Storage SIG State and Future

Making
Software Defined Storage
easy on CentOS

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About the presenter

Name: Niels de Vos (ndevos on IRC)
Company: Red Hat (8+ years)
Location: Amsterdam, or where there is internet
Profession: Senior Software Engineer
Tasks: Improving Gluster and everything around it

Goals of the Storage SIG

- Make it easy for users to deploy Software Defined Storage
- Provide timely updates and new versions
- Assist upstream projects with distribution of CentOS packages
- Automatically test against other CentOS components before release

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Participating Projects

- Gluster

    – GlusterFS is a scalable network filesystem. Using common off-the-shelf hardware, you can create large, distributed storage solutions for media streaming, data analysis, and other data- and bandwidth-intensive tasks.

    – Additional components are provided, like NFS-Ganesha, Heketi and glusterfs-coreutils.

- Ceph

    – Ceph is a distributed object store and file system designed to provide excellent performance, reliability and scalability.

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Onboarding Projects

- Samba (maintained for storage use-cases, not IdM)

  - Samba is the standard Windows interoperability suite of programs for Linux and Unix. Samba is an important component to seamlessly integrate Linux/Unix Servers and Desktops into Active Directory environments. It can function both as a domain controller or as a regular domain member.

- Tendrl

  - Tendrl is an open source Software Defined Storage management system that is designed for SDS technologies of today and tomorrow. It provides for installation, storage provisioning, lifecycle management, monitoring, alerting, trending, and analytics for Ceph and Gluster storage, while providing a framework to encompass other SDS technologies in the future.

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Onboarding Projects

- gluster-block (part of the Gluster project)
    - Configuration tool that provides iSCSI LUNs in a High-Available fashion.

- Lustre (some interest from users at CEA)
    - An open-source, parallel file system that supports many requirements of leadership class HPC simulation environments.

- EOS

    - Elastic, Adaptable and Scalable

    - A software solution for central data recording, user analysis and data processing.

    - Supports thousands of clients with random remote I/O patterns with multiprotocol support.

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Products

- Gluster
    - centos-release-gluster packages for YUM
    - Repository for stable releases (3.10 and 3.12)
    - Release candidates in testing repository
    - Several tools and utilities in the repositories
    - Docker container images
- Ceph

    - centos-release-ceph packages for YUM
    - Repository for stable releases (Hammer, Jewel, Luminous)
    - Several tools and utilities in the repositories

Suggestions for other products welcome!

Gluster Example

```
# yum install centos-release-gluster
# yum install glusterfs-server glusterfs-fuse
# systemctl enable glusterd
# systemctl start glusterd

# gluster volume create dojo …
# gluster volume start dojo

# mount -t glusterfs storage.example.org:/dojo /mnt
```
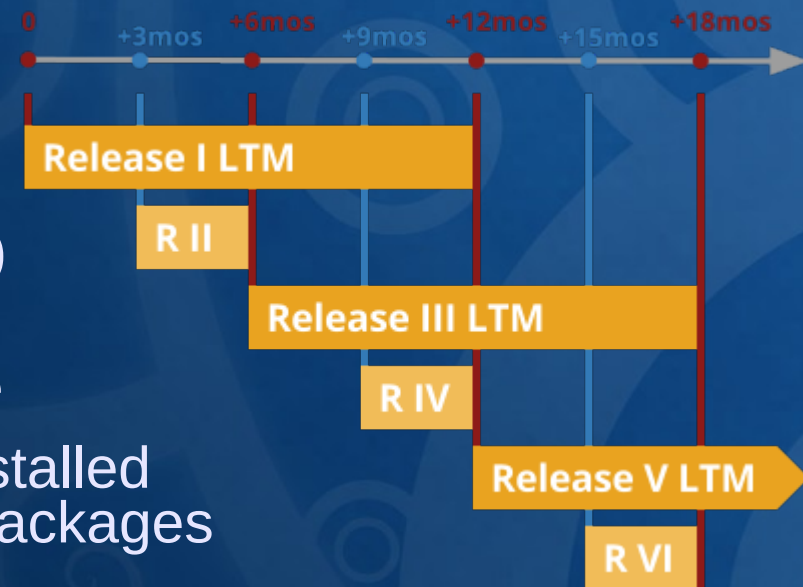
Gluster Release Alignment

- Upstream release schedule differentiates between Long-Term-Maintenance (LTM) and Short-Term-Maintenance (STM)

- centos-release-gluster will always enable the most recent LTM release

- centos-release-glusterXY can be installed in addition to get the STM release packages

0   +3mos   +6mos   +9mos   +12mos   +15mos   +18mos

Release I LTM

R II

Release III LTM

R IV

Release V LTM

R VI

Where YOU can contribute

- Testing of packages
    - Testing real-world applications on the storage components
    - Write test-cases to integrate in the CentOS CI
- Package Maintenance
    - Update the .spec file when new releases land, provide pull requests and learn how to do builds
    - https://github.com/CentOS-Storage-SIG
- Improve Documentation
    - Existing Quick Guide and other wiki pages
    - https://wiki.centos.org/SpecialInterestGroup/Storage
- Be an advocate of the CentOS project and Storage SIG
    - Blog about your use-case and deployment
    - Propose talks at conferences

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Thanks!

Get in touch on
centos-devel@centos.org
#centos-devel on Freenode IRC
for any questions or suggestions

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