The Easiest Way to Build and Manage an OpenStack Cloud

Canonical and SoftLayer, an IBM Company, have come together to provide the expertise and infrastructure you need to scale a cloud environment.

Opening up the Cloud

OpenStack, the world's most popular cloud management platform, makes cloud computing accessible to everyone. It tears down financial barriers to cloud deployments and tackles one of the biggest fears associated with cloud computing: lock-in. Because OpenStack is open source and supported by a wide ecosystem, it gives users the freedom to change service providers and hardware at any time.

Its performance speaks for itself. Compared to other cloud environments built using virtualization technology, OpenStack can double server utilization to as much as 85 percent.[1] This infrastructure efficiency makes an OpenStack cloud economical, and the additional capacity made available by OpenStack delivers more flexibility, scalability, and agility to businesses building on this cloud foundation.

The OpenStack community is supported by contributions from more than 200 companies, including IBM and Canonical. SoftLayer, part of IBM, provides OpenStack-compatible cloud services that can scale out to many thousands of nodes. SoftLayer's own object storage platform is built on OpenStack Swift, and its three-tiered network integrates perfectly with OpenStack's compute and network node architecture.

The Challenge of Finding Expertise

Although OpenStack is well supported with compatible cloud services, there is a significant challenge to overcome before users can launch their own OpenStack cloud. That is to recruit—and retain—OpenStack experts in a highly competitive jobs market. Resourcing a six-strong team to work 24x7 would cost between $900,000 and $1.5 million at current market rates, and can take months of headhunting.

Because it's hard to find experienced staff, companies often struggle to deploy OpenStack on time and on budget, eroding the savings that OpenStack should bring.

"Compared to other cloud environments built using virtualization technology, OpenStack can double server utilization to as much as 85 percent."

1. http://www.socaltech.com/bringing_the_benefit_of_managed_cloud_to_enterprises_with_metacloud/s-0050272.html.

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Introducing BootStack

To address these concerns, Canonical has created BootStack, a new service for setting up and operating an OpenStack cloud, in both on-premises and hosted environments.

Canonical is the company behind Ubuntu OpenStack, the world's most popular OpenStack distribution, used for 64 percent of OpenStack production clouds.[2]

% of OpenStack production clouds run on:

● Ubuntu
● RHEL
● CentOS
● Other

64%
20%
19%
16%
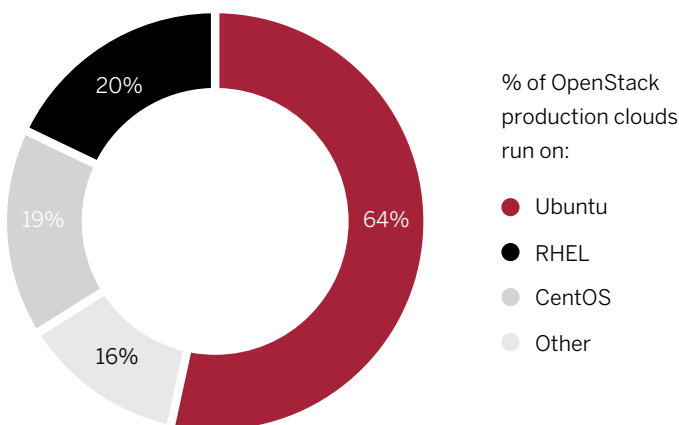
With BootStack, the Canonical team will work with you to define requirements and specify the right cloud infrastructure for your business needs. Canonical can build and manage your entire cloud infrastructure, including Ubuntu OpenStack, the underlying hypervisor, and deployment onto hosted or on-premises hardware. As a result, you get all the benefits of a private cloud without any of the pain of day-to-day infrastructure management.

BootStack provides peace of mind that experts are running your OpenStack environment. Canonical's engineering and support teams are the most experienced in the industry, having worked with many OpenStack customers around the world and supported Canonical's own IT infrastructure, which is built on OpenStack. BootStack is backed by a clear SLA that covers cloud availability at your desired scale, as well as uptime and responsiveness metrics.

BootStack is short for "Build, Operate, and Optionally Transfer," and it gives you the option of taking over the management of your cloud in the future.

On-premises or hosted?

Some companies prefer to host on-premises because they feel more secure knowing their cloud is running on their own site. However, this feeling of security can be an illusion, and when things go wrong, companies sometimes find they don't have the expertise on-hand to quickly recover. Who is responsible for troubleshooting and fixing errors? Some companies don't have a good answer to that question.

Hosting on-site can be expensive, too. With an on-premises data centre, there is significant outlay up-front, and large spikes in investment are required when the hardware footprint needs to be extended. In the best-case scenario, it is three times as expensive to run your own data centre as it is to outsource to a hosting specialist.

Managing your own data centre locks employees into operational responsibilities and distracts them from the more strategic and value-adding activities of the organization.

"A 24/7 team of six in-house OpenStack experts could cost from $900k to $1.5m. BootStack therefore makes economic sense for deployments of up to 200 servers."[3]

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2. http://superuser.openstack.org/articles/openstack-user-survey-insights-november-2014
3. http://www.ubuntu.com/cloud/managed-cloud

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BootStack: The Hosted Option

Canonical has chosen SoftLayer to provide its hosted option for BootStack worldwide. SoftLayer provides customizable bare metal and virtual cloud infrastructure from data centres around the world, enabling OpenStack to be used for provisioning bare metal as well as virtual machines.

With the hosted option for BootStack, your OpenStack cloud will be hosted on Ubuntu-certified hardware in SoftLayer's data centres. SoftLayer provides the highest performing cloud infrastructure available, with powerful servers, a robust network architecture, multiple power feeds, fiber links, dedicated generators, and battery backup.

SoftLayer has a network of data centres around the world, so you can host your cloud where you choose. Using SoftLayer's private network, you can seamlessly move data between servers at no cost and benefit from secure, fast, and low-latency communications between data centres. All SoftLayer data centres are built to the same exacting standards and specifications, so you get consistent results and reliability in all locations.

SoftLayer data centres are staffed 24x7 by experts who can troubleshoot and address the rare issues that can't be directly resolved through the automated management system.

The hardware and software are covered by proactive maintenance too. Canonical and SoftLayer will take care of patches and upgrades to both the operating system and OpenStack; hardware and software failure prevention and fix; proactive health monitoring of the cloud and hardware; and resolution of any other problems.

No Lock-in

With BootStack, you're in charge. Your team can access every tool and every machine, any time. You can choose to take over the management of your cloud at any time, and will receive training and support from Canonical to ensure a smooth transition. You can bring your cloud in-house or continue hosting with SoftLayer.

If you continue to host with SoftLayer, you will benefit from the SoftLayer API, which enables you to automate your SoftLayer solution to fit your unique needs and provides access to more than 3,000 documented methods and hundreds of distinct services. It underpins SoftLayer's Web-based customer portal and mobile apps, which make account administration and server management quick and easy, wherever you are.

How much does BootStack cost?

BootStack offers predictable and stable costs. Your cloud is built to your specification, on dedicated hardware, and priced in a predictable fashion.

BootStack is priced at $15 per day per server, plus the cost of the hosting. To meet OpenStack's demanding requirements, Canonical recommends that hardware nodes have dual processors and a minimum of 64GB of RAM.

SoftLayer offers a number of bare metal servers that meet (and exceed) that recommended configuration, starting at $699 per month.[4] There's no up-front investment to acquire hardware or staff, and there is no additional ongoing overhead. You pay as you go, and can scale flexibly as your business needs change.

BootStack, hosted on SoftLayer hardware, is the most flexible, scalable and cost-effective way to deploy an OpenStack cloud, backed by the industry's most experienced OpenStack experts.

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4. Bare Metal Server: Dual Processor Hex Core Xeon 2620 @ 2.00GHz with 64GB RAM, 500GB SATA HDD, 100Mbps Network Port, and 20TB of included public outbound bandwidth.

Learn More

The cooperation between Canonical and SoftLayer builds on the existing relationship between the two companies. Canonical has a strong working relationship with SoftLayer's parent company, IBM, and Ubuntu is the preferred operating system of many SoftLayer customers. Liberate your team from the challenge of OpenStack management, without compromising on quality or control. Contact us today to find out how we can help you to achieve greater agility in your business, and greater flexibility in your cloud.

To find out more about BootStack, visit: **www.ubuntu.com/cloud/bootstack.**

To find out more about the SoftLayer cloud platform, visit: **www.softlayer.com.**

sales@softlayer.com or call us toll free: **866.398.7638.**

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