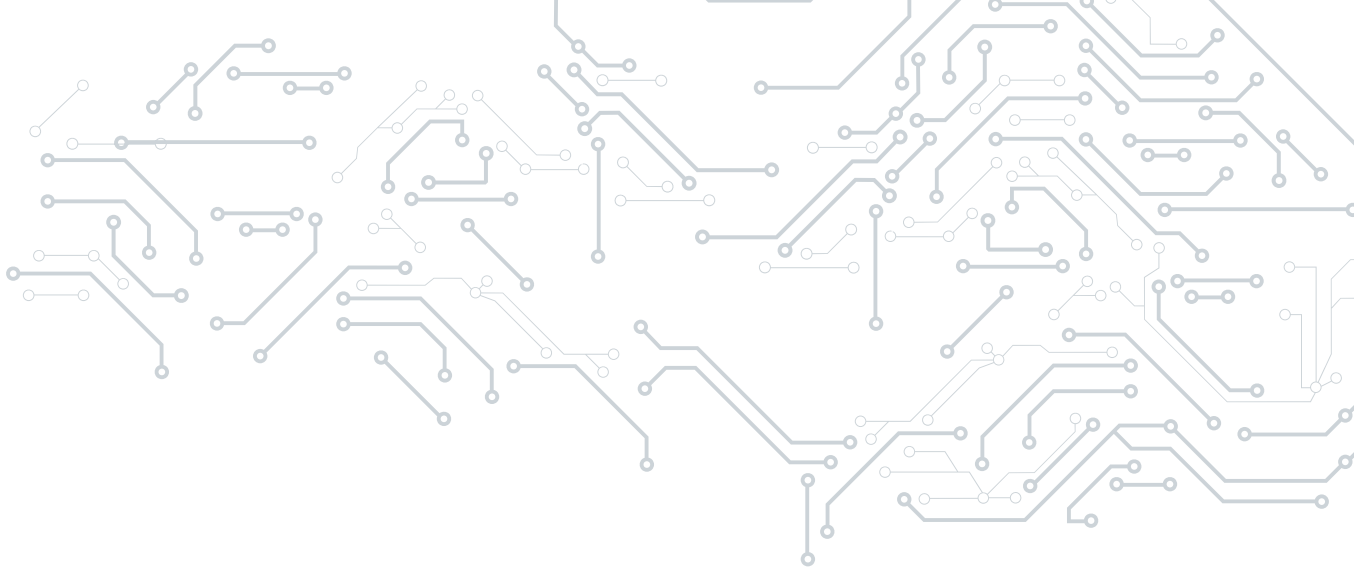# 451 Research | Advisory

OpenStack in Support of Public Cloud

OpenStack has a dominant position as the source for building open source public cloud environments

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PREPARED FOR

redhat.

About 451 Research

451 Research is a preeminent information technology research and advisory company. With a core focus on technology innovation and market disruption, we provide essential insight for leaders of the digital economy. More than 100 analysts and consultants deliver that insight via syndicated research, advisory services and live events to over 1,000 client organizations in North America, Europe and around the world. Founded in 2000 and headquartered in New York, 451 Research is a division of The 451 Group.

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When it comes to public cloud, OpenStack is comparable with the offerings of the major public cloud providers. Managed cloud providers have been able to provide a similar cloud experience to these public cloud services using OpenStack. Think of public cloud services as resources – such as applications and storage – available to organizations over the internet via public cloud service providers, usually on a pay-per-use model.

This is but one indication of the ongoing and growing efforts from within the OpenStack community to push this cloud computing platform ever further. Just six years old, the OpenStack community has more than 60,000 members – double the number a year ago – and almost every single major technology vendor in the world is a member of the foundation.

Enthusiasm for and adoption of OpenStack cloud continues to grow at a rapid pace. Our research indicates that the global OpenStack market will continue at a healthy 35% compound annual growth rate at least through 2020. In sum, 451 Research believes that OpenStack has established a dominant, leading position as the go-to open source option for building public cloud environments. Today, the majority of OpenStack's $5bn annual revenue comes from service providers offering multi-tenant infrastructure as a service.

Our research indicates that part of OpenStack's success in the near future will be in providing the orchestration for public cloud integration, along with on-premises private cloud and hosted OpenStack environments. Below are two case studies of very different organizations that have adopted OpenStack public cloud.

Case Study: Global Leader in OpenStack Public Cloud

As a top-tier global managed cloud provider, this company boasts more than one billion OpenStack managed server hours. With annual revenue in excess of $2bn, the company counts more than half the Fortune 100 as its customers. Its commitment of more than 3,000 hosting engineers and more than 400 'public cloud provider certified' professionals boosts its popularity with large customers.

Although entrenched with a major public cloud provider, the company initially moved to OpenStack technology in an effort to create managed cloud services beyond this public cloud provider. Other motivators for the company's move to OpenStack included avoiding vendor lock-in and increasing operational efficiency.

The company has deployed several platforms and tools to help run its massive OpenStack environment, including a hybrid cloud management tool, the Linux platform, a lifecycle and systems management tool, a software-defined storage platform, and a monitoring tool. The company also has deployed a wide variety of storage offerings including object, block unified and file.

The company reports that this dedication to OpenStack has paid off for its growing list of customers in terms of offering them greater portability of workloads, scalability, flexibility and enhanced security. The company has further architected its OpenStack environment for interoperability between private and public clouds.

Case Study: Service Provider Goes 'All In' With OpenStack

As a leading provider of OpenStack services in Asia-Pacific, this company was founded nine years ago with the stated intention of 'making cloud computing a practical option for businesses,' clearly at a time when cloud was in its earliest days. Upon its initial contribution and usage in 2010, the company joined the OpenStack Foundation as one of the original founding Gold Members. Today, it operates seven datacenters running roughly 4,400 virtual CPUs and more than 300 terabytes of cloud storage.

The company said it seized on OpenStack as a cloud platform in order to provide greater agility and efficiency to its customer base while offering lower costs than other cloud platform alternatives. Other key motivators for moving to OpenStack for its public cloud offerings included avoiding vendor lock-in and the ability to program via APIs.

Today, the company operates roughly 2,000 OpenStack cores or CPUs. The number and variety of use cases and workloads leveraging OpenStack at this company are many: they include email, enterprise resource planning, application development, analytics and business intelligence, and security applications. To further help run this growing OpenStack environment, the company has also pressed into service a hybrid cloud management tool for simpler integration and workload movement, a Linux platform and a software-defined storage program. 'Developing and running cloud-native applications' ranks at the top of the company's list of uses for its cloud-based platform.

The biggest OpenStack benefit the company cites for its customers comes down to 'the agility they get from (the public cloud service provider) within their own walls that they can own and control.'

The Wisdom of Leveraging a Trusted Partner

It is true that some organizations will try to cobble together their own OpenStack platforms, given that the software is largely in the public open source domain. But that kind of strategy requires a very dedicated OpenStack staff to deploy, support and maintain all the new developments and iterations of OpenStack as they become available. Thus, most users choose a commercial distribution of OpenStack. Our Voice of the Enterprise research survey shows that nearly 63% of users choose a vendor's distribution of OpenStack or simply sign on with a service provider, which also may well use a popular distribution. Just 21% of organizations choose a do-it-yourself course.

With a lingering shortage of OpenStack engineering expertise available in the job market, coupled with excellent commercial distributions (which themselves are bolstered by the large and growing OpenStack community), 451 Research believes organizations will continue to favor managed service providers and cloud service providers for their OpenStack-based cloud efforts.