Hyperscale SIG update

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CentOS Dojo May 2021
Agenda

- SIG recap
- Deliverables and recent work
- Developer experience
- Coming up
Hyperscale SIG

- CentOS Stream focus
- Large-scale infrastructure
- Foster cross-company collaboration on packages and tooling
- Bring in-house development out in the open
- Open to anybody interested in working in this space
- [https://wiki.centos.org/SpecialInterestGroup/Hyperscale](https://wiki.centos.org/SpecialInterestGroup/Hyperscale)
SIG health

- Established in Jan 2021 with 6 founding members
- +5 members since then
- #centos-hyperscale
- Bi-weekly IRC meetings
- Monthly hackathons / hangouts
- Issue tracker: https://pagure.io/centos-sig-hyperscale/sig
- Conference talks
  - CentOS Dojo FOSDEM 2021: https://www.youtube.com/watch?v=Kg7FqVGaZxs
  - DevConf.cz 2021: https://www.youtube.com/watch?v=K8x4CletnCc
  - FOSDEM 2021: https://fosdem.org/2021/schedule/event/desktoplinuxmgmtatfacebook/
  - LISA21: https://www.usenix.org/conference/lisa21/presentation/cavalca
Hyperscale SIG scope

- Faster moving package backports
- Policy and configuration alternatives
- Large-scale testing enablement
- Kernel
Package backports

- Delivered to the Hyperscale main repository
  - dnf install centos-release-hyperscale
- Drop in replacements for stock CentOS packages
- File bugs on https://pagure.io/centos-sig-hyperscale/package-bugs
systemd

- SIG branch tracking the latest upstream (currently 248)
- Defaults to unified hierarchy (cgroup2)
- systemd-oomd (needs PSI)
- Experimental SELinux enablement
systemd

- Public repo to track development and stage patches
  - https://pagure.io/centos-sig-hyperscale/systemd

- Public repo for releng tools and scripts
  - https://pagure.io/centos-sig-hyperscale/systemd-releng

- Contbuild on CentOS CI
  - Based on the current Hyperscale packaging
  - Daily rebuilds of the upstream git master
  - VM testing: https://pagure.io/centos-infra/issue/308
Information for user **hyperscalebot**

- **Name**: hyperscalebot
- **ID**: 255
- **Tasks**: 88
- **Packages**: No packages
- **Builds**: No builds

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LLVM 12

- Non-modular LLVM 12 build
- llvm, clang, lld, lldb (+ mesa)
- Currently in CBS, release is pending more testing
- [https://bugzilla.redhat.com/show_bug.cgi?id=1952248](https://bugzilla.redhat.com/show_bug.cgi?id=1952248)
- Modular LLVM 12 is slated for RHEL 8.5
- [https://reviews.llvm.org/D101972](https://reviews.llvm.org/D101972)
Other packages

- dwarves 1.21
- grep 3.6
- less 581
- libvirt 7.10 (non-modular)
- mtr 0.94
- meson 0.57.1
- ninja-build 1.10.2
- pykickstart 3.32
- rasdaemon 0.6.6
- tpm2-tools 4.3.0
- tpm2-tss 2.4.4
Kernel

- Test 5.10.31 kernel based on the Fedora 33 packaging
  - https://cbs.centos.org/koji/taskinfo?taskID=2476549
- Btrfs support
- Development tree: https://pagure.io/centos-sig-hyperscale/linux
- Outstanding issues
  - KABI
  - Secure boot: https://pagure.io/centos-infra/issue/307
  - https://pagure.io/centos-sig-hyperscale/sig/issue/7
- kpatch
  - Updated to 0.9.3
  - Includes kpatch-build
Large-scale testing

- Provide a way to test distro-wide changes in production settings
- DNF/RPM Copy-on-Write
  - [https://fedoraproject.org/wiki/Changes/RPMCoW](https://fedoraproject.org/wiki/Changes/RPMCoW)
  - Requires patched packaging stack
  - Currently deployed in production at FB
- Released to a dedicated “experimental” repo
  - dnf install centos-release-hyperscale-experimental
Developer experience

- mock-centos-sig-configs
  - Make it easier to do local mock builds against SIG repos
  - Send PRs to add configs for your SIG
  - Packaged in Fedora and EPEL

- centos-packager
  - [https://git.centos.org/centos/centos-packager](https://git.centos.org/centos/centos-packager)
  - Tools to get a certificate and interact with CBS
  - Packaged in Fedora and EPEL

- centpkg
  - [https://git.centos.org/centos/centpkg](https://git.centos.org/centos/centpkg)
  - rpkg-style tool, currently only for c9s
  - c8s would need SRPMLayout integration: [https://git.centos.org/centos/centpkg/issue/45](https://git.centos.org/centos/centpkg/issue/45)
  - Packaged in Fedora and EPEL
Developer experience

● Missing -devel packages
  ○ Now downloadable from https://koji.mbox.centos.org
  ○ https://pagure.io/centos-infra/issue/316

● PR workflow for git.centos.org
  ○ Would probably require updating Pagure or moving to GitLab
  ○ Wishlist: on-PR scratch builds
  ○ https://pagure.io/centos-infra/issue/228

● centos-git-common
  ○ https://git.centos.org/centos-git-common
  ○ Still needed for lookaside-upload and get_sources.sh
  ○ Merge into centos-packager?
  ○ https://git.centos.org/centos/centos-packager/issue/10
Coming up

● Btrfs transactional updates
  ○ [https://pagure.io/centos-sig-hyperscale/sig/issue/37](https://pagure.io/centos-sig-hyperscale/sig/issue/37)
● Kernel package in “experimental”
● ISO images
● Cloud images
● More CentOS CI integration
● EPEL
  ○ Make it available on CBS: [https://pagure.io/centos-infra/issue/306](https://pagure.io/centos-infra/issue/306)
  ○ Hyperscale release packages would depend on epel-release
CentOS Stream 9

- It’s here!
  - Sources: https://gitlab.com/redhat/centos-stream/rpms
  - Koji: https://kojihub.stream.centos.org
  - Composes: https://composes.stream.centos.org/test/
- Planning to start c9s SIG builds as soon as possible
- Build tags on CBS: https://pagure.io/centos-infra/issue/324
Resources

- [https://wiki.centos.org/SpecialInterestGroup/Hyperscale](https://wiki.centos.org/SpecialInterestGroup/Hyperscale)
- [#centos-hyperscale on Freenode](https://www.freenode.org)
- Bi-weekly meetings and monthly VC hangout
  - [https://www.centos.org/community/calendar](https://www.centos.org/community/calendar)
- [https://pagure.io/centos-sig-hyperscale/sig](https://pagure.io/centos-sig-hyperscale/sig) issue tracker
- centos-devel mailing list
Questions?