Red Hat Enterprise Linux

Start with an open, reliable, secure operating system

Jacek Skórzyński
Senior Solution Architect
jacek@redhat.com

RED HAT PRODUCTS ALIGNED TO PILLARS

HYBRID CLOUD INFRASTRUCTURE

RED HAT ENTERPRISE LINUX

RED HAT VIRTUALIZATION

RED HAT STORAGE

RED HAT OPENSTACK PLATFORM

RED HAT CLOUD INFRASTRUCTURE

RED HAT OPENSHIFT

CLOUD-NATIVE APP PLATFORMS

RED HAT OPENSHIFT

RED HAT OPENSHIFT.io

RED HAT JBOSS AMQ

RED HAT JBOSS FUSE

RED HAT JBOSS DATA GRID

RED HAT CLOUD SUITE

RED HAT JBOSS BPM SUITE

RED HAT DECISION MANAGER

RED HAT MOBILE APPLICATION PLATFORM

RED HAT JBOSS ENTERPRISE APPLICATION PLATFORM

3scale BY RED HAT

CLOUD MANAGEMENT AND AUTOMATION

RED HAT CLOUDFORMS

RED HAT ANSIBLE Automation

RED HAT SATELLITE

RED HAT INSIGHTS

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OPEN SOURCE PROJECT TO SUPPORTABLE PRODUCT

15 YEARS OF INNOVATION

Red Hat® Enterprise Linux®

RED HAT®

ENTERPRISE LINUX® 2.1

Bringing Linux and open source to the enterprise

RED HAT

ENTERPRISE LINUX 4

Delivering RAS, storage, military-grade security

RED HAT

ENTERPRISE LINUX 6

Linux becomes mainstream for physical, virtual, and cloud

RED HAT

ENTERPRISE LINUX 7

ATOMIC HOST

Secure minimal-footprint OS optimized to run Linux containers

'02   '03   '05   '07   '10   '12   '14   '15   '16   '17

RED HAT

ENTERPRISE LINUX 3

Multi-architecture support, more choices with a family of offerings

RED HAT

ENTERPRISE LINUX 5

Virtualization, stateless Linux–any application, anywhere, anytime

RED HAT

ENTERPRISE LINUX 7

The foundation for the open hybrid cloud

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PREDICTABILITY IN YOUR TIMELINES

The Red Hat® Enterprise Linux® Ten Year Life Cycle

	Full Support	Maintenance Support 1	Maintenance Support 2
Access to previously released content in Red Hat Network	✔	✔	✔
Unlimited incidental technical support	✔	✔	✔
Security errata	✔	✔	✔
Red Hat Knowledge Base, documentation, videos, red arch's, etc.	✔	✔	✔
Bug fix errata	✔	✔	✔
Minor releases	✔	✔	✔
Refreshed hardware enablement	Native	Limited native	Through virtualization
Software enhancements	✔	❌	❌
Updated install images	✔	✔	✔

Red Hat® Enterprise Linux® 7

Red Hat Enterprise Linux 5 and Red Hat Enterprise Linux 6

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THE PERFECT COMPLEMENT

Server Add-Ons to Support the Modern Operating System

MANAGEMENT

+ **Red Hat Satellite**
Manage, provision, automate and update Red Hat Enterprise Linux systems with Red Hat Satellite and Red Hat Insights.

+ **Red Hat Insights**
Proactively manage your environment and resolve technical issues before they impact business operations.
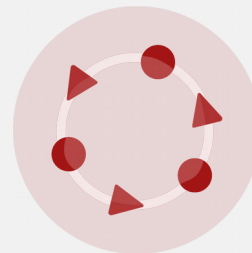
RELIABILITY AND STABILITY

+ **High availability**
Minimize service interruptions with automated failover and fault tolerant components.

+ **Resilient storage**
Improve storage availability in high-availability clusters.

LIFE CYCLE

+ **Extended update support**
Extend the support period of an update for 24 months.
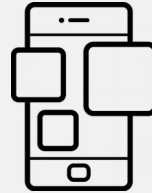
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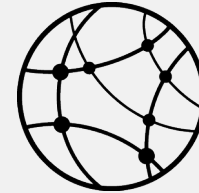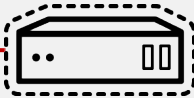# A STRONG AND STANDARD FOUNDATION
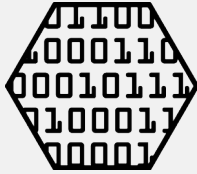
Big data
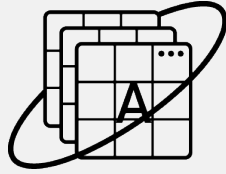
Modern apps

Mobile

IoT

Physical

Virtual

Private cloud

Public cloud

RED HAT® ENTERPRISE LINUX®

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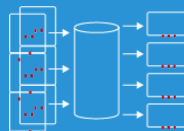# RED HAT ENTERPRISE LINUX 7 HIGHLIGHTS

Flexible

Lightweight application isolation (Linux® containers)

Windows interoperability

Scalable file systems

Stable and efficient

Optimal performance via profiles

Streamlined installation and deployment

System management

Critical reliability and military-grade security

RHEL FLAVOURS

RHEL ATOMIC HOST

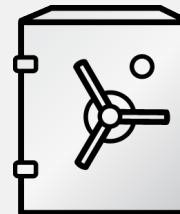## Focus on the application - not the host

OPTIMIZED

Applications run in Linux containers, the host OS is "immutable."

Complete consistency between dev, test, and production.

SECURITY

Using SELinux, Linux Control Groups (cgroups), seccomp, and namespaces helps to isolate and secure applications.

TRUST

Atomic Host is composed of the same software in RHEL, no need to re-certify or learn new tooling.

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RED HAT ENTERPRISE LINUX FOR SAP SOLUTIONS

- RHEL for SAP HANA, S/4 HANA, and Business Apps workloads
- High Availability
- Smart Management for lifecycle management
- Red Hat Insights for proactive optimization
- 4 Y Update Services for SAP Solutions
- Integrated support process
- SAP specific contents (resource agents, tuned profiles, …)

SAP certified Server Hardware
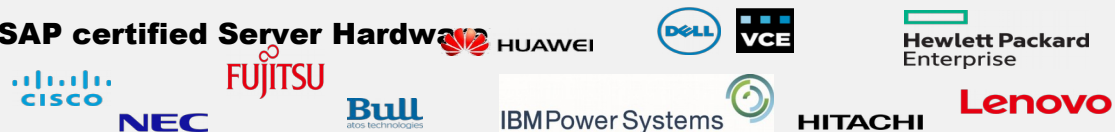
Certified Cloud Service Providers

SLA choices:
- Premium (7X24 production)
- Standard (5X12 non prod)

Per "socket pair" stackable models:
- 2 sockets **or** 2 virtual machines

Virtual Datacenter model
- 2 sockets/Hypervisor
- Unlimited guests

RED HAT VIRTUALIZATION HOST

Lightweight Host

- RHV-H - Purpose built node built on RHEL
- Can be deployed via ISO, PXE, USB, cloned, etc
- Writable root file system
- Uses trimmed down Anaconda installer
- "Cockpit" administrative console
- Security & services are pre-tuned to support virtual machines
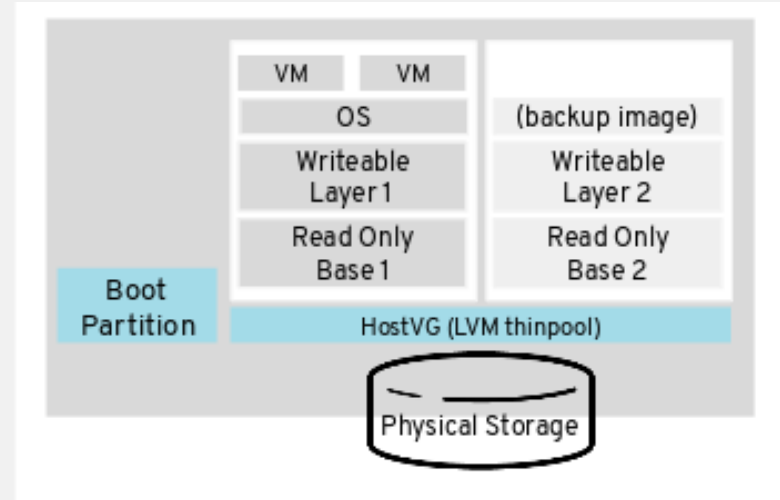
Red Hat Virtualization Host is designed around LVM Thinpools and "imgbased", resulting in a lightweight and flexible architecture.

RHEL - WHAT'S NEW?

RECENT RED HAT ENTERPRISE LINUX UPDATES

- Network-Bound Disk Encryption - auto LUKS decryption for boot volumes (7.4) and data volumes (7.5). Disks are auto-decrypted when on the network with the server, not decryptable when removed.

- TPM 2.0 (Trusted Platform Module) provides a fully supported (7.5) hardware root of trust for trusted boot, secure storage for disk encryption keys, and a secure system identity.

- Container enhancements for security and performance.

- Virtual Data Optimizer (VDO) provides data reduction (dedupe, compression)

- Identity Management improvements for large and complex deployments.

- System Roles via Ansible (tech preview) simplify RHEL system configuration

VIRTUAL DATA OPTIMIZER

Modular Data Reduction for Red Hat Enterprise Linux

Permabit acquired by Red Hat in August 2017

VDO is a data reduction module for the Linux device mapper. It installs on top of a Linux block device and provides:

- Inline, real-time, 4 KB fixed block-level deduplication
- Data compression optimized for high-speed random access
- 4 KB granular thin provisioning and zero block elimination
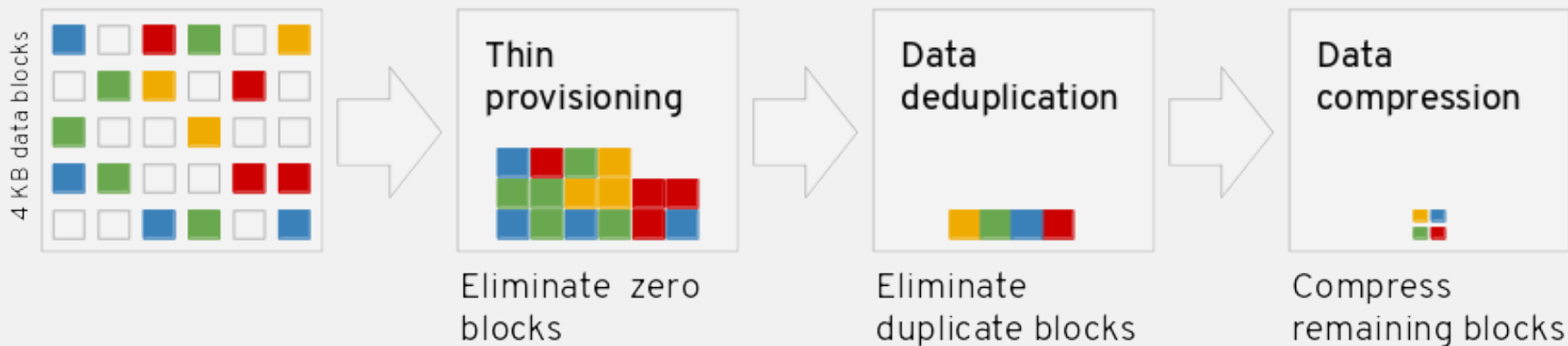- Included in RHEL 7.5

Benefits:

- Built-in cost savings across all of deployments especially with cloud consumption-based pricing
- Extend the life of your storage hardware by expanding its capacity

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VIRTUAL DATA OPTIMIZER

How Does It Work?

VDO data reduction processing

4 KB data blocks

Thin provisioning

Eliminate zero blocks

Data deduplication

Eliminate duplicate blocks

Data compression

Compress remaining blocks

VIRTUAL DATA OPTIMIZER

How Much Can I Save?

Good Candidates

Compressible Data
- Databases (textual content)
- Messaging
- Monitoring, alerting, tracing
- Systems, application logging

Redundant Workflow
- Backups
- Virtual Desktops
- Virtual Servers
- Containers
- Shared Home Directories
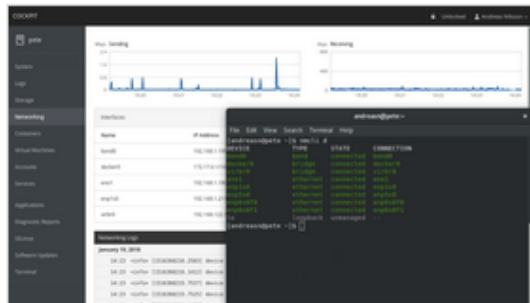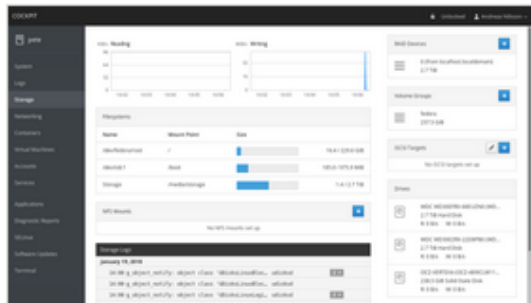
50% (2X) 66% (3X) 75% (4X) 80% (5X) 83% (6X) +

Savings Potential

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COCKPIT

Easy-to-use, Browser-based Admin Interface For Systems Management

EASY TO USE

Cockpit makes Linux discoverable, allowing sysadmins to easily perform tasks such as starting containers, storage administration, network configuration, inspecting logs and so on.

NO INTERFERENCE

Jumping between the terminal and the web tool is no problem. A service started via Cockpit can be stopped via the terminal. Likewise, if an error occurs in the terminal, it can be seen in the Cockpit journal interface.

MULTI-SERVER

You can monitor and administer several servers at the same time. Just add it easily and your server will look after its buddies.

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COCKPIT

Easy-to-use, Browser-based Admin Interface For Systems Management
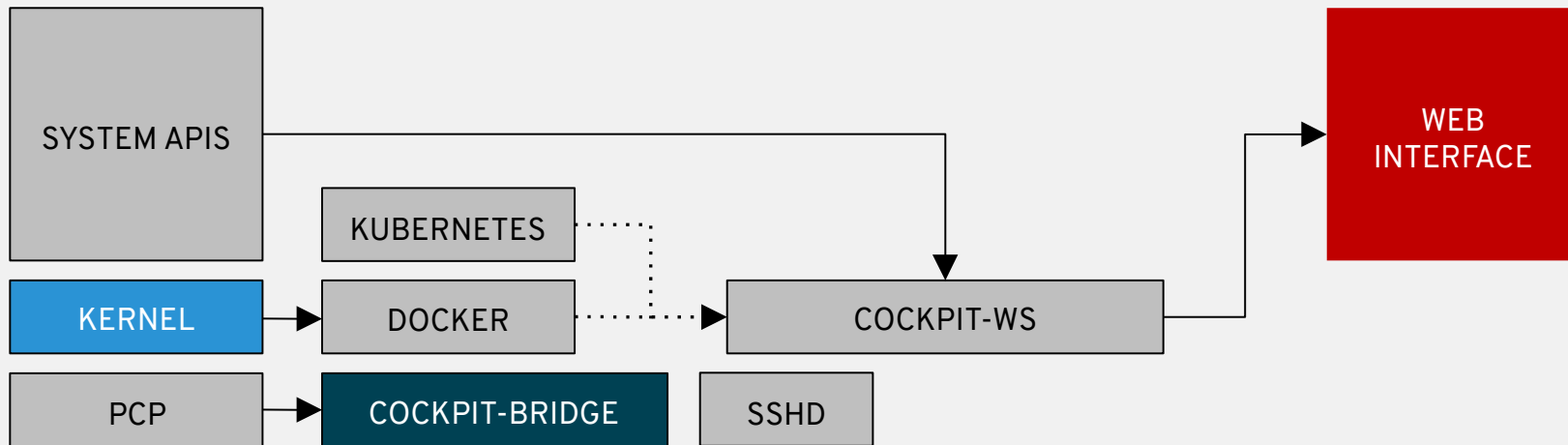
pete

System

Logs

Storage

Networking

Containers

Virtual Machines

Accounts

Services

Applications

Diagnostic Reports

SELinux

Software Updates

Terminal

KiB/s Reading

96
64
32
0
   14:02   14:03   14:04   14:05   14:06

MiB/s Writing

32
16
0
   14:02   14:03   14:04   14:05   14:06

Filesystems

Name	Mount Point	Size	
/dev/fedora/root	/		16.4 / 229.6 GiB
/dev/sdc1	/boot		185.0 / 975.9 MiB
Storage	/media/storage		1.4 / 2.7 TiB

NFS Mounts   ➕

No NFS mounts set up

Storage Logs

January 19, 2018

14:00 g_object_notify: object class 'UDisksLinuxBloc…   udisksd   2 ▸

14:00 g_object_notify: object class 'UDisksLinuxBloc…   udisksd   2 ▸

14:00 g_object_notify: object class 'UDisksLinuxLogi…   udisksd   2 ▸

RAID Devices ➕

0 (from localhost.localdomain)
2.7 TiB

Volume Groups ➕

fedora
237.5 GiB

iSCSI Targets ✏️ ➕

No iSCSI targets set up

Drives

WDC WD30EFRX-68EUZN0 (WD…
2.7 TiB Hard Disk
R: 0 B/s   W: 0 B/s

WDC WD30EZRX-22D8PB0 (WD…
2.7 TiB Hard Disk
R: 0 B/s   W: 0 B/s

OCZ-VERTEX4 (OCZ-489ICLW11…
238.5 GiB Solid-State Disk
R: 0 B/s   W: 0 B/s

Thank you

Jacek Skórzyński
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jacek@redhat.com