# 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: <u>https://tinyurl.com/52hqdp6t</u>
  - What's new with CentOS @ FB: <u>https://tinyurl.com/1bzn0rbi</u>
  - CentOS Stream @ FB (upcoming, DevConf.cz 2021): <u>https://tinyurl.com/9s6ak3o7</u>

#### 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
- <u>https://wiki.centos.org/SpecialInterestGroup/Hyperscale</u>

## 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: <u>facebookincubator/rpm-backports</u>
- 247 and onwards will be developed within the SIG
- systemd @ FB in 2019 talk: <u>https://tinyurl.com/yu639xj4</u>

#### 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
  - <u>https://fedoraproject.org/wiki/Changes/RPMCoW</u>
  - 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

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

### Questions?