

Hyperscale SIG introduction

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Agenda

- Goals and motivation
- What's in scope
- What's not in scope
- SIG status and roadmap

CentOS @ FB

- Infra built on an Open Source foundation
- >75% of the fleet on CentOS Stream 8
- EPEL + backports from Fedora
- Upstream kernel
- Chef for config management
- Rolling OS updates
- Relevant talks
 - Upgrading CentOS @ FB: <https://tinyurl.com/52hqdp6t>
 - What's new with CentOS @ FB: <https://tinyurl.com/1bzn0rbi>
 - CentOS Stream @ FB (upcoming, DevConf.cz 2021): <https://tinyurl.com/9s6ak3o7>

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>

What's in scope

Faster-moving package backports

- Updated backports of distro packages
- Feature enablement, closely tracking upstream development
- Drop in replacements for distro packages
- Stable and targeting production use
- Will be delivered as a dedicated repository

systemd

- Facebook maintains a systemd backport for CentOS
- Tracking latest upstream stable release
- Based on the Fedora packaging
- Actively deployed in production
- GitHub: [facebookincubator/rpm-backports](https://github.com/facebookincubator/rpm-backports)
- 247 and onwards will be developed within the SIG
- systemd @ FB in 2019 talk: <https://tinyurl.com/yu639xj4>

Policy and configuration alternatives

- Modifications of distro packages to enable alternative options
- Meant to be backward compatible and minimize changes
- Example: iptables
 - Only supports nftables in CentOS Linux 8
 - Rebuild to enable the legacy iptables backend as an alternative
- Also: enablement for cgroup2, btrfs, etc

Large-scale testing

- Provide a way to test distro-wide changes in production settings
- Example: DNF/RPM Copy-on-Write
 - <https://fedoraproject.org/wiki/Changes/RPMCoW>
 - See the next talk for specifics
 - Requires patched packaging stack
 - Currently deployed in production at FB
- Testing content will release to a dedicated “experimental” repo

Kernel

- Wishlist: an LTS-tracking alt kernel for CentOS Stream
- Middle ground between the official RH kernel and the Fedora one
- Could also be useful for feature enablement (e.g. btrfs, cgroup2, etc)
- Integration work is needed
 - Kernel builds enablement for SIGs
 - Secure Boot
- Still in early planning

What's not in scope

- New packages
 - Contribute them to Fedora, and then to EPEL
- Fedora packages missing from EPEL
 - File tickets on bugzilla
 - Work with the Fedora EPEL Packages SIG
 - <https://fedoraproject.org/wiki/EPEL/Packagers>
- Unshipped packages (e.g. missing -devel)
 - File tickets on bugzilla
 - <https://wiki.centos.org/FAQ/CentOS8/UnshippedPackages>
- Bugfixes
 - File tickets on bugzilla and/or upstream
 - Send patches

SIG Status

- Approved by the board on Jan 13
- In the process of setting up resources
- Planned deliverables
 - SIG branches on git.centos.org for all modified packages
 - Main package repository (systemd, iptables, etc)
 - Experimental package repository (RPM CoW, etc.)
- Wishlist
 - Cloud images with Hyperscale repo
 - Kernel

Resources

- <https://wiki.centos.org/SpecialInterestGroup/Hyperscale>
- #centos-hyperscale on Freenode
- Bi-weekly formal meetings starting Feb 17 18:00 UTC
- <https://pagure.io/centos-sig-hyperscale/sig> issue tracker
- centos-devel mailing list

Questions?