Building a fileserver-cluster with GlusterFS

Stefan Kania

12. Mai 2016
Introduction

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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GlusterFS

Characteristics of GlusterFS

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

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Different configurations

• Replicated Volume
• Distributed Volume
• Striped Volume
• Replicated-Distributed Volume
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Configuring GlusterFS

- Configure your system to use the packages from gluster.org
- Install the packages
- Format the filesystem on all bricks
- Mount the filesystem on all nodes
- Create the volume
- Start the volume
- Mount the volume
- Use the volume and be happy
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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 its own partition
- All LVM2-volumes must be *thinly provisioned Volumes*
how it works

Let's do some clustering