

## Neue Features der Open Source Virtualisierungslösung oVirt

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Grazer Linuextage – 05. April 2014



- Teil 1 - Was ist oVirt?
  - oVirt Projekt News
- Teil 2 - oVirt Releases
  - Version 3.3
  - Version 3.4
- Teil 3 - Erweiterungen



# Teil 1

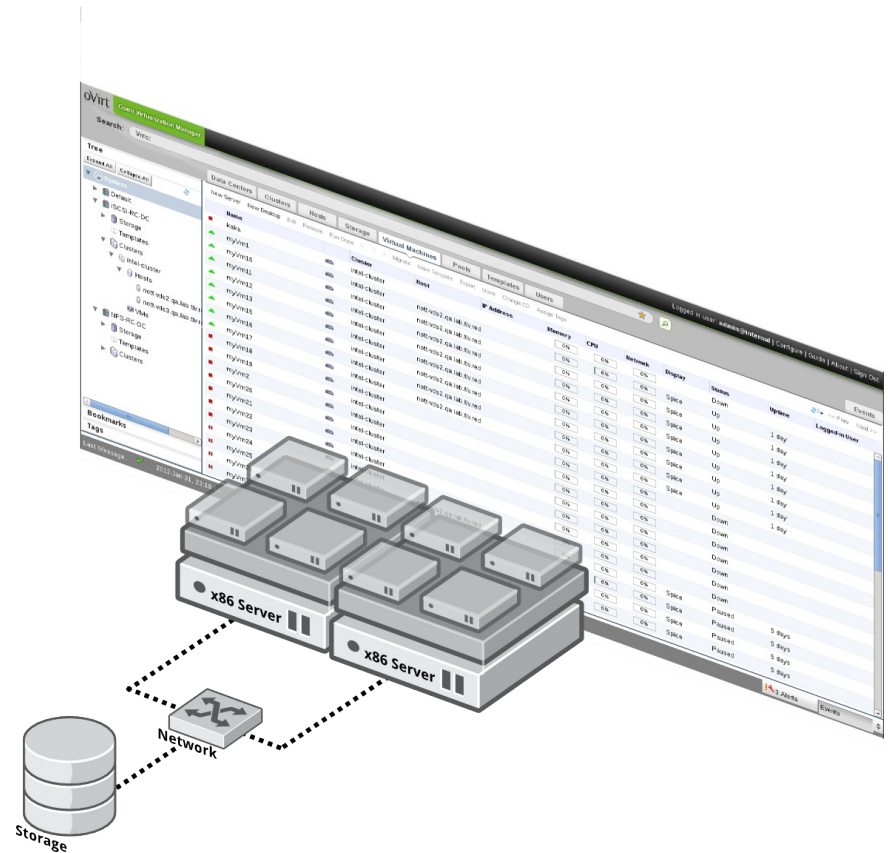
## Was ist oVirt?



# Was is oVirt?

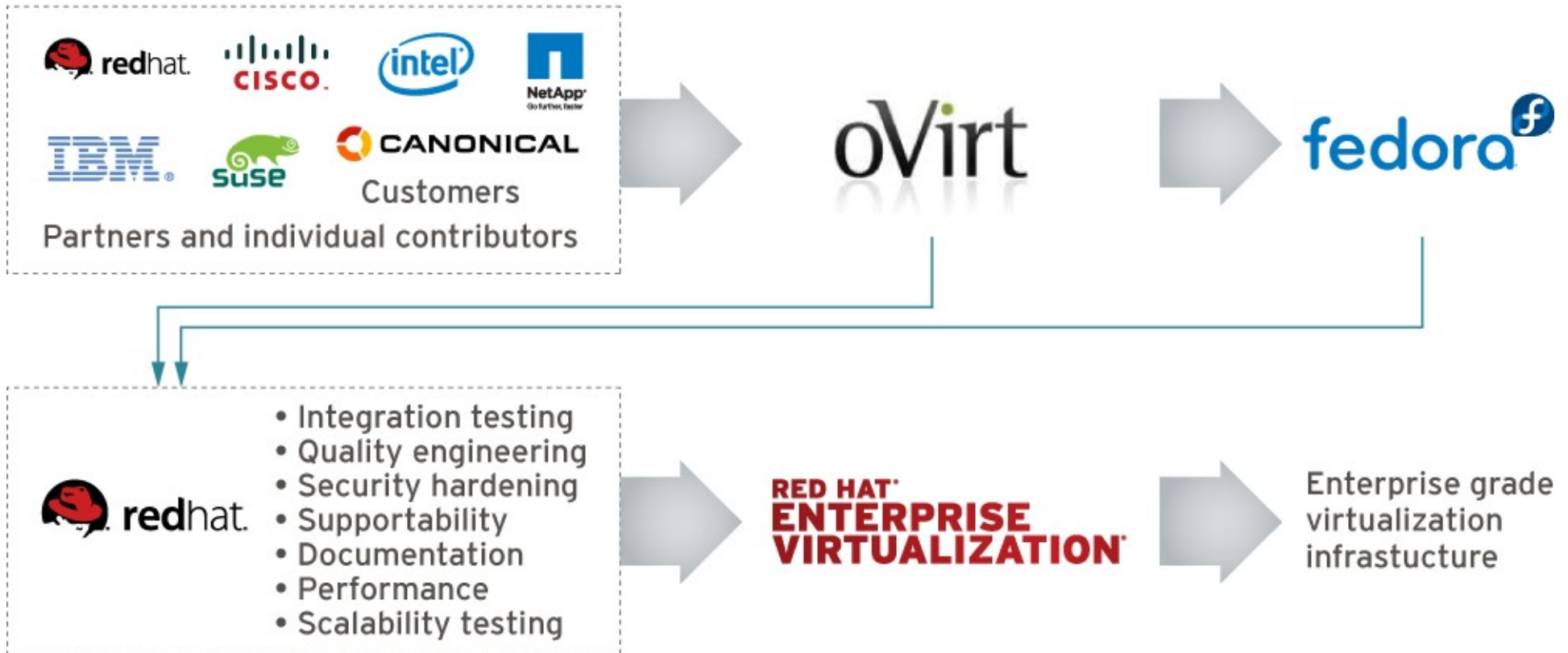


- Zentralisiertes Management für Server- und Desktop-Virtualisierung
- Basierend auf KVM
- Führend bei Performance, Skalierbarkeit und Sicherheit
- Open Source Alternative zu VMware vSphere/vCenter



# Was ist oVirt?

# oVirt



# Was is oVirt?



- Komponenten:
  - oVirt Node (Hypervisor-Image)
  - oVirt Host (CentOS/Fedora-Hypervisor)
  - oVirt Engine (Management-Server)
  - User Portal
  - Self-Provisioning Portal
  - Reporting Engine / DWH
  - REST-API, Python-, Java-SDK
  - oVirt Shell
  - Erweiterungen (UI-Plugins, VDSM-Hooks, API, Scheduler)



# Was is oVirt?



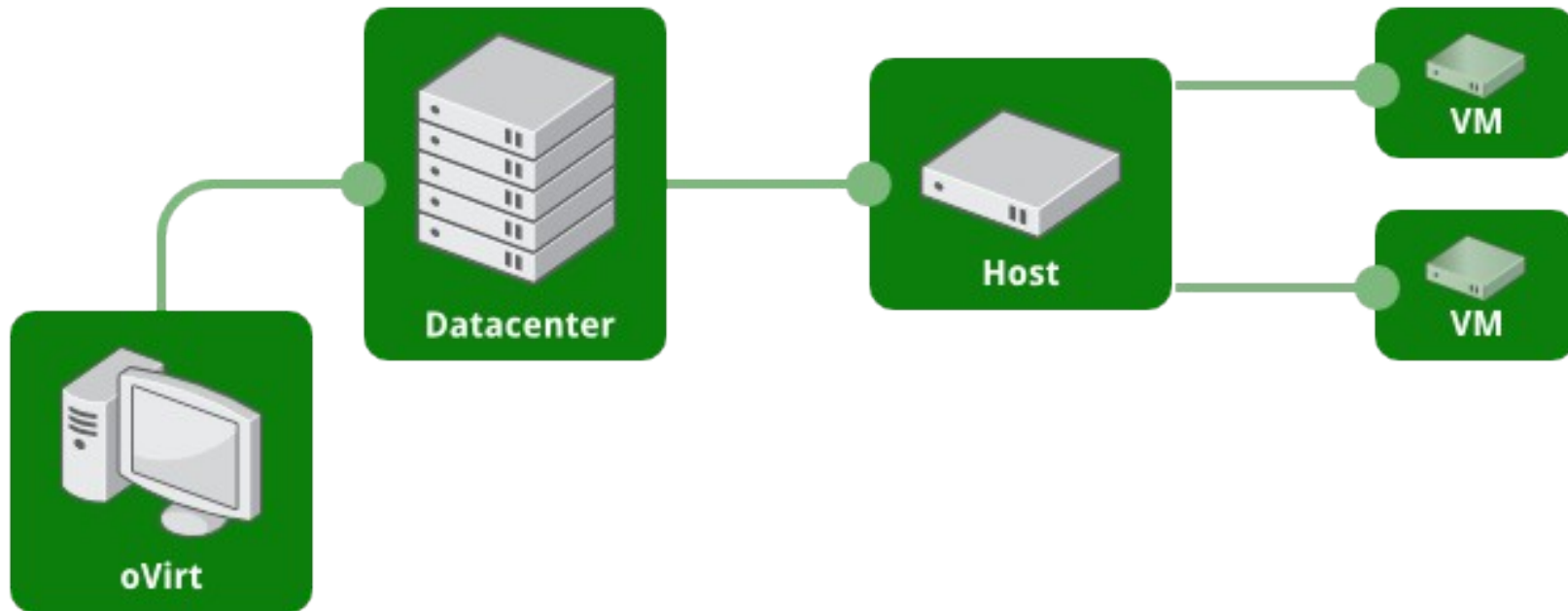
- Features:
  - Hochverfügbarkeit
  - Live Migration
  - Load Balancing (DRS)
  - Power Saver (DPM)
  - Maintenance Manager (Node Updates)
  - Image Management (Templates, Thin Provisioning, Snapshots, OpenStack Glance)
  - Zentrales Netzwerk- und Störagement
  - Monitoring und Reporting
  - VDI für Windows und Linux-Gäste
  - V2V (VMware, XEN, KVM -> oVirt)



# Was is oVirt?

oVirt

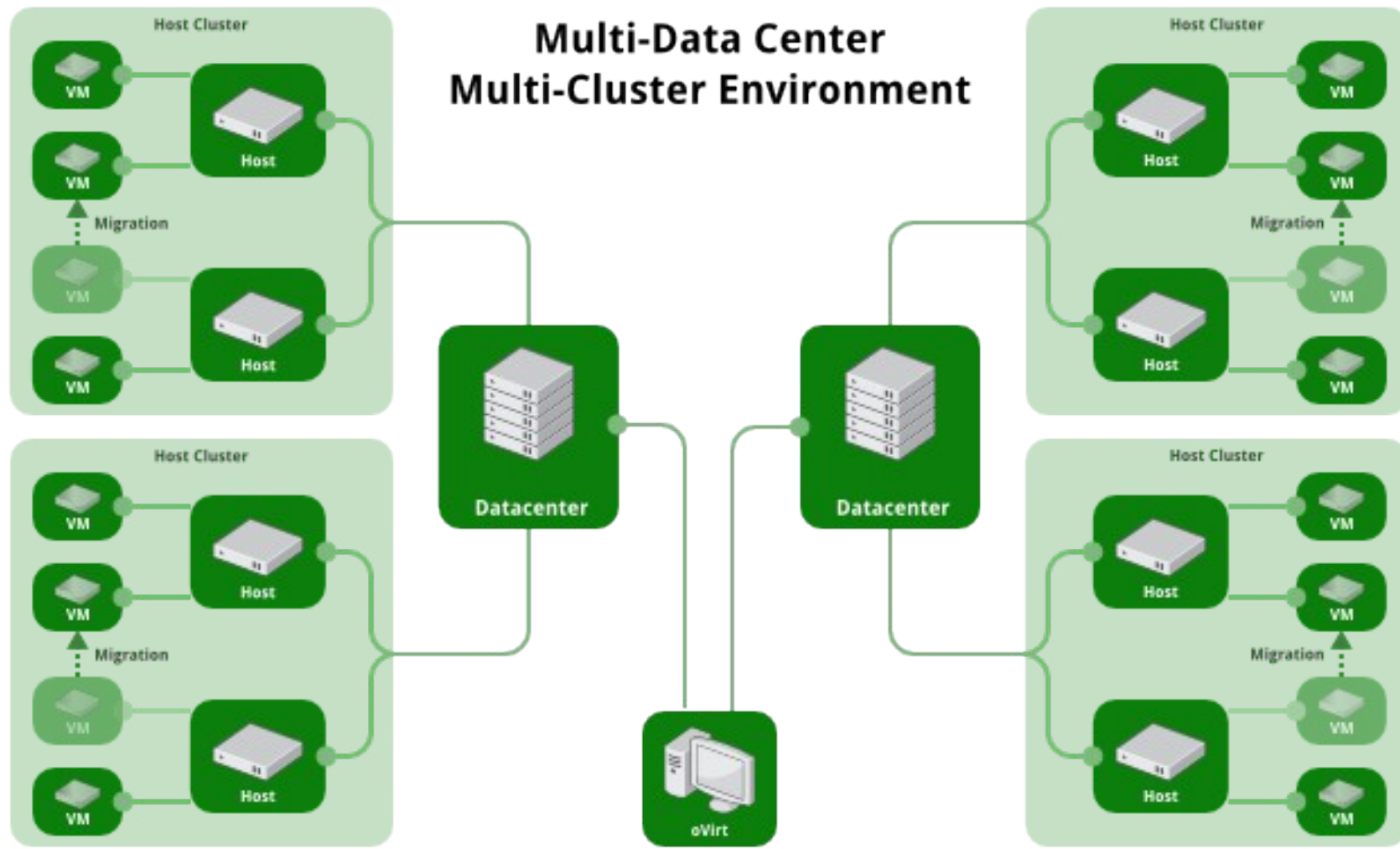
## Basic One Host Environment





# Was is oVirt?

oVirt



# Was ist oVirt?



oVirt Open Virtualization Manager

Logged in user: admin | Configure | Guide | About | Sign Out [Feedback](#)

Search: Vms: [x] [star] [magnifying glass]

System

Expand All Collapse All

System

Data Centers

Default

Storage

dvalin-EXPORT

melange-ISOs

ovirt\_glusters

Networks

ovirtmgmt

lab

lan

Templates

Clusters

Default

Hosts

ovirt-host01.dmz.linu...

ovirt-host02.dmz.linu...

VMs

External Providers

ovirt-image-repository

theforeman\_dmz.linu...

Bookmarks

Tags

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

New VM Edit Remove Run Once [up] [down] [refresh] [migrate] [cancel migration] [make template] [export] [create snapshot] [change cd] [assign tags] [show report] [guide me]

Name	Host	IP Address	FQDN	Cluster	Data Center	Memory	CPU	Network	Display	Status	Uptime
bpview.dmz.ovid.o.at	ovirt-host01.dmz.linu...	192.168.1.100	bpview.dmz.linu...	Default	Default	37%	1%	0%	SPICE	Up	27 days
bpview-test2.dmz.linu...	ovirt-host02.dmz.linu...	192.168.1.101		Default	Default	0%	0%	0%	SPICE	Up	18 days
bpview-test.dmz.linu...	ovirt-host01.dmz.linu...	192.168.1.102		Default	Default	0%	0%	0%	SPICE	Up	18 days
corebiz.lan.linu...	ovirt-host01.dmz.linu...	192.168.1.103	melange.lan.linu...	Default	Default	32%	0%	0%	VNC	Up	26 days
HostedEngine	ovirt-host02.dmz.linu...	192.168.1.104	ovirt-engine.dmz.linu...	Default	Default	67%	3%	0%	VNC	Up	18 days
icinga1.lan.linu...	ovirt-host01.dmz.linu...	192.168.1.105	icinga1.lan.linu...	Default	Default	44%	2%	0%	SPICE	Up	27 days
icinga2.lan.linu...	ovirt-host01.dmz.linu...	192.168.1.106	icinga2.lan.linu...	Default	Default	20%	1%	0%	SPICE	Up	27 days
mc.lan.linu...	ovirt-host01.dmz.linu...	192.168.1.107	mc.lan.linu...	Default	Default	88%	13%	0%	SPICE	Up	24 days
mgmt.dmz.linu...	ovirt-host02.dmz.linu...	192.168.1.108	mgmt.dmz.linu...	Default	Default	64%	1%	0%	SPICE	Up	6 days
neutron.dmz.linu...	ovirt-host02.dmz.linu...	192.168.1.109	neutron.dmz.linu...	Default	Default	75%	22%	0%	SPICE	Up	40 min
rh-course-troubleshooting-client	ovirt-host02.dmz.linu...	192.168.1.110		Default	Default	0%	0%	0%	SPICE	Up	11 days
rh-course-troubleshooting-server	ovirt-host02.dmz.linu...	192.168.1.111		Default	Default	0%	0%	0%	SPICE	Up	11 days
test-ipa	ovirt-host02.dmz.linu...	192.168.1.112		Default	Default	0%	1%	0%	SPICE	Up	3 days
test-nfs-client	ovirt-host02.dmz.linu...	192.168.1.113		Default	Default	0%	0%	0%	SPICE	Up	3 days
test-nfs-server	ovirt-host02.dmz.linu...	192.168.1.114		Default	Default	0%	0%	0%	SPICE	Up	3 days
test-rhel6	ovirt-host02.dmz.linu...	192.168.1.115		Default	Default	17%	1%	0%	SPICE	Up	5 days
theforeman.dmz.linu...	ovirt-host01.dmz.linu...	192.168.1.116	theforeman.dmz.linu...	Default	Default	32%	1%	0%	SPICE	Up	27 days
vc.dmz.linu...	ovirt-host01.dmz.linu...	192.168.1.117		Default	Default	0%	2%	0%	SPICE	Up	27 days
voip.lan.linu...	ovirt-host01.dmz.linu...	192.168.1.118	voip.lan.linu...	Default	Default	40%	3%	0%	SPICE	Up	26 days
voip-test.lan.linu...	ovirt-host01.dmz.linu...	192.168.1.119		Default	Default	0%	3%	0%	SPICE	Up	23 days
wiki.lan.linu...	ovirt-host01.dmz.linu...	192.168.1.120	wiki.lan.linu...	Default	Default	20%	1%	0%	SPICE	Up	18 days

Last Message: 2014-Mar-31, 17:41 ETL service sampling has encountered an error. Please consult the service log for more details.

Alerts (0) Events Tasks (0)



# Was ist oVirt?



- Weitere Informationen:
  - Vortrag: Open Source Virtualisierung mit oVirt (Grazer Linuxtage 2013)
    - <http://glt13-programm.linuxtage.at/events/174.de.html>
  - oVirt
    - <http://www.ovirt.org>



# Teil 1.1

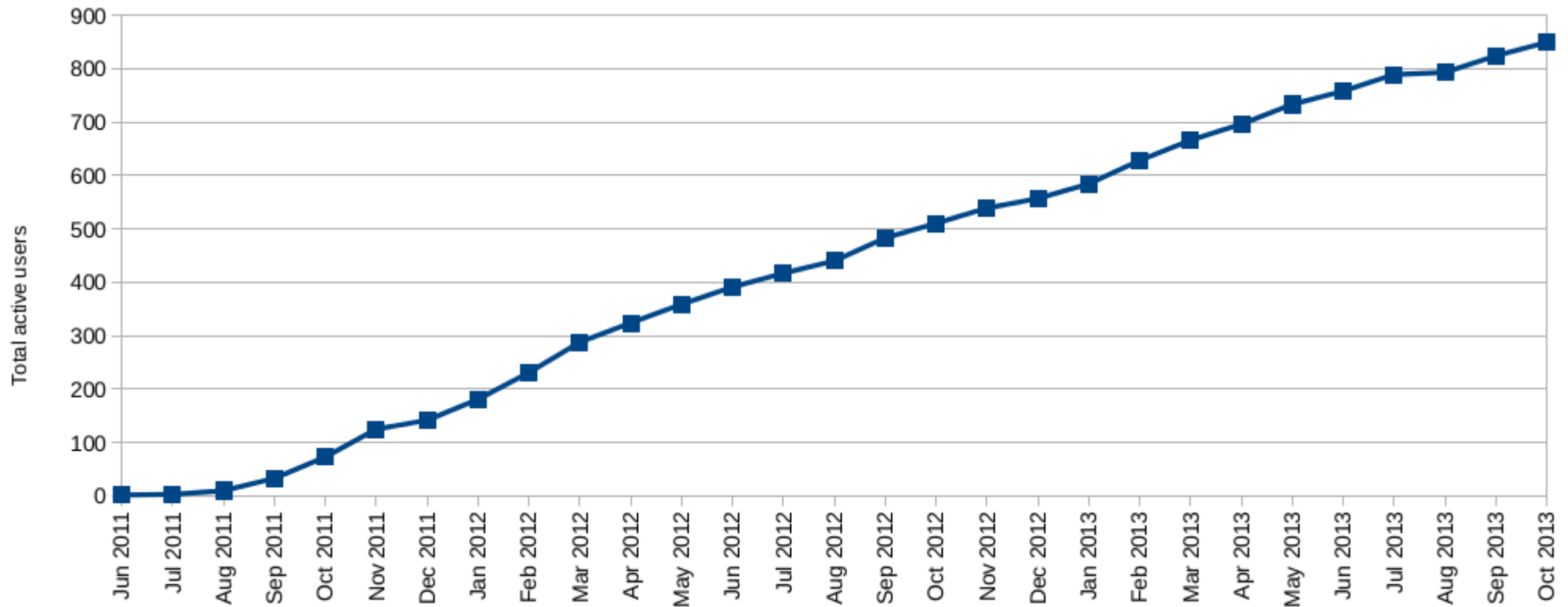
## oVirt Projekt News



# oVirt Projekt News



- ~650 Subscribers auf users ML
- ~150 Non-Subscribers senden E-Mails
- ~200 (20%) von Red Hat, ~180 von Gmail



Quelle: Itamar Heim <https://docs.google.com/file/d/0ByCzJ3AoWZuuWUdmZTdaeVl6Z2s>



# oVirt Projekt News



- Commits pro Monat



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



- Releases
  - **02/2013 – oVirt 3.2 GA**
  - 04/2013 – oVirt 3.2.1 (inkl. RHEL/CentOS Support)
  - **09/2013 – oVirt 3.3**
  - 11/2013 – oVirt 3.3.1
  - 12/2013 – oVirt 3.3.2
  - 01/2014 – oVirt 3.4 Alpha, Beta 1
  - 02/2014 – oVirt 3.3.3
  - 02/2014 – oVirt 3.4 Beta 2, Beta 3, RC
  - 03/2014 – oVirt 3.3.4
  - **03/2014 – oVirt 3.4**



## Teil 2.1 oVirt 3.3

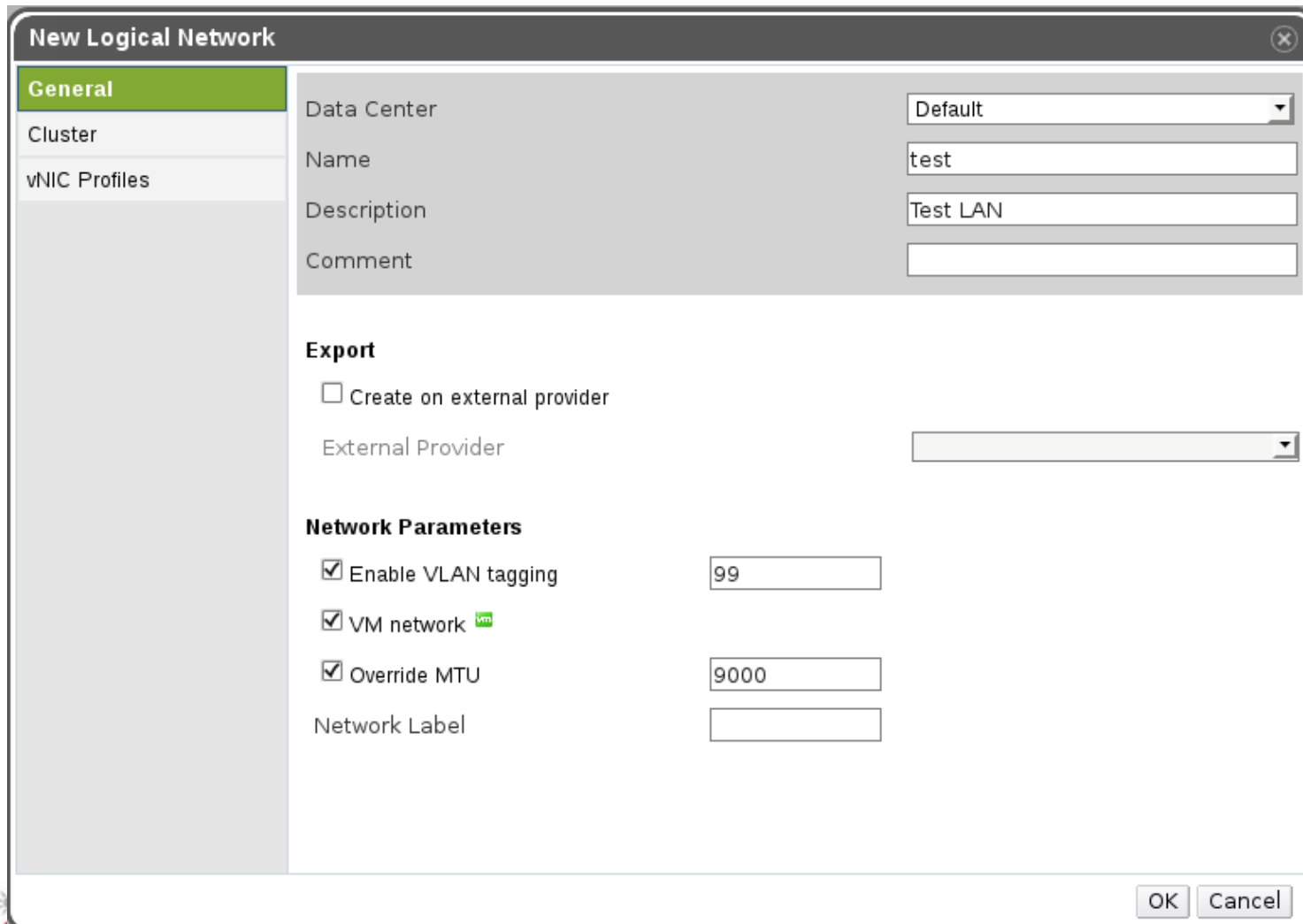




- **OpenStack Integration**
  - **Neutron Integration**
    - Support für OpenStack Neutron als externer Netzwerk Provider
  - **Glance Integration**
    - Verwendung von Glance Images, welche als Templates importiert werden können.
- **Cloud-Init Integration**
  - Initiales Setup von provisionierten virtuellen Maschinen (SSH-Keys, Netzwerk, Zeitzone,...)



- OpenStack Neutron Integration
  - Bisher: Linux-Bridges



**New Logical Network**

**General**

Cluster

vNIC Profiles

Data Center: Default

Name: test

Description: Test LAN

Comment:


**Export**

Create on external provider

External Provider:

**Network Parameters**

Enable VLAN tagging: 99

VM network 

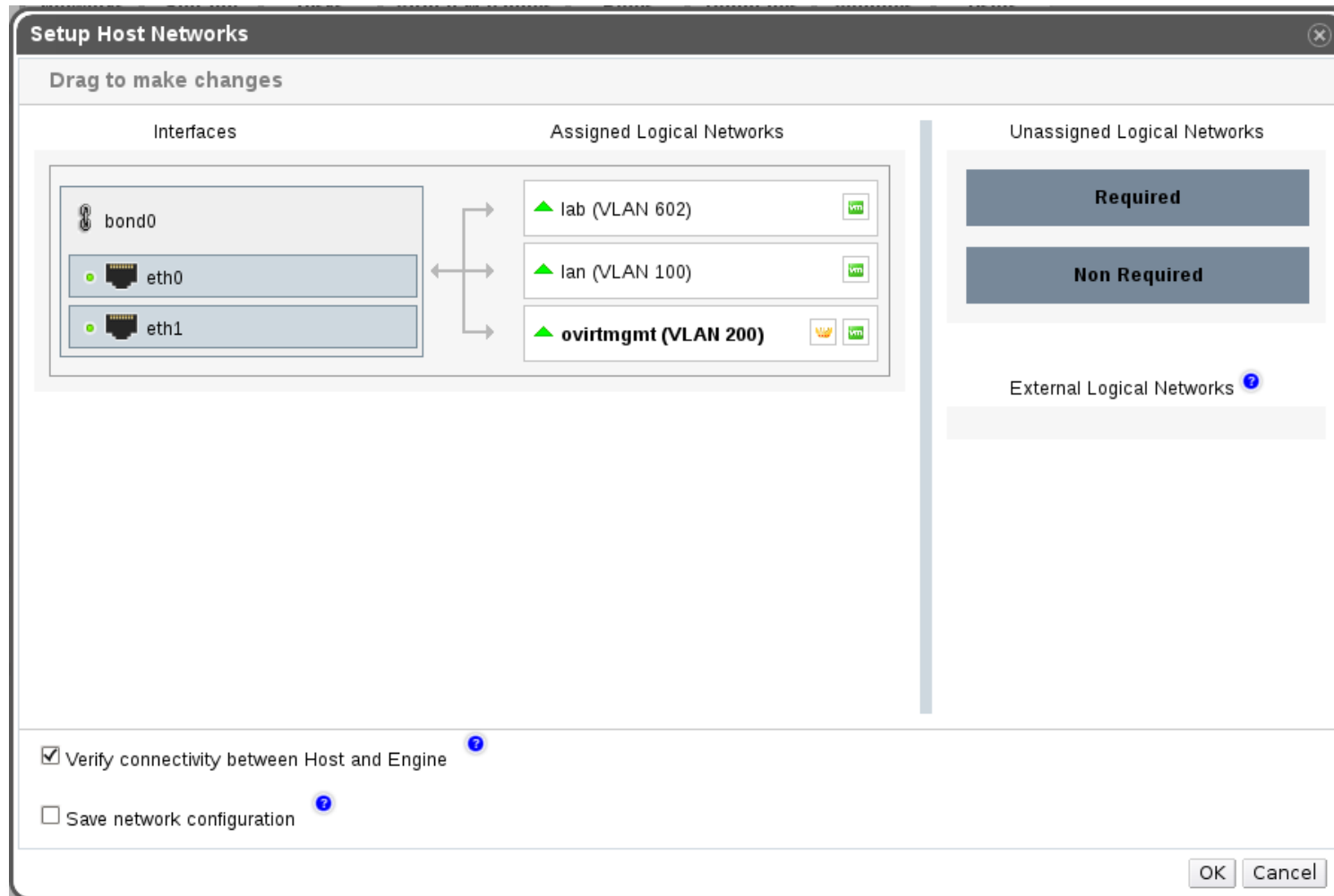
Override MTU: 9000

Network Label:

OK Cancel



- OpenStack Neutron Integration
  - Bisher: Linux-Bridges

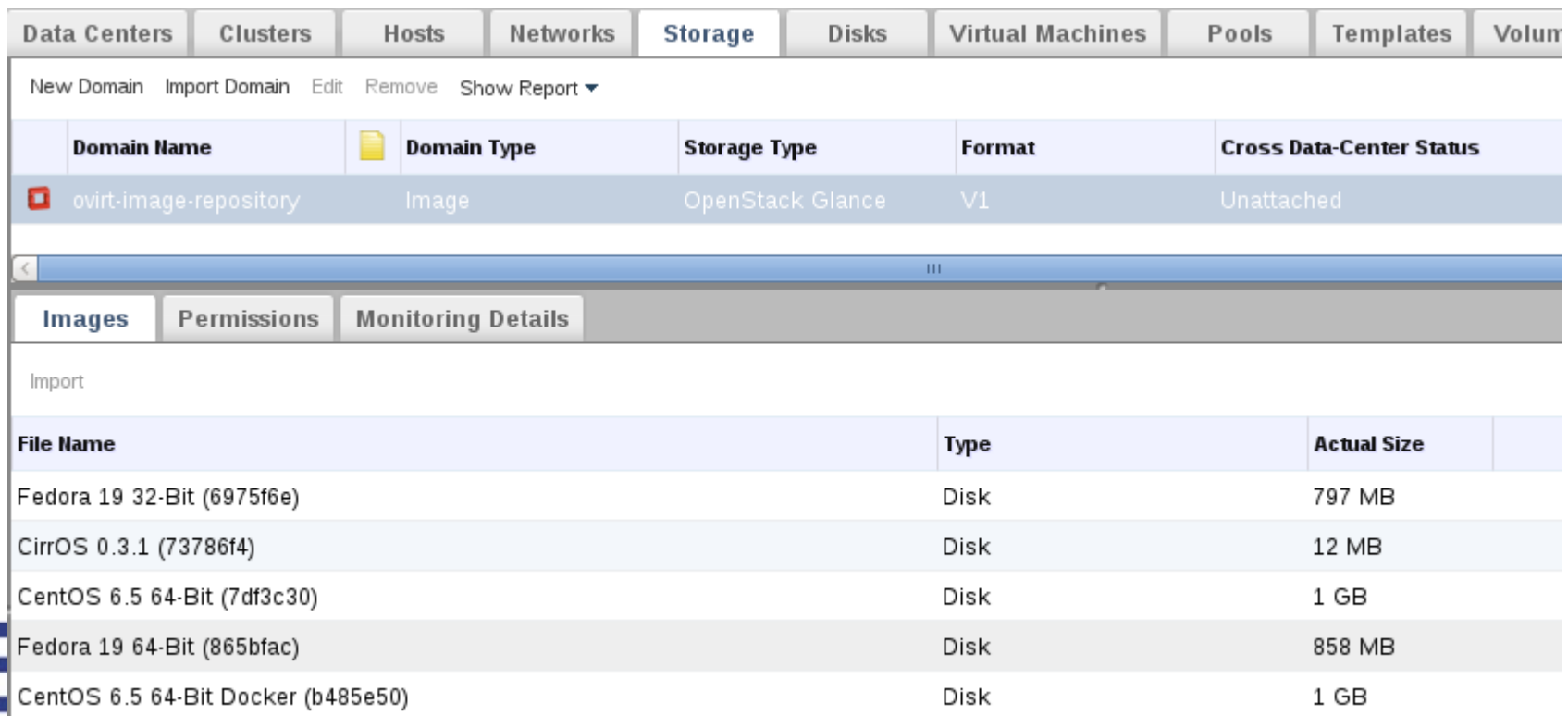


- **OpenStack Neutron Integration**
  - Mit Neutron Support für Neutron Plugins
  - Neutron Plugins:
    - **Linux Bridge, OVS, ML2, Cisco Nexus, NVP, Ryu, NEC,...**
  - L3-Services in Neutron
  - Verbindung beider Welten:
    - Neutron verwaltet VM Netzwerke
    - oVirt verwaltet Netzwerk-Infrastruktur (Storage-, Migration-Netzwerk,...)



## • OpenStack Glance Integration

- Neue Image-Storage domain OpenStack Glance
- Auflisten der Images
- Importieren von Images als Templates oder Disk



The screenshot shows the oVirt web interface with the 'Storage' tab selected. The main table displays the 'ovirt-image-repository' domain, which is an 'Image' type using 'OpenStack Glance' storage and 'V1' format, currently 'Unattached'. Below this, the 'Images' sub-tab is active, showing a list of imported images.

File Name	Type	Actual Size
Fedora 19 32-Bit (6975f6e)	Disk	797 MB
CirrOS 0.3.1 (73786f4)	Disk	12 MB
CentOS 6.5 64-Bit (7df3c30)	Disk	1 GB
Fedora 19 64-Bit (865bfac)	Disk	858 MB
CentOS 6.5 64-Bit Docker (b485e50)	Disk	1 GB



- **CloudInit Integration**

- Anpassen von System-Parametern von Templates
- Unterstützt: Fedora, RHEL, Debian, Ubuntu
- Benötigt cloud-init im Gast (Template)
- cloud-init konfiguriert System mit Parametern, die via Webadmin oder REST-API übergeben werden (z.B. Hostname)



- **CloudInit Integration**

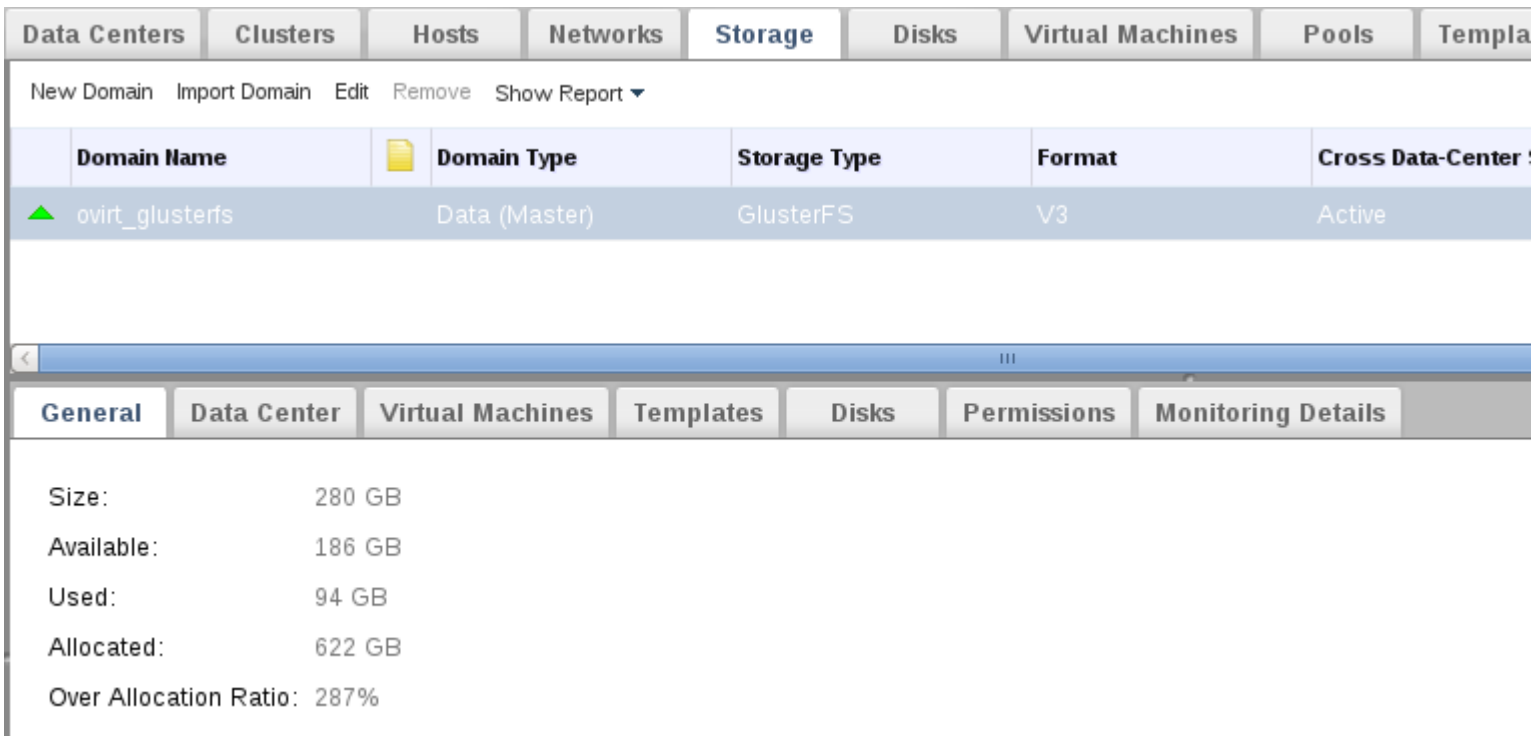
The screenshot shows the 'Edit Virtual Machine' dialog box with the following settings:

- Custom Properties:** (Empty list)
- Use Cloud-Init/Sysprep
- VM Hostname: testvm.linuxland.at
- Configure Time Zone
- Time Zone: (GMT) Greenwich Mean Time
- Authentication:**
  - Use already configured password
  - Root Password: [Redacted]
  - Verify Root Password: [Redacted]
  - SSH Authorized Keys: [Empty text area]
  - Regenerate SSH Keys
- Networks:**
  - DNS Servers: 8.8.8.8
  - DNS Search Domains: [Empty text area]
  - Network
    - eth0

At the bottom, there are controls for network management: 'Select network above | + Add new | - Remove selected' and 'Use DHCP '. A 'Hide Advanced Options' button is on the left, and 'OK' and 'Cancel' buttons are on the right.



- **Verbesserter GlusterFS Support**
  - GlusterFS Storage Domain



Domain Name	Domain Type	Storage Type	Format	Cross Data-Center
ovirt_glusterfs	Data (Master)	GlusterFS	V3	Active

Size:	280 GB
Available:	186 GB
Used:	94 GB
Allocated:	622 GB
Over Allocation Ratio:	287%

- **Gluster Hooks Management**
  - Gluster Hooks (Volume Lifecycle Management) via oVirt Engine.





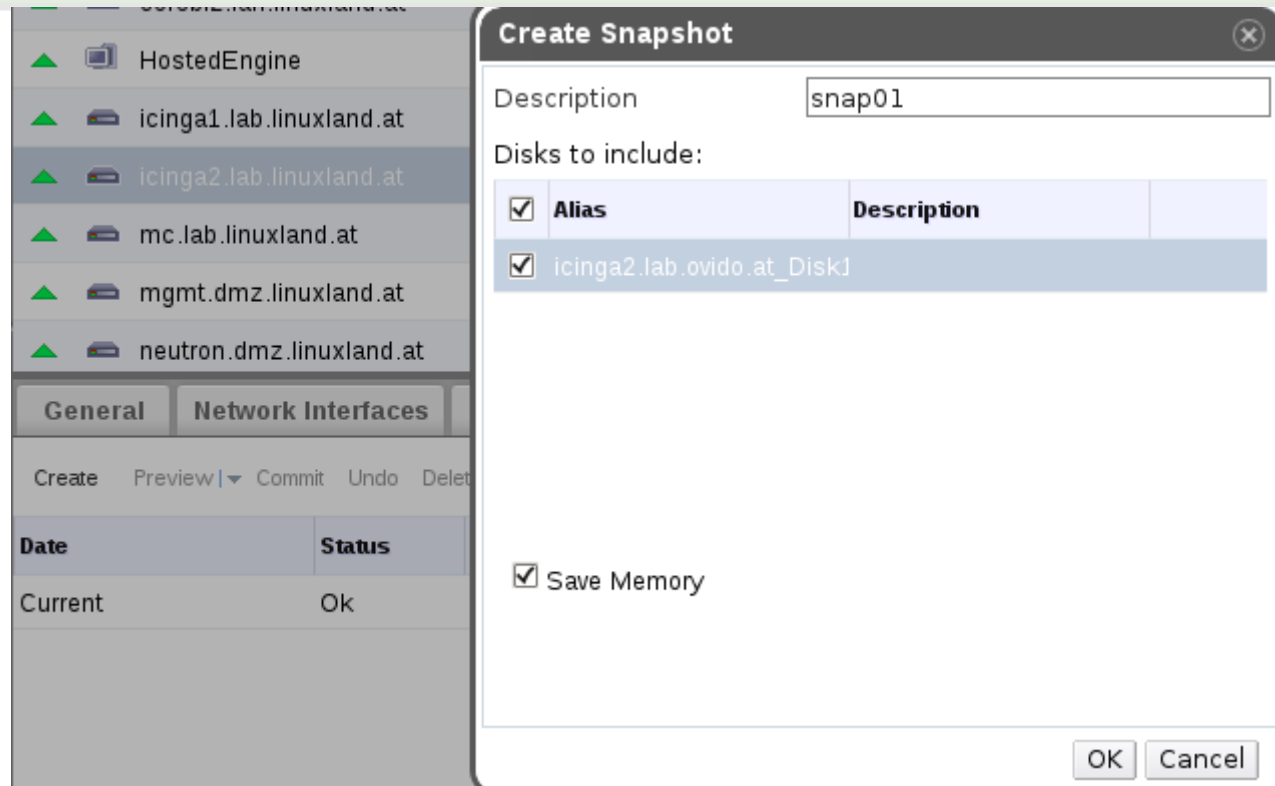
- **Erweiterungsmöglichkeiten**
  - oVirt Scheduler API
  - Device Custom Properties
  - External Task Support (via REST-API)
  - Backup-Restore API
  - Java SDK
  - Disk Hooks



# oVirt 3.3



- **Weitere Features**
  - RAM Snapshots
  - noVNC Konsole
  - Public Key Authentifizierung für Hosts



- **Netzwerk**
  - Migration Network
  - Mehrere Gateways (1 GW pro logischen Netzwerk)
  - Normalized ovirtmgmt Initialization



- **Storage**
  - Online Disk-Resize
  - VirtIO-SCSI
  - Read Only Disks
  - Editieren von Storage Verbindungen
  - MoveAsCopyAndDelete

### Edit Virtual Disk

Internal  External (Direct LUN)

Size(GB)	<input type="text" value="20"/>	<input type="checkbox"/> Wipe After Delete
Extend size by(GB)	<input type="text" value="5"/>	<input checked="" type="checkbox"/> Bootable
Alias	<input type="text" value="icinga2.lab.ovidio.at_Disk1"/>	<input type="checkbox"/> Shareable
Description	<input type="text"/>	<input type="checkbox"/> Read Only
Interface	<input type="text" value="VirtIO"/>	
Allocation Policy	<input type="text" value="Thin Provision"/>	
Storage Domain	<input type="text" value="ovirt_glusterfs (186 GB free of 280 G"/>	
Quota	<input type="text"/>	



- **SLA & Scheduling**
  - oVirt Scheduler
  - Watchdog Engine Support
  - Network QoS
  - Trusted Compute Pools

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

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

Name	Storage Type	Status	Compatibility Version	Description
▲ Default	Shared	Up	3.4	The default Data Center

Sub-navigation tabs: Storage, Logical Networks, Network QoS, Clusters, Quota, Permissions, Monitoring Details

Actions: New, Edit, Remove

Name	In Average	In Peak	In Burst	Out Average	Out Peak	Out Burst
limit_test-networks	10	10	100	10	10	100



- **Node**
  - Universal Node Image
    - Node Image erweiterbar/anpassbar um Node Plugins
  - Node VDSM Plugin
    - Macht Universal Node Image zu oVirt Image
- **Integration**
  - Otopi Infra Migration
  - ~~Self Hosted Engine~~
- **UX Enhancements**
  - User Portal Verbesserungen für IE8
  - Frontend Cleanup/Refactoring



## Teil 2.2 oVirt 3.4



- **Hosted Engine**
  - oVirt Engine kann also virtuelle Maschine auf den oVirt Hosts laufen
- **Verbesserter GlusterFS Support**
  - Gluster Volume Asynchronous Tasks Management via WebUI
    - Rebalance Volume
    - Remove Bricks
- **Preview: PPC64**
  - Engine Support für PPC64
  - VDSM Support für PPC64
- **Preview: Hot-plug CPUs**



- **Hosted Engine**

- Engine läuft als VM auf den Hypervisoren
- Hochverfügbar mittels ha-agents

```
# hosted-engine --vm-status
```

```
--== Host 1 status ==--
```

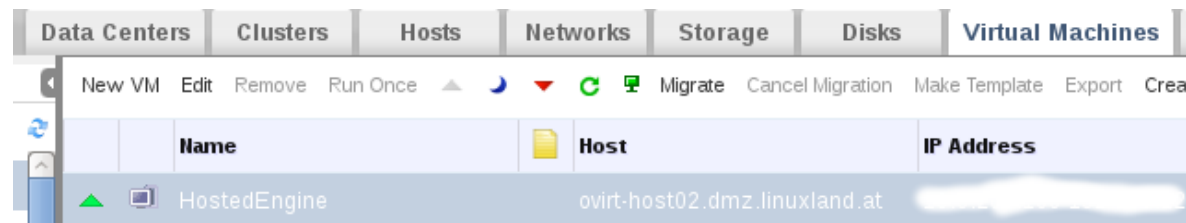
```
Status up-to-date      : True
Hostname               : ovirt-host02.dmz.linuxland.at
Host ID                : 1
Engine status          : {'health': 'good', 'vm': 'up', 'detail': 'up'}
Score                  : 2400
Local maintenance     : False
Host timestamp         : 1396342593
Extra metadata (valid at timestamp):
  metadata_parse_version=1
  metadata_feature_version=1
  timestamp=1396342593 (Tue Apr 1 10:56:33 2014)
  host-id=1
  score=2400
  maintenance=False
  state=EngineUp
```





- **Hosted Engine**

- Benötigt NFS-Storage
- Mind. 2 Hypervisoren
- Installation auf Node01 mit `hosted-engine --deploy`
- Installation Guest-OS und oVirt-Engine in der VM
- Hinzufügen weiterer Nodes mit `hosted-engine --deploy`
- Maintenance-Skripts



Data Centers		Clusters		Hosts		Networks		Storage		Disks		Virtual Machines	
Name	Host	IP Address											
HostedEngine	ovirt-host02.dmz.linuxland.at												



- Hot-Plug CPUs

Guest OS Support Matrix

OS	Version	Arch	Plug	Unplug
Red Hat Enterprise Linux 6.3		x86	+	-
Red Hat Enterprise Linux 6.5		x86	+	+
Microsoft Windows Server 2003	All	x86	-	-
Microsoft Windows Server 2003	All	x64	-	-
Microsoft Windows Server 2008	All x86	-	-	-
Microsoft Windows Server 2008	Standard, Enterprise	x64	Reboot Required	Reboot Required
Microsoft Windows Server 2008	Datacenter	x64	+	?
Microsoft Windows Server 2008 R2	All	x86	-	-
Microsoft Windows Server 2008 R2	Standard, Enterprise	x64	Reboot Required	Reboot Required
Microsoft Windows Server 2008 R2	Datacenter	x64	+	?
Microsoft Windows Server 2012	All	x64	+	?
Microsoft Windows Server 2012 R2	All	x64	+	?
Microsoft Windows 7	All	x86	-	-
Microsoft Windows 7	Starter, Home, Home Premium, Professional	x64	Reboot Required	Reboot Required
Microsoft Windows 7	Enterprise, Ultimate	x64	+	?
Microsoft Windows 8.x	All	x86	+	?
Microsoft Windows 8.x	All	x64	+	?



# oVirt 3.4



- Weitere Verbesserungen
  - Guest Agents für openSUSE und Ubuntu/Debian
  - SPICE Proxy
  - SSO Method Control

The screenshot shows the oVirt web interface. At the top, there is a navigation bar with tabs for Data Centers, Clusters, Hosts, Networks, Storage, Disks, Virtual Machines (selected), Pools, Templates, Volumes, Users, and D. Below the navigation bar is a toolbar with various actions like New VM, Edit, Remove, Run Once, Migrate, etc. The main content area displays a table of Virtual Machines. The table has columns for Name, Host, IP Address, FQDN, Cluster, and Data Center. One VM is listed: corebiz.lan.linuxland.at on host ovirt-host01.dmz.linuxland.at with IP address [redacted] and FQDN melange.lan.linuxland.at. Below the table, there is a detailed view of the selected VM, showing various configuration parameters.

Name	Host	IP Address	FQDN	Cluster	Data Center
corebiz.lan.linuxland.at	ovirt-host01.dmz.linuxland.at	[redacted]	melange.lan.linuxland.at	Default	Default

<b>General</b>	Network Interfaces	Disks	Snapshots	Applications	Affinity Groups	Permissions	Sessions	Monitoring Details	Event
Name:	corebiz.lan.linuxland.at	Defined Memory:	1024 MB	Origin:	oVirt				
Description:	CoreBiz PDC	Physical Memory Guaranteed:	1024 MB	Run On:	Any Host in Cluster				
Template:	Blank	Number of CPU Cores:	2 (1 Socket(s), 2 Core(s)	Custom Properties:	Not-Configured				
Operating System:	Ubuntu Precise Pangolin	Highly Available:	No	Cluster Compatibility Version:	3.4				
Default Display Type:	VNC	Number of Monitors:	1	VM Id:	a0b648dc-f08b-487e-b60				
Priority:	Medium	USB Policy:	Disabled	Quota:	Not Configured				
				FQDN:	melange.lan.linuxland.at				

# oVirt 3.4



- Weitere Verbesserungen

- Init Persist
- Guest Reboot
- Template Versioning

Name	Host
icinga1.lab.linuxland.at	ovirt-host01.dmz.linuxland.at
icinga2.lab.linuxland.at	ovirt-host01.dmz.linuxland.at

Name	Version	Creation Date	Status	Cluster	Data Center	Description
Blank		2008-Mar-31, 23:00	OK	Default	Default	Blank template
GlanceTemplate-cfb3b49		2014-Mar-13, 11:22	OK	Default	Default	Fedora 19 64-Bit (865bfac
GlanceTemplate-f92026a		2014-Mar-04, 19:01	OK	Default	Default	Cirros 0.3.1 (73786f4)
test-template		2014-Apr-01, 11:41	OK	Default	Default	
updated-template	test-template ()	2014-Apr-01, 12:01	OK	Default	Default	Template Update 1

- Infrastruktur

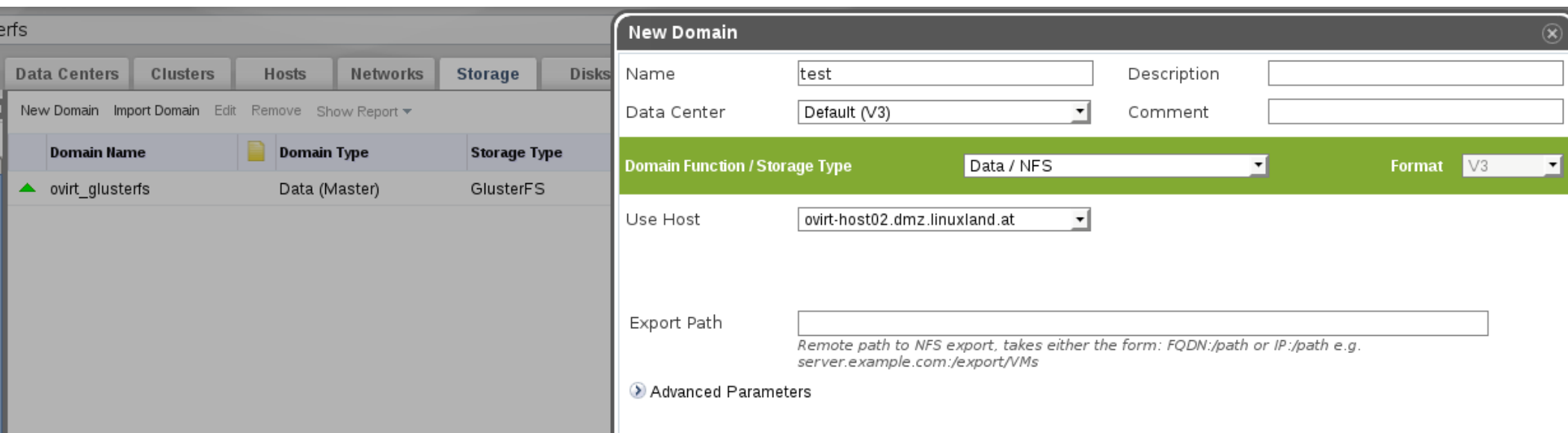
- oVirt Engine SNMP Traps
- Authentifizierung und Directory rewrites



- **Netzwerk**
  - Netzwerk Label
  - vNIC Ordering
  - OpenStack Neutron Integration
    - Unterstützt Havana
    - Verbessertes Editieren via oVirt
    - Support für IPAM
    - Security Groups (Version 3.4 unterstützt noch keine Migration, folgt mit 3.4.x)
  - iproute2 Support \*
  - Multi-Host Netzwerkkonfiguration



- **Storage**
  - Multiple Storage Domains
  - Read Only Disk für Engine
  - Single-disk Snapshot



The screenshot shows the oVirt web interface. On the left, the 'Storage' tab is active, displaying a table with the following content:

Domain Name	Domain Type	Storage Type
ovirt_glusterfs	Data (Master)	GlusterFS

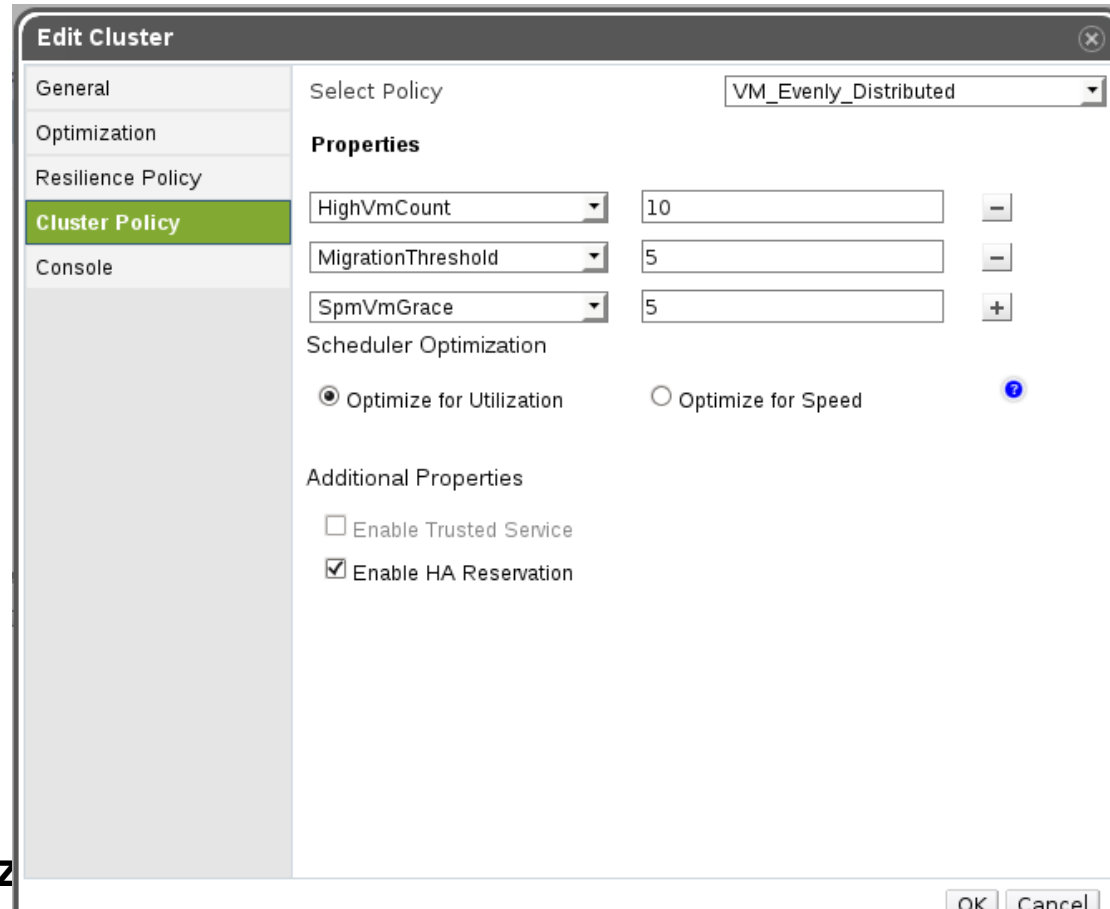
On the right, the 'New Domain' dialog is open, showing the following configuration:

- Name: test
- Description: (empty)
- Data Center: Default (V3)
- Comment: (empty)
- Domain Function / Storage Type: Data / NFS
- Format: V3
- Use Host: ovirt-host02.dmz.linuxland.at
- Export Path: (empty)
- Advanced Parameters: (collapsed)

Below the Export Path field, there is a note: *Remote path to NFS export, takes either the form: FQDN:/path or IP:/path e.g. server.example.com:/export/VMs*



- **SLA und Scheduling**
  - VM Affinity
  - Power off capacity added to power policy
  - Even VM distribution based on VM count
- High Availability  
VM Reservation
- Self Hosted Engine  
Maintenance Flows



**Edit Cluster**

General  
Optimization  
Resilience Policy  
**Cluster Policy**  
Console

Select Policy: VM\_Evenly\_Distributed

**Properties**

HighVmCount	10	-
MigrationThreshold	5	-
SpmVmGrace	5	+

Scheduler Optimization

Optimize for Utilization     Optimize for Speed

Additional Properties

Enable Trusted Service  
 Enable HA Reservation

OK Cancel

# oVirt 3.4



- UX Verbesserungen
  - UI Refresh Synchronization
  - Lower Resolution Support

The screenshot displays the oVirt Open Virtualization Manager interface. The top navigation bar includes the oVirt logo, the text "Open Virtualization Manager", and user information: "Logged in user: admin | Configure | Guide | About | Sign Out". A "Feedback" link is also present. Below the navigation bar is a search field containing "Network:". The main content area is divided into tabs: "Data Centers", "Clusters", "Hosts", "Networks" (selected), "Storage", "Disks", "Virtual Machines", "Pools", and "Templates". The "Networks" tab shows a table with the following data:

Name	Data Center	Description	Role
lab	Default	Linuxland LAB	vm
lan	Default	Linuxland Wien LAN	vm
ovirtmgmt	Default	Management Network	vm

The left sidebar shows a tree view of the system hierarchy: "System" (expanded) contains "Data Centers" (expanded) with "Default" (expanded) containing "Storage" (expanded) with "dvalin-EXPORT", "melange-ISOs", and "ovirt\_glusterfs", and "Networks" (expanded) with "ovirtmgmt", "lab", and "lan". The bottom status bar shows "Last Message: 2014-Apr-01, 12:11" and "ETL service sampling has encountered an error. Please consult the service log for more details." along with "Alerts (0)", "Events", and "Tasks (1)" indicators.

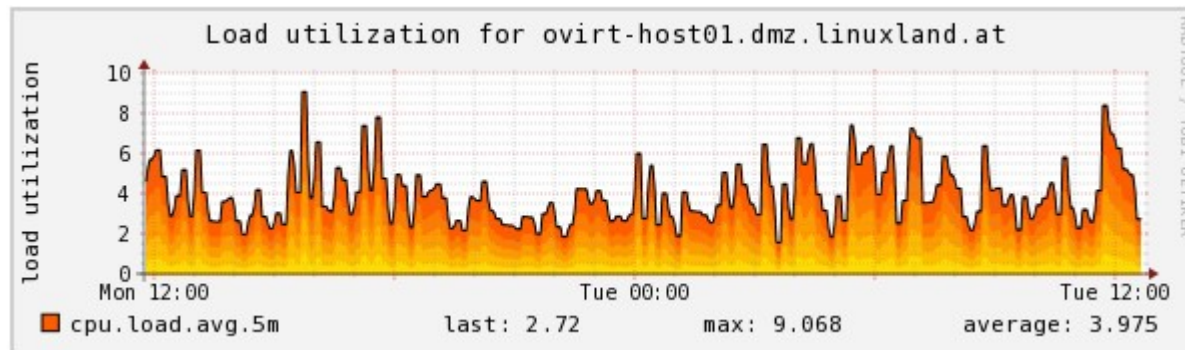


# Teil 3

## Erweiterungen



- `check_rhev3`
  - Icinga/Nagios Plugin
  - Überwachung von Datacenter, Cluster, Hosts, Storedomains, VMs, VM Pools
  - Benötigt keinen Agent (REST-API)



- Projekt-URL: [https://github.com/ovido/check\\_rhev3](https://github.com/ovido/check_rhev3)
- Author: René Koch <[rkoch@linuxland.at](mailto:rkoch@linuxland.at)>



- **check\_rhev3**
  - 1.2 – 05/2013
    - Zu Github migriert:  
[https://github.com/ovido/check\\_rhev3](https://github.com/ovido/check_rhev3)
    - RHEV-M/oVirt Engine Zertifikats-Validierung
    - Authentication-Session Support
    - Überwachung von einzelnen NICs
    - Performance-Daten für check\_multi bereinigt
  - 1.2.1 – 07/2013
    - Such-Regex für Hosts und Netzwerke verbessert



- **check\_rhev3**
  - 1.3 – 11/2013
    - Cookie-basierte Authentifizierung als Standard
    - GB/MB Schwellwerte für Storedomains
    - Überwachung von NIC Fehlern
    - Verbesserte Status-Meldungen für NICs/Storage
    - Bugfix für NIC Such-Regex
    - Optimierte Fehlermeldungen
    - Negative Speicherauslastung gefixt \*



- **check\_rhev3**
  - 1.4 – 04/2014 (geplant)
    - Status von VMs pro Host
    - Proxy/No Proxy ENV Support
    - RHEV-M/oVirt Engine Passwort von Debug Output entfernt
    - Standardport auf 443 geändert
    - Source Code Formatierung verbessert
    - Warning/Critical für CPU Load basierend auf der Anzahl an Cores
    - Detaillierte Status-Informationen für Datacenter, Hosts, VMs und Stagedomains
    - PNP4Nagios Templates für diese Informationen
    - Interface Traffic wird jetzt in Mbytes/s berechnet (Bugfix)
    - Memory-Auslastung auf 0 gesetzt wenn negativ



# Erweiterungen



- **Monitoring UI-Plugin**

- Darstellung von Icinga/Nagios Check Ergebnissen in oVirt
- Projekt-URL: <https://github.com/monitoring-ui-plugin>
- Author: René Koch <[rkoch@linuxland.at](mailto:rkoch@linuxland.at)>

The screenshot displays the oVirt monitoring interface. At the top, there are navigation tabs for Data Centers, Clusters, Hosts, Networks, Storage, Disks, Virtual Machines, Pools, Templates, Volumes, and Users. Below these is a table of hosts with columns for Name, Hostname/IP, Cluster, Data Center, Status, Virtual Machines, Memory, CPU, Network, and SPM. Two hosts are listed: ovirt-host01.dmz.linuxland.at (Up, 12 VMs, 60% Memory, 2% CPU) and ovirt-host02.dmz.linuxland.at (Up, 11 VMs, 17% Memory, 0% CPU). Below the table, there are tabs for General, Virtual Machines, Network Interfaces, Host Hooks, Permissions, Hardware Information, and Monitoring Details. The Monitoring Details tab is active, showing a table of services and their outputs. To the right, there is a PNP Performance Graphs section with a 25-hour traffic utilization graph for ovirt-host01.dmz.linuxland.at. The graph shows traffic usage for various network interfaces (eth0.100, eth1, eth0, eth0.602, eth0.200) over time, with a significant spike in traffic usage around 12:00 on Monday.

Service	Output
oVirt Host CPU Utilization	RHEV OK: cpu ok - 2% used (ovirt-host01.dmz.linuxland.at)
oVirt Host KSM Usage	RHEV OK: ksm.cpu.current ok - 0% used (ovirt-host01.dmz.linuxland.at)
oVirt Host Load	RHEV OK: cpu.load.avg.5m ok - 3.1 (ovirt-host01.dmz.linuxland.at)
oVirt Host Memory Usage	RHEV WARNING: memory warning - 60.00% used (ovirt-host01.dmz.linuxland.at)
oVirt Host Network Errors	RHEV OK: errors ok - eth0.100: 0.00 Errors eth1: 0.00 Errors eth0: 0.00 Errors eth0.602: 0.00 Errors eth0.200: 0.00 Errors (ovirt-host01.dmz.linuxland.at)
oVirt Host Network Status	RHEV OK: Nics ok - 5/5 Nics with state Active
oVirt Host Network Traffic	RHEV OK: traffic ok - eth0.100: 0.00 MB/s eth1: 1.24 MB/s eth0: 0.00 MB/s eth0.602: 0.00 MB/s eth0.200: 0.00 MB/s (ovirt-host01.dmz.linuxland.at)
oVirt Host Status	RHEV OK: Hosts ok - 1/1 Hosts with state UP
oVirt Host Swap Usage	RHEV OK: swap ok - 0.00% used (ovirt-host01.dmz.linuxland.at)

**PNP Performance Graphs**  
25 Hours  
Traffic utilization for ovirt-host01.dmz.linuxland.at

Interface	last	max	average
eth0.100	0Mbit/s	0Mbit/s	0Mbit/s
eth1	1.24Mbit/s	6.697Mbit/s	1.221Mbit/s
eth0	0Mbit/s	0Mbit/s	0Mbit/s
eth0.602	0Mbit/s	0Mbit/s	0Mbit/s
eth0.200	0Mbit/s	0Mbit/s	0Mbit/s

- **Monitoring UI-Plugin**
  - 0.1 – 08/2013
    - Backend-Code komplett neu geschrieben
    - Konfigurations-Dateien for Monitoring UI-Plugin
    - Host/VM-Mappings
    - Unterstützte Monitoring-Backends:
      - NDOUtils (MySQL-Datenbank)
      - IDOUtils (MySQL-Datenbank)
      - IDOUtils (PostgreSQL-Datenbank)
      - mk-livestatus (UNIX-Socket)
      - mk-livestatus (TCP-Verbindung)



- **Monitoring UI-Plugin**
  - 0.1 – 08/2013
    - Performance-Graphen mit PNP4Nagios
    - Service Check-Zuweisungen für:
      - Datacenter
      - Cluster
      - Storage Domains
      - VM Pools
    - Automatischer Refresh
    - Tabellen vergrößerbar/verkleinerbar (oVirt Look-and-Feel)
    - Logging
    - RPMs verfügbar für RHEL 6, CentOS 6





# Erweiterungen



- Monitoring UI-Plugin
  - Mappings

# mappings.yml:

ovirt:

storage:

"ovirt\_glusterfs":

host: "ovirt-engine.dmz.linuxland.at"

services:

- "oVirt StorageDomain ovirt\_glusterfs Status"

- "oVirt StorageDomain ovirt\_glusterfs Usage"

The screenshot shows the 'Storage' tab in the oVirt web interface. The table lists various storage domains with columns for Domain Name, Domain Type, Storage Type, Format, Cross Data-Center Status, Total Space, Free Space, and Description. The 'ovirt\_glusterfs' domain is highlighted in blue.

Domain Name	Domain Type	Storage Type	Format	Cross Data-Center Status	Total Space	Free Space	Description
dvalin-EXPORT	Export	NFS	V1	Active	720 GB	409 GB	
dvalin-ISOs	ISO	NFS	V1	Unattached	720 GB	412 GB	
ISOs	ISO	POSIX compliant FS	V1	Unattached	280 GB	277 GB	
melange-ISOs	ISO	NFS	V1	Active	124 GB	109 GB	
ovirt_glusterfs	Data (Master)	GlusterFS	V3	Active	280 GB	184 GB	
ovirt-image-repository	Image	OpenStack Glance	V1	Unattached	[N/A]	[N/A]	

The screenshot shows the 'Monitoring Details' page for the 'ovirt\_glusterfs' storage domain. It displays a table of monitoring services and their outputs, along with a sidebar showing detailed metrics for the selected service.

Service	Output
oVirt StorageDomain ovirt_glusterfs Status	RHEV OK: StorageDomains ok - 1/1 StorageDomains with state UP
oVirt StorageDomain ovirt_glusterfs Usage	RHEV OK: storage ok - 34.29% used (ovirt_glusterfs)

Name	Value
Acknowledged	no
Comments	
Is flapping	no
Last check	2014-04-01 12:59:59
Last notification	0000-00-00 00:00:00
Last state change	2014-03-13 13:49:59
Latency	0.252
Long plugin output	

# Danke für die Aufmerksamkeit!

## Live-Demo am Projektstand!

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