

HP Helion OpenStack® Community



Quickly deploy and easily manage small, open cloud environments

Completely free to license and download, HP Helion OpenStack Community allows enterprises to quickly deploy a private cloud based on OpenStack technology. It is suited for evaluation, development, and small-scale production deployments. It offers an open and extensible cloud architecture that provides customers choice and flexibility as they scale private cloud deployments. Optional HP support services provide the confidence of having HP on-call to assist when needed.



Balancing business needs

To compete and thrive in today's business environment, organizations must drive agility, cost control, and speed. To compete, enterprises must balance the benefits of an open, scalable, and extensible cloud architecture with high performance and security typical of enterprise-grade products and support.

So as enterprises look to adopt cloud architectures, many need to implement a strategy that includes a mix of cloud deployment models—private, managed, and public cloud—to account for different requirements and needs of the infrastructure and applications.

Gain more value with HP Helion OpenStack Community

HP Helion OpenStack Community speeds deployment and simplifies the management of small scale, open cloud environments and infrastructure services. It allows enterprises to evaluate, develop, and build small production deployments using the latest community innovations featuring openness, agility, and security through:

- A pure, standards based, and extensible distribution with no proprietary mix of software
- Simple installation and configuration process leveraging TripleO for deployment
- The latest OpenStack technology through automated-live distribution of updates close to trunk
- Improved speed, support, and control across the full solution stack with our own, included Linux® host operating system.
- Ability to upgrade workloads to HP Helion OpenStack for scalability and a more feature-rich environment when needed
- A hardened distribution for the confidence of enterprise grade performance and security
- Optional support services to help you resolve issues and maintain smooth operations

HP Helion OpenStack Community: the benefits

- **Gain control with open, extensible architecture**—When it comes to the cloud, integrating proprietary stacks with open source software can be difficult and leads to vendor lock-in. HP Helion OpenStack Community is not a mix of proprietary tools, but released under open source license. And because HP is a top contributor to OpenStack, you can rely on continued innovation with updates close to trunk.
- **Simplify cloud management**—A simplified administrative user console streamlines operational tasks and, with automated update distribution and cloud health monitoring and management, you'll reduce administrative time and costs, allowing you to focus on the issues that matter most.
- **Improve business agility and productivity**—HP Helion OpenStack Community relies on an open cloud that speeds and simplifies workload delivery across hybrid cloud models, starting with streamlined configuration and deployment for accelerated time-to-value. And when it's time to scale up to a large, enterprise-grade production deployment, you'll be ready.

Speed deployment and gain confidence with HP

As a leader and top contributor in the OpenStack community, HP brings industry-leading innovation, expertise, and best practices with HP OpenStack technology to help customers accelerate business outcomes. Further, HP provides a wide range of professional cloud services and support, allowing your organization to move to the cloud quickly and leverage the benefits of the cloud effectively. These experts can advise, transform, and manage your cloud journey and investments. And with HP-backed and branded products and services, you'll be confident in taking the leap to the cloud.

HP Helion OpenStack leadership

As a founding member of the OpenStack Foundation and current Platinum Member, HP has unsurpassed experience with the OpenStack cloud platform and access to its latest technology innovations. HP Helion is one of the largest code contributors to the OpenStack community.

We were named a "Leader" in Forrester Wave™ for Private Cloud Solutions for a solution built on OpenStack, while also running one of the largest OpenStack public cloud infrastructures in the world.¹ All this further underscores our commitment and contributions to the OpenStack community.

HP Helion OpenStack Community specifications

Deploy the OpenStack Community edition with a minimum configuration of seven physical servers:

1. **Seed Cloud**—One virtual machine
2. **UnderCloud Server**—One physical server
3. **Overcloud Management Servers**—Three physical servers
4. **Overcloud Swift Object Servers**—Two physical servers
5. **Overcloud Compute Server**—One physical server (at least one and maximum of 30)

The maximum supported configuration is 36 servers (as above with 30 compute servers in place).

¹Forrester Research Inc., "The Forrester Wave: Private Cloud Solutions, Q4 2013," Lauren E. Nelson, Nov. 25, 2013

Technical specifications

Component Type	Role of the component	VM or physical server	Hardware configuration (minimum and recommended)
Seed Cloud	<p>The Seed Cloud VM is created by the customer as per HP Helion OpenStack® Community edition specification, and booted from an image provided as part of the installer.</p> <p>The Seed Cloud is used to deploy and update the UnderCloud.</p>	1 VM	<p>Memory: 2048MB</p> <p>Network: 1 vNIC</p> <p>CPU: 1 vCPU</p> <p>Disk: 2x200 GB Discs presented as a single 400 GB device via a RAID controller</p>
UnderCloud Server	The UnderCloud system is a basic, single-node, OpenStack cloud running nova bare-metal (Ironic), plus the CODN and the Community edition installer. It is used only to deploy, test, and update the OverCloud Servers.	1 physical server	<p>Memory: 24 GB</p> <p>Network:</p> <ul style="list-style-type: none"> • Minimum—10Gb NIC with PXE support • Recommended—2x 10Gb NIC capable of being bonded <p>CPU: Intel or AMD 64-bit processor</p> <p>Disk: 2x350 GB discs presented via a RAID controller a 100 GB for the system, 600 GB for volume storage</p>
OverCloud Management Servers	These management servers are required to provide quorum-based HA configurations for clustered services (MySQL and RabbitMQ) and API service.	3 physical servers	<p>Memory: 32 GB</p> <p>Network:</p> <ul style="list-style-type: none"> • Minimum—10Gb NIC with PXE support • Recommended—2x 10Gb NIC capable of being bonded <p>CPU: Intel or AMD 64-bit processor</p> <p>Disk:</p> <ul style="list-style-type: none"> • Minimum—2x350 GB discs presented as a single 700 GB device via a RAID controller • Recommended—4x2TB disks
OverCloud Swift Object Servers	Provides object storage with two servers in a load balancing mechanism.	2 physical servers	<p>Memory: 32 GB</p> <p>Network: 10Gb NIC with PXE support</p> <p>CPU: Intel or AMD 64-bit processor</p> <p>Disk:</p> <ul style="list-style-type: none"> • Minimum—2x350 GB discs presented as a single 700 GB device via a RAID controller • Recommended—4 or more 500 GB discs, presents as a single device via a RAID controller
OverCloud Compute Servers	Enables VM provisioning through a choice of standard hypervisors: multiple compute servers work in a high-availability mode.	1 physical server (Min. 1 and Max. 30)	<p>Memory:</p> <ul style="list-style-type: none"> • Minimum—32 GB • Recommended— 96 GB or more <p>Network:</p> <ul style="list-style-type: none"> • Minimum—10Gb NIC with PXE support • Recommended—2x 10Gb NIC capable of being bonded <p>CPU: Intel or AMD 64-bit processor with hardware virtualization enabled</p>

Feature specifications

Feature	Specification
Speeds cloud service delivery and development	<ul style="list-style-type: none"> • Simplified installation and configuration process reduces 1,200+ manual configurations to a few automated steps • Provides up to 30 nodes and 600 VMs to support small-scale production and evaluations • Workloads migrate to HP Helion OpenStack for larger production requirements
Simplifies deployment and management	<ul style="list-style-type: none"> • Automated-live distribution of regular updates, tested patches, and service releases with full customer control over upgrades • Simplified administrative user console • Technical support option available to help manage performance • Integrated HP Linux host OS for better speed, support, and control across the full solution stack
Enterprise-grade reliability and security	<ul style="list-style-type: none"> • Resilient, distributed, and highly available infrastructure services for OverCloud and security hardening of OpenStack code
Optional HP Support Service	<ul style="list-style-type: none"> • HP Helion OpenStack Community edition is available as a free download or as a for-fee version that includes HP's 9x5 Foundation Care Support Service. Foundation Care provides the added confidence that HP OpenStack experts are available to provide assistance and help you resolve issues with the software. Primary features of 9x5 Foundation Care include: <ul style="list-style-type: none"> – Global access to HP OpenStack technical experts – Help with software features and operational support – Installation advisory support – Ownership and accountability for problem through to resolution • HP Helion OpenStack Community edition with 9x5 Foundation Care Service is available for sale through HP sales and HP partners worldwide
Optional product indemnification	<ul style="list-style-type: none"> • HP offers optional indemnification on Helion OpenStack products, giving our customers the added confidence with HP as their partner as they develop OpenStack-based clouds. Foundation Care support is a prerequisite to Indemnification. Other conditions apply; contact your HP sales rep for details.

Icehouse release capabilities

OpenStack-powered Capabilities Offered	Compute (Nova)	Object Storage (Swift)	Block Storage (Cinder)	Networking (Neutron)	Image Services (Glance)	Identity (Keystone)	Telemetry (Ceilometer)	Dashboard (Horizon)
Version of OpenStack used	ICEHOUSE	ICEHOUSE	ICEHOUSE	ICEHOUSE	ICEHOUSE	ICEHOUSE	ICEHOUSE	ICEHOUSE
API supported	Full Support	Full Support	Full Support	Full Support	Full Support	Full Support	Full Support	Full Support
API Version Supported	v2.0	v1.0	v1.0 and v2.0	v2.0	v1.0 and v2.0	v2.0 and v3.0	v2.0	N/A

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Why partner with HP?

HP Helion OpenStack Community provides the best of open source choice and enterprise-grade reliability and security, so you can focus on developing cloud applications that deliver value to and differentiate your organization. By working with HP, you have the confidence that comes with a proven and trusted technology partner that understands the enterprise with global reach.

- **Scalability** to grow and evolve your enterprise by adding components as your business grows
- **Workload flexibility** to enable the design and provisioning of multi-tier infrastructure services
- **Maintained control and security** with proven security hardening of OpenStack so cloud environment meets compliance requirements
- **No vendor lock-in** with open and transparent non-proprietary cloud architecture that enables innovation and cost control

See what HP Helion OpenStack Community is all about.

The benefits of HP Helion OpenStack Community are hard to ignore. Scalability, maintained control, and security, no vendor lock-in, and workload flexibility are just the beginning. With HP-backed and branded services and products, you'll be confident in the future of your organization's cloud.

Download your free distribution today at hp.com/helion/openstack.



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