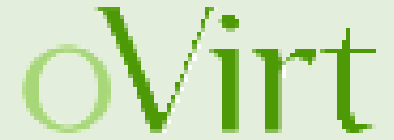


# oVirt Board Meeting

January 7, 2014

Itamar Heim and Brian Proffitt  
Red Hat

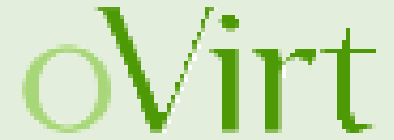
# Agenda



- The state of oVirt's technology
- The state of oVirt's community
- Building on oVirt's momentum in 2014
- Moving forward

Itamar Heim

# 2013 Releases

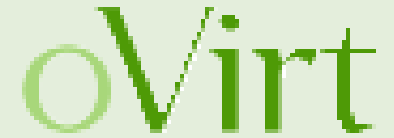


- 02/2013 - oVirt 3.2 GA
- 04/2013 - oVirt 3.2.1 - .el6 (CentOS/RHEL) support
- 09/2013 - oVirt 3.3
- 10/2013 - oVirt 3.3.1
- 12/2013 – oVirt 3.3.2
- 02/2014 – oVirt 3.4 (planned)

# **Main Themes**

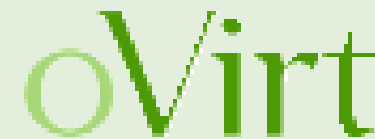
**Ecosystem, Extensibility,  
Integration & Robustness**

# Cross Platform Support



- **Ubuntu and SUSE guest OSes** added to oVirt
- **Gentoo** experimental support for oVirt Engine
- Cross arch **PPC** support for engine and vds
- **Android** oVirt Opaque client (Spice)
- Native Spice support (mime based)
- NoVnc/Spice.HTML5
- Ubuntu vds/engine – still in the works

# 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 | Logical Networks | Clusters

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:

[Data Centers](#)
[Clusters](#)
[Hosts](#)
[Networks](#)
[Storage](#)
[Disks](#)
[Virtual Machines](#)
[Pools](#)
[Templates](#)
[Volumes](#)
[Users](#)
[Events](#)

[New](#)
[Edit](#)
[Remove](#)
[Activate](#)
[Maintenance](#)
[Configure Local Storage](#)
[Power Management](#)
[Assign Tags](#)

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

[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

[Details](#)
[Graphs](#)

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)

# NetApp UI Plugin



The screenshot shows the oVirt Engine Web Admin interface. The browser address bar indicates the URL is localhost:8700/webadmin/webadmin/WebAdmin.html#netapp-tab. The user is logged in as admin@internal. The main content area displays a table of storage controllers under the NetApp tab.

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

An "Add Storage Controller" dialog box is open, containing the following fields:

- Target Hostname: 10.61.167.50
- Target Port: 80
- User Name: root
- Password: (empty)
- Use SSL:

Buttons for "OK" and "Cancel" are visible at the bottom right of the dialog box.

# ProgressBar Plugin



oVirt Open Virtualization Manager

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

Search: Vms

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

System

Expand All | Collapse All

▼ Systems

- ▼ Data Centers
  - ▼ DC32
    - Storage
    - ▶ Networks
    - ▶ Templates
    - ▶ Clusters
  - ▼ Default
    - Storage
    - ▶ Networks
    - ▶ Templates
    - ▶ Clusters
  - External Providers

Bookmarks

Tags

ProgressBar plugin | Storage | **Networking** | Virtualization | Gluster

Select category

Storage | **Networking** | Virtualization | Gluster

63 % complete

**Your rank in Networking is Adept**

Some descriptive overview of this category goes here, possibly with pointers to documentation.

[Learn more about Networking](#)

**Unlocked achievement**

Description related to this achievement, acting as micro-documentation.

**Locked achievement**

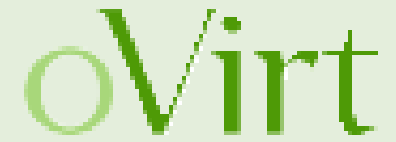
Hint and tips how to unlock this achievement, written in an encouraging way.

**Blocked achievement**

This achievement is blocked by some other achievement that must be unlocked first.

Last Message: 2014-Jan-08, 11:33 | User: admin@internal logged in | Alerts (2) | Events | Tasks (0)

# Kimchi Incubated



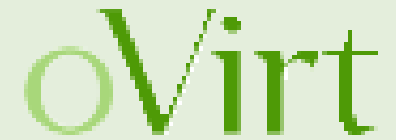
Kimchi - Mozilla Firefox

Kimchi root

Guests Templates Storage

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

# 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

Disabled Weights

- None
- EvenDistribution

**Load Balancer** ?

**Properties** ?

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

## 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](#)

# oVirt Order Portal (slu.se)



## VPS Order Portal

### Server Catalog

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

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](http://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](http://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.

# oVirt 3.3: OpenStack Network Neutron Provider



### Import Networks

Network Provider: Neutron

**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

▼ ▲

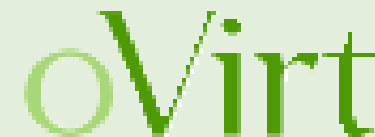
**Networks to Import**

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

Import Cancel



# oVirt 3.3: OpenStack Glance Image Provider



### Add Provider

**General**

Name: GlanceDomain1

Description: My Glance Domain 1

Type: OpenStack Image

Provider URL: http://fsimonce-rhos.usersys.redhat.com

Requires Authentication

Username: ovirt

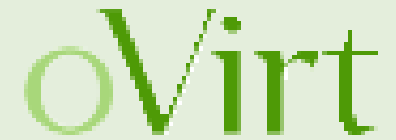
Password: \*\*\*\*\*

Tenant Name: ovirt-storage1

✔ Test succeeded, managed to access provider. Test

OK Cancel

# oVirt 3.3: The Foreman Provider



### Add Provider

**General**

Name: new foreman provider

Description:

Type: Foreman

Provider URL: http://localhost

Requires Authentication

Username: username

Password: .....

Test

OK Cancel

# oVirt 3.3: The Foreman Provider



**New Host** [X]

**General**

Power Management

SPM

Console

Data Center: DC2

Host Cluster: CL2

Show External Providers

Provider search filter:  [Search]

External Hosts: [Dropdown]

Name

Address

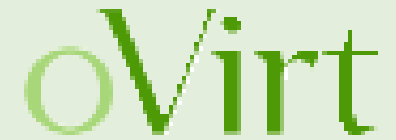
Root Password

Automatically configure host firewall

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

# oVirt 3.3: 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

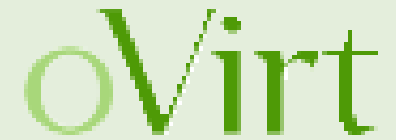
Watchdog Action: none, reset, poweroff, dump, pause

Hide Advanced Options

Highly Available: No

Number of Monitors: 1

# oVirt 3.3: vNic Profiles & QoS



**VM Interface Profile**

Network:

Name:

Description:

QoS:

Port Mirroring:

**Edit Network QoS**

Data Center:

Name:

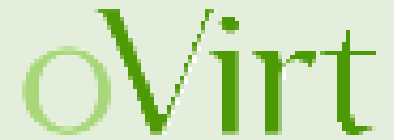
**Inbound**

Average  Mbps      Peak  Mbps      Burst  Mb

**Outbound**

Average  Mbps      Peak  Mbps      Burst  Mb

# oVirt 3.3: 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

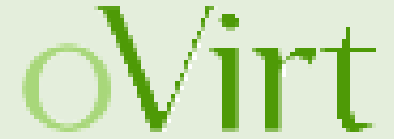
SSH Authorized Keys

Regenerate System SSH Keys

Time Zone

Root Password

# Short-Term Roadmap



- Backup API
- Multiple storage domains
- Hosted engine
- VM-affinity scheduling
- Hot-plug CPU
- Network labels
- Snmp traps
- PPC support
- Logical Network QoS
- Template versions
- Neutron – security groups, IPAM
- Fedora 20 support
- Ubuntu support
- Authentication refactoring
- JSON Rest API

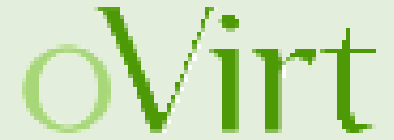
# Looking Down The Road

- UI over REST API
- Host update manager
- Private networks
- Resize LUN
- Import data domain
- Multiple storage types in DC
- Live merge snapshot
- Keystone authentication support
- Cinder storage domain
- Feature level negotiation (engine-vdsm)
- Host profiles



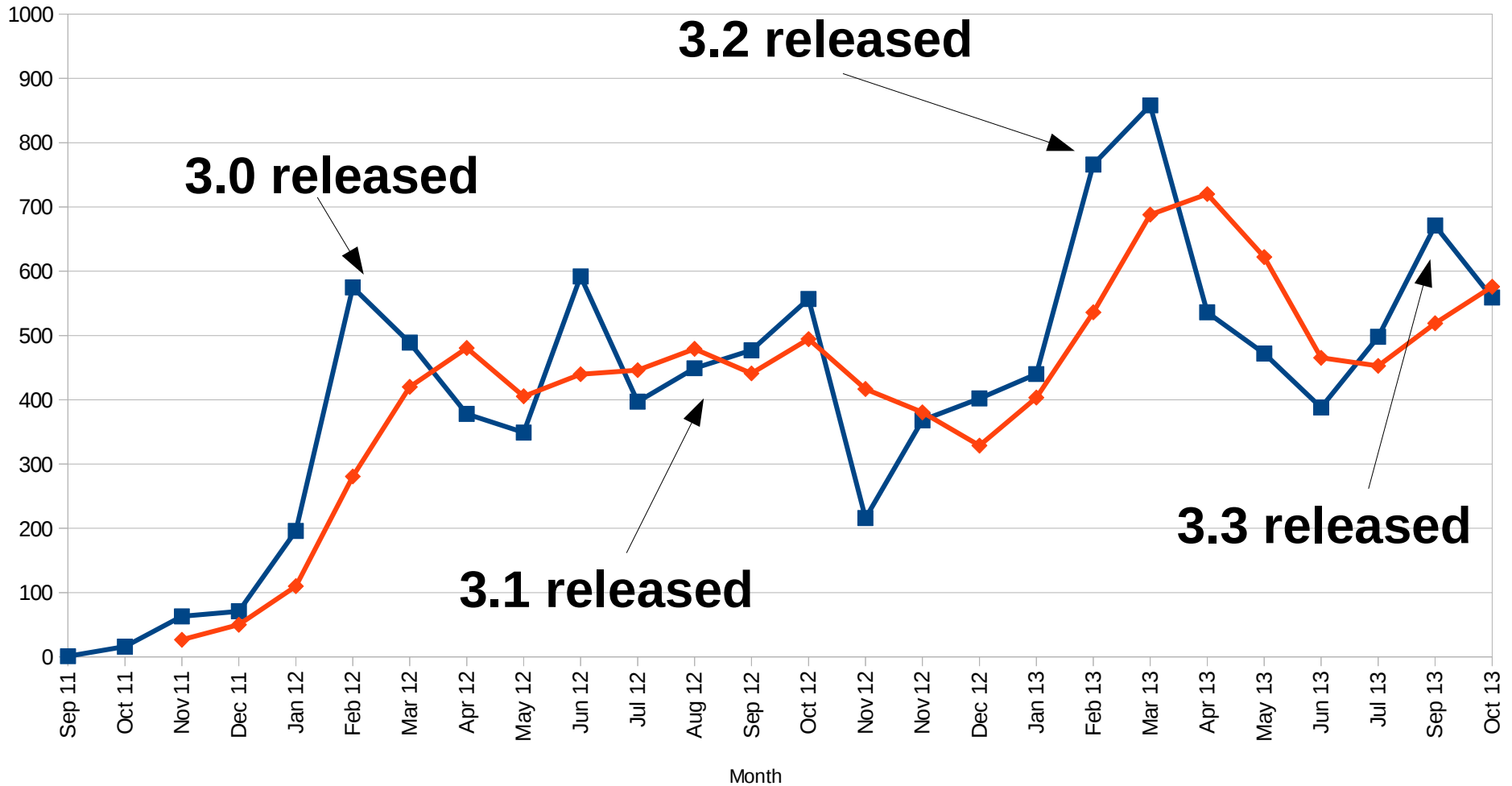
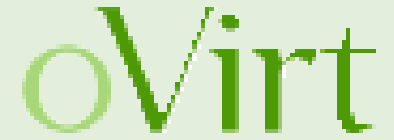
Brian Proffitt

# User List

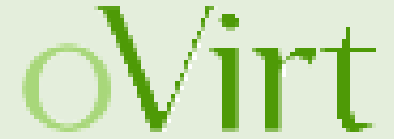


- Over 100 unique posters monthly
- 642 subscribers
  - 25% Red Hat
  - 75% non-Red Hat

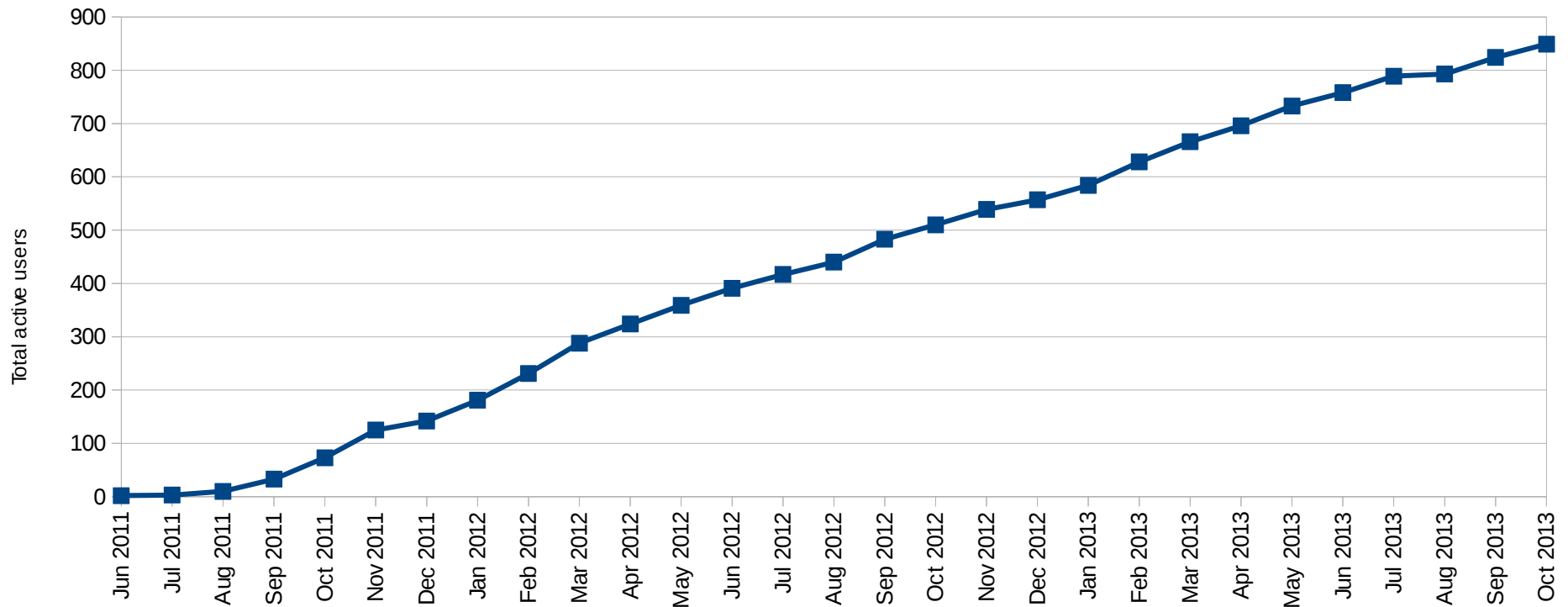
# User list growth



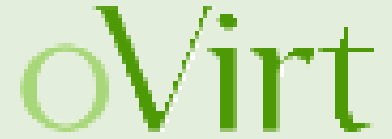
# User Mailing List



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



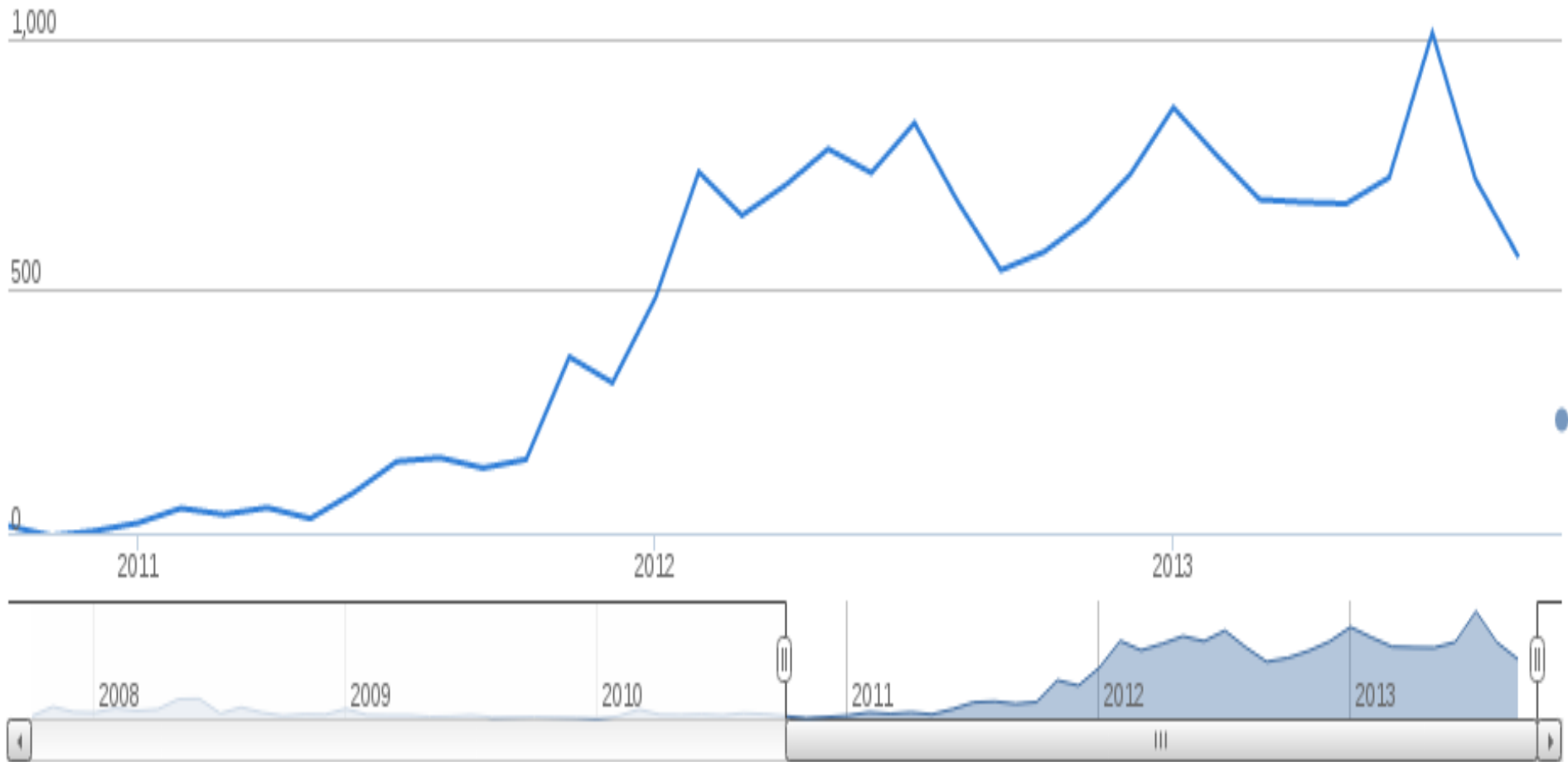
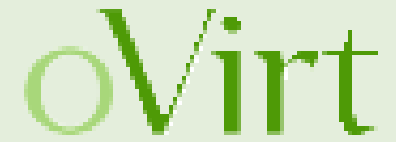
# oVirt Community Size



- Subscriber count to users list steadily increasing
- Consistent high-traffic representative of broad, engaged community

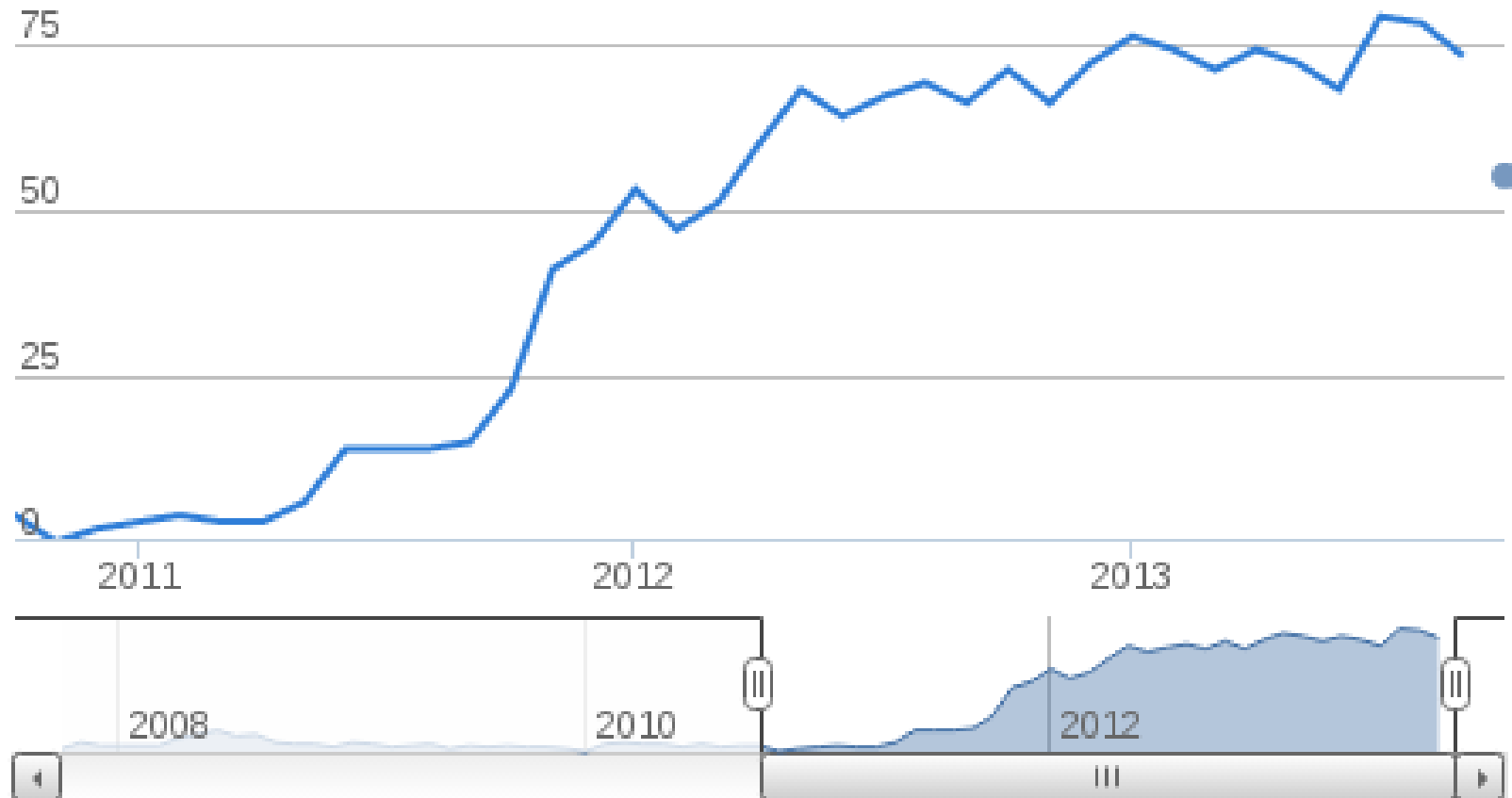
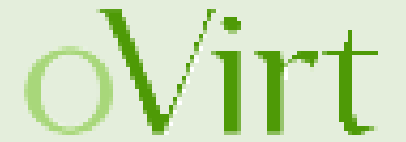
- 11697 patches submitted in last 12 months
- 810 from contributors not working for Red Hat
- Patches by project:
  - ovirt-engine: 7266
  - VDSM: 1688
  - ovirt-node: 1080
  - Everything else: 1663

# oVirt Commits per Month



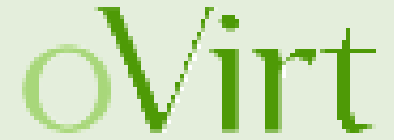
<https://www.ohloh.net/p/oVirt/commits/summary>

# Contributors per Month



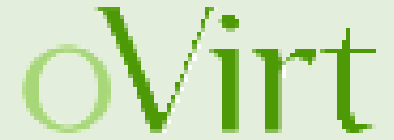


# Not Just Red Hat



- IBM: MOM, Kimchi...
- El Dorado Research & IBM: Power64
- NetApp: Storage integration with UI plug-in
- Intel: Trusted Computing support
- UI plug-ins: Nagios, NetApp, Symantec

# Case Studies



- Alter Way – public hosting offering using oVirt
- Keele University – 10,000-student school running oVirt since summer 2013
- NieuwLand - Mobile software developer using high-traffic geo databases
- Two more case studies lined up, plan on having one per month

# Exciting Uses



- Recently discovered: Austrian data center hoster with 1,100 physical machines
- Wind River Open Virtualization based on oVirt

The screenshot shows a Twitter thread with the following content:

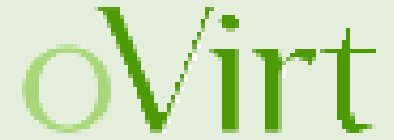
- Steffen Rieger** (@Steffen\_Rieger) - 8 Dec: Alle VMs in die @ovirt Farm migriert. Jetzt noch Verkabelungsrestarbeiten, dann endlich WE. :) #OpenSourceDataCenter pic.twitter.com/uull7GYLi0
- Open Virtualization** (@ovirt) - 10 Dec: @Steffen\_Rieger Und gefällt es Ihnen? (Hope I got that right)
- Steffen Rieger** (@Steffen\_Rieger) - 10 Dec: @ovirt The migration was carried out hassle-free. @ovirt is very reliable and buisness ready for large data centers. #OpenSourceDataCenter
- Open Virtualization** (@ovirt) - 10 Dec: @Steffen\_Rieger Great to hear! How big is the final production deployment?
- Steffen Rieger** (@Steffen\_Rieger) - 10 Dec: @ovirt We operate approx. 1100 machines. The underlying storage system is @openattic, a open source project by @itnovum #OpenSourceDataCenter

At the bottom of the tweet, it shows 8 retweets and 2 favorites, along with a row of user avatars. The timestamp is 12:53 PM · 10 Dec 13 · Details.

- Two oVirt Workshops – NetApp, Sunnyvale Jan 2013 and Intel, Shanghai, May 2013
- oVirt engagement and presentations: dozens of presentations, 15-20 events with oVirt presentations
- oVirt stands: LinuxCon Europe 2012, FOSDEM, Red Hat summit, OSCON, LinuxCon Europe 2013
- Virtualization DevRoom at FOSDEM 2013

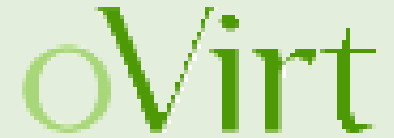
## How Do We Move Forward?

# Challenges



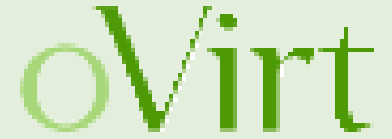
- Website – Content organization
- Metrics – Bitergia, Website
- Awareness and visibility – Media, events
- Community depth and breadth – Events, extensions

# Wiki Reorganization



- Deliver content based on one main goal: what will make it easier for new members to enter oVirt community?
- Task-oriented user documentation
- More clearly organized developer documentation
- Better search tools

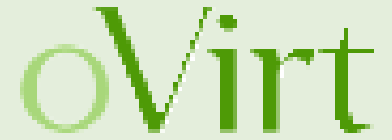
# Enabling the oVirt Ecosystem



- Build a user- and partner-facing portal to host oVirt Exchange, a new site for hosting UI plugins, extensions, scripts for oVirt
- Grow strong ecosystem of content and add-ons for oVirt
- Value-add for end-users and developers
- Clear point-of-entry for developers to engage with oVirt

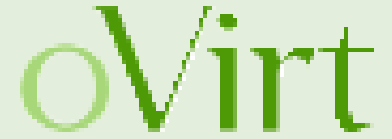


# oVirt Marketing Group



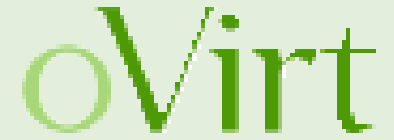
- Identify key events to target users
- Plan event presence
- Collaborate with oVirt board members to showcase their oVirt-related value
- Interface with industry trade groups such as the OVA
- Increase activity on social media/community websites
- Write and post more thought-leadership articles in the mainstream technical media, beyond OSS/Linux
- Create and promote user success stories
- Plan global workshops
- Coordination of an oVirt Speaker's Bureau

# Meetups: Low Touch, High Value



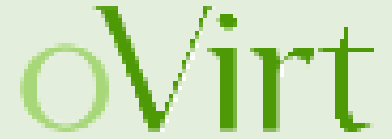
- Coordinate smaller scale, lower overhead oVirt meetups in geos with critical mass of participants
- Create easily replicable model for meetups and encourage community participation
- Compliment with web-delivered content for users in areas we don't have critical mass for workshops or meet-ups
- Seeking partners to help initiate and host these easy to coordinate events

# 2014 Event Plan



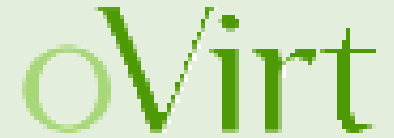
- Booth and presentations:
  - LinuxCon events
  - FISL
  - FOSDEM
  - SCALE
  - LISA
  - DevConf.cz
  - OSCON
  - Infrastructure.Next event series
  - *Your favorite conference here!*

# 2014 Event Plan: oVirt Workshops



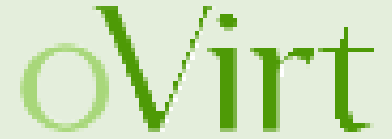
- Continuation of workshops in partner HQs
- Partner members can present their own content to users and developers
- Connect with existing events to maximize attendees' travel budgets

# 2014 Event Plan: Virtualization



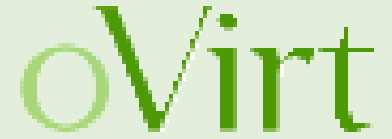
- Target industry virtualization & systems conferences with presentations, and targeted stand presence
  - InterOp
  - O'Reilly Velocity
  - CloudExpo East/West
  - Virtualization and Cloud Summit
  - USENIX LISA, ATC
  - Gartner Data Center Summit
  - NetApp Insight Americas
  - GigaOm Structure
  - IP EXPO

# 2014 Event Plan: Open Source



- Target community conferences with systems/virt tracks
  - OSCON – propose 3h tutorial (paid if necessary)
  - Linux Foundation events
  - Loadays
  - Free/Open Source Developers Meeting (FOSDEM)
  - Linux Conference Australia
  - SoCal Linux Expo
  - Open World Forum
  - International Conference for Open Source and Systems

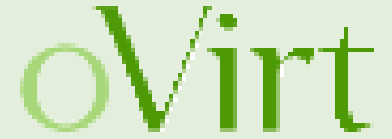
# Budget Proposal



- \$20,000: Outreach and promotion in industry events (sponsorships, stand preparation, costs, excl. travel)
- \$40,000: oVirt Workshops (4)
- \$20,000: Participation in Infrastructure.Next event series, promoting oVirt as a key solution for open hybrid cloud
- \$10,000: Marketing materials (USB keys, printing, t-shirts)
- \$35,000: Creation and first-year maintenance of oVirt extensions portal

**Total proposed oVirt budget: \$125,000**

# Moving Forward



- How can we make it easier for people to participate in oVirt?
- How do we raise awareness for oVirt in broader virtualization sector?
- How do we specifically pivot VMware users to oVirt?
- How do we better integrate and collaborate with OpenStack?
- How do you, our partners, want to work with the oVirt community?



Thank you!

When is our next meeting?