

OpenStack: An Overview

What is OpenStack?

OpenStack is an open source cloud platform. OpenStack software controls large pools of compute, storage, and networking resources throughout a datacenter, all managed by a dashboard that gives administrators control while empowering their users to provision resources through a web interface.

Why OpenStack?

Control. OpenStack's flexible architecture and vibrant ecosystem mean you can customize the platform for your business needs and control your own destiny. The modular design allows you to integrate third-party technologies, so you don't have to rip-and-replace your existing infrastructure and can continue to use your favorite tools. You can also directly influence the OpenStack roadmap through the open design process and strong user community.

Agility. OpenStack's self-service dashboard and rapid resource provisioning support internal engineering teams, agile business processes and faster product delivery. Gain operational efficiencies and a competitive advantage by streamlining your infrastructure on the OpenStack cloud platform.

Cost savings. With expensive and complex licensing schemes, some cloud software forces you to make architectural decisions just to contain licensing costs. With OpenStack, the software is freely available under the Apache 2 license, which means you have the freedom to use OpenStack according to your unique requirements, whether it's from the free open source repositories or a with a turnkey enterprise solution. Many companies in the ecosystem offer professional services to provide expertise regardless of which path you choose.

OpenStack Ecosystem. More than 400 leading technology companies across the globe are developing and building tools for OpenStack. With so many options in the commercial ecosystem, you are never locked to a vendor. For more information about the companies supporting OpenStack, go to openstack.org/foundation/companies.

OpenStack Elements

OpenStack is open source software to build private and public clouds. There are three main components:



OpenStack Compute: Provision and manage large networks of virtual machines



OpenStack Networking: Pluggable, scalable, API-driven network and IP management



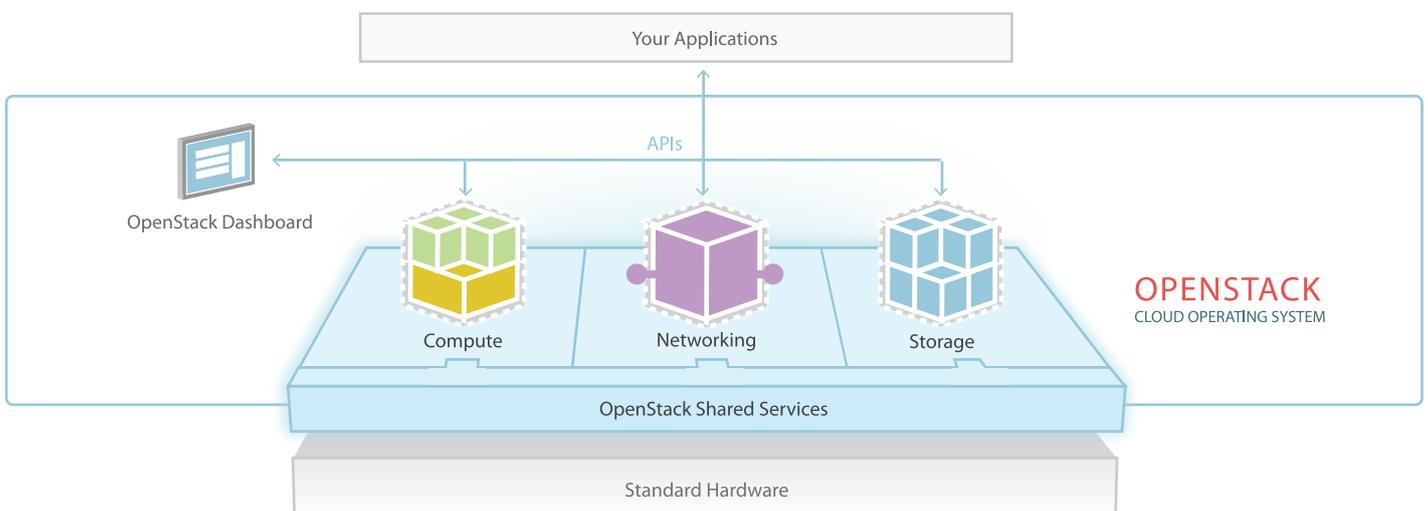
OpenStack Storage: Object and Block storage for use with servers and applications

OpenStack components are tied together with **OpenStack Shared Services** and accessible both via the **OpenStack Dashboard** and programmatically via the API.



The **OpenStack Foundation** promotes the development, distribution and adoption of the OpenStack cloud operating system.

To learn more about OpenStack Foundation and OpenStack cloud software, go to: www.openstack.org



OpenStack: Getting Started

Try OpenStack

Option One: Public Clouds

To see how an OpenStack Cloud operates, you can quickly try one of many OpenStack public clouds in production across the world, including DreamHost, eNovance, HP and Rackspace. A quick swipe of the credit card will show you OpenStack in action.

Option Two: Local Dev Environment: devstack.org

With some technical skills, DevStack is a great option to install and run an OpenStack cloud on your laptop (or even inside the VM on a cloud). DevStack is ideal for potential users who want to see what the Dashboard looks like from an admin or user perspective, and OpenStack contributors wanting to test against a complete local environment.

For more great pointers on getting started with OpenStack, go to www.openstack.org/start/

Learn About OpenStack

openstack.org/user-stories/

Complete case studies to learn more about use cases and best practices

docs.openstack.org

Detailed OpenStack documentation, developer and administrator guides

Deploy OpenStack

Distributions. There are many ways to install and deploy OpenStack through software distributions, each of which add their own value to the cloud operating system. Software distributions powered by OpenStack include Cisco, Cloudscaling, Debian, Fedora, Piston Cloud Computing, Red Hat, SUSE, Ubuntu and StackOps.

Packaged Solutions. Many companies now offer integrated hardware and software solutions to deploy OpenStack private clouds, such as Dell, IBM, MetaCloud, Morphlabs, and Nebula.

Services. There are many service companies that bring OpenStack expertise to the table such as B1 Systems, CloudTP, Mirantis and SwiftStack. If you are looking for someone to guide you through these choices, help you execute your cloud strategy and provide development and operations support, this is a great place to start. Several of these companies such as Mirantis and Rackspace also provide OpenStack training courses for cloud administrators.

An OpenStack User Story



"We knew we had to reinvent the job of a traditional hosting company and quickly detach ourselves from competition by being innovative and specialized in a specific area of expertise: choosing OpenStack was a way to do so."

RAPHAËL FERREIRA
CEO, ENOVANCE

French-based hosting and managed services provider, eNovance, specializes in improving the end-user experience for web and mobile applications, Big Data solutions, and Open Source/Open Cloud environments. A few years ago, eNovance began receiving recurring requests from customers asking how to handle fluctuating capacity, avoid vendor lock-in and maintain control of their IT infrastructures while still allowing for scale. These market needs caused eNovance to build a Public Cloud that complemented their existing Private Clouds. eNovance chose OpenStack to build its Public Cloud for its open source technology, compatibility with other Public Clouds, ability to massively scale, and growing dynamic ecosystem.

In May 2012 eNovance officially launched the first OpenStack Public Cloud in Europe, eNoCloud. Major French users of the new eNoCloud such as Chronopost (part of the La Poste group, the French national mail) and the CNES (government agency responsible for shaping and implementing France's space policy in Europe) reviewed the deployment positively. Today, eNovance is glad they made the right cloud bet with OpenStack. Businesses of all sizes and in any industry can realize similar value from OpenStack software, for on-premise or hosted private clouds, hybrid clouds, eCommerce, and SaaS.

Read the full case study at openstack.org/user-stories/