



The Road to RHEL 8

A Technical Discussion with Gunnar Hellekson

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RED HAT®
ENTERPRISE
LINUX® 8
Beta

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SPEND MORE TIME DRIVING BUSINESS GROWTH WITH A MODERN OPERATING SYSTEM



CONTROL

It should be secure.



CONFIDENCE

It should just work.



FREEDOM

It shouldn't get in the way.

RED HAT®
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Implement **WHAT YOU WANT** when it makes sense for you

A FAMILIAR EXPERIENCE

What's the same

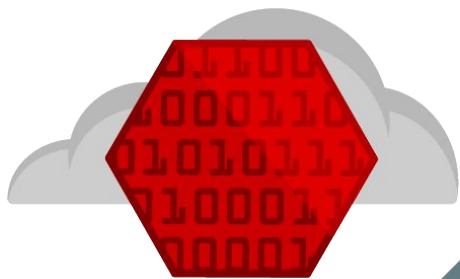
- Enterprise OS on all footprints
- Development Process (Fedora)
- 10-year lifecycle for most content
- Offerings and Add-Ons
- Managed by Satellite

What's different

- Simpler delivery structure
- Predictable release cadence
- More life cycle options
- More frequent application updates

ACCESS TO OPEN SOURCE ENTERPRISE SOFTWARE

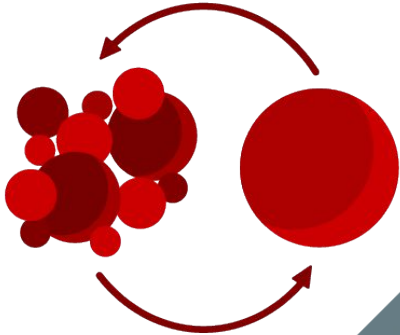
INNOVATION FROM A SECURE SUPPLY CHAIN



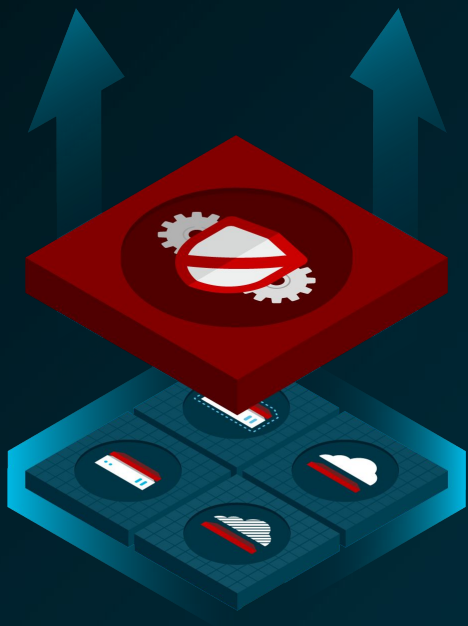
- Receive **direct access** to the latest enterprise-ready Linux innovation.
- Use Red Hat Enterprise Linux to **avoid the risk & cost** of “free” untested, uncertified solutions.
- Choose a Red Hat Enterprise Linux subscription to get **access, automation, & management benefits** from the rest of the Red Hat portfolio.

ACCESS TO EMERGING OPEN SOURCE TECH

RED HAT TURNS PROJECTS INTO ENTERPRISE PRODUCTS



- Invest in the future of enterprise open source technology by paying Red Hat to **represent your needs & contribute code** to influential communities.
- Take advantage of **hardened, tested, certified enterprise-ready solutions** identified & evolved by Red Hat.



EASY ADOPTION

- > Installation and Upgrades
- > RHEL as a Guest
- > Building Images

INSTALLATION AND UPGRADES

- > **Improvements to Anaconda**
Source packages from multiple repos
- > **Upgrading to RHEL 8**
In-place upgrades with a new framework
- > **Snapshot and rollback**
Bootable LVM snapshots



RHEL AS A GUEST

- > **Light-weight kernel packaging**
Reduced footprint for guests only with separate packaging for additional drivers
- > **Direct access from the guest**
Pass-through, virt-io improvements
- > **Optimized for the Cloud**
AWS, Azure, GCE, and OpenStack Platform



MODERN DEVELOPMENT PLATFORM

Fastest time to Hello World!



- > Choice of frameworks
- > Compatibility Best Practices
- > Developing on Containers

A MODERN DEVELOPMENT ENVIRONMENT

> **Application Streams**
Access to software faster from Red Hat

> **Best Practices for Compatibility**
Writing portable applications for RHEL



DEVELOPERS

Stable APIs and ABIs



NEXT-GEN CONTAINER TOOLS

Providing stability, flexibility, and performance with containers and images



buildah

> Build oci/docker images



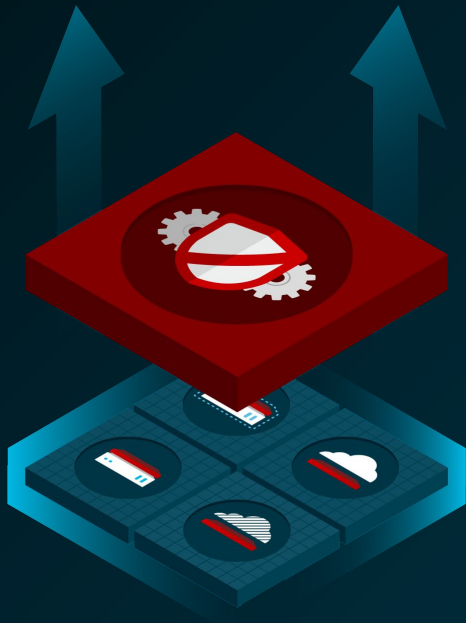
skopeo

> Inspect, copy, and sign images



podman

> Run, manage, and debug containers



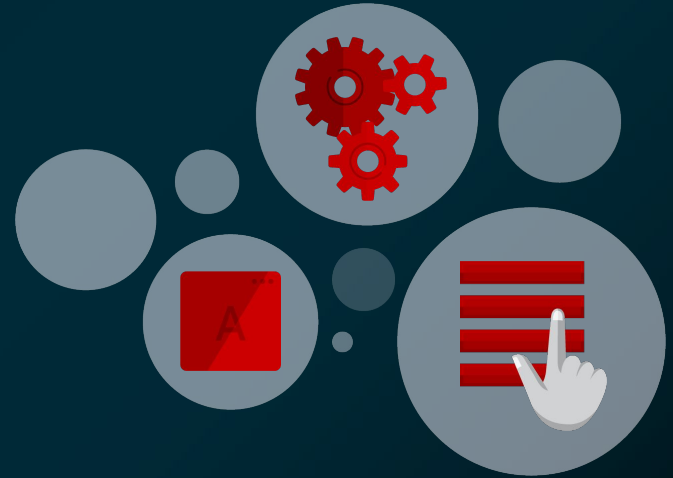
SIMPLE SYSTEM MANAGEMENT

- > Package Management
- > Managing Network Services
- > Managing File system and Storage

PACKAGE MANAGEMENT



- > **Yum 4**
Next generation Yum based on *dnf* technology
- > **Faster dependency resolution**
- > **Support for *modules***



RED HAT WEB CONSOLE

- Feature rich interface
- More accessible for non-Linux experts
- Integration with Network Bound Disk Encryption, Single Sign-on and more
- Added support for virtual machines, session recording, and more

The screenshot displays the Red Hat Enterprise Linux Web Console interface. The top navigation bar includes the user name 'Pras@red' and 'Cloud User'. The left sidebar contains a menu with categories: System, Logs, Storage, Networking, Accounts, Services, Applications, Diagnostic Reports, Kernel Dump, SELinux, Software Updates, Subscriptions, and Terminal. The main content area is titled 'Storage' and features two line graphs for 'kB/s Reading' and 'kB/s Writing' over a time range from 10:31 to 10:37. Below the graphs is a 'Filesystems' table:

Name	Mount Point	Size
/dev/sda1	/boot	269 / 1014 MiB
/dev/sda3	/	4.43 / 7.99 GiB
cidata	-	366 KB

Below the table is an 'NFS Mounts' section with a '+ Add' button and the text 'No NFS mounts set up'. A 'Storage Logs' section shows a log entry for February 19, 2019:

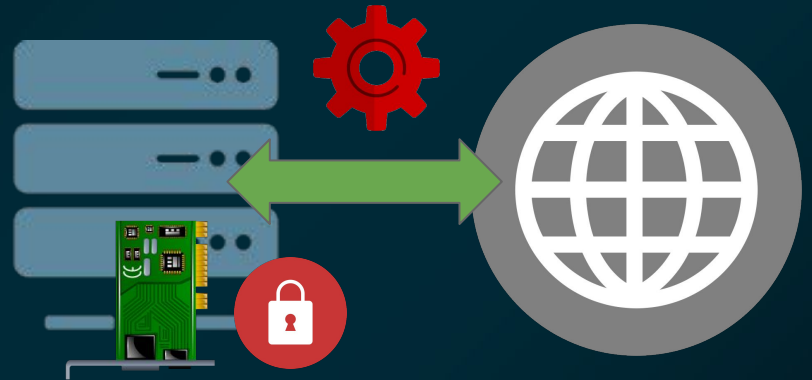
```
10:37 g_object_notify: object class 'UDisksObjectSkeleton' has no property named 'manager-iscsi-initiator' udisksd
10:37 Loading module libudisks2_iscsi.so... udisksd
10:37 Acquired the name org.freedesktop.UDisks2 on the system message bus udisksd
10:37 udisks daemon version 2.8.0 starting udisksd
```

On the right side of the console, there are several panels: 'RAID Devices' (No storage set up as RAID), 'VDO Devices' (Install VDO support), 'iSCSI Targets' (No iSCSI targets set up), and 'Drives' (listing Win7 Disk, 10 GB Hard Disk, and QEMU DVD-ROM).

NETWORKING SERVICES



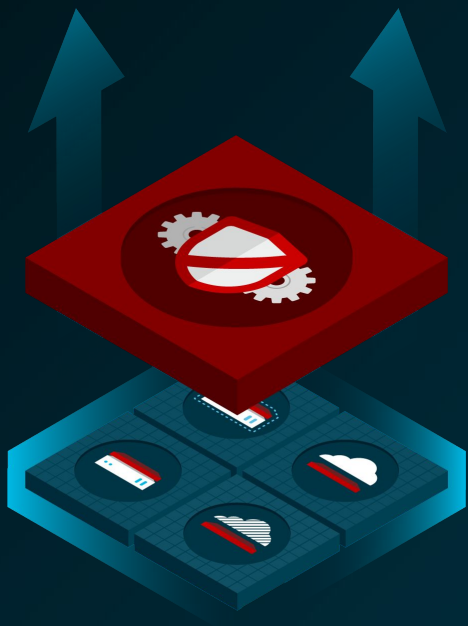
- > **New TCP/IP stack**
with improved performance and BBR congestion control
- > **Crypto offload**
for IPSec VPN and TLS
- > **NetworkManager**
CLI and API to configure services



FILE SYSTEMS AND STORAGE

- > **Stratis.** Easy to use CLI for storage management
- > **XFS Reblink and RMAP**
support providing faster snapshot-like support within XFS and faster file system checks
- > **VDO compression and deduplication**
to increase storage efficiency and reduce costs
- > **Performance** optimizations





A SECURE PLATFORM

- > System Hardening
- > Session Recording
- > Identity Management

SECURITY AND COMPLIANCE

- › **System-wide crypto policies**
Reduce attack vector and stay in compliance
- › **Industry standard algorithms and protocols**
OpenSSL 1.1.1; TLS 1.3



coming
soon

The Red Hat logo, consisting of a red silhouette of a hat, is positioned above the words "RED HAT" in a red, sans-serif font. Below "RED HAT" is the text "ENTERPRISE LINUX" in a smaller, red, sans-serif font.

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