

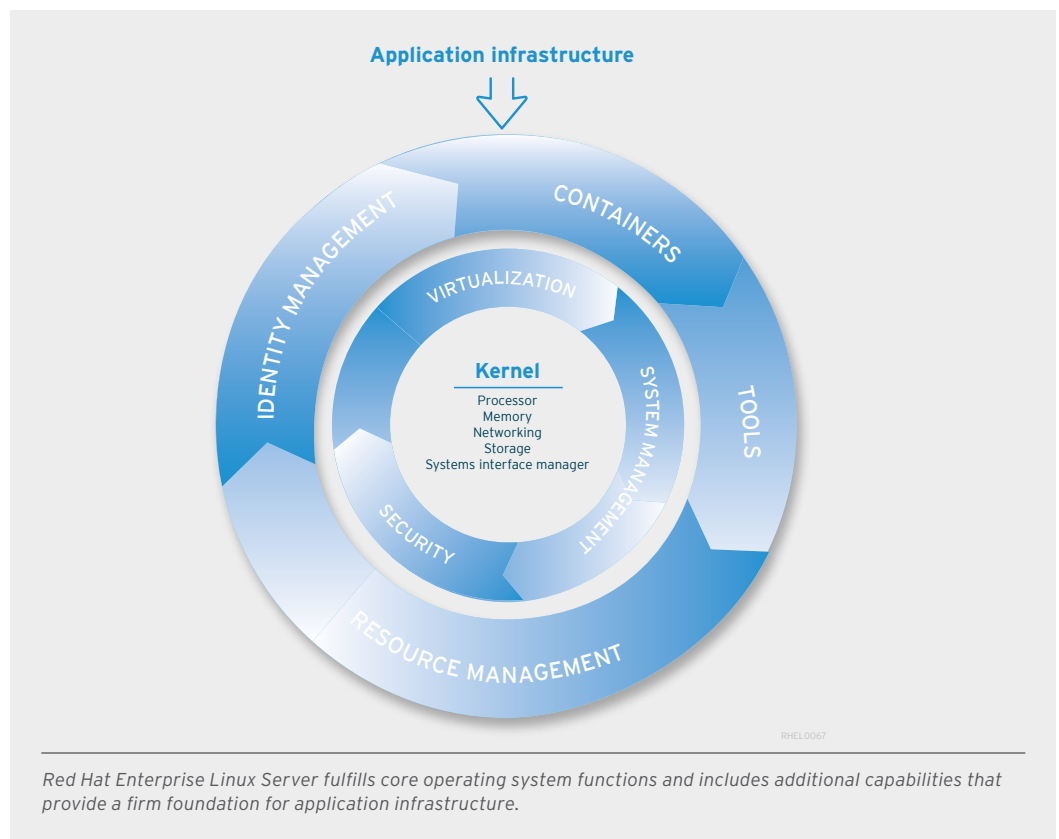
# RED HAT ENTERPRISE LINUX SERVER

DATASHEET

Business-critical applications need a platform that is proven to be stable. Red Hat Enterprise Linux frees you to deliver meaningful business results through technology by providing exceptional reliability and military-grade security.

## PRODUCT OVERVIEW

The operating system is the foundation on which your business depends. You depend on its reliability and security when you build your infrastructure. You need it to be easy to administer and control when you deploy applications on physical hardware, in virtual machines, and in the cloud. When you run applications, you want high performance as well as the ability to maintain and manage the platform on which they run. Finally, your operating system should give you the kind of flexibility you need to grow and take advantage of new solutions. Red Hat® Enterprise Linux®, the world's leading enterprise Linux platform, delivers these capabilities, which is why 90% of Fortune 500 companies trust Red Hat for their critical business applications.<sup>1</sup>



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<sup>1</sup> Red Hat client data, 2013.

With a Red Hat Enterprise Linux Server subscription, you gain access to the industry's most extensive ecosystem of partners, customers, and experts that supports and accelerates your success.

## **FEATURES + BENEFITS**

### **OPERATING SYSTEM FUNDAMENTALS**

Red Hat Enterprise Linux Server orchestrates the hardware resources that fulfill the infrastructure's basic computing requirements such as CPU, memory, networking, and storage. Red Hat works side-by-side with engineers from major hardware vendors to make sure that the operating system takes full advantage of the newest hardware innovations. Thanks to this collaboration, when a new chip design, system architecture, or driver comes out that accelerates performance or improves power utilization, Red Hat Enterprise Linux Server can deliver on the specifications.

#### **Performance**

Red Hat Enterprise Linux Server runs on highly scalable, multi-core systems that support the most demanding workloads. It manages underlying system complexity for you so that you get high performance with minimal management overhead. Performance optimization tools then allow you to tune your infrastructure to map precisely to your service level demands.

Red Hat Enterprise Linux Server is one of the highest performing operating systems available for x86 machines. When a solution provider wants to showcase their own solution's performance they frequently choose Red Hat Enterprise Linux Server as the platform on which to run those industry benchmarks. Those benchmarks measure against criteria such as database transactions, Java application performance, and I/O speeds in physical and virtual environments.

#### **Storage**

In the modern datacenter, servers rarely function in isolation. The default file system for Red Hat Enterprise Linux is xfs which is highly scalable (up to 500 TB) and robust in terms of data integrity. Red Hat Enterprise Linux delivers other file systems (ext4, CIFS, GFS2) to give you the flexibility to tailor your storage architecture to meet your data requirements.

Built into Red Hat Enterprise Linux Server are storage management capabilities, such as snapshotting and backup tools, that help you meet business continuity and disaster recovery goals for large volumes of data. The Red Hat ecosystem includes the major vendors of third-party backup and restore solutions that are certified to work with Red Hat Enterprise Linux Server.

#### **Security**

Red Hat Enterprise Linux delivers military-grade security technologies such as Security Enhanced Linux (SELinux) to prevent intrusions and protect your data. From network firewall control to secure containers for application isolation, Red Hat Enterprise Linux is one of the most secure operating systems available. It is certified for deployment in government agencies where data protection is of the utmost importance. You can secure applications with a common and comprehensive suite of technologies and policies across physical, virtual, and cloud deployments—all backed by Red Hat's global Security Response Team.

#### **Availability**

Red Hat Enterprise Linux customers are able to deliver 99.999% uptime to their enterprise users. The rock-solid reliability of Red Hat Enterprise Linux is achieved with the help of advanced hardware reliability, availability, and serviceability (RAS) features. You can further increase resilience of applications across physical or virtual machines by using the included Pacemaker cluster manager and GFS2 clustered file system. In addition, clustering capabilities offered by the Red Hat High Availability Add-On ensure availability and data integrity for both applications and storage, including for off-the-shelf applications such as Apache, PostgreSQL, and SAP business applications.

**Server administration**

A powerful framework that applies parallelization to managing processes and services, systemd, gives administrators the ability to very quickly start and stop processes. A concise set of commands and graphical tools provides powerful introspection capabilities matched by fine-grained control over systems. If your organization has implemented a third-party IT management system, you can integrate Red Hat Enterprise Linux Server using the standard interfaces provided by OpenLMI.

**Virtualization**

Red Hat Enterprise Linux Server includes KVM-based virtualization capabilities. Red Hat Enterprise Linux can serve as a host for virtual guests or it can run as a guest on supported hypervisors, including Red Hat Enterprise Virtualization, VMware, or Microsoft Hyper-V. The performance of Red Hat Enterprise Linux as a guest is nearly the same as performance on physical machines for many workloads. The Red Hat Enterprise Linux Server subscription is flexible so that you can move it from physical to virtual to cloud environments and back again without contacting Red Hat to modify the subscription.

**Interoperability**

Red Hat Enterprise Linux supports numerous hardware architectures from embedded devices to the mainframe. It offers interoperability of systems across datacenters, including centralized identity management for both UNIX and Microsoft Windows. By working with major hypervisors and commercial cloud providers, Red Hat Enterprise Linux simplifies transitions between physical, virtual, and cloud deployments.

**Application infrastructure**

An operating system is often considered a general-purpose backbone that must support a variety of workloads. However, Red Hat Enterprise Linux Server includes additional features aimed at specifically supporting requirements for running applications, such as application isolation capabilities, user authentication services, and administration capabilities. This gives DevOps teams integrated oversight and control over applications and the environment in which they run.

**Containers**

Linux containers in Red Hat Enterprise Linux combine lightweight application isolation with the flexibility of an image-based deployment method. They include the application dependencies (runtimes, libraries) so the application can work across hosts, including Red Hat Enterprise Linux, Red Hat Enterprise Linux Atomic Host, and OpenShift by Red Hat. Containers have a small footprint, minimal overhead, and simplified maintenance that reduce deployment costs of applications.

**Identity management**

Identity management is essential to data and application security. Red Hat Enterprise Linux Server includes a set of identity management features that simplifies an otherwise complex task of authenticating users and managing their access permissions. One of these features is the ability to manage identities centrally across Linux, UNIX, and Microsoft Windows domains, which then allows for single sign-on capabilities and a unified experience for users as they access applications running in different domains. The integration with Microsoft Directory is such that Windows administrators can work with SELinux security profiles and manage Linux identities using their own workflows, or Linux administrators can manage Windows users from within the Linux domain.

**NEXT STEPS**

Find out more about what makes 90% of Fortune 500 companies rely on Red Hat. Contact Red Hat Sales to learn more about how to evaluate or purchase Red Hat Enterprise Linux Server.

**Resource management**

Red Hat Enterprise Linux gives administrators and application developers fine-grained control over resources such as memory, network, and CPU processing to address business needs and service-level agreements (SLAs). You benefit from centralized management of processes, security, and services using systemd. And Linux containers help you isolate, secure, and deliver applications across development, test, and production environments. Features like control groups (cgroups) are but one example of how this is achieved.

**Tools**

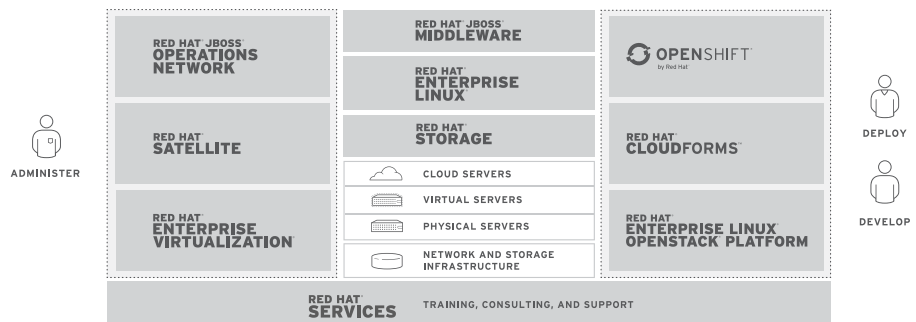
Red Hat Enterprise Linux Server includes a complete set of supported open source tools for creating modern applications using the latest stable technologies, including development tools, such as OpenJDK7, GCC, Ruby, Python, PHP, Perl; performance tools, such as OProfile, SystemTap, Valgrind, and many more; databases, such as MariaDB, MongoDB, PostgreSQL; and Apache Web Server. Red Hat Enterprise Linux also has a developer program, which makes specialized subscriptions and support levels available for developing and testing applications. These include the Red Hat Developer Toolset and Red Hat Software Collections that offer faster release cycles of the latest stable versions of popular development languages, databases, and tools, including Eclipse IDE.



**ABOUT RED HAT**

Red Hat is the world's leading provider of open source solutions, using a community-powered approach to provide reliable and high-performing cloud, virtualization, storage, Linux, and middleware technologies. Red Hat also offers award-winning support, training, and consulting services. Red Hat is an S&P company with more than 70 offices spanning the globe, empowering its customers' businesses.

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