

oVirt Updates

23 October 2013

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Agenda

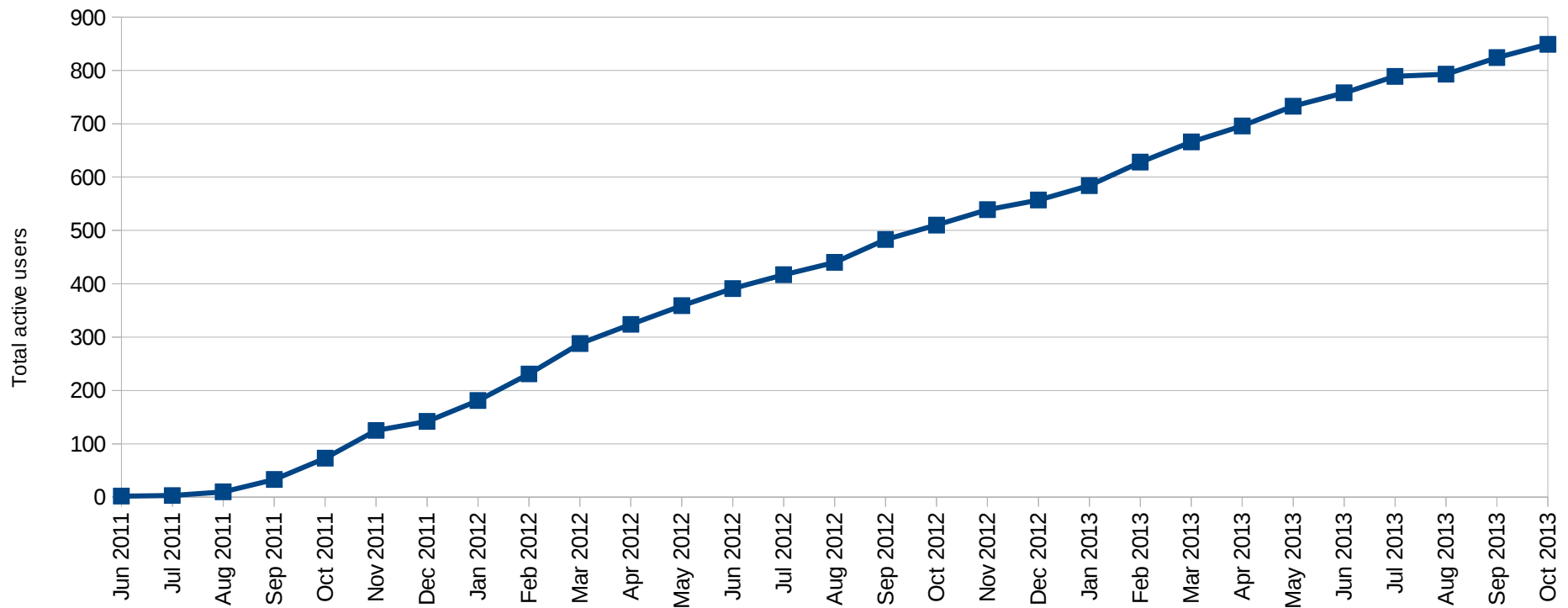


- Community
- Events
- Updates
- Feature Highlights
- Roadmap

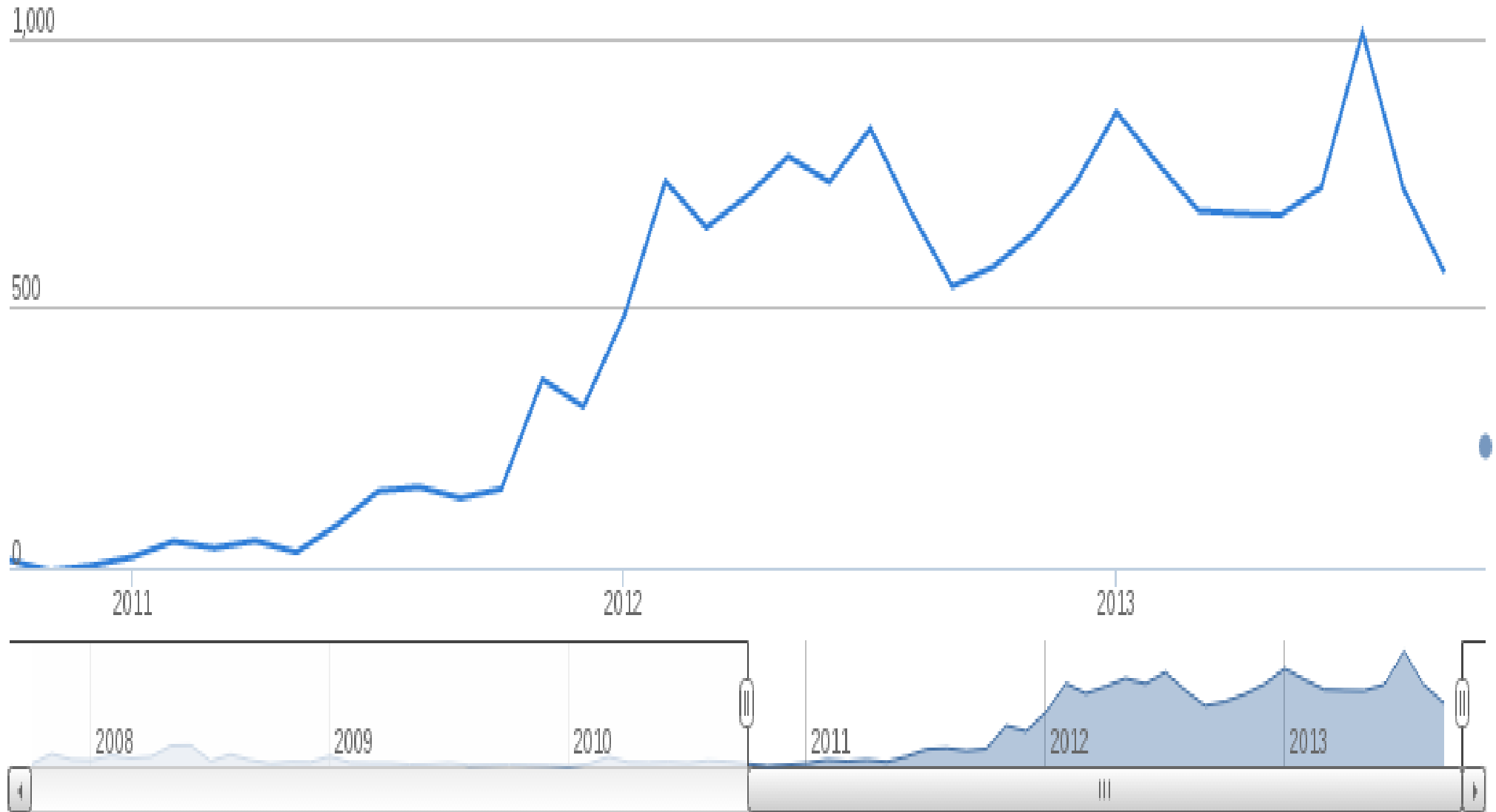
Users Mailing List



- ~650 subscribers to users
- ~150 non subscribers send emails to it
- ~200 (20%) from redhat, ~180 from gmail, most other come from unique domains

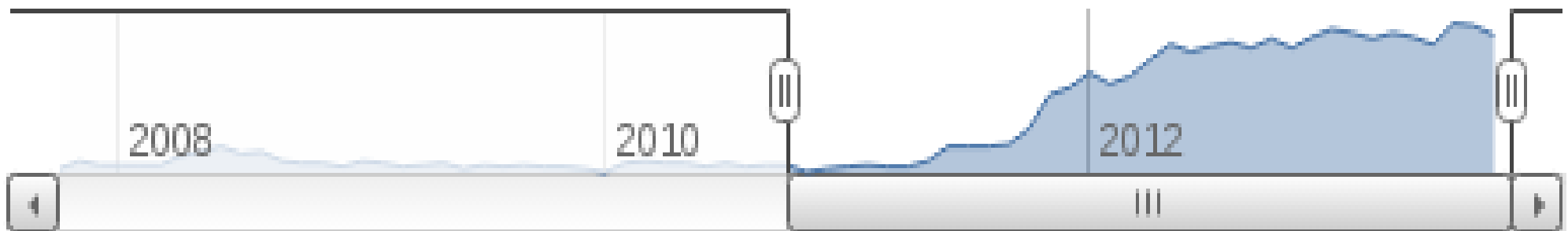
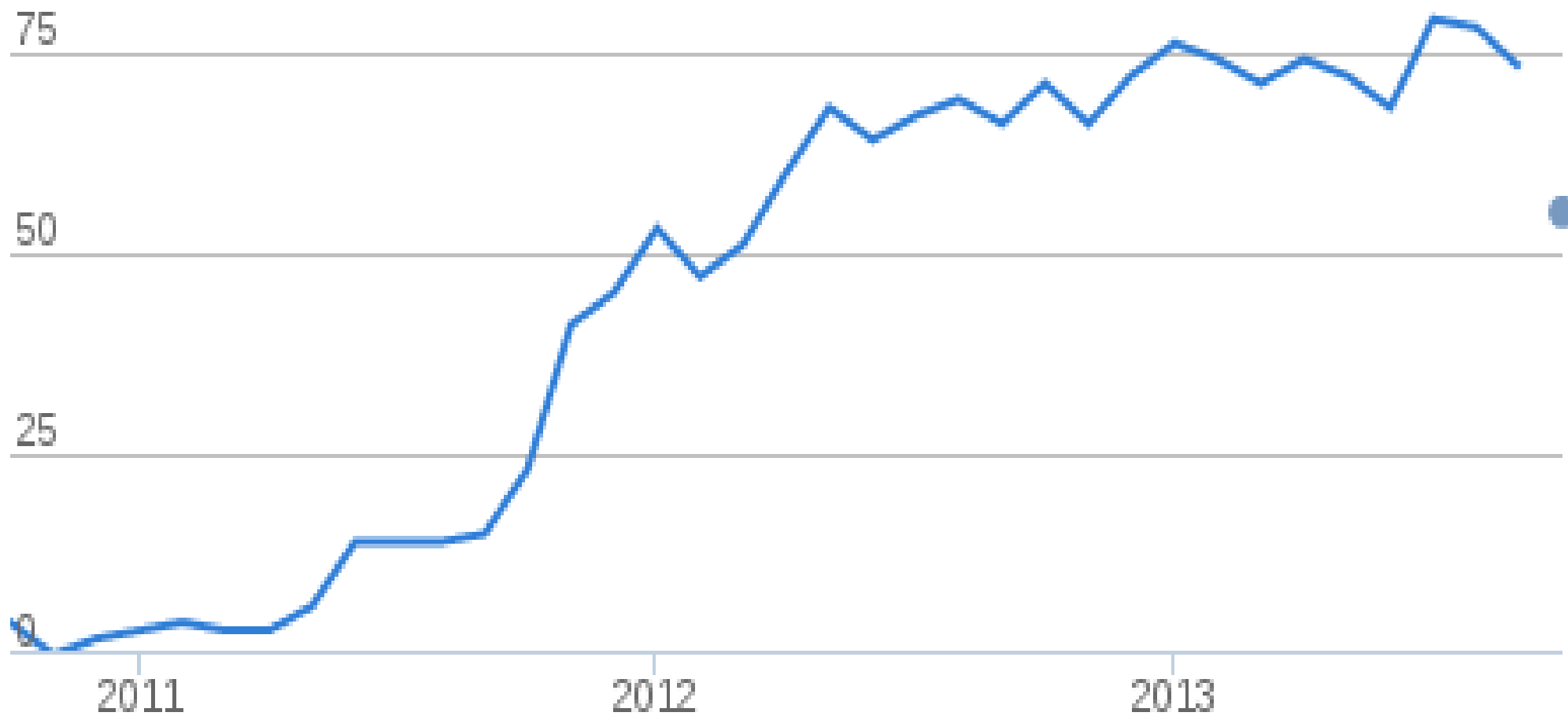


oVirt Commits per Month



<https://www.ohloh.net/p/oVirt/commits/summary>

Contributors per Month



2013 Releases



- 02/2013 - oVirt 3.2 GA
- 04/2013 - oVirt 3.2.1 - .el6 (CentOS/RHEL) support
- 09/2013 - oVirt 3.3
- 10/2013 - oVirt 3.3.1 (in beta)
- 02/2014 – oVirt 3.4 (planned)

Events – Busy Year for oVirt!



- 01/2013 – oVirt workshop, NetApp, CA, USA
- 01/2013 – linux.conf.au, Australia (oVirt Intro)
- 02/2013 – Fosdem, Belgium (6 sessions, booth)
- 03/2013 – oVirt workshop, Intel, Shanghai, China
- 03/2013 - FOSS Stockholm (oVirt Intro)
- 04/2013 – OpenStack Summit, CA, USA (oVirt as Compute Resources)
- 05/2013 – CloudOpen Japan (oVirt Intro, SLA)
- 05/2013 - Linuxwochen Vienna, Austria (oVirt Intro)

Events – Busy Year for oVirt!



- 06/2013 – Red Hat Summit (oVirt booth)
- 07/2013 – FISL14, Brazil (4 sessions, booth)
- 07/2013 - Seemanta Engineering College, Odisha, India (oVirt hands on lab)
- 08/2013 – August Pinguin, Israel (oVirt Intro)
- 09/2013 – CloudOpen NA (oVirt Intro, SLA)
- 09/2013 – k-lug, MN, USA (oVirt Intro)
- **10/2013 – CloudOpen, KVM/oVirt, UK (lots...)**
- 10/2013 – OSDC, Germany (oVirt Intro)

- **Vagrant** support for oVirt/RHEV added
- `ovirt_metrics` - ActiveRecord-based gem for reading the oVirt History database
- **libgovirt** - G Object C library for oVirt REST API
- DEMO: oVirt - GlusterFS Native Integration for KVM Virtualization
- **Ubuntu and SUSE guest OSs** added to oVirt
- using oVirt to build a virtualization platform on an IBM BladeCenter
- How to create and provision an oVirt VM with **Ansible**
- oVirt works with samba

UI Plugins Crash Course: oVirt Space Shooter



Data Centers Clusters Hosts Networks Storage Disks Virtual Machines

New Edit Remove Force Remove Guide Me

Name	Storage Type	Status	Compatibility Version
▼ Default	NFS	Uninitialized	3.1
▼ MyDC	NFS		

- New
- Edit
- Remove
- Force Remove
- Guide Me
- Re-Initialize Data Center
- Protect DataCenter from Alien Invasion

UI Plugins Crash Course: oVirt Space Shooter



Navigation tabs: Data Centers, Clusters, Hosts, Networks, Storage, Disks, Virtual Machines, Pools, Templates, Volumes, Providers

Actions: New, Edit, Remove, Force Remove, Guide Me

Name	Storage Type
▼ Default	NFS
▼ MyDC	NFS

Description: The default Data Center

Storage tabs: Storage, Logical Networks, Clusters

Storage Actions: Attach Data, Attach ISO, Attach Export, Detach, Ac

Domain Name	Domain Type	Used Space	Total Space
▼ nfs01	Data (Master)	544 GB	610 GB

MyDC under attack

00000000

Get me outta here Cheat

oVirt Monitoring UI Plugin



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

Search: Host:

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

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

Monitoring Details

Service	Output
RHEV CPU Load Check	RHEV OK: cpu ok - 1% used (centos-hyp01.la
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

PNP Performance Graphs

4 Hours

Load utilization for 10.0.100.42

cpu.load.avg.5m last: 0.031 max: 0.138 average: 0.07794

Last Message: ✔ 2013-Feb-18, 17:58 User admin@internal logged in. Alerts (0) Events Tasks (0)

oVirt Monthly Updates (highlights)



- Alien Invasion **crash course UI Plugin**
- new **Português users mailing list**
- build your home 10GE gluster/virt lab at bargain prices
- **Mac SPICE** mime launcher
- **Nagios** monitoring plugin released
- **Monitoring UI Plugin** published
- Android x86 running on oVirt
- **ZENOSS monitoring** webinar on oVirt (rhev)

3.3 Deep Dives



Deep dives

In anticipation of the 3.3 release, a number of deep dive presentations into 3.3 features are being prepared.

- Deep Dive Into Host Power Management [File:PM-deep-dive.odp recording](#) 🗝
- OpenStack Glance (Image) Integration Deep Dive [File:Ovirt-2013-glance-integration-deep-dive.pdf Recording](#) 🗝
- OpenStack Neutron (Network) Integration Deep Dive [File:Ovirt-neutron-integration-deep-dive-2013.pdf Recording](#) 🗝
- Async Task Manager changes for oVirt 3.3 Deep Dive [File:Async task mgr 23 july 2013 ovirt final.odp](#)
- Network QoS / vNIC Profiles presentation [File:VNIC Profiles.odp](#)
- Scheduling in oVirt 3.3 deep dive [File:Scheduler-Deep-Dive-oVirt.pdf](#)
- Hosted engine deep dive [File:Hosted Engine Deep Dive.pdf](#)
- Packaging [File:Ovirt 3.3 - packaging.pdf](#)

NetApp UI Plugin



mobiusdev2 (Before the next updates) [Running] - Oracle VM VirtualBox

Machine View Devices Help

Activities Google Chrome Wed 15:29

oVirt Engine Web Administ x

localhost:8700/webadmin/webadmin/WebAdmin.html#netapp-tab

NetApp Internal ... Learning@NetApp... Burt Web Interfac... mobius_ace Inbox - cmorris@... W Virtualization/Mob... NetApp WebEx En... Mobius Other Bookmarks

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

Search: Volumes: x ☆ 🔍

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

Tree

Expand All Collapse All

System

Controller	IP Address	Version	Status
MFIT	10.61.167.254	8.1.2	SSL_NOT_CONFIGURED
ice3170-1b.rtp.netapp.com	10.61.185.155	-	SSL_NOT_CONFIGURED

Add Storage Controller

Target Hostname:

Target Port:

User Name:

Password:

Use SSL:

OK Cancel

Bookmarks

Tags

Last Task: N/A

00:14 [no jobs available] 01:07

Alerts (1) Events Tasks (0)

00:14/01:07

NetApp UI Plugin



The screenshot displays the oVirt Engine Web Administration interface. A modal dialog box titled "Specify the details for the new domain" is open, asking "What is the size and name of the new domain that you would like to create?". The dialog has a left sidebar with tabs: "Storage Controller Details", "Storage Domain Details" (selected), and "Summary". The main area contains the following fields:

- Size (GB): 5
- Domain name: newDomain
- Aggregate: bomb
- Thin provision:
- Auto-grow:
- Grow increment (GB): 1
- Maximum domain size (GB): 20

At the bottom of the dialog are "OK" and "Cancel" buttons. The background interface shows the "Storage" section with a "New Domain" button and a table with the header "Domain Name".

Kimchi Incubated



The screenshot shows the Kimchi web interface in a Mozilla Firefox browser window. The interface has a dark header with the Kimchi logo and a user profile for 'root'. Below the header is a navigation bar with 'Guests', 'Templates', and 'Storage' tabs. The main content area displays a table of virtual machines with columns for Name, CPU, Network I/O, Disk I/O, Livetile, and Actions.

Name	CPU	Network I/O	Disk I/O	Livetile	Actions
Fedora-19	0%	0 KB/s	0 KB/s	VM	Refresh, Power Off, Actions
kimchi-test-fedora-19	2%	0 KB/s	23 KB/s		Refresh, Power On, Actions
kimchi-test-opensuse-12.3	0%	0 KB/s	0 KB/s	VM	Refresh, Power Off, Actions
kimchi-test-rhel-6.4	0%	0 KB/s	0 KB/s	VM	Refresh, Power Off, Actions
kimchi-test-ubuntu-13.04					Refresh, Power Off, Actions

- **oVirt 3.3 deep dive** sessions
- An oVirt Clojure SDK library for vm life cycle
- **Ubuntu and Debian guest agent packages**
- Testing oVirt 3.3 with Nested KVM
- **NetApp UI plugin**
- Alter Way Case Study
- **Kimchi** incubated
- oVirt Python SDK review (Português)
- new **spice-xpi windows** support (2.8.90)

oVirt Order Portal (slu.se)



VPS Order Portal

Server Catalog

<p>Fedora 17 Cutting-edge, always one step ahead. Gnome desktop experience.</p>	<p>Ubuntu 12.04 Debian base combined with a primary focus on ease of use.</p>	<p>FreeBSD 9 80x25 console with a true UNIX lineage. The rest is up to you.</p>	<p>Win2008R2 Gives the best integration with other Microsoft products.</p>
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Specifications CPU: 1 | RAM: 512MB | HDD: 80GB

Customer Input

Fedora Ubuntu FreeBSD (Coming soon) Win2008R2 (Coming soon)

: User ID (e.g. abcd0001)

: Desired Hostname (e.g. testsystem)

Stands for Virtual Private Server
What if you could have a computer that ran on it's own and was always available. That happily gathered important research data and presented that for you on a web page that all of your colleagues could go in and view. Or to test how a particular system update is going to play russian roulette with your applications. Would it be nice to have a different platform to test how your project reacts against? Or to just let it play Pong against itself for all eternity...

Why?
You rid yourself of that big noisy thing cramped under desk, your closet might be otherwise occupied, or you want a more flexible solution than hiring rack space in someone else's server room. You get access to a customer portal where you can start and stop the machine, plus the ability to take snapshots(restore points), so that when(not if) something goes wrong, you effortlessly roll back in time to a happier place. You know, just to take a snapshot before that huge upgrade that never goes by unnoticed.

Built on Open Source
The Virtualization engine that drives this system is called oVirt (www.ovirt.org), originally developed by RedHat, that uses Linux's KVM virtualization. The storage behind it is supplied by a FreeBSD server (www.freebsd.org) equipped with the ZFS filesystem, originally developed by SUN.

Start small, scale big
What's cool about virtual machines is that, if you need to, are able to shut the machine down, crank up it's resources with more CPU's, RAM and HDD's, and when you don't that need anymore, you can turn it back down again; Resources On-Demand.

Safety comes first
We know from ourselves the thrill and joy of keeping hundreds of servers patched and secure. Say with me, "Patching is fun!" (right?). So in this system, the servers patch themselves automagically once a month at night, between 01:30 and 04:30, and a reboot takes less than five minutes.

Support
The *NIX systems have three basic dependencies; Puppet- that is in charge of keeping the machines updated, Winbind- that handles how you log in with your SLU domain account, and SSH- so you(and we) can administer the machine without having direct access to it's console(the monitor). Since it is your server you are free to do with it what you want, but if any of these dependencies are broken, you are going to be referred to the respective distribution's support forum instead, case closed. The same principle applies to Windows machines as well, except with it's Active Directory join as the dependency that provides for the rest.

- **Power PC** engine patches
- How to use a Glance image with oVirt
- **oVirt order portal**
- VM life cycle Ansible oVirt module
- Pluggable scheduler samples are available
- **puppet and chef** modules to deploy oVirt engine and oVirt node
- High-Availability oVirt-Cluster with iSCSI-Storage
- 3 part series on using the python sdk

3.2 - Feature Highlights

- Ease of install / stability
- .el6 support
- Live storage migration
- Live snapshot
- Hotplug disk/nic
- UI plugins
- Multiple fencing devices
- Fencing proxy
- Gluster management improvements

3.3 - Feature Highlights

- Neutron network provider support
- Glance image provider support
- Foreman as a host provider
- Pluggable scheduler (3.3.1)
- Watchdog support
- Network profiles (3.3.1)
- Cloud-init
- OpenLDAP authentication
- MoM/Cpu shares/Ballooning
- Virtual disk resize
- Live snapshot with RAM

Add Provider

General

Agent Configuration

Interface Mappings [?]

QPID

Host

Port

Username

Password

OK Cancel

OpenStack Network Neutron Provider



Import Networks

Network Provider:

Provider Networks

<input type="checkbox"/>	Name	Provider Network ID
<input type="checkbox"/>	external_red	91680074-3299-401b-bde4-228bbe09e67c
<input type="checkbox"/>	nicless	cd3e23fa-ca33-4d74-ae1a-b1c58987614d
<input type="checkbox"/>	test	54b37199-203b-48fd-897a-edc74a56188e
<input type="checkbox"/>	test2	da4e6bf0-848f-4551-8234-87d97e0aabe5
<input type="checkbox"/>	test3	af5efdca-a9d9-4cec-8562-a75447108618

Networks to Import

<input type="checkbox"/>	Name	Provider Network ID	Data Center	<input checked="" type="checkbox"/> Allow All
<input type="checkbox"/>	newnet	7a75f104-7c08-4e3b-bb82-5d68e5c9def8	<input type="text" value="oVirt"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	foo	a072f05d-0ab6-4205-a406-c4aed41238bc	<input type="text" value="Default"/>	<input checked="" type="checkbox"/>

OpenStack Glance Image Provider



Add Provider

General

Name:

Description:

Type:

Provider URL:

Requires Authentication

Username:

Password:

Tenant Name:

Test succeeded, managed to access provider.

OpenStack Glance Image Provider



Data Centers Clusters Hosts Networks **Storage** Disks Virtual Machines Pools Templates

New Domain Import Domain Edit Remove

	Domain Name	Domain Type	Storage Type	Format	Cross Data-Center Status
▲	BlockDomain1	Data	iSCSI	V3	Active
▲	BlockDomain2	Data (Master)	iSCSI	V3	Active
▲	ExportDomain1	Export	NFS	V1	Active
▼	FileDomain1	Data (Master)	NFS	V3	Unknown
■	GlanceDomain1	Image	OpenStack Glance	V1	Unattached
■	GlanceDomain2	Image	OpenStack Glance	V1	Unattached
▲	IsoDomain1	ISO	NFS	V1	Active

Images Permissions

Import

File Name	Type	Actual Size
Blank QCOW2 Image 20Gb (1477cd5)	Disk	< 1 GB
BlockDiskThin1 (7fdbd25)	Disk	< 1 GB

The Foreman Provider



Add Provider [X]

General

Name: new foreman provider

Description:

Type: Foreman

Provider URL: http://localhost

Requires Authentication

Username: username

Password: [masked]

Test

OK Cancel

The Foreman Provider



New Host [Close]

General

Power Management

SPM

Console

Data Center: DC2

Host Cluster: CL2

Show External Providers

Provider search filter: [Search]

External Hosts

Name

Address

Root Password

Automatically configure host firewall

foreman1

- test1.example.com
- test2.example.com
- test3.example.com
- test4.example.com
- test5.example.com
- test6.example.com
- test7.example.com
- test8.example.com
- test9.example.com
- test10.example.com
- test11.example.com
- test12.example.com
- test13.example.com
- test14.example.com
- test15.example.com

OK Cancel

Pluggable Scheduler



Edit Cluster Policy

Name Description

Filter Modules Drag or use context menu to make changes ?

Enabled Filters

- Migration
- Memory
- CPU

Disabled Filters

-

Weights Modules Drag or use context menu to make changes ?

Enabled Weights & Factors

- 1 +

- PowerSaving

Disabled Weights

- None
- EvenDistribution

Load Balancer ?

Properties ?

CpuOverCommitDurationMi	<input type="text" value="2"/>	+ -
HighUtilization	<input type="text" value="80"/>	+ -
LowUtilization	<input type="text" value="20"/>	+ -

Close

Watchdog

Edit Virtual Machine

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

Cluster: sla-gold-tlv-redhat-com-Loc
Quota: template-quota
Based on Template: Blank
Operating System: Other OS
Optimized for: Server

Highly Available

Priority for Run/Migration queue:

Low
 Medium
 High

Watchdog

Watchdog Model: i6300esb
Watchdog Action: none
reset
poweroff
dump
pause

Hide Advanced Options

Highly Available: No
Number of Monitors: 1

vNic Profiles & QoS



VM Interface Profile

Network:

Name:

Description:

QoS:

Port Mirroring:

Edit Network QoS

Data Center:

Name:

Inbound

Average Mbps Peak Mbps Burst Mb

Outbound

Average Mbps Peak Mbps Burst Mb

OK Cancel

cloud-init

Run Virtual Machine(s)

Cloud-Init

Hostname

Network

Select network above | Add new | Remove selected

Use DHCP

IP Address

Netmask

Gateway

Start on Boot

DNS Servers

DNS Search Domains

SSH Authorized Keys

Regenerate System SSH Keys

Time Zone

Root Password

3.3 – Feature Highlights (cont)

- Intel's attestation service support
- Native gluster domain
- NoVNC/spice.html5
- Java SDK
- Hosted Engine (coming)
- virtio-scsi support
- Edit storage connections (3.3.1)
- Apache frontend
- ssh soft fencing
- Create multiple VMs from template
- OsInfo

Short Term Roadmap

- Authentication refactoring (in the works)
- PPC support (in the works)
- JSON Rest API (in the works)
- Logical Network QoS (in the works)
- Feature level negotiation (engine-vdsm)
- Fedora 20 support
- Ubuntu support
- Host profiles
- VM affinity scheduling
- Hot plug cpu

High on the Radar

- UI over REST API
- Host update manager
- Template versions
- Private networks
- Resize LUN
- Import data domain
- Multiple storage types in DC
- Live merge snapshot
- Keystone authentication support
- Cinder storage domain

THANK YOU !

<http://ovirt.org>
users@ovirt.org

#ovirt irc.oftc.net