
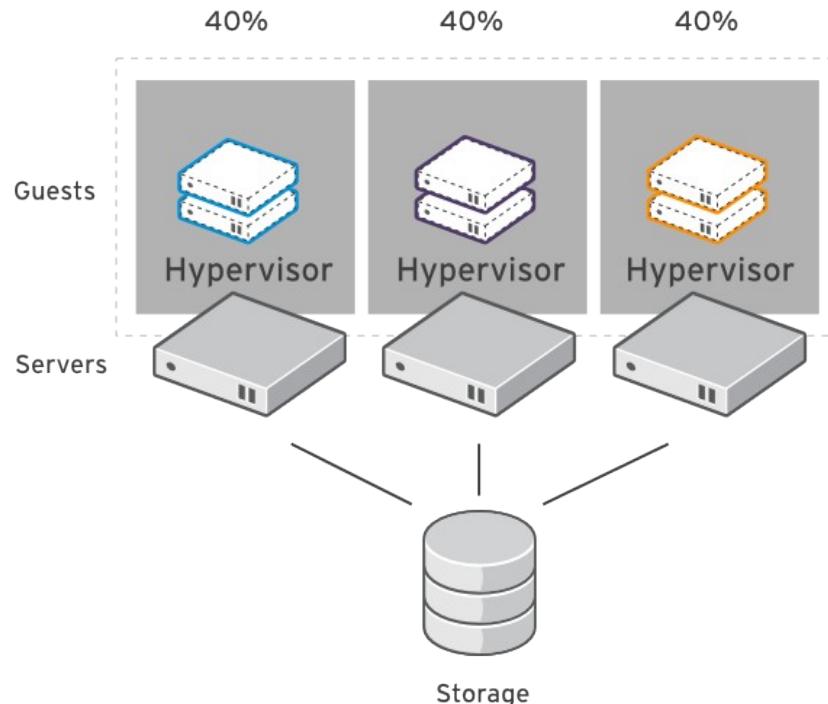
System Scheduler



- Dynamically balance workloads in the data center.
- Automatically live migrate virtual machines based on resources
- Define custom policies for distribution of virtual machines

Maintain consistent resource usage across the enterprise data center

Power Saver



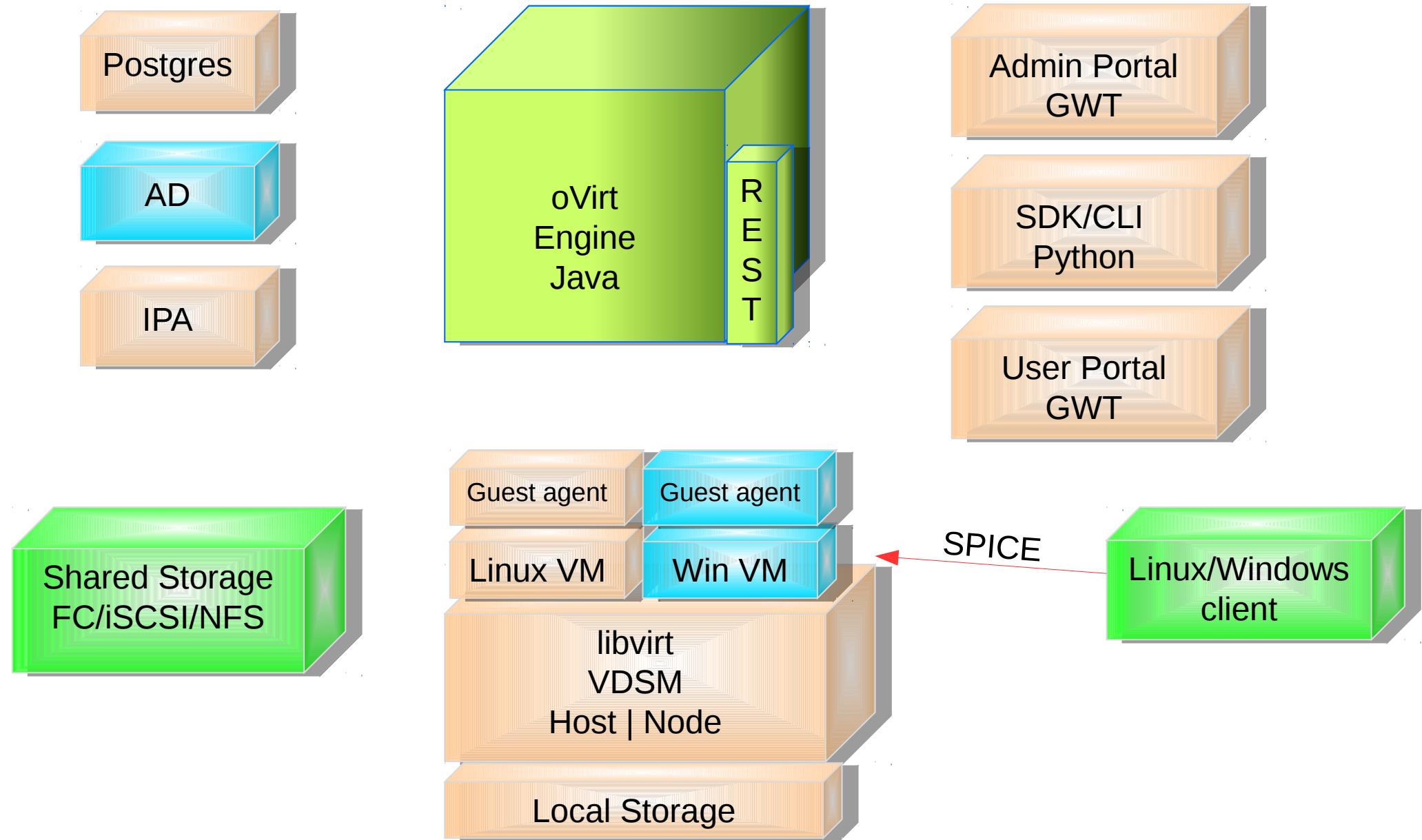
Define policies to optimize workload on a fewer number of servers during “off-peak” hours

Turn off servers – Saving money

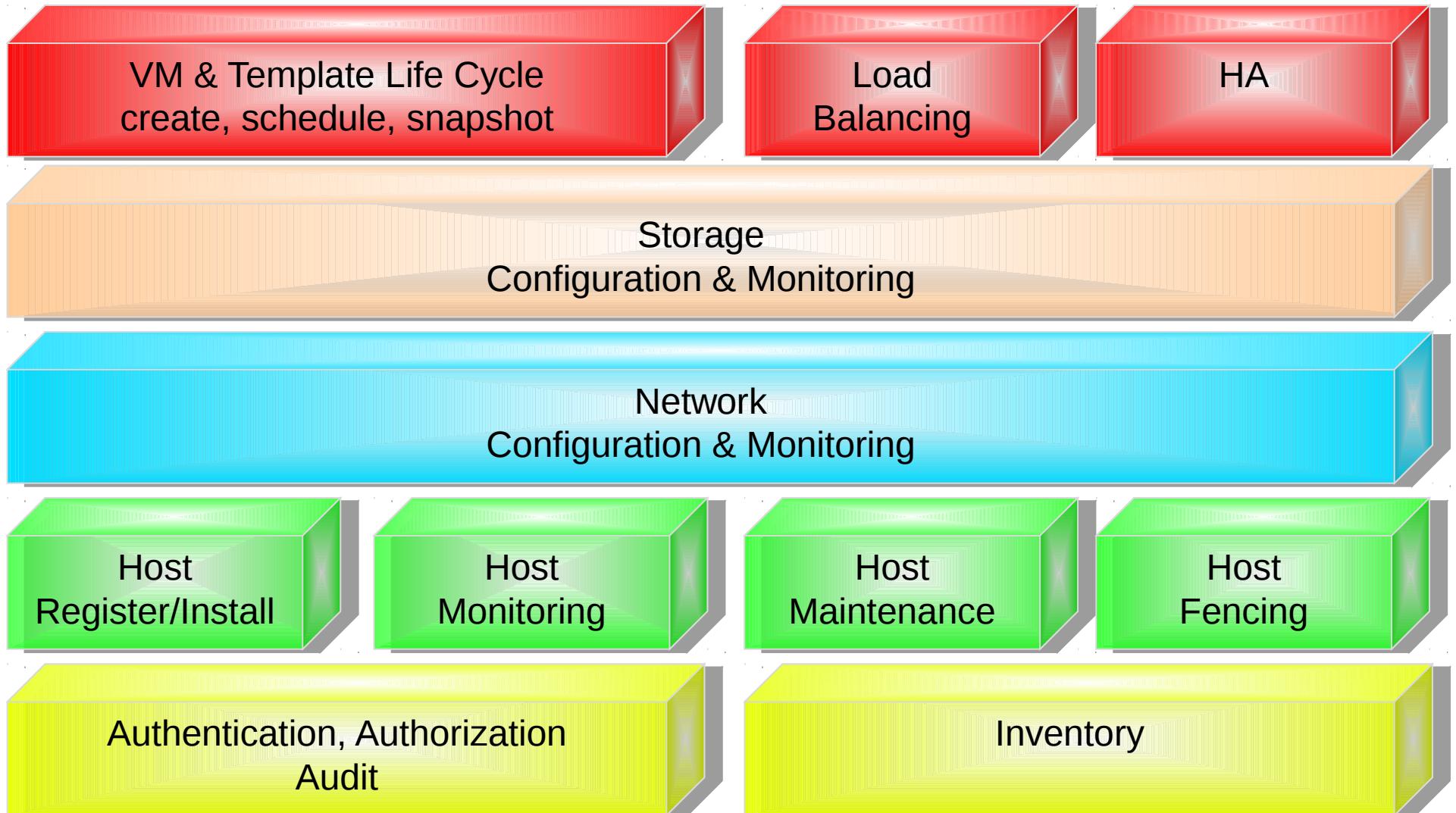
Architecture



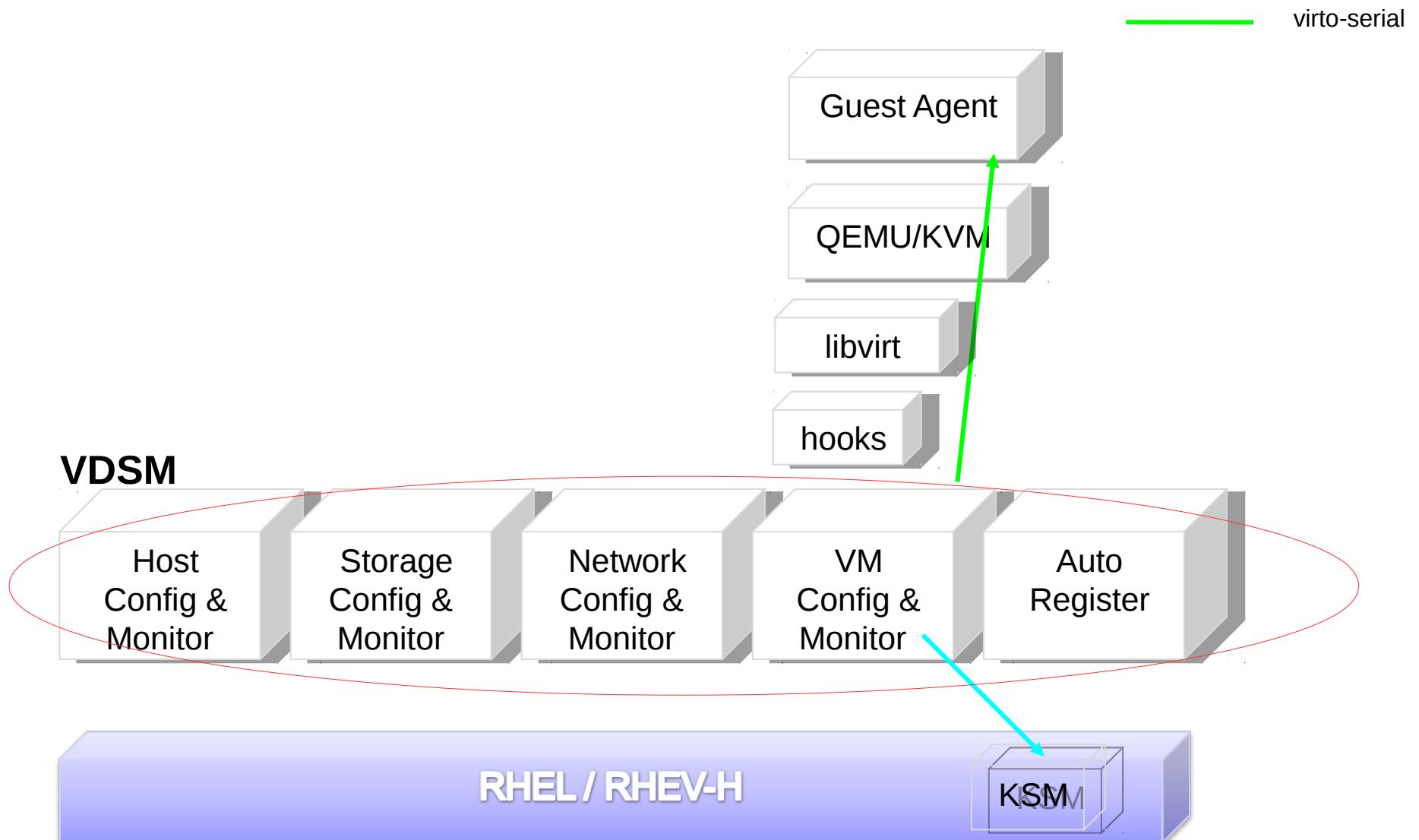
oVirt High Level Architecture



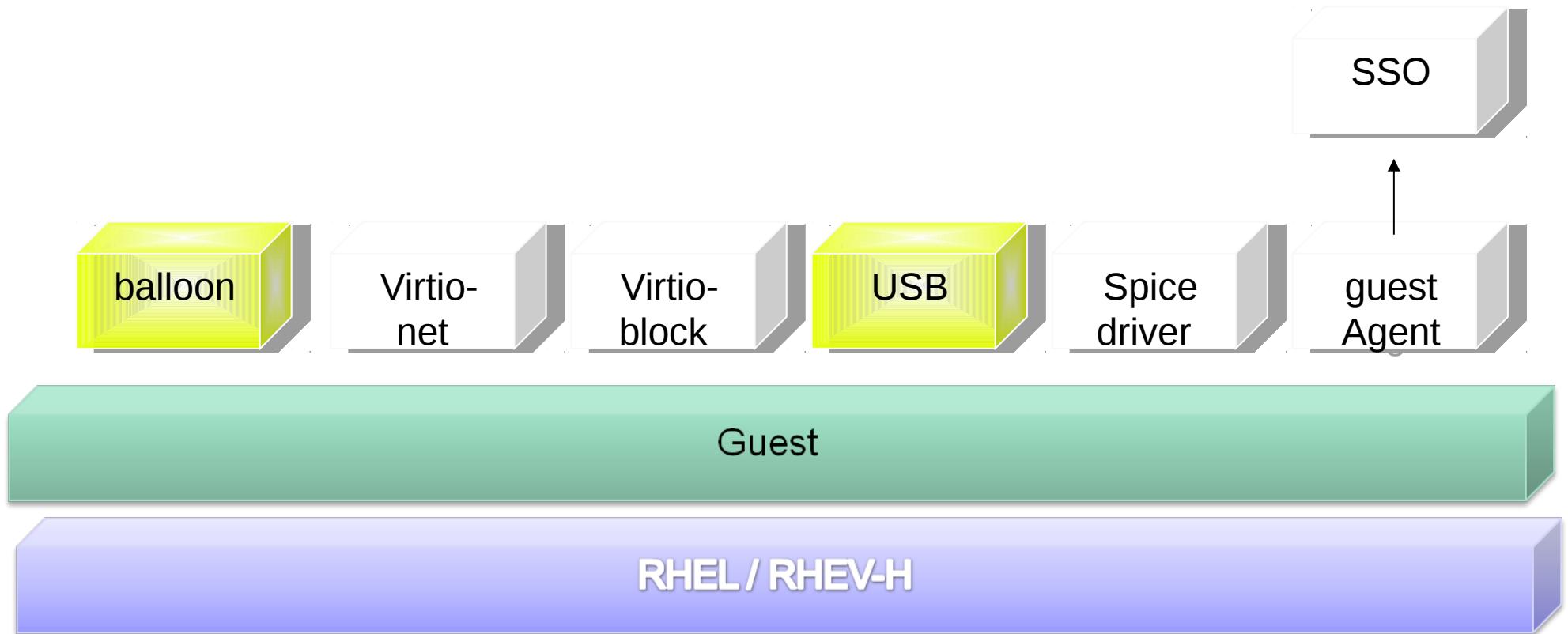
Engine Core (Backend)

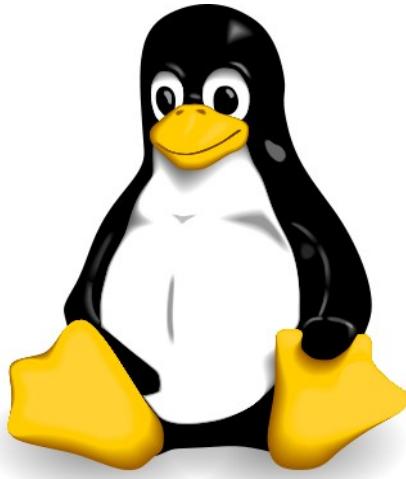


Zoom In To The Hypervisor's Components



Zoom In To The VM Components





oVirt Users How to use?



Three Pillars of Management

- **Simplicity**
- **Stability**
- **Functionality**

Simplicity

- Installation
 - yum install -y ovirt-engine; engine-setup
 - http://www.ovirt.org/Build_and_Install_Engine_RPM
 - http://www.ovirt.org/OVirt_Engine_Development_Environment
- oVirt-Host-Deploy process
- oVirt Node
- Varied user interaction mechanisms
 - Python CLI, Python/Java SDK
- Configuration - One place, single utility

Stability

- Involvement of big companies
 - RHEV is based on oVirt
 - IBM, Netapp, Cisco etc.
- Release schedule
 - Feature freeze
 - Stabilization periods
 - Test days
- Continues Integration
 - Jenkins jobs – Available upstream
- Active users community

Functionality - Login

oVirt | OPEN VIRTUALIZATION MANAGER

Welcome to Open Virtualization Manager

Version 3.6.0_master

Portals

- [User Portal](#)
- [Administration Portal](#)
- [Reports Portal](#)

U.S. English ▾

Downloads

- [Console Client Resources](#)

Functionality - Admin Console

Activities Firefox Fri 22:13 Itamar Heim

File Edit View History Bookmarks Tools Help

oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox

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

Google

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

Search: Vms: Events

Tree 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 << 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	

Bookmarks

Functionality -Declare DC and Cluster

The screenshot shows the oVirt web interface with the 'Data Centers' tab selected in the top navigation bar. The main content area displays a table of data centers, each with a name, storage type, status, compatibility version, and a description. The table includes columns for Name, Storage Type, Status, Compatibility Version, and Description. The 'Name' column uses icons to indicate status: red triangles for non-responsive, green triangles for up, and grey triangles for uninitialized. The 'Status' column shows the current state of each data center. The 'Compatibility Version' column lists the supported version. The 'Description' column provides a brief summary of each data center.

Name	Storage Type	Status	Compatibility Version	Description
dc_34	Shared	Non Responsive	3.4	
dc_35	Shared	Up	3.5	
dc_numa_test	Shared	Non Responsive	3.5	
Default	Shared	Uninitialized	3.5	The default Data Center

Functionality - Declare DC and Cluster

Clusters

Name	Data Center	Compatibility Version	Description	Cluster CPU Type	Host Count	VM Count
cl_34_amd	dc_34	3.4		AMD Opteron G1	0	1
cl_35	dc_35					
cl_35_amd	dc_35					
cl_35_amd_el7	dc_35					
cl_35_el7	dc_35					
cl_local_run	dc_35					
cluster numa test	dc numa test					
Default	Default					

New Cluster

General

Data Center: dc_35

Name: New Cluster

Description: internal virtual cluster

Comment: rh machines

CPU Type: IBM POWER 8

Compatibility Version: 3.5

Enable Virt Service (radio button selected)

Enable Gluster Service (radio button)

Enable to set VM maintenance reason (checkbox)

Required Random Number Generator sources:

/dev/random source (checkbox)

/dev/hwrng source (checkbox)

OK Cancel

Functionality - Events

The screenshot shows the oVirt web interface with the following details:

- Left Sidebar:** Contains sections for System, Data Centers, Storage, Networks, Templates, Clusters, and Bookmarks.
- Host List Table:** Shows a list of hosts with columns for Name, Host, IP Address, FQDN, Cluster, Data Center, Memory, CPU, Network, Migration, Display, Status, and Uptime. Most hosts are listed as "Down".
- Bottom Navigation Bar:** Includes tabs for Tags, Alerts (3), Events (red), and Tasks.
- Event Log Table:** Displays a history of events with columns for Date, Message, and Type (green checkmark for success, orange exclamation mark for warning, red X for error). The log includes messages like "User admin logged in." and warnings about host connectivity issues.

Red arrows point from the "Events" tab in the bottom navigation bar to the event log table, highlighting the functionality being demonstrated.

Date	Message	Type
2015-Feb-05, 17:35	User admin logged in.	✓
2015-Feb-05, 17:33	Host alma05.qa.lab.tlv.redhat.com is not responding. It will stay in Connecting state for a grace period of 120 seconds and after that an attempt to fence the host will be issued.	!
2015-Feb-05, 17:30	Host alma05.qa.lab.tlv.redhat.com is not responding. It will stay in Connecting state for a grace period of 120 seconds and after that an attempt to fence the host will be issued.	!
2015-Feb-05, 17:27	Host alma05.qa.lab.tlv.redhat.com is non responsive.	✗
2015-Feb-05, 17:27	Host alma05.qa.lab.tlv.redhat.com is not responding. It will stay in Connecting state for a grace period of 60 seconds and after that an attempt to fence the host will be issued.	!

Functionality - Add Host

The screenshot shows the oVirt web interface with the 'Hosts' tab selected. The top navigation bar includes links for Data Centers, Clusters, Hosts, Networks, Storage, Disks, Virtual Machines, Pools, Templates, Volumes, and Users. The 'Hosts' tab is highlighted. Below the navigation bar is a toolbar with actions: New, Edit, Remove, Activate, Maintenance, Select as SPM, Configure Local Storage, Power Management, Assign Tags, Refresh Capabilities, and Red Hat Access: Support. On the far right of the toolbar are close, star, and search icons. The main content area displays a table of hosts. The columns are: Name, Hostname/IP, Cluster, Data Center, Status, Virtual Machines, Memory, CPU, Network, and SPM. Two hosts are listed: 'alma05.qa.lab.tlv.redh...' and 'cyan-vdsf.qa.lab.tlv.re...'. The first host is in Maintenance mode with 0 VMs, 0% Memory, 0% CPU, and 0% Network. The second host is Up with 0 VMs, 8% Memory, 12% CPU, and 0% Network. The status column shows 'Maintenance' for the first host and 'Up' for the second. The SPM column indicates 'Normal' for the first host and 'SPM' for the second. The left sidebar shows a tree view of the oVirt environment, including Data Centers (dc_34, dc_35), Storage, Networks, Templates, Clusters, and various hosts and clusters under them.

Name	Hostname/IP	Cluster	Data Center	Status	Virtual Machines	Memory	CPU	Network	SPM
alma05.qa.lab.tlv.redh...	alma05.qa.lab.tlv.redh...	cl_35_amd_el7	dc_35	Maintenance	0	0%	0%	0%	Normal
cyan-vdsf.qa.lab.tlv.re...	cyan-vdsf.qa.lab.tlv.re...	cl_35	dc_35	Up	0	8%	12%	0%	SPM

Add Host As Simple As

The screenshot shows the oVirt Open Virtualization Manager interface. On the left, the navigation tree includes Data Centers, Clusters, and various system components like Storage, Networks, Templates, and Clusters. A red arrow points from the 'Clusters' section to the 'New Host' dialog.

The 'New Host' dialog is open, showing the 'General' tab. It includes fields for:

- Data Center: Default
- Host Cluster: Default
- Use Foreman Hosts Providers
- Name (empty)
- Comment (empty)
- Address (empty)
- SSH Port: 22

The 'Authentication' section contains:

- User Name: root
- Password (disabled)
- SSH Public Key: ssh-rsa AAAAB3NzaC1yc2EAAAQABAAQ... (with a long RSA key string)

The 'Advanced Parameters' section is collapsed.

On the right side of the interface, there are tabs for Events, Users, and a summary table for Virtual Machines, Memory, CPU, Network, and SPM. The summary table shows 0 VMs, 6% memory usage, 0% CPU usage, 0% network usage, and Normal status.

Add Host From External Management System

The screenshot shows the oVirt Open Virtualization Manager interface. On the left, the navigation tree is visible with sections like System, Data Centers, Clusters, and External Providers. Under External Providers, there is an entry for 'satellite'. A red arrow points from this entry to the 'satellite' entry in the 'Name' list on the right. Another red arrow points from the 'satellite' entry in the list to the 'satellite' dropdown in the 'General' tab of the 'New Host' dialog.

New Host

General

Data Center: Default

Host Cluster: Default

Console: satellite

Use Foreman Hosts Providers

Discovered Hosts

Provisioned Hosts

Discovered Hosts: d4ae52b9bd4b

Host Groups: First-1

Compute Resources:

Name: d4ae52b9bd4b

Comment:

Address: 192.168.200.12

Set Root Password

Advanced Parameters

Automatically configure host firewall:

Use JSON protocol:

SSH Fingerprint:

Enter host fingerprint or [fetch](#) manually from host

oVirt Functionality - VM Management

The screenshot shows the oVirt Enterprise Virtualization Engine Web Administration interface. The top navigation bar includes 'Activities' (highlighted), 'Firefox', the date 'Fri 22:13', and user information 'en Itamar Heim'. The main title is 'oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox'. The browser address bar shows the URL 'hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin/WebAdmin.html#vms'. The interface has a green header bar with 'Open Virtualization Manager' and a user logged in as 'admin@internal'. Below the header is a search bar with 'Search: Vms:' and a toolbar with tabs: Data Centers, Clusters, Hosts, Storage, Virtual Machines (highlighted with a red arrow), Pools, Templates, and Users. The left sidebar is a tree view under 'System' with nodes like Default, iSCSI-RC-DC, Storage, Templates, Clusters, intel-cluster, Hosts, and VMs. The main content area displays a table of virtual machines:

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	

Add Servers or Desktops

oVirt OPEN VIRTUALIZATION MANAGER

Vms:

Data Centers | Clusters | New VM | Edit | Remove | Name

New Virtual Machine

General

Cluster: [dropdown]

Based on Template: [dropdown]

Template Sub Version: [dropdown]

Operating System: [dropdown]

Instance Type: [dropdown]

Optimized for: [dropdown] Server

Name: [text input]

Description: [text input]

Comment: [text input]

Stateless Start in Pause Mode Delete Protection

Instantiate VM network interfaces by picking a vNIC profile.

nic1 [dropdown] [-] [+]

Not available when no Data Center is up.

Hide Advanced Options | OK | Cancel

System

Expand All Collapse All

System

Data Centers

New VM Edit Remove

Name

Default

Storage Networks Templates Clusters

External Providers

masayag ovirt-image-repository satellite

Users

Guide Me Cluster Data Center Memory

EV

Vms:

Data Centers | Clusters | New VM | Edit | Remove | Name

New Virtual Machine

General

Cluster: [dropdown]

Based on Template: [dropdown]

Template Sub Version: [dropdown]

Operating System: [dropdown]

Instance Type: [dropdown]

Optimized for: [dropdown] Server

Name: [text input]

Description: [text input]

Comment: [text input]

Stateless Start in Pause Mode Delete Protection

Instantiate VM network interfaces by picking a vNIC profile.

nic1 [dropdown] [-] [+]

Not available when no Data Center is up.

Hide Advanced Options | OK | Cancel

System

Expand All Collapse All

System

Data Centers

New VM Edit Remove

Name

Default

Storage Networks Templates Clusters

External Providers

masayag ovirt-image-repository satellite

Users

Guide Me Cluster Data Center Memory

EV

Add Servers or Desktops

oVirt OPEN VIRTUALIZATION MANAGER

Vms: x ☆ Search

Data Centers Clusters New VM Edit Remove

System

Expand All Collapse All

- System
- Data Centers
 - Default
 - Storage
 - Networks
 - Templates
 - Clusters
 - External Providers
 - masayag
 - ovirt-image-repository
 - satellite

New Virtual Machine

General

System

Initial Run

Console

Host

High Availability

Resource Allocation

Boot Options

Random Generator

Custom Properties

Cluster: [dropdown]

Based on Template: [dropdown]

Template Sub Version: [dropdown]

Operating System: [dropdown]

Instance Type: [dropdown]

Optimized for: Server

Memory Size: 256 MB

Total Virtual CPUs: [dropdown]

Cores per Virtual Socket: [dropdown]

Virtual Sockets: [dropdown]

Advanced Parameters

General

Time Zone: [dropdown]

Provide custom serial number policy

Hide Advanced Options

OK Cancel

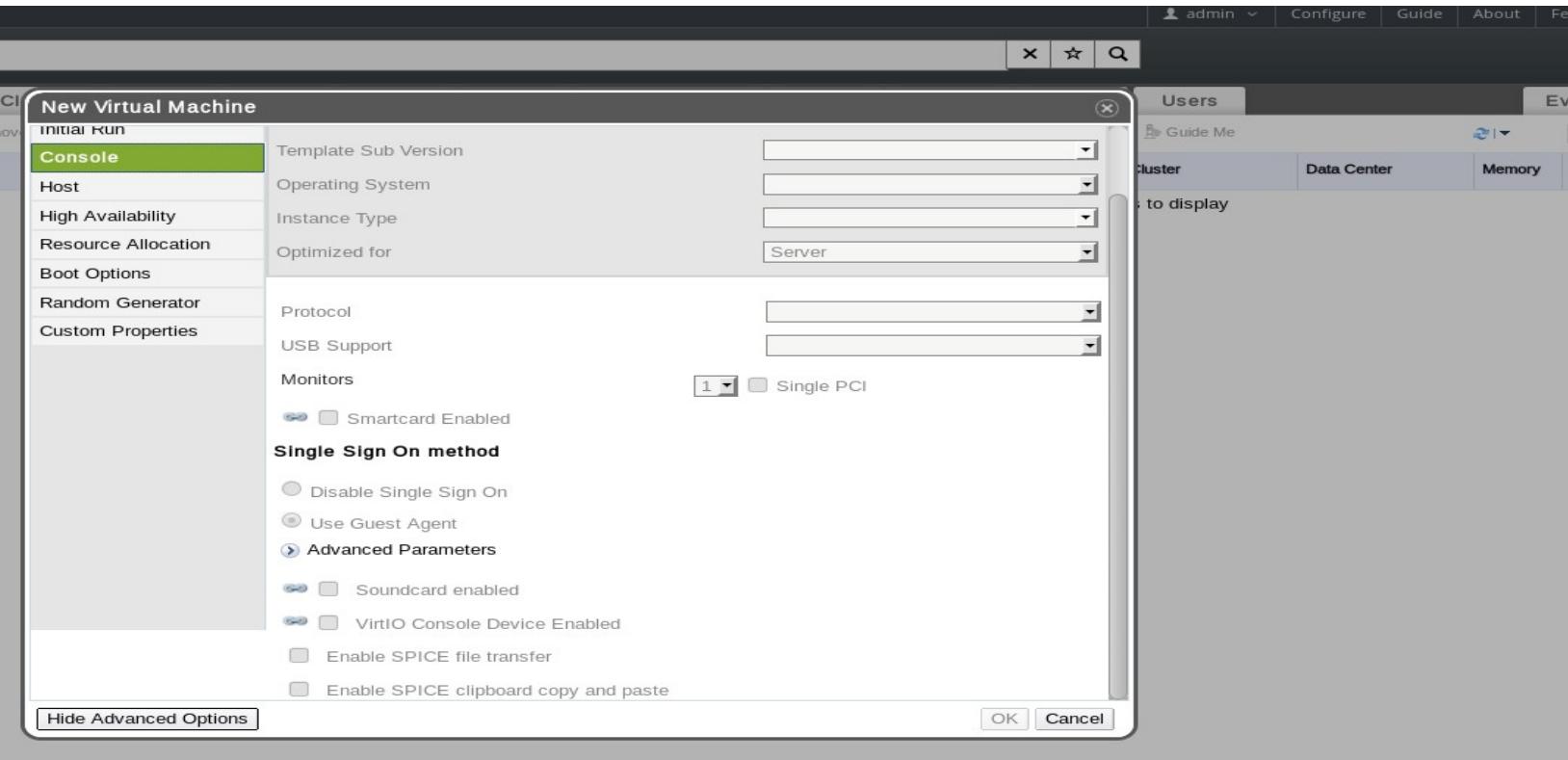
Users

Guide Me

Cluster Data Center Memory

Events

Define Console - VDI



Virtual Desktop Infrastructure

Centralized management,
security and policy enforcement

Virtual desktops with user
experience of a physical PC

Multiple monitors

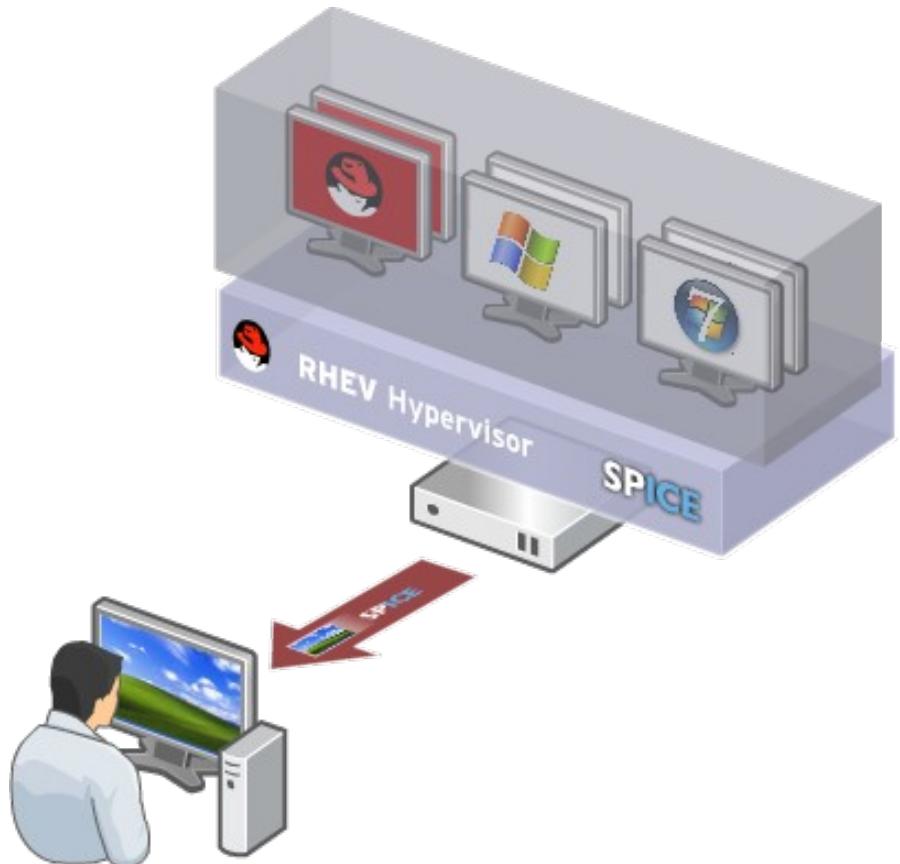
HD quality video

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

Smartcard support

USB support

Industry leading density of virtual
desktops/server



Quick Search

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

File Edit View History Bookmarks Tools Help

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

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

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

Data Centers Clusters Hosts Storage Virtual Machines Pools Templates Users Events

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

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

3 Alerts

Events

Virtual Machine List:

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	

Last Message: 2012-Jan-31, 23:18:41 User admin@internal logged in. Browser Firefox version 9 is currently not supported.



Search Auto Complete

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

Configure Networks

The screenshot shows the oVirt Open Virtualization Manager web interface. The top navigation bar includes links for Data Centers, Clusters, Hosts, Networks, Storage, Disks, Virtual Machines, Pools, Templates, Volumes, and Users, along with a search bar and user authentication.

The main content area displays a table for hosts. A red circle highlights the row for host 'aaa', which has the IP address 10.35.0.188, belongs to the Default cluster and Data Center, and is currently Up. The host has 0 virtual machines, 6% memory usage, 3% CPU usage, and 0% network usage.

The left sidebar shows the system navigation tree, including Data Centers, Clusters, Storage, Networks, Templates, and Clusters under System. External Providers listed include masayag, ovirt-image-repository, and satellite.

A red circle also highlights the 'Network Interfaces' tab in the host configuration panel for 'aaa'. This tab lists the network interface eth0, which is bonded to the ovirtnetmgmt network, has an IP address of 10.35.0.188, and a MAC address of 84:2b:2b:9f:2f:6e.

Name	Hostname/IP	Cluster	Data Center	Status	Virtual Machines	Memory	CPU	Network	SPM
aaa	10.35.0.188	Default	Default	Up	0	6%	3%	0%	Normal

Setup Host Networks						Events
Name	Bond	VLAN	Network Name	Address	MAC	
eth0			* ovirtnetmgmt	10.35.0.188	84:2b:2b:9f:2f:6e	

Interface Details

Host:

oVirt OPEN VIRTUALIZATION MANAGER | admin | Configure | Guide | About | Feedback

System
Expand All Collapse All
Data Centers
Default
Storage
Networks
Templates
Clusters
External Providers
masayag
ovirt-image-repository
satellite

Data Centers
New Edit Name
aaa

Setup Host aaa Networks
Drag to make changes

Interfaces **Assigned Logical Networks**

eth0 ovirtmgmt

Unassigned Logical Networks

Required

Non Required

External Logical Networks

Verify connectivity between Host and Engine

Save network configuration

OK Cancel

Events

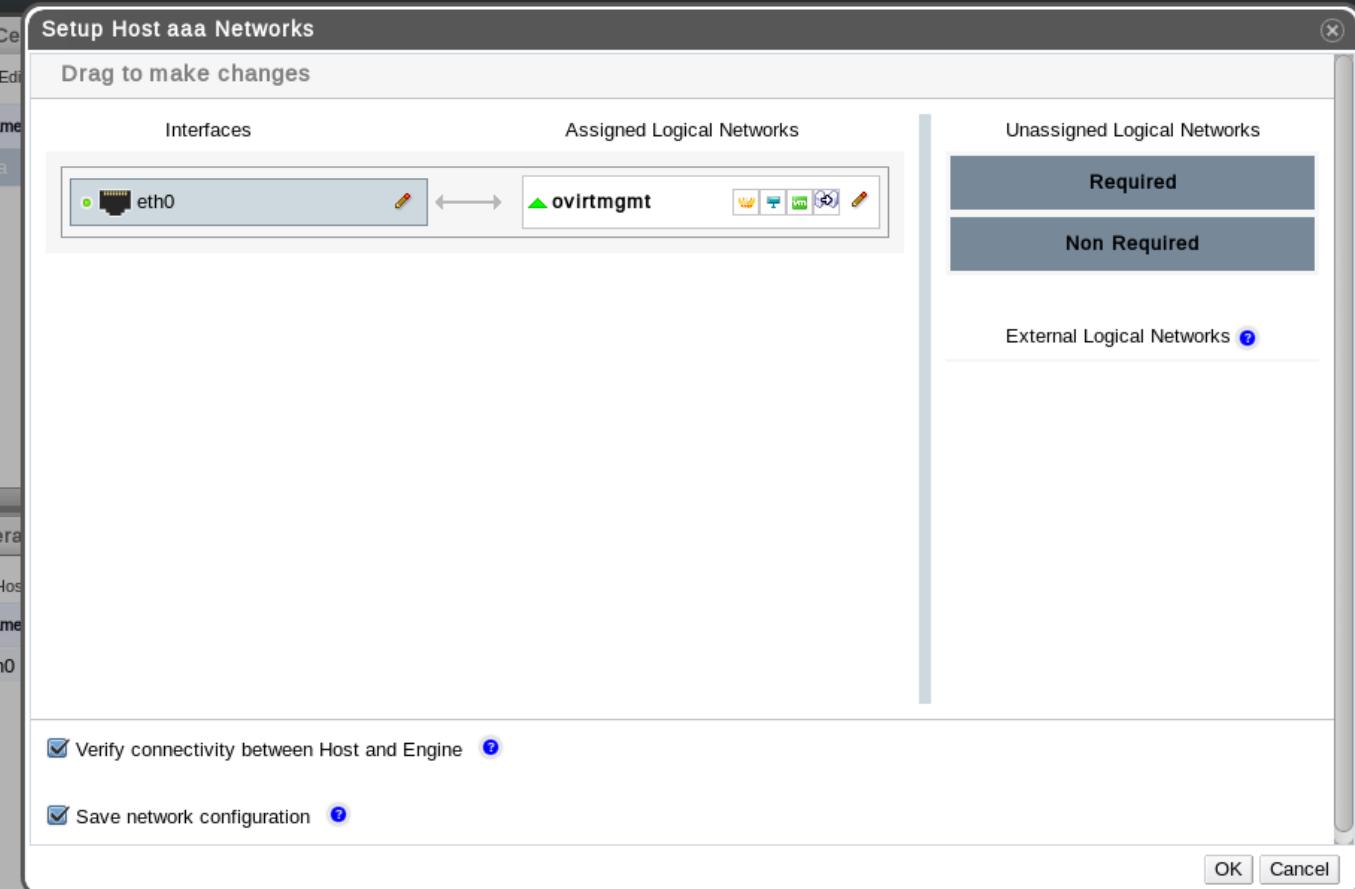
Memory CPU Network SPM

1-1

Events

MAC

84:2b:2b:9f:2f:6e



Without Scripts or Config Files

OPEN VIRTUALIZATION MANAGER

System

Data Centers

Default

Storage

Networks

Templates

Clusters

External Providers

masayag

ovirt-image-repository

satellite

General

Setup Host

Name

eth0

Setup Host aaa Networks

Drag to make changes

Interfaces

Assigned Logical Networks

Unassigned Logical Networks

External Logical Networks

eth0

ovirtmgmt

Verify connectivity between Host and Engine

Save network configuration

Edit Management Network

Network Name: ovirtmgmt

Boot Protocol:

None

DHCP

Static

IP: 10.35.0.188

Subnet Mask: 255.255.254.0

Gateway: 10.35.1.254

Custom Properties

Please select a key... ▾

Sync network

Changing the display network will cause any running VMs in the cluster to lose display console connectivity until they are restarted.

OK Cancel

Attach Storage Domain

The screenshot shows the oVirt WebAdmin interface with the URL 10.35.1.53:8080/ovirt-engine/webadmin/?locale=en_US#storage-images. The main navigation bar includes links for Torrents Search Engine, Facebook, Google, and various system status indicators. The left sidebar lists system components like Data Centers, Storage, Networks, Templates, Clusters, External Providers, and User accounts (masayag, ovirt-image-repository, satellite). The central workspace displays a 'New Domain' dialog box over a 'Storage' list. The dialog box contains fields for Name, Description, Data Center (set to Default), Comment, Domain Function / Storage Type (set to Data / NFS), Format (set to V3), Use Host (set to aaa), and Export Path. A note below the path field states: "Remote path to NFS export, takes either the form: FQDN:/path or IP:/path e.g. server.example.com:/export/VMs". An 'Advanced Parameters' section is expanded, containing a warning: "* It is recommended to keep the default values in the fields below unchanged." and several configuration options: 'Override Default Options' (unchecked), 'NFS Version' (set to V3 (default)), 'Retransmissions (#)', 'Timeout (deciseconds)', and 'Additional mount options'. The background shows a list of storage domains including 'ovirt-image-repos'.

Configure Storage Once for Entire Cluster

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

File Edit View History Bookmarks Tools Help

oVirt Enterprise Virtualization E... +

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

Google

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

Search: Storage

Data Centers Clusters

New Domain Import Domain Edit

Tree

Expand All Collapse All

System

- Default
- iSCSI-RC-DC
 - Storage
 - Templates
- Clusters
 - hateya-ovirt-rc-1
 - Targets > LUNs
 - hateya-ovirt-rc-2
 - nfs-ovirt-rc-2
 - nfs-ovirt-rc-4
 - OvirtSharelso
- 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

Size: 74 GB Available: 18 GB Used: 56 GB Over Allocation Ratio: 2100%

LUNs > Targets

Targets > LUNs

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

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

3 Alerts

Events

Browser Firefox version 9 is currently not supported.

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.html#storage-general

Google

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

Search: Storage

Data Centers Clusters

New Domain Import Domain Edit

Tree

Expand All Collapse All

System

- Default
- iSCSI-RC-DC
 - Storage
 - Templates
- Clusters
 - hateya-ovirt-rc-1
 - hateya-ovirt-rc-2
 - nfs-ovirt-rc-2
 - nfs-ovirt-rc-4
 - OvirtSharelso
- 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

LUNs > Targets

Cross Data-Center Status Free Space

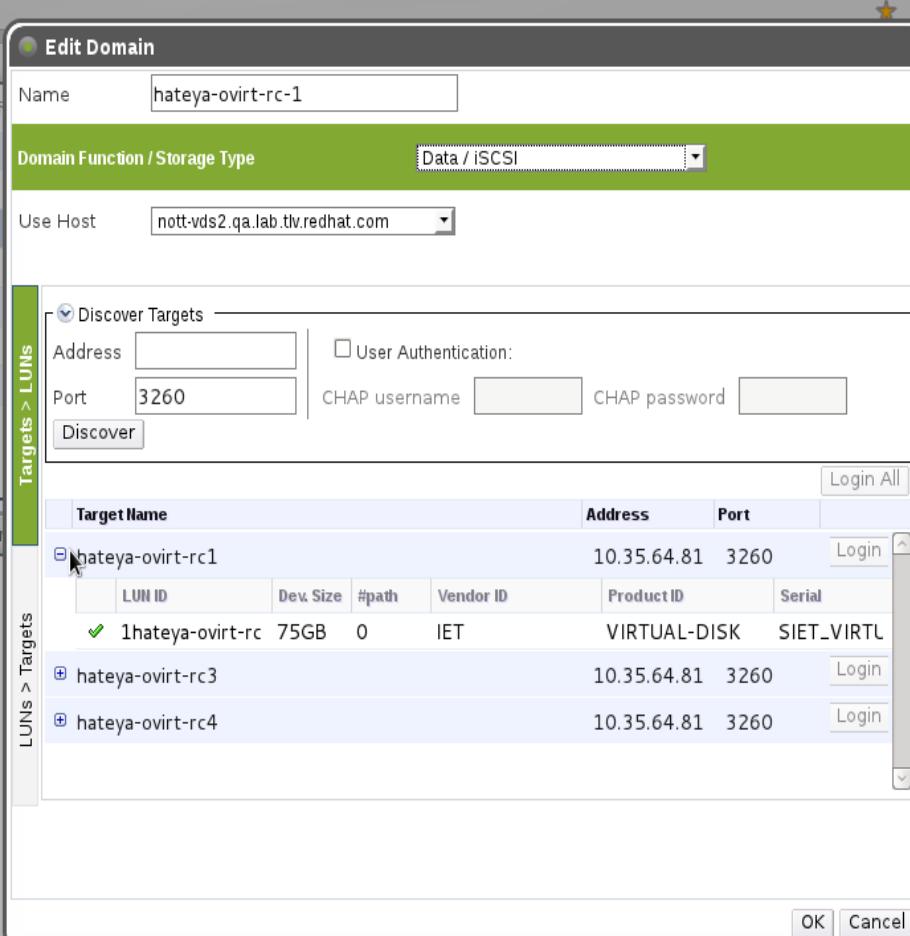
Status	Free Space
Active	326 GB
Active	18 GB
Active	20 GB
Inactive	357 GB
Unattached	< 1 GB
Active	29 GB

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.





Assign Permissions to Objects by Roles

The screenshot shows the oVirt Enterprise Virtualization Engine Web Administration interface. The main window displays a tree view of system components like Storage, Clusters, and VMs. A modal dialog titled "Configure" is open, specifically the "Roles" tab. The dialog lists various system permissions with their names and descriptions. The "Description" column includes links to "Administrator Roles" and "User Roles". The right side of the screen shows a summary table for uptime and logged-in users, and a sidebar with bookmarks and tags.

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



Define Your Own Roles

The screenshot shows a Firefox browser window with the oVirt Enterprise Virtualization Engine Web Administration interface. The title bar reads "oVirt Enterprise Virtualization Engine Web Administration - Mozilla Firefox". The address bar shows the URL "hateya-fed16.qa.lab.tlv.redhat.com:8080/webadmin/webadmin.html#vms-application". The main content area displays a "Configure" dialog box titled "New Role". The dialog has fields for "Name" and "Description", and a radio button for "Account Type" set to "Admin". Below these are sections for "Check Boxes to Allow Action" under "System", "Data Center", "Storage Domain", and "Cluster". Under "System", checkboxes include "Configure System", "Manipulate Users", "Manipulate Permissions", "Manipulate Roles", and "Generic Configuration". Under "Data Center", there is a single checkbox for "Configure Data Center". Under "Storage Domain", there is a single checkbox for "Configure Storage Domain". Under "Cluster", there is a single checkbox for "Configure Cluster". At the bottom of the dialog are "OK", "Reset", and "Cancel" buttons. The background shows the oVirt interface with a tree view of system components like "System", "iSCSI-RC-DC", "NFS-RC-DC", and "VMs". A sidebar on the right lists "Events" and "Uptime" for various hosts. The bottom status bar shows "Last Message: 2012-Jan-31, 23:18:41" and "User admin@internal logged in.".

The screenshot shows the oVirt User Portal interface. At the top, there is a navigation bar with various icons and links. Below it, a red header bar displays "RED HAT ENTERPRISE VIRTUALIZATION". The main content area is divided into two sections: a grid of virtual machine thumbnails on the left and a detailed machine configuration on the right.

Virtual Machines Grid:

- ybronhei-rhel7: Red Hat Enterprise Linux 7.x x64, 64 bit, Machine is Ready
- ybronhei-rhev30: Red Hat Enterprise Linux 6, 64 bit, Machine is Ready
- ybronhei-rhevm31: Red Hat Enterprise Linux 6, 64 bit, Machine is Ready
- ybronhei_f21: Red Hat Enterprise Linux 7, 64 bit, Machine is Ready
- ybronhei_rhel63: Red Hat Enterprise Linux 6, 64 bit, Machine is Ready

Detailed Machine View (ybronhei-rhel7):

- Operating System :** Red Hat Enterprise Linux 7.x x64
- Defined Memory :** 2GB
- Number of Cores :** 1 (1 Socket(s), 1 Core(s) per Socket)
- Drives :** ybronhei-rhel7_Disk1: 20GB
- Console :** Connect (SPICE (Edit))
- Client Resources :** Client Resources

At the bottom, there is a horizontal toolbar with various application icons and a system status bar showing the date and time (16:27).



Self Provisioning Portal

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/UserPortal.html Google

oVirt User: admin@internal | Sign out | Guide | About 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

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

Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://10.35.1.171/rhevm-api

http://10.35.1.171/rhevm-api

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

Done

- Creating the proxy
- Listing all collections

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

```
api.
```



- Listing collection's methods.

```
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
```

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

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:

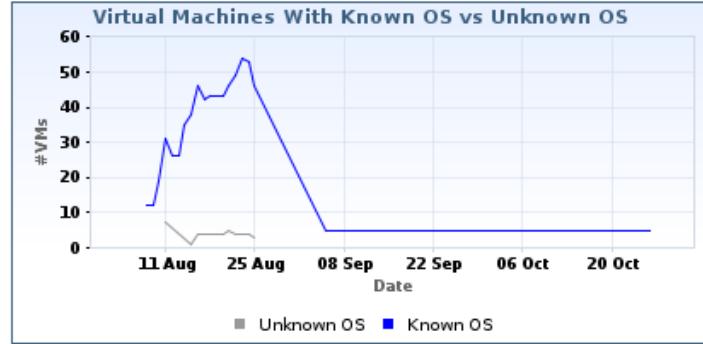
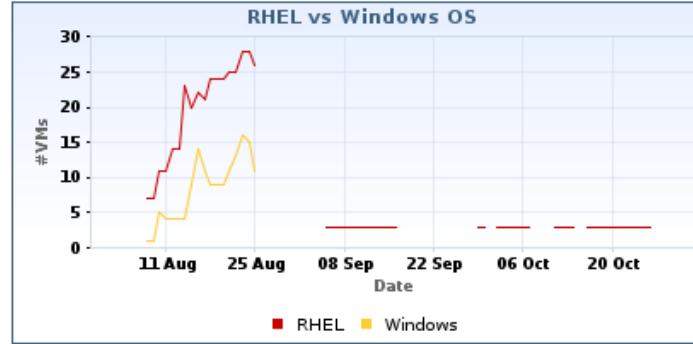
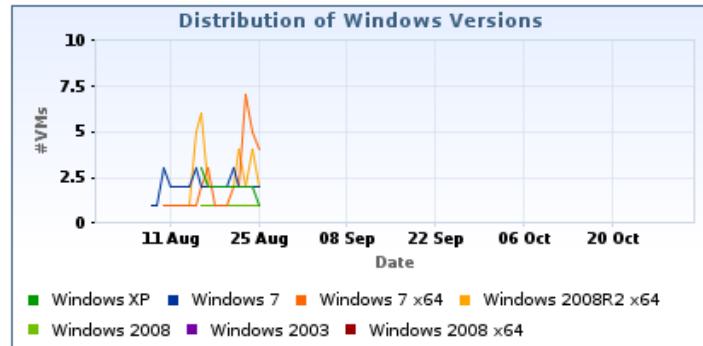
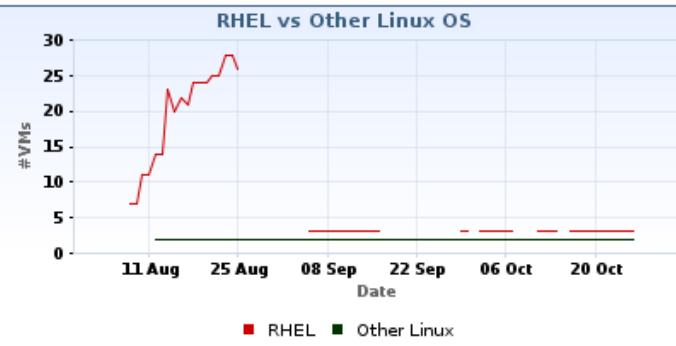
- * url - The URL to connect to.
- * username - The user to connect as. Important: this needs to be in the user@domain format.
- * password - The password to use.

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

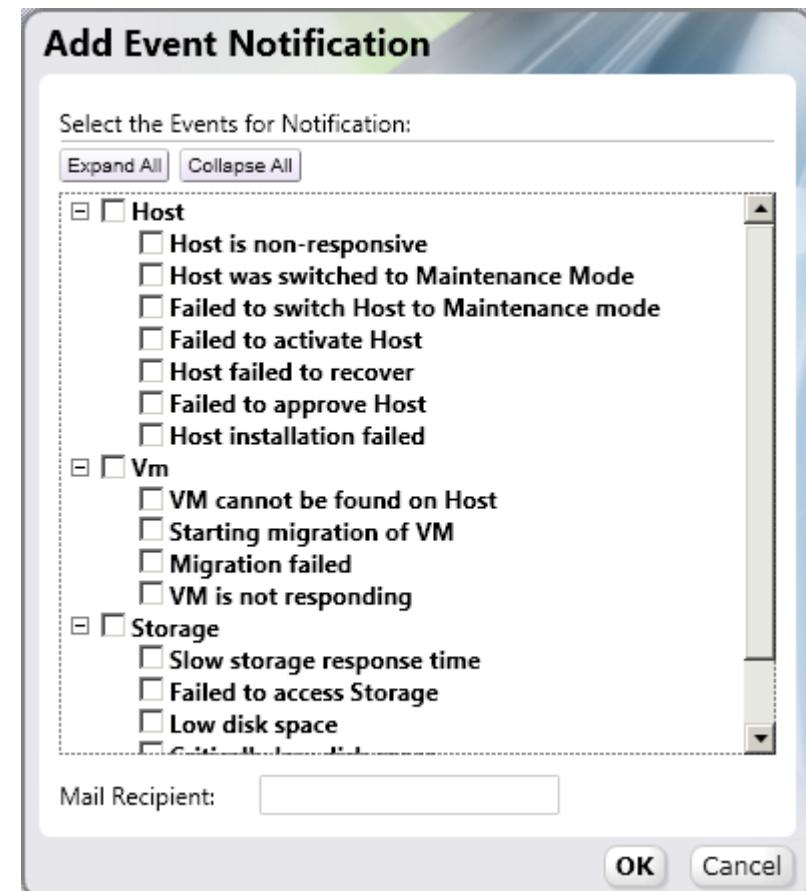
* Select Month: August 2011

* Start Date: 2011-08-01

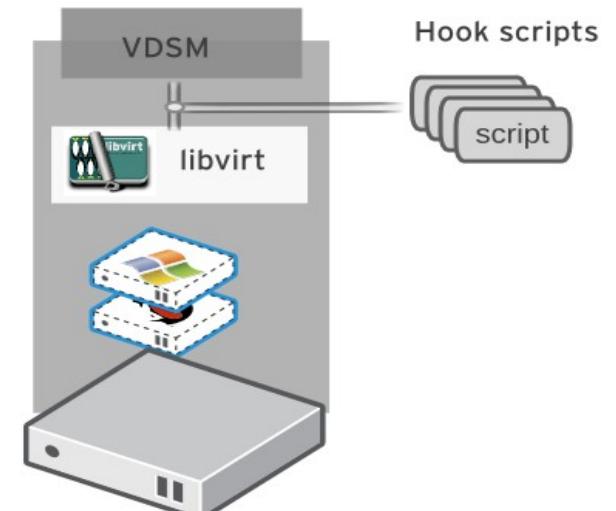
* End Date: 2011-08-31

Buttons: Apply, OK, Reset, Cancel

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



- “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

UI-Plugin: Easy Java Script

ovirt Open Virtualization Manager

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

Search: Vms:

Data Centers Clusters Hosts Networks Storage Virtual Machines Pools Templates Volumes Users Foreman Dashboard Events

Tree
Expand All Collapse All

System

Generated at 20 Dec 13:41

Description	Data
Hosts that had performed modifications without error	0
Hosts in Error State	0
Good Host Reports in the last 35 minutes	0 / 4 hosts (0%)
Hosts that had pending changes	0
Out Of Sync Hosts	0
Hosts With No Reports	4
Hosts With Alerts Disabled	0

Puppet Clients Activity Overview

Puppet Clients Activity Overview

Notification disabled: 0 Active: 0 Error: 0 OK: 0 Pending changes: 0 Out of sync: 0

No report: 4

Run Distribution in the last 30 Minutes

Number Of Clients

30 Minutes ago, 27 Minutes ago, 24 Minutes ago, 21 Minutes ago, 18 Minutes ago, 15 Minutes ago, 12 Minutes ago, 9 Minutes ago, 6 Minutes ago, 3 Minutes ago

Bookmarks

Tags

Last Message: 2012-Dec-20, 16:32 User admin@internal logged in.

Alerts (1) Events Tasks (0)

UI-Plugin: oVirt Monitoring sub-tab

Open Virtualization Manager

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

Search: Host:

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

System

New Edit Remove Activate Maintenance Configure Local Storage Power Management Assign Tags

Expand All Collapse All

System

Name	Hostname/IP	Cluster	Data Center	Status	Virtual Machines	Memory	CPU	Network	SPM
centos-hyp01.lab.ovid.at	10.0.100.42	ovido-local	ovido-local	Up	4	75%	1%	0%	SPM

ovido-local

- Storage
- Networks
- Templates
- Clusters

General Virtual Machines Network Interfaces Host Hooks Permissions Hardware Information **Monitoring Details** Events

Acknowledge Comment Downtime Notifications Schedule

Service	Output
RHEV CPU Load Check	RHEV OK: cpu ok - 1% used (centos-hyp01.l)
RHEV Host Load Check	RHEV OK: cpu.load.avg.5m ok - 0.020 (cento)
RHEV Host Status Check	RHEV OK: Hosts ok - 1/1 Hosts with state UF
RHEV KSM Load Check	RHEV CRITICAL: ksm.cpu.current critical - 90:
RHEV Memory Check	RHEV WARNING: memory warning - 75.00%
RHEV Network Status Chec	RHEV CRITICAL: Hosts critical - 1/2 Nics with
RHEV Network Traffic Check	RHEV OK: traffic ok - eth1: 0 Mbit/s eth0: 0 M
RHEV Swap Check	RHEV OK: swap ok - 19.27% used (centos-h)

Bookmarks

Tags

Last Message: 2013-Feb-18, 17:58 User admin@internal logged in.

Alerts (0) Events Tasks (0)

PNP Performance Graphs

4 Hours Load utilization for 10.0.100.42

last: 0.031 max: 0.138 average: 0.07794

More info at: <https://labs.ovid.at/monitoring/wiki/ovirt-monitoring-ui-plugin>

Also in oVirt but not here

- Gluster Support
- Hot plug
 - Cpu, memory, nics
- Shared disks
- PPC support
- Integration with:
 - Foreman, Glance, Neutron, Cinder ..
- Live snapshot with ram
- Numa
- Live storage Migration
- Upgrade Manager
- Events
- Network Broker

- Obtain from oVirt website -
 - <http://www.ovirt.org/Download>
- Fedora And oVirt repositories (resources.ovirt.org)
- Live USB -
http://wiki.ovirt.org/wiki/OVirt_Live
- Build from source



Join the community

- Find bugs, File Them, Correct Them.
- Translate, Write Documentation.
- Design Interfaces, Develop new features
- Share your experiences.

Everyone can make a difference.

- **Website and Repository:**

- <http://gerrit.ovirt.org/>
- <http://www.ovirt.org>
- <http://www.ovirt.org/wiki>

- **Mailing lists:**

- <http://lists.ovirt.org/mailman/listinfo>

- **IRC:**

- #ovirt on OFTC

- Release 3.6
- Up coming 4.0
- Test days



THANK YOU !

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