Red Hat
OpenStack Platform

Upgrade to Red Hat OpenStack Platform 17.1

The latest release of Red Hat OpenStack Platform offers more stability and innovation than ever.

Get new features and an extended software life cycle.

Red Hat® OpenStack® Platform is a cloud computing platform that virtualizes resources from industry-standard hardware, organizes those resources into clouds, and manages them so users can access what they need—when they need it. Red Hat OpenStack Platform brings together open, community-powered innovation with enterprise scale and confidence, helping you build the cloud you need to deliver new, differentiated applications and services on a flexible, scalable, and proven OpenStack private cloud.

Red Hat has been a leading code contributor to the OpenStack community since 2011. Red Hat's participation reduces risk by providing long-term stability and integrations with enterprise software life cycle management and production-level support. Red Hat's active participation also gives the platform the ability to quickly understand and solve customers' most complex private cloud issues.

Red Hat OpenStack Platform 17.1 is the next iteration of the platform with an extended feature set and capabilities to:

- Keep pace with changing technologies and demands.
- Maintain a scalable, flexible cloud environment based on proven, integrated technologies from the core to the edge of the cloud infrastructure.

Organizations can run Red Hat OpenStack Platform 17.1 with Red Hat OpenShift® from the datacenter to the edge with the ability to run both virtual machines (VMs) and containers with bare-metal performance.

Why upgrade to Red Hat OpenStack 17.1

Red Hat OpenStack 17.1 advanced features provide a proven foundation for critical workloads and a future path to a hybrid cloud, the cloud edge, and beyond.

Simplified management

- **Director Operator.** OpenStack's virtualized control plane running on Red Hat OpenShift allows you to scale rapidly, using fewer resources running in a container than in a VM, and lets customers run VMs and containers side by side.

Networking that scales without limits

- **Logical Volume Management (LVM)-based short-lived snapshot and revert.** This allows for the creation of new block devices that are exact copies of logical volumes, frozen at a particular point in time on live systems.
- **Open Virtual Network (OVN) migration scale and OVN migration revert.** OVN networking tools assist in your migration to OVN's enhanced control plane.
- **Octavia load balancer.** This allows for more simultaneous incoming connections that are load balanced to the configured VMs, so sites remain available even with large numbers of connections from spikes in demand.

- **Expanded cluster capacity.** With greater capacity, Red Hat OpenStack 17.1 supports 1,000 nodes per cluster–250 more nodes per cluster than Red Hat OpenStack 16.2.

Flexibility and efficiency

- **Central processing unit (CPU) network interface controller (NIC) partitioning.** This reduces strain on NIC resources and improves NIC efficiency by allowing multiple data path interfaces to share NIC resources.
- **Mix pinned and unpinned virtual central processing units (vCPUs) within a VM.** This allows shared infrastructure resources across network function virtualization (NFV) and non-NFV workloads and the ability to pin an NFV process to a specific CPU to speed up response time.
- **Octavia and Designate at the edge.** This provides management and operation tools to strengthen the Red Hat OpenStack Platform solution portfolio so it functions as a self-contained virtual infrastructure solution.

Security

- **Security-hardened roles-based access control.** This allows organizations to deploy new environments with separate admins, members, and readers–granting each level the appropriate access for their roles.
- **Federation with OpenID Connect.** This provides a more security-focused user authentication and authorization experience by allowing users to log in using existing credentials and reducing the need for users to manage multiple sets of login credentials.
- **Federal Information Processing Standards (FIPS) compliance.** Running in FIPS mode allows deployment in highly regulated environments and helps achieve Federal Risk and Authorization Management Program (FedRAMP) compliance.
- **Keystone caching when using Fernet tokens.** Fernet tokens facilitate caching by the OpenStack Identity subsystem for both enhanced security of sensitive data and to accelerate the process of generating tokens, making the authentication process much simpler.

Red Hat Services can help

Upgrading a private cloud platform can be a complex process. Red Hat Services can help you plan and test your upgrade path, execute the upgrade, answer your questions during and after the upgrade, and upskill and certify your IT staff. Proven, field-tested solutions based on industry best practices help you deploy and test your Red Hat OpenStack upgrade through an approach that incorporates your technology, people, and processes.

Learn more about upgrading to Red Hat OpenStack 17.1

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