Introduction to oVirt Hyperconvergence

oVirt + Gluster

Gobinda Das (Associate Manager,Software Engineering)

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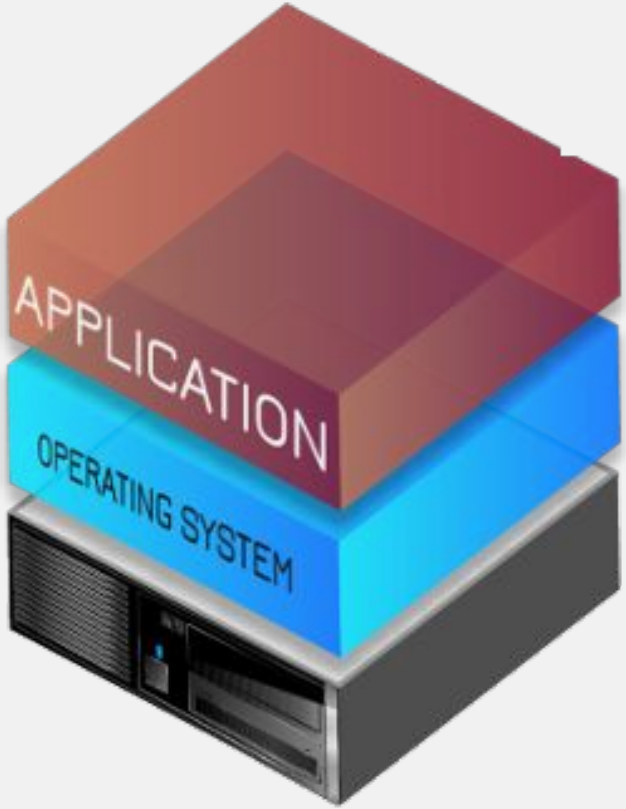
Agenda

- Virtualization
- oVirt
- oVirt Hyperconvergence

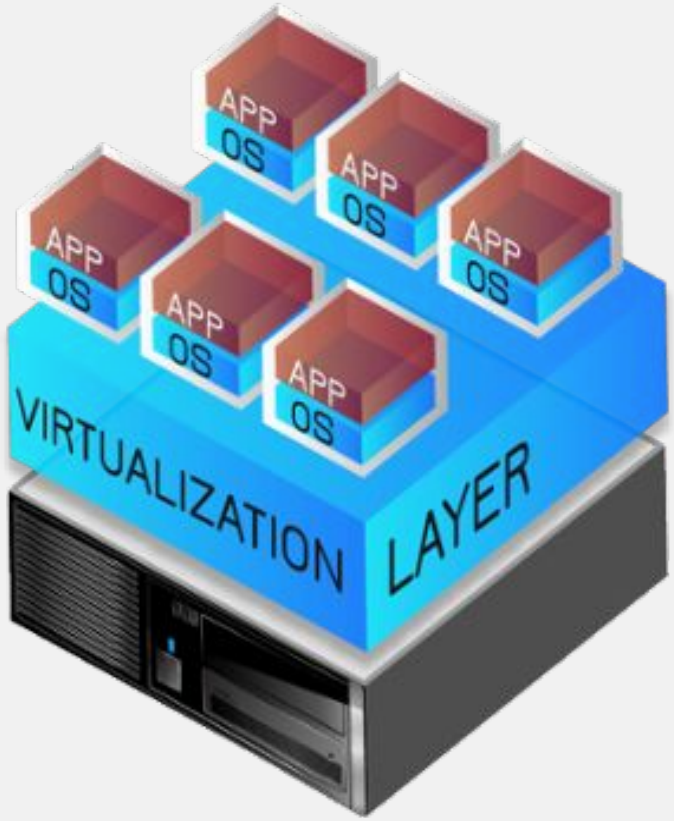
Virtualization

redhat.


WSG
WAVES SOUNDGRID
ON/OFF
RST
SERVER ONE



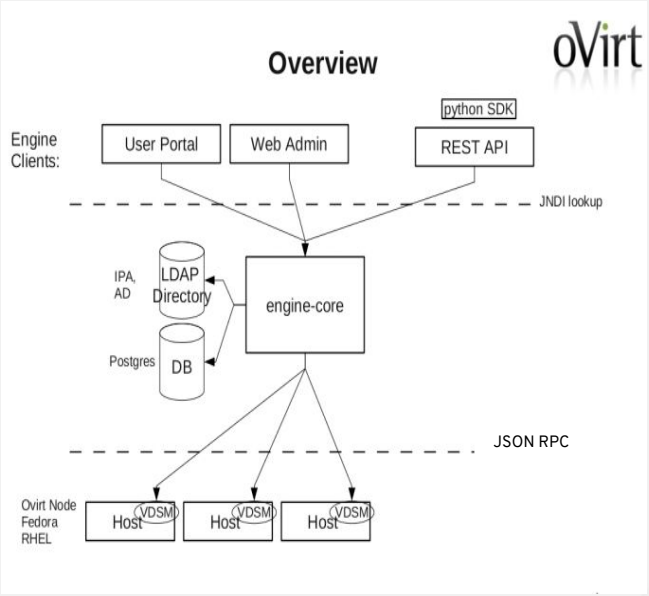
Traditional Server Architecture



Virtualized Server Architecture

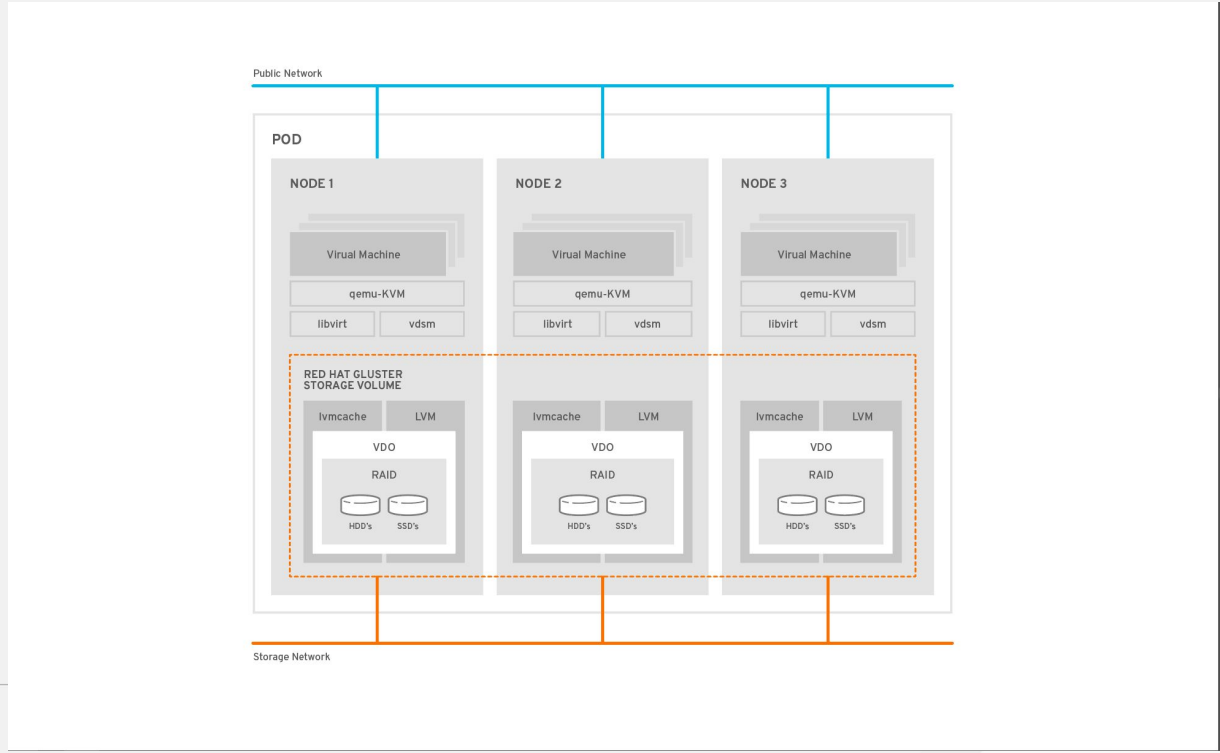
oVirt

- It’s a virtualization management application.
- Manage h/w nodes.
- Manage storage and network resources.
- Deploy & monitor vms in DC.
- Using KVM as hypervisor to manage vms.



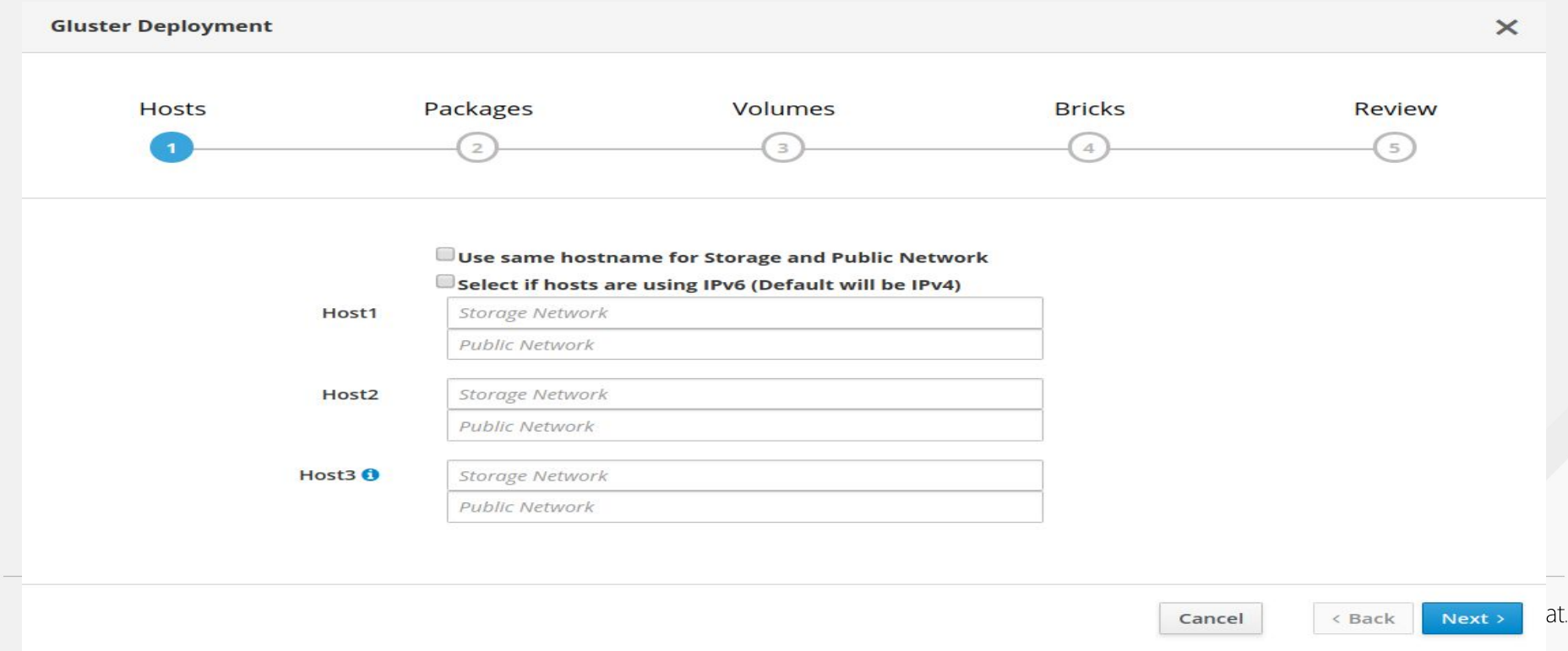
oVirt Hyperconvergence

- combines compute, storage, networking and management capabilities in one deployment.



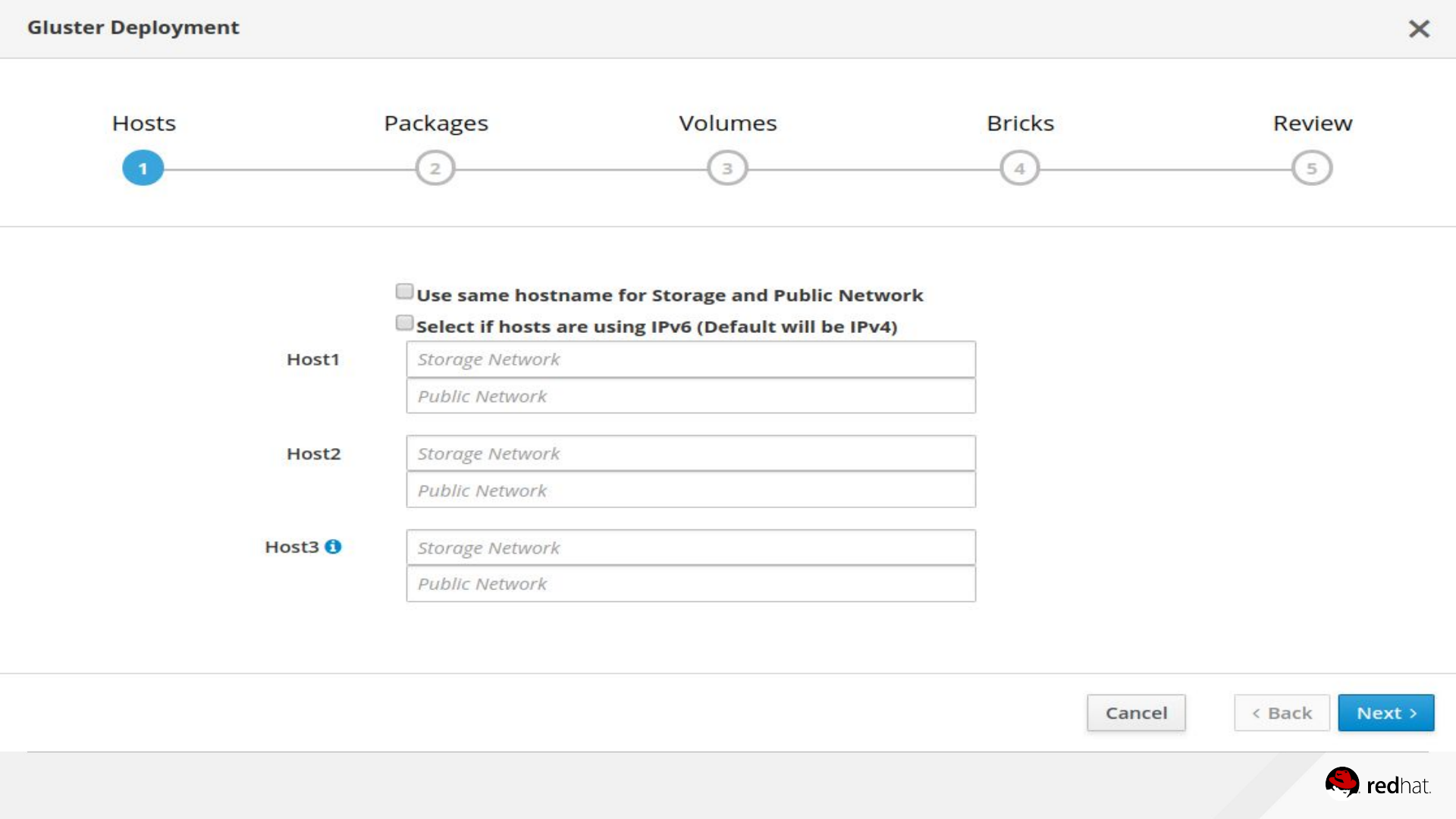
Deployment

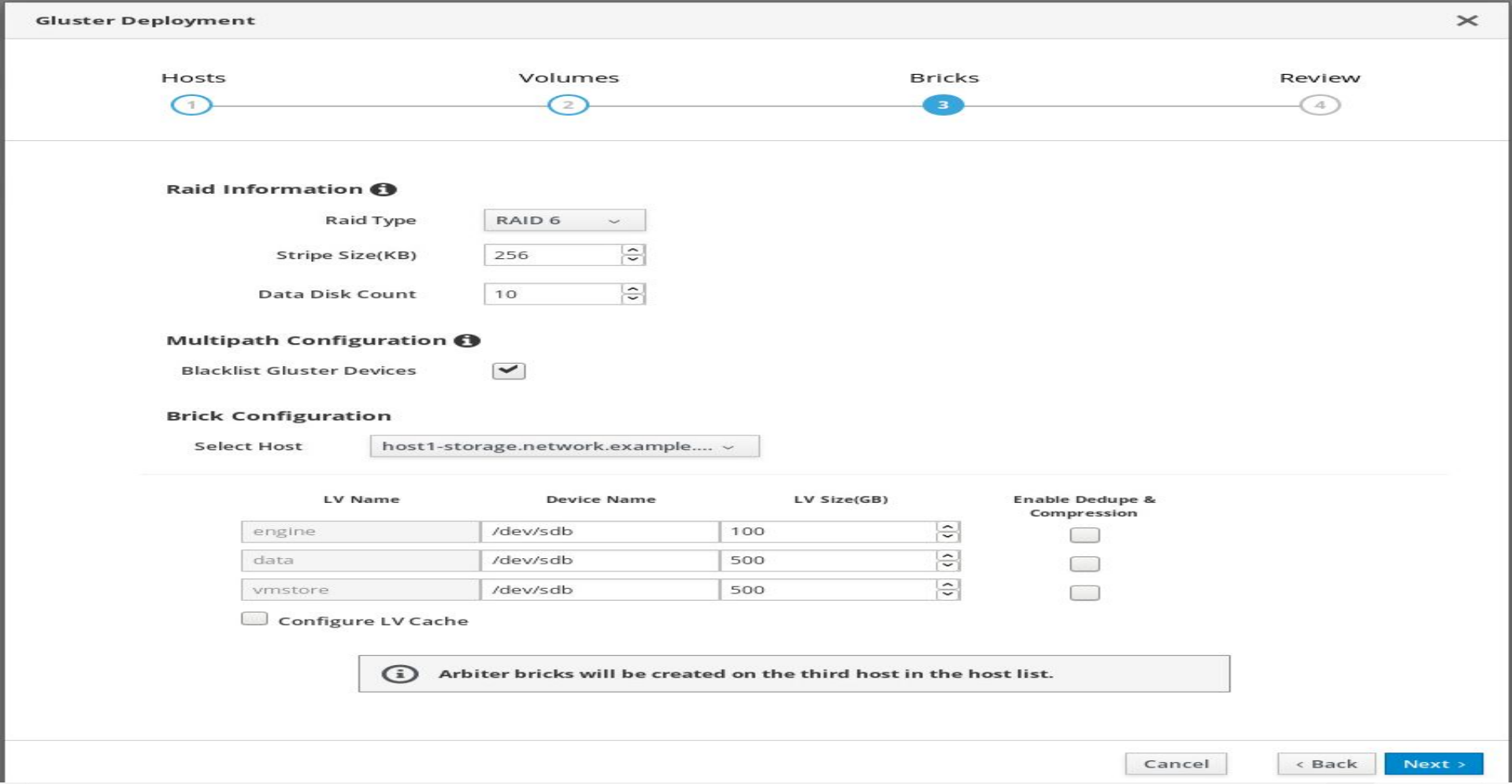
- Simple and easy deployment with Cockpit UI / CLI based deployment.



Features

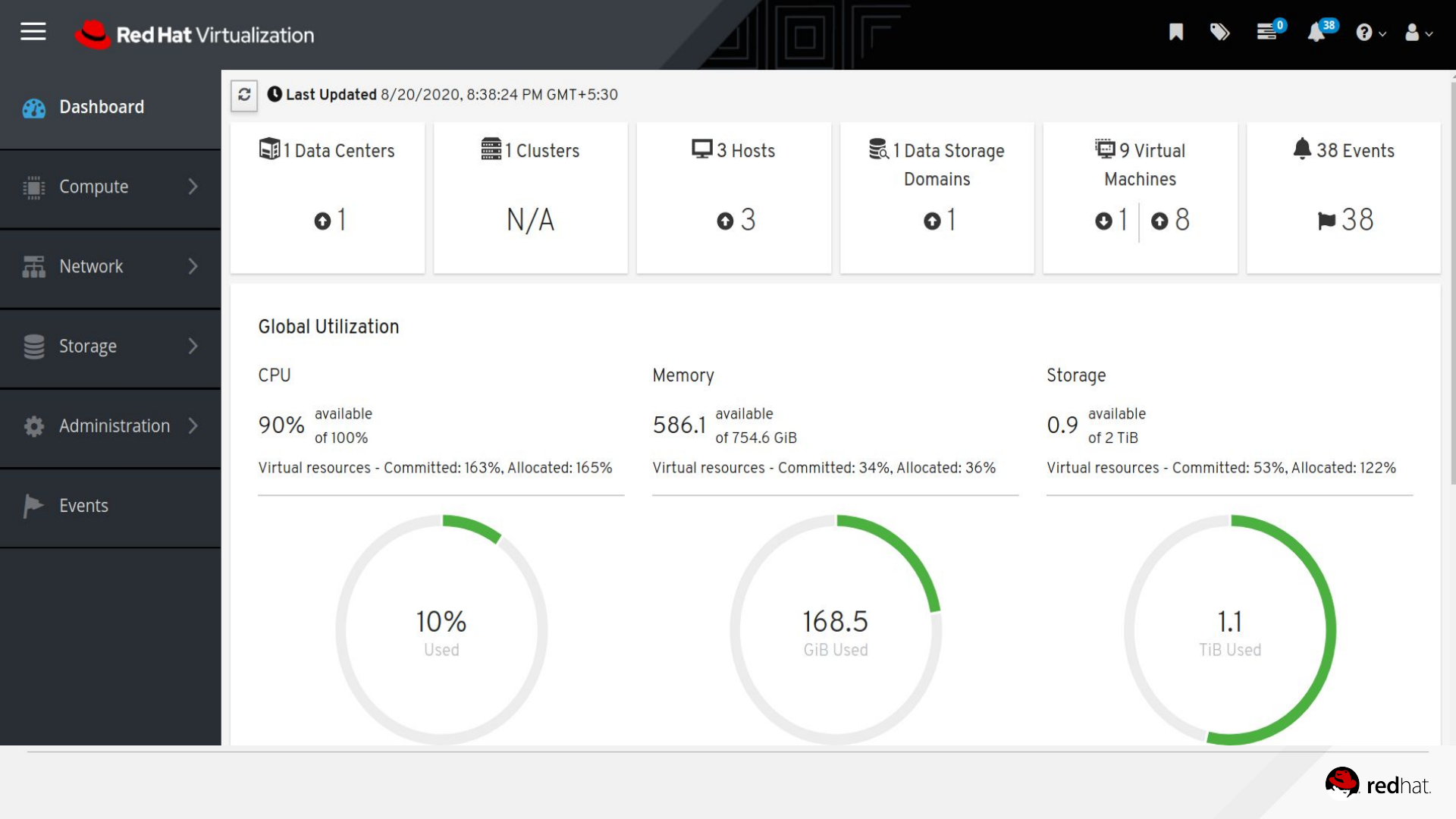
- IPv4/IPv6
- Multipath
- NBDE
- VDO
- Node Replacement
- Single Click Cluster Upgrade
- Gluster logical network


Gluster Deployment
Hosts
Packages
Volumes
Bricks
Review
1
2
3
4
5
Use same hostname for Storage and Public Network
Select if hosts are using IPv6 (Default will be IPv4)
Host1
Storage Network
Public Network
Host2
Storage Network
Public Network
Host3
Storage Network
Public Network
Cancel
< Back
Next >

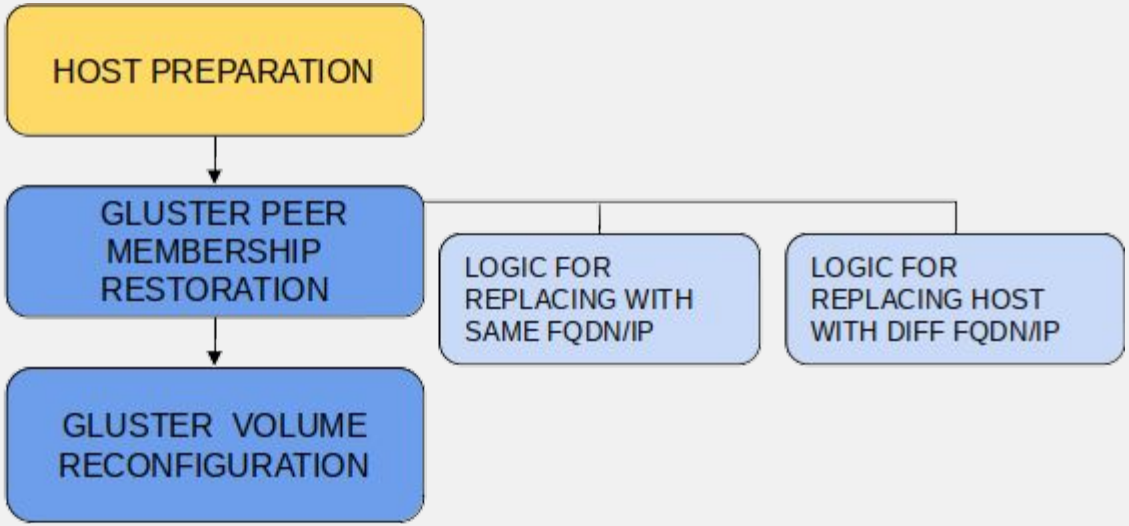

Gluster Deployment
Hosts
1
Volumes
2
Bricks
3
Review
4
Raid Information
Raid Type
RAID 6
Stripe Size(KB)
256
Data Disk Count
10
Multipath Configuration
Blacklist Gluster Devices
Brick Configuration
Select Host
host1-storage.network.example....
LV Name
Device Name
LV Size(GB)
Enable Dedupe & Compression
engine
/dev/sdb
100
data
/dev/sdb
500
vmstore
/dev/sdb
500
Configure LV Cache
Arbiter bricks will be created on the third host in the host list.
Cancel
< Back
Next >

NBDE

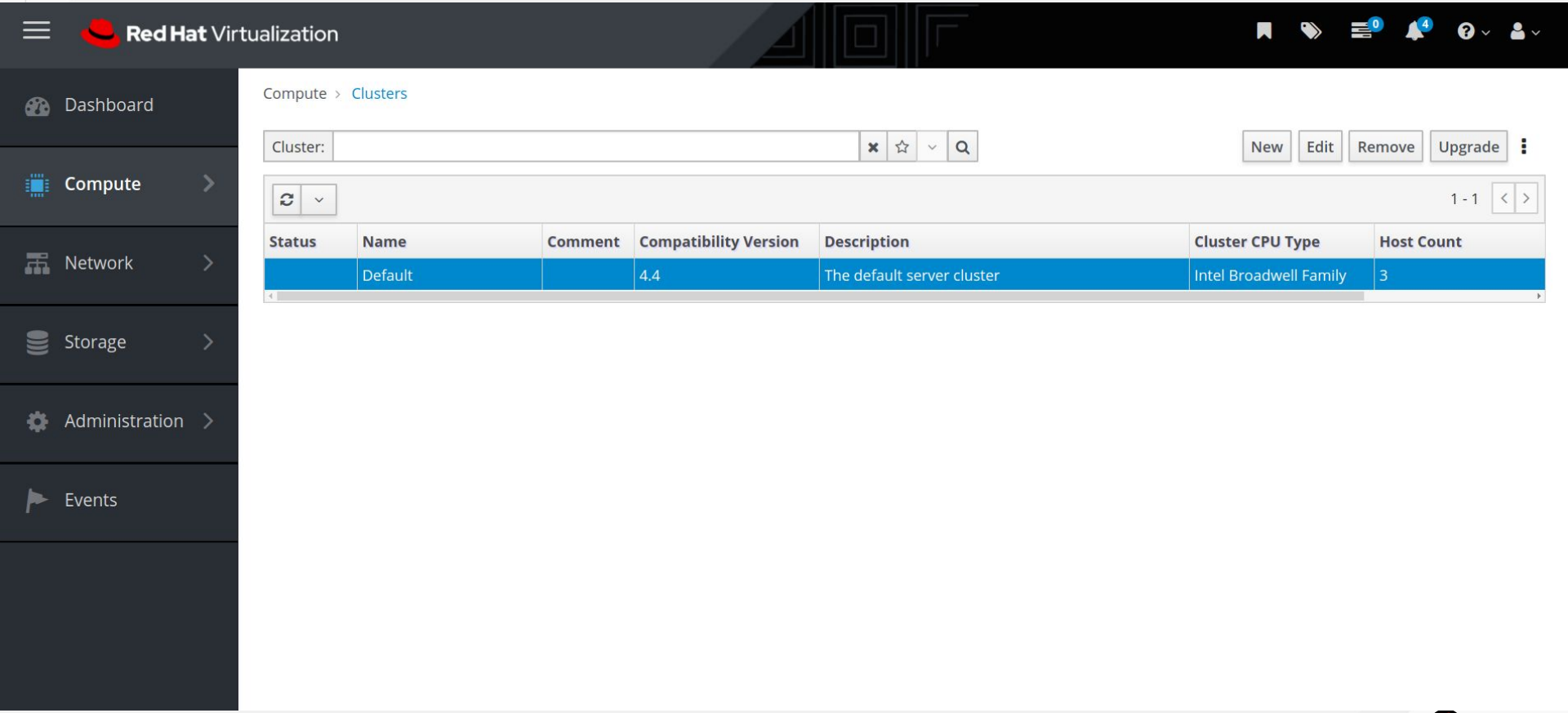
- The Policy-Based Decryption (PBD) is a collection of technologies that enable unlocking encrypted root and secondary volumes of hard drives on physical and virtual machines
- The current implementation of the PBD in Red Hat Enterprise Linux consists of the Clevis framework and plug-ins called *pins*.
  - `tang` - allows volumes to be unlocked using a network server
- The Network Bound Disc Encryption (NBDE) is a subcategory of PBD that allows binding encrypted volumes to a special network server.
- The current implementation of the NBDE includes a Clevis pin for Tang server and the Tang server itself.
- Right now we support only CLI based NBDE feature. User need to run playbook separately prior to RHHI deployment.
- Ref: https://github.com/gluster/gluster-ansible/blob/master/playbooks/hc-ansible-deployment/README


Red Hat Virtualization
Dashboard
Compute
Network
Storage
Administration
Events
Last Updated 8/20/2020, 8:38:24 PM GMT+5:30
1 Data Centers
1
1 Clusters
N/A
3 Hosts
3
1 Data Storage Domains
1
9 Virtual Machines
1
8
38 Events
38
Global Utilization
CPU
90% available of 100%
Virtual resources - Committed: 163%, Allocated: 165%
10% Used
Memory
586.1 available of 754.6 GiB
Virtual resources - Committed: 34%, Allocated: 36%
168.5 GiB Used
Storage
0.9 available of 2 TiB
Virtual resources - Committed: 53%, Allocated: 122%
1.1 TiB Used
redhat.

Node Replacement



Cluster Upgrade



oVirt

- Simplicity
- Stablility
- Functionality
- Security
- Large Community Support

Way to Contribute

Join the community

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

Everyone can make a difference.

- Websites, Repository, Bug Tracking:
- http://www.ovirt.org
- http://www.ovirt.org/project/subprojects/
- https://gerrit.ovirt.org/
- https://gerrit.ovirt.org/
- https://bugzilla.redhat.com/
- https://bugzilla.redhat.com/

Mailing lists: http://lists.ovirt.org/mailman/listinfo

IRC: #ovirt on OFTC

Thank You :)

Gobinda Das
godas@redhat.com
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