Red Hat Enterprise Linux

Components
Use Cases
Features
Advantages
Resources
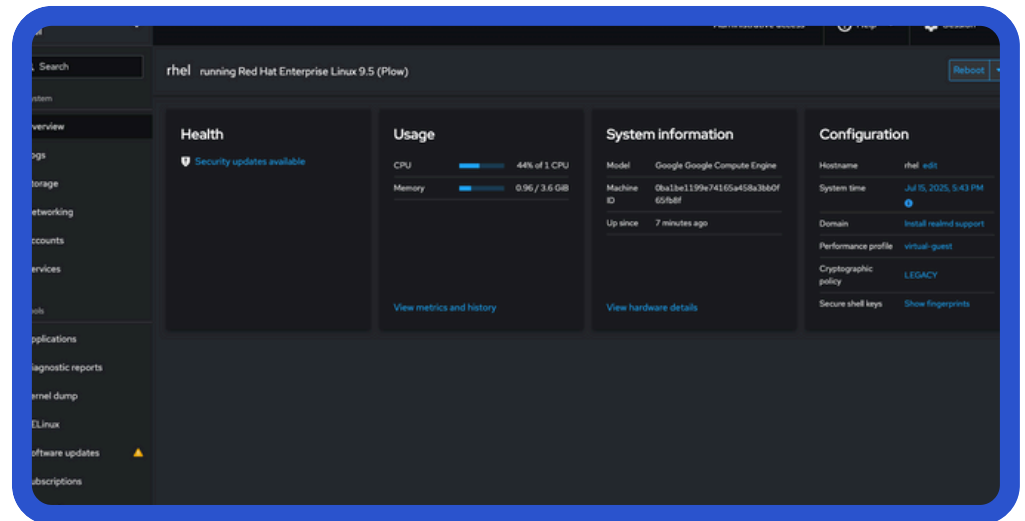
Strategic Consistency Across Hybrid Cloud: Provide a unified and reliable operating environment spanning on-premises data centers, public clouds, and the edge, streamlining operations and management.

Enhanced Security & Quantum Resilience: Proactively safeguard your infrastructure with advanced security features, including the introduction of post-quantum cryptography, and simplified FIPS compliance.

Accelerated AI/ML Workloads: Optimize performance for AI and machine learning initiatives with kernel-aware tuning, pre-built frameworks, and unified accelerator integration.

Boosted Operational Efficiency with AI: Leverage AI-powered guidance and automation tools, such as RHEL Lightspeed, to reduce the skills gap and accelerate system administration.

Reduced Total Cost of Ownership: Benefit from a stable, long-term supported platform with proactive analytics and streamlined management, minimizing downtime and operational expenditure.

Red Hat Enterprise Linux 10
Product Card

Turtini is focused on making Red Hat implementations successful for operators and decision makers

Turtini LLC
400 Granby St, Norfolk, VA 23510
contact@turtini.com

UEID -V5SFG9UL2JB8
CAGE: 12HZ4

Components
Red Hat Enterprise Linux 10

Red Hat Enterprise Linux 10 is the latest major iteration of the enterprise-grade Linux operating system, providing a robust, secure, and adaptable foundation for your IT landscape. It's engineered for the hybrid cloud, ensuring consistent experiences and high performance for diverse workloads from traditional applications to advanced AI/ML.

- **Linux Kernel 6.12:** The updated kernel brings significant performance enhancements, improved hardware support, and optimizations for modern architectures.
- **Application Streams Reloaded:** Offers multiple, independently updated versions of popular programming languages (e.g., Python 3.12, Node.js 22, Ruby 3.3) and development tools, providing developers with the latest innovations without impacting core OS stability.
- **Image Mode for RHEL (Bootable Container Images):** Streamlines OS management by allowing the entire operating system to be managed and deployed as container images, offering simplified updates, rollbacks, and consistent deployments.
- **Red Hat Enterprise Linux Lightspeed:** An integrated AI-powered command-line assistant that provides context-aware guidance, troubleshooting steps, and answers to natural language prompts, accelerating system administration and bridging the skills gap.
- **Enhanced System Management Tools:** Continues to refine the Cockpit web console for intuitive graphical administration, integrates deeper with Red Hat Insights for proactive issue detection, and expands System Roles for automated configuration with Ansible.
- **Advanced Container Host:** Further optimized for running containerized applications with the latest Podman, Buildah, and Skopeo versions, providing a secure and efficient environment for Kubernetes and OpenShift deployments.

Benefits for System Administrators & Developers

Increased Productivity: AI assistance, intuitive management tools, and modern developer environments empower teams to accomplish more, faster.

Simplified OS Lifecycle: Image-based deployments and streamlined updates reduce maintenance overhead and improve consistency.

Unmatched Stability & Performance: Leverage the latest kernel and performance optimizations for demanding applications and AI/ML workloads.

Stronger Security Posture: Benefit from built-in advanced security features and simplified compliance.

Consistent Development-to-Production: Maintain uniformity across your hybrid cloud environment.

Mission-Critical Workloads & Databases:
- **Use**: Providing a highly stable, performant, and secure foundation for demanding databases (e.g., SAP HANA, Oracle Database), enterprise resource planning (ERP) systems, and other critical business applications.
- **Benefit**: Maximum uptime, optimized performance, and long-term support for your most vital operations.

Hybrid & Multi-Cloud Consistency:
- **Use**: Ensuring a uniform operating environment and seamless workload portability across on-premises servers, virtual machines, and major public cloud providers (AWS, Azure, Google Cloud).
- **Benefit**: Simplified management, reduced operational complexity, and increased agility in heterogeneous environments.

AI/Machine Learning Infrastructure:
- **Use**: Serving as the optimized base for AI/ML development, training, and inference, leveraging hardware acceleration (GPUs), pre-tuned frameworks (TensorFlow, PyTorch), and robust data processing capabilities.
- **Benefit**: Faster model development, efficient resource utilization, and reliable deployment of AI-powered applications.

Edge Computing & IoT:
- **Use**: Deploying and managing RHEL at the edge for localized data processing, real-time analytics, and secure device management for IoT solutions.
- **Benefit**: Consistent management from core to edge, optimized footprint for resource-constrained devices, and enhanced security for distributed operations.

Containerized & Cloud-Native Applications:
- **Use**: Providing a secure and efficient host for container runtimes and orchestrators like Red Hat OpenShift, enabling rapid development and scaling of cloud-native applications.
- **Benefit**: Secure container isolation, streamlined container lifecycle management, and accelerated delivery of modern applications.

Enhanced Security & Compliance:
- **Use**: Meeting stringent regulatory requirements (e.g., FIPS, PCI DSS, HIPAA) with built-in security hardening, post-quantum cryptography, and simplified compliance tools.
- **Benefit**: Proactive risk mitigation, simplified auditing processes, and a demonstrably secure IT environment.

Red Hat Enterprise Linux Lightspeed (AI-Powered Assistant):
- **What**: A generative AI command-line assistant providing intelligent, context-aware guidance, troubleshooting, and code suggestions (e.g., for system configuration, log parsing) directly in the terminal.
- **Why**: Significantly reduces the Linux skills gap, accelerates problem-solving, and increases the efficiency of IT operations.

Post-Quantum Cryptography (PQC):
- **What**: Introduces support for quantum-resistant cryptographic algorithms to protect sensitive data against future threats from quantum computing, enhancing long-term data security.
- **Why**: Proactive security posture for critical data, safeguarding against emerging cyber threats, and future-proofing your encryption strategy.

Image Mode for RHEL (Bootc Integration):
- **What**: Enables the operating system to be deployed and managed as a container image, allowing for atomic updates, simplified rollbacks, and enhanced consistency across large deployments.
- **Why**: Streamlines OS lifecycle management, reduces operational errors, and accelerates infrastructure deployments, particularly for immutable infrastructure and edge use cases.

Optimized for AI & ML Workloads:
- **What:** Kernel optimizations (e.g., advanced scheduling heuristics), pre-tuned and certified AI/ML frameworks (TensorFlow, PyTorch), and unified integration with various accelerators (GPUs) for maximum performance.
- **Why:** Unlocks the full potential of your AI investments, providing a highly efficient and stable platform for data scientists and AI engineers.

Streamlined Compliance & Hardening:
- **What:** Offers integrated system roles for security compliance (e.g., CIS Benchmarks), simplified FIPS validation processes, and enhanced security hardening across both package and image modes.
- **Why:** Reduces the burden of compliance, strengthens your security posture, and provides clear auditing capabilities for regulatory requirements.

Advantages & Resources
Red Hat Enterprise Linux 10

Industry Leadership: The most trusted and widely deployed enterprise Linux platform, continuously evolving to meet future demands.

Hybrid Cloud Built-in: Designed from the ground up for consistent operation across any environment – bare metal, virtual, cloud, and edge.

AI at Your Fingertips: Leverage integrated AI to simplify management, accelerate development, and optimize AI/ML workloads.

Uncompromising Security: Proactive, multi-layered security including groundbreaking post-quantum cryptography, safeguarding your most valuable assets.

Developer Empowerment: Provides the latest tools and runtimes in a stable, enterprise-grade environment.

- **For Decision-Makers**: Invest in a secure & intelligent operating system that drives digital transformation and delivers tangible business value.
- **For Procurement**: Secure a high-value, continuously innovative, and fully supported platform that minimizes risk and optimizes long-term total cost of ownership.
- **For End-Users/Operators**: Experience a powerful, intuitive, and highly reliable environment that simplifies complex tasks and boosts your productivity.

Lab Environment
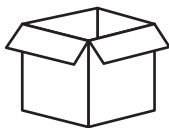
Product Page

Documentation

Transform your IT operations

Visit **turtini.com/rhel** for detailed documentation and resources.
Request a personalized demo to see Red Hat Enterprise Linux 10 in action.
Message us at **turtini.com/message** to discuss your OS needs.