Building a fileserver-cluster with GlusterFS

Stefan Kania

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Why use Clusters?



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· Eliminate single point of failure



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- · failover in case of a server outage



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- · Load balancing under heavy load



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Why use Clusters?

- · Eliminate single point of failure
- · failover in case of a server outage
- · Load balancing under heavy load
- Maintenance during normal working hours



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Characteristics of GlusterFS



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merge space from many knodes to one volume



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- mount via *fusemount* over the network



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- Many different configurations possible
- self healing in case on knode is down



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Characteristics of GlusterFS

- merge space from many knodes to one volume
- mount via fusemount over the network
- Expandable
- PosixACL Support
- Many different configurations possible
- self healing in case on knode is down
- support of filesystem-snapshots (LVM2), starting with version 3.6

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Different configurations



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Replicated Volume



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Different configurations

- Replicated Volume
- Distributed Volume



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Different configurations

- Replicated Volume
- Distributed Volume
- Striped Volume



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Different configurations

- Replicated Volume
- Distributed Volume
- Striped Volume
- Replicated-Distributed Volume



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Configuring GlusterFS



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 Configure your system to use the packages from gluster.org



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- Install the packages
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- create the volume
- start the volume
- mount the volume
- use the volume an be happy

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Gluster and Snapshots



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all bricks have to be configured with LVM2



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- Gluster-version must be at least 3.6



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- All bricks have to be on it's own partition



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Gluster and Snapshots

- all bricks have to be configured with LVM2
- Gluster-version must be at least 3.6
- All bricks have to be on it's own partition
- All LVM2-volums must be thinly provisioned Volumes



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how it works



Let's do some clustering

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