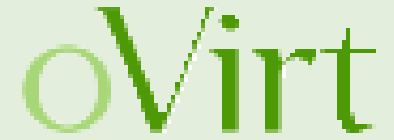


oVirt Board Meeting

January 7, 2014

Itamar Heim and Brian Proffitt
Red Hat

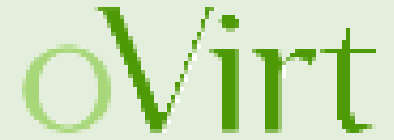
Agenda



- 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

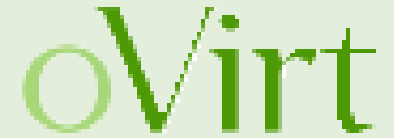


- 02/2013 - oVirt 3.2 GA
- 04/2013 - oVirt 3.2.1 - .el6 (CentOS/RHEL) support
- 09/2013 - oVirt 3.3
- 10/2013 - oVirt 3.3.1
- 12/2013 – oVirt 3.3.2
- 02/2014 – oVirt 3.4 (planned)

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



The screenshot shows the oVirt management interface with a game overlay titled "MyDC under attack". The game is a space shooter where the player's ship is at the bottom, and several alien ships (green circles) are attacking. The score is 00000000. The game has two buttons: "Get me outta here" and "Cheat".

The background interface shows the "Data Centers" tab with a table of Data Centers:

Name	Storage Type
Default	NFS
MyDC	NFS

Below the game, the "Storage" tab is active, showing a table of Storage Domains:

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

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	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

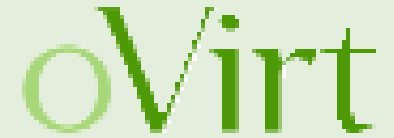
4 Hours

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



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

Machine View Devices Help

Activities Google Chrome Wed 15:29 netapp

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: 10.61.167.50

Target Port: 80

User Name: root

Password:

Use SSL:

OK Cancel

Bookmarks Tags

Last Task: N/A

00:14 01:07 [No jobs available] Alerts (1) Events Tasks (0)

00:14/01:07 200% Right Ctrl

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

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.

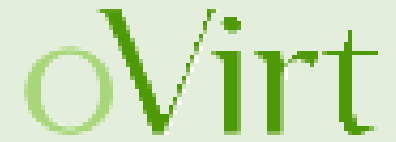
Blocked achievement
This achievement is blocked by some other achievement that must be unlocked first.

Bookmarks

Tags

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

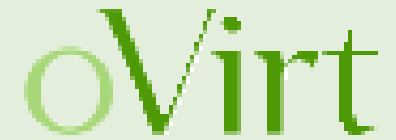
Kimchi Incubated



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, 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

- 1 +

Disabled Weights

- None
- EvenDistribution

Load Balancer ?

Properties ?

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

Close

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

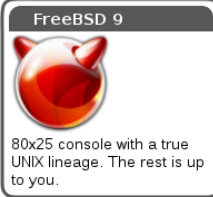
Server Catalog




Fedora 17
Cutting-edge, always one step ahead. GNOME desktop experience.



Ubuntu 12.04
Debian base combined with a primary focus on ease of use.



FreeBSD 9
80x25 console with a true UNIX lineage. The rest is up to you.



Win2008R2
Gives the best integration with other Microsoft products.

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.

oVirt 3.3: OpenStack Network Neutron Provider



Import Networks

Network Provider:

Provider Networks

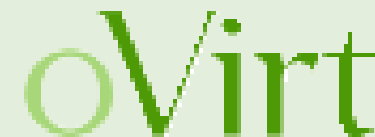
<input type="checkbox"/>	Name	Provider Network ID
<input type="checkbox"/>	external_red	91680074-3299-401b-bde4-228bbe09e67c
<input type="checkbox"/>	nicless	cd3e23fa-ca33-4d74-ae1a-b1c58987614d
<input type="checkbox"/>	test	54b37199-203b-48fd-897a-edc74a56188e
<input type="checkbox"/>	test2	da4e6bf0-848f-4551-8234-87d97e0aabe5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

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

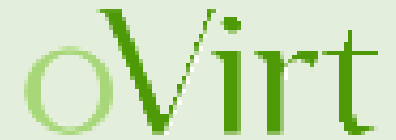
Password: *****

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:

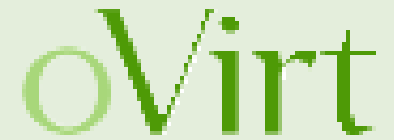
Inbound

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



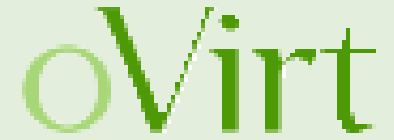
- Backup API
- Multiple storage domains
- Hosted engine
- VM-affinity scheduling
- Hot-plug CPU
- Network labels
- Snmp traps
- PPC support
- Logical Network QoS
- Template versions
- Neutron – security groups, IPAM
- Fedora 20 support
- Ubuntu support
- Authentication refactoring
- JSON Rest API

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

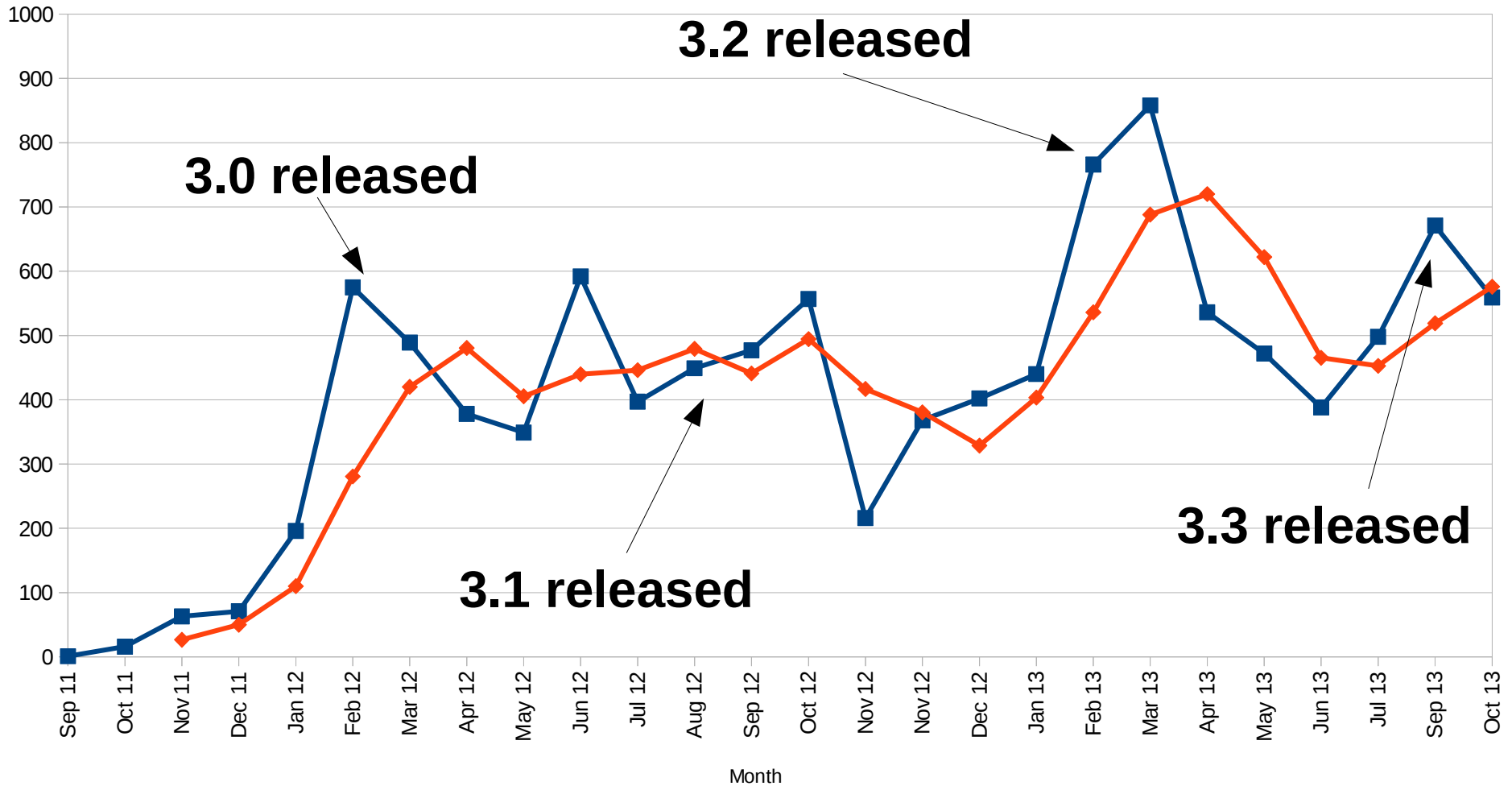
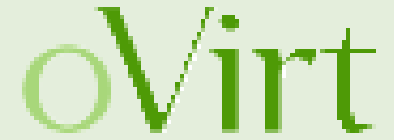
Brian Proffitt

User List



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

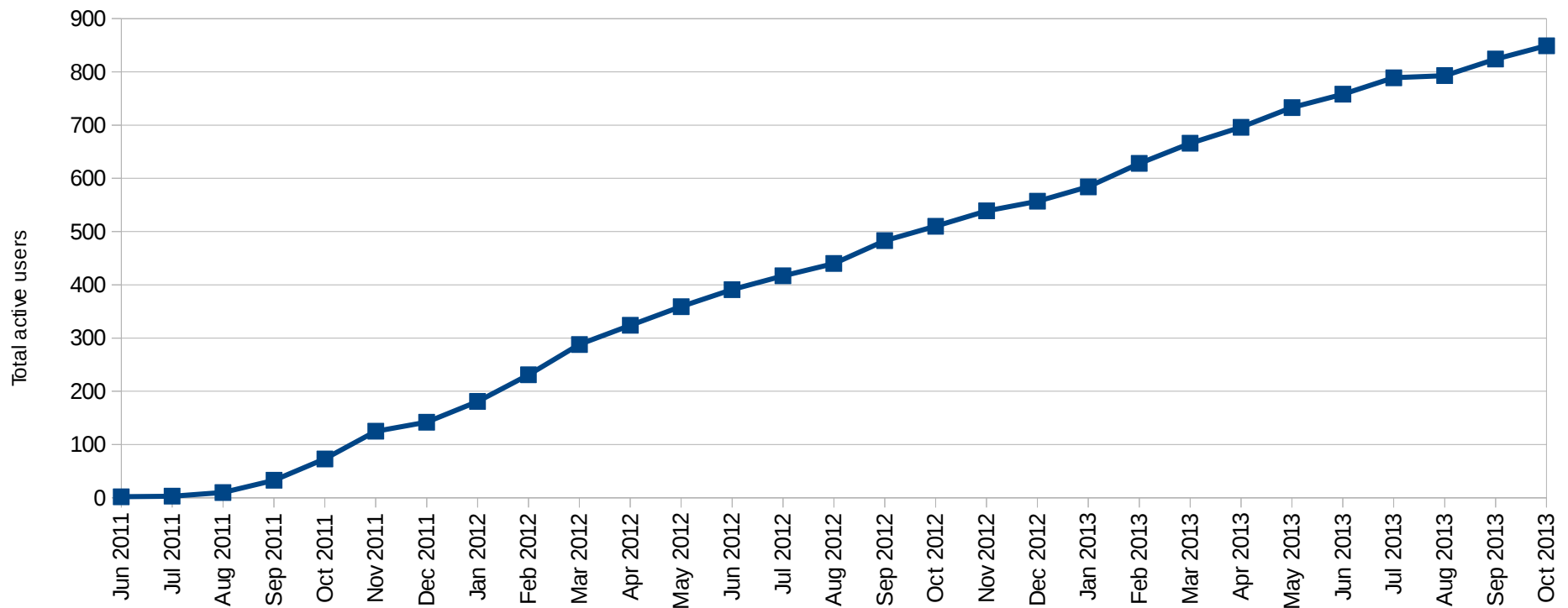
User list growth



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



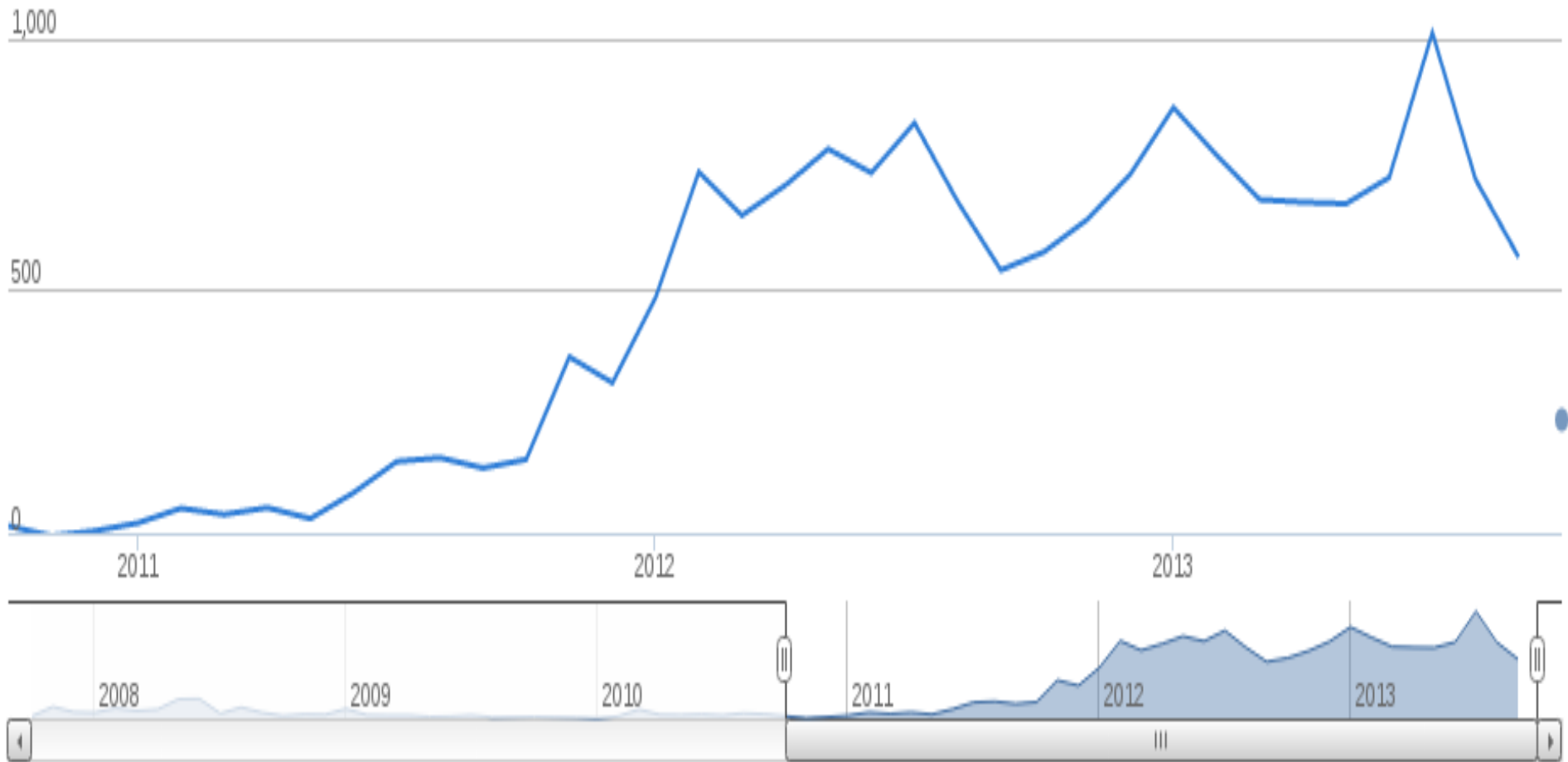
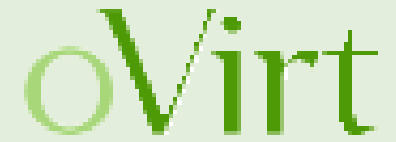
oVirt Community Size



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

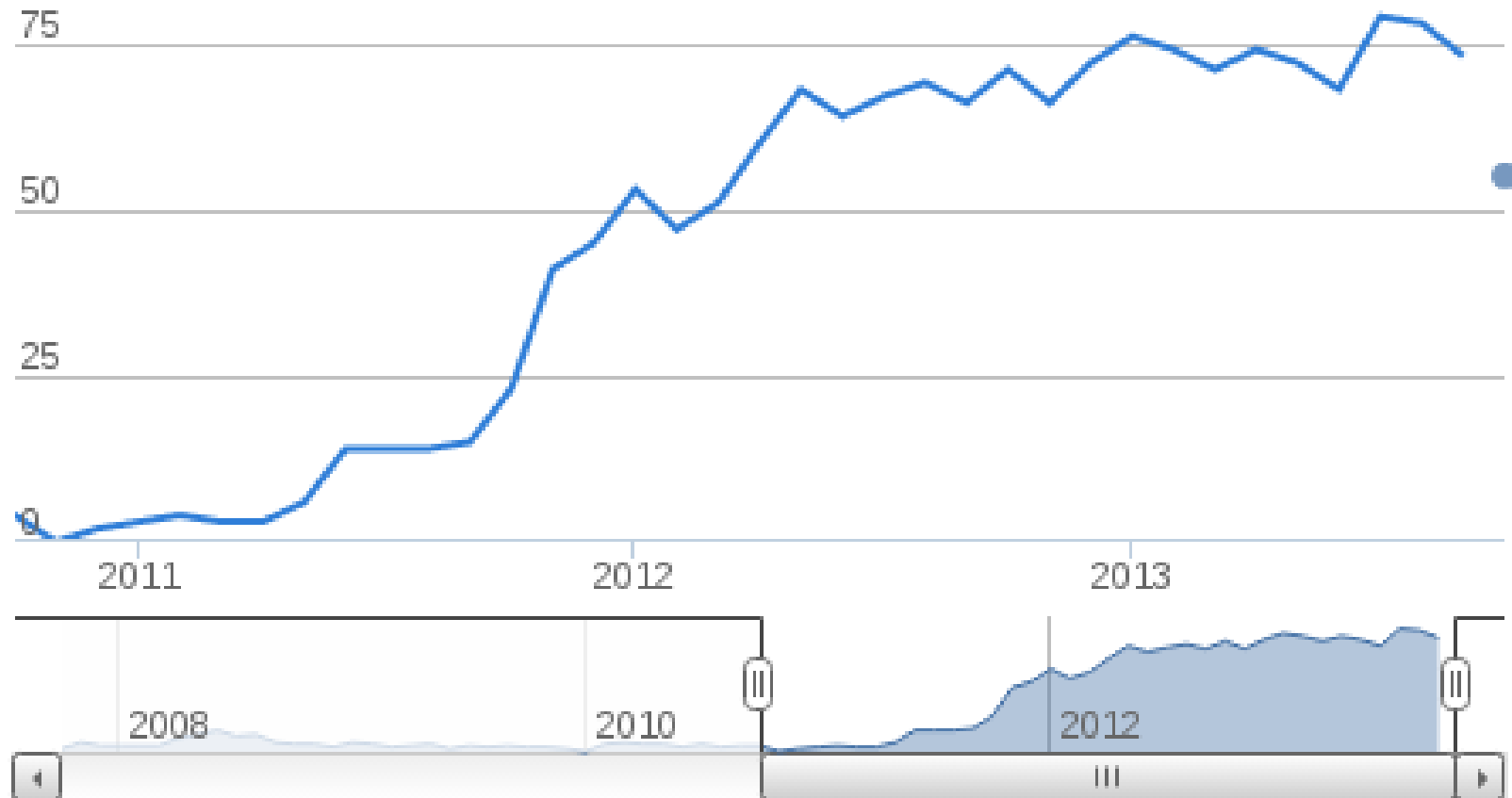
- 11697 patches submitted in last 12 months
- 810 from contributors not working for Red Hat
- Patches by project:
 - ovirt-engine: 7266
 - VDSM: 1688
 - ovirt-node: 1080
 - Everything else: 1663

oVirt Commits per Month

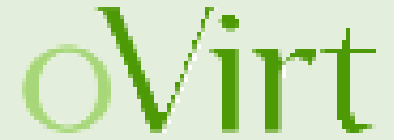


<https://www.ohloh.net/p/oVirt/commits/summary>

Contributors per Month

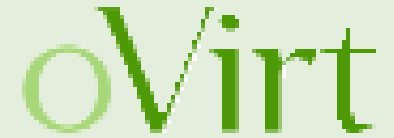


Not Just Red Hat



- 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:

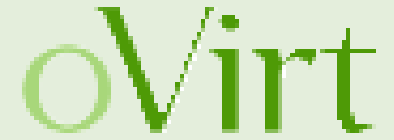
- Steffen Rieger** (@Steffen_Rieger) - 8 Dec: Alle VMs in die @ovirt Farm migriert. Jetzt noch Verkabelungsrestarbeiten, dann endlich WE. :) #OpenSourceDataCenter pic.twitter.com/uull7GYLi0
- Open Virtualization** (@ovirt) - 10 Dec: @Steffen_Rieger Und gefällt es Ihnen? (Hope I got that right)
- Steffen 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, with a row of user avatars including GBL.

- 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

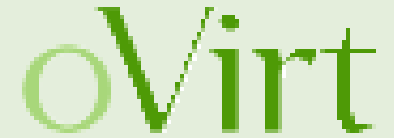
How Do We Move Forward?

Challenges



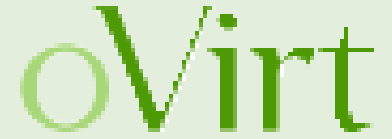
- Website – Content organization
- Metrics – Bitergia, Website
- Awareness and visibility – Media, events
- Community depth and breadth – Events, extensions

Wiki Reorganization



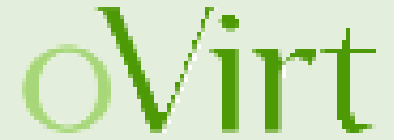
- Deliver content based on one main goal: what will make it easier for new members to enter oVirt community?
- Task-oriented user documentation
- More clearly organized developer documentation
- Better search tools

Enabling the oVirt Ecosystem



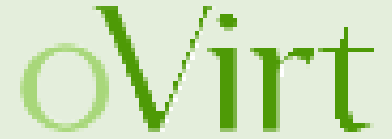
- Build a user- and partner-facing portal to host oVirt Exchange, a new site for hosting UI plugins, extensions, scripts for oVirt
- Grow strong ecosystem of content and add-ons for oVirt
- Value-add for end-users and developers
- Clear point-of-entry for developers to engage with oVirt

oVirt Marketing Group



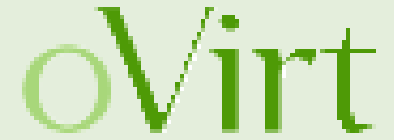
- Identify key events to target users
- Plan event presence
- Collaborate with oVirt board members to showcase their oVirt-related value
- Interface with industry trade groups such as the OVA
- Increase activity on social media/community websites
- Write and post more thought-leadership articles in the 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



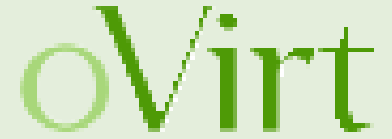
- Coordinate smaller scale, lower overhead oVirt meetups in geos with critical mass of participants
- Create easily replicable model for meetups and encourage community participation
- Compliment with web-delivered content for users in areas we don't have critical mass for workshops or meet-ups
- Seeking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

2014 Event Plan



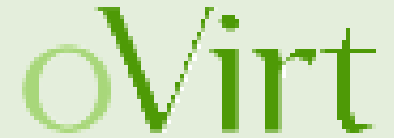
- Booth and presentations:
 - LinuxCon events
 - FISL
 - FOSDEM
 - SCALE
 - LISA
 - DevConf.cz
 - OSCON
 - Infrastructure.Next event series
 - *Your favorite conference here!*

2014 Event Plan: oVirt Workshops



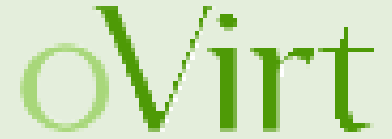
- Continuation of workshops in partner HQs
- Partner members can present their own content to users and developers
- Connect with existing events to maximize attendees' travel budgets

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

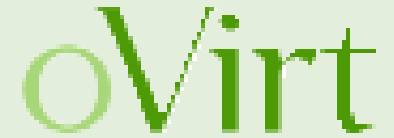
Budget Proposal



- \$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?