Packaging and releases by SIGs

How a SIG gets to provide YUM repositories for its users

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Agenda

- Introduction into SIGs

- YUM repositories, how do they get there?

- Tags, buildroots, what!?

- Provide contents for testing

- Test, test, test and release it

- Userfriendly access to contents

Introduction into SIGs

- A Special Interest Group consists of a set of people that want to provide quality software components on top op the standard CentOS distribution

- These "add-ons" can be provided as YUM repositories, container or VM images, special installation media or other form of products

- Participating SIGs have access to resources like build systems, testing infrastructure and download servers that are maintained by the CentOS team

- Any Open Source project can request to start or join a SIG

- SIGs can have multiple projects with their own 'product' releases

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YUM repositories

- Packages are a basic 'product' for SIGs

- Easy to use, familiar for most CentOS users

- Start small, grow with experience and user adoption

    – Provide a 'main' component

    – Add tools, utilities, plugins and extensions later

- Different repositories for different target users

    – Stable versions, 'next' versions

    – Split repositories based on functionality

Tags, Build Targets, what?!

- Building RPMs in the Community Build System (cbs.centos.org)
- Build Targets collect all packages with a certain tag and create YUM repositories for building more packages
    - Tag a build dependency, build the next package
- Tags are used to mark the state of a package
    - Candidate, testing, release
- Other tools can list packages by tag and take actions
    - Place package in public testing repository
    - Mark packages for signing+pushing to mirrors
- Build Targets for SIGs inherit packages from base CentOS
    - Can also be setup to inherit packages from other tags

Build Targets Example

- userspace-rcu in storage7-common-candidate
- glusterfs-3.8.x in storage7-gluster-38-{candidate,testing,release}

Name	storage7-gluster-38-el7-build
ID	744
Arches	x86_64 aarch64 ppc64le
Locked	no
Permission	none
Inheritance	storage7-gluster-38-el7-build
	buildsys7
	storage7-gluster-30-candidate
	storage7-gluster-common-candidate
	storage7-common-candidate
External repos	centos7-cr
	centos7-updates
	centos7-os

Tags, Build Targets, what?!

- The 'cbs' command is used to manage packages and tags

  - Add a package (name only) to a tag

  - Build packages in a Build Target

  - Tag builds (full NVR) as -testing and -release

- Obtain permissions to build and tag packages by talking to members (or the chair) of the SIG, request membership on accounts.centos.org and have it approved (see SIG Guide for details)

Providing contents for testing

- Special YUM repositories for packages in a pre-release testing phase

- Automated testing in the CentOS CI (and manual)

- Tag builds with their -testing tag

- Have synchronization setup to create a YUM repository based on the -testing tag on buildlogs.centos.org

  - Needs request through bugs.centos.org (see SIG Guide)

- Automate test on checking the YUM repository (repomd.xml file)

Test, test, test and release it

- Packages will need to be signed before being pushed to the mirrors

- Mark builds with the -release tag so that they get picked up

- Have synchronization setup to create a YUM repository based on the -testing tag on mirror.centos.org

   - Needs request through bugs.centos.org (see SIG Guide)

- Test and verify some more
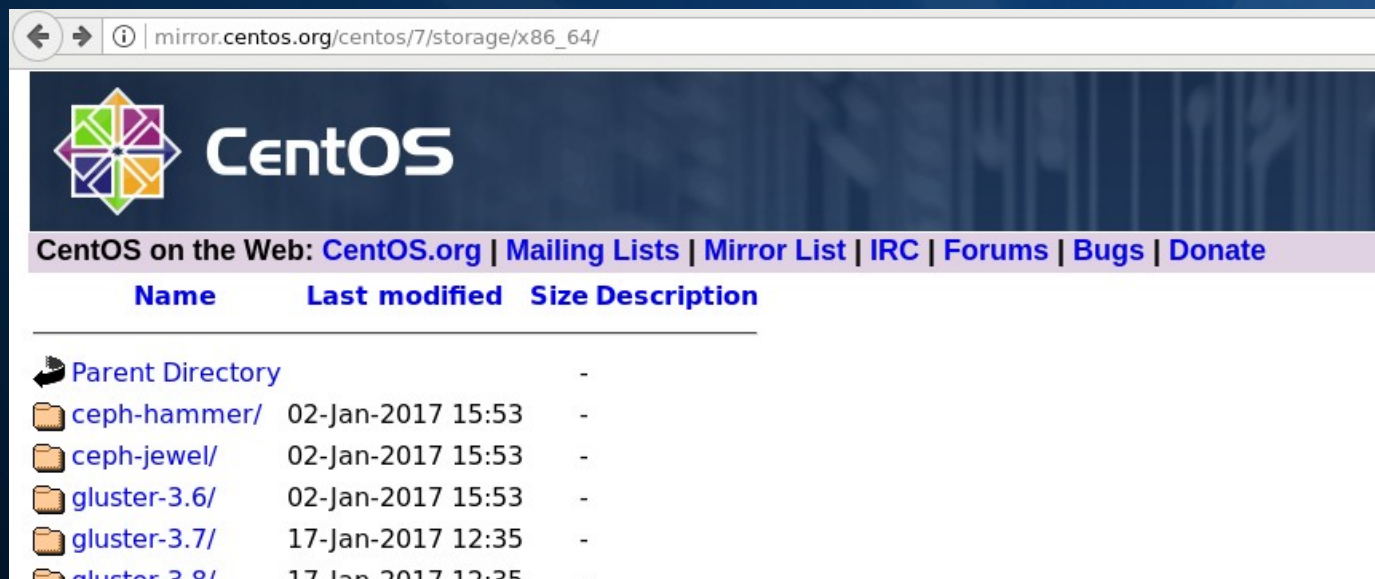
Userfriendly access to contents

- Make it easy for users to enable the new YUM repository
- Provide a package with a .repo file in CentOS Extras
  - yum install centos-release-gluster38
- Enable the release repository
  - Also include the testing (buildlogs) one, but disabled
- Document on the CentOS Wiki how to install and start using the packages provided by the SIG
- Send a "General Availability" (GA) announcement

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Useful links

- SIG Guide: https://wiki.centos.org/SIGGuide

- Community Build System: https://cbs.centos.org/

- CentOS CI (Jenkins): https://ci.centos.org/

- Ask questions:

  – Today, at this dojo!

  – Any of the contributors to SIGs

  – centos-devel@centos.org

  – #centos-devel on Freenode

https://people.redhat.com/ndevos/talks/2017-02-CentOS-Dojo/