

## REPORT REPRINT

# NTT Communications unifies cloud management with enhanced Enterprise Cloud

**AGATHA POON, WILLIAM FELLOWS**

**1 MARCH, 2016**

The enhanced Enterprise Cloud is positioned as an extension of the company's vCloud-based Enterprise Cloud that utilizes a unified management framework, along with open source technologies and the microservice design model.

---

THIS REPORT, LICENSED EXCLUSIVELY TO NTT COMMUNICATIONS, DEVELOPED AND AS PROVIDED BY 451 RESEARCH, LLC, SHALL BE OWNED IN ITS ENTIRETY BY 451 RESEARCH, LLC. THIS REPORT IS SOLELY INTENDED FOR USE BY THE RECIPIENT AND MAY NOT BE REPRODUCED OR REPOSTED, IN WHOLE OR IN PART, BY THE RECIPIENT, WITHOUT EXPRESS PERMISSION FROM 451 RESEARCH.



©2016 451 Research, LLC | [WWW.451RESEARCH.COM](http://WWW.451RESEARCH.COM)

In the spirit of enabling enterprise IT to deliver a unified experience that comprises homegrown and third-party traditional and cloud-native ICT services, NTT Communications (NTT Com) has announced a new version of its Enterprise Cloud. Like the existing VMware vCloud-based cloud platform, the new-generation Enterprise Cloud supports its global vision of delivering a consistent service experience around the globe. With a new overarching management framework, the cloud management platform facilitates one-stop control and orchestration of multiple clouds (both NTT Com and third-party-hosted), with full visibility and operational governance in mind. NTT Com is also offering an OpenStack deployment targeted at new projects and customers with developer teams moving beyond VMware. In particular, it's designed to support those that want to spin up OpenStack in-house and then continue to use it in a cloud environment.

The updated version of Enterprise Cloud is now commercially available in Japan, and will be commercially available for business organizations in eight datacenter locations spanning seven countries in 2016 (out of 14 locations in 11 countries for the delivery of existing Enterprise Cloud). NTT Com is also acquiring Atlas IT to bolster its managed services ambition. Atlas IT provides remote infrastructure and application management services to midmarket and enterprise customers globally, and will become NTT Com Managed Services on April 1.

---

## THE 451 TAKE

Leveraging a combination of its own IP and acquired assets, NTT Com is progressing its cloud ambitions, as evidenced by the steady increase in revenue for its cloud platform business. It can now offer customers a single management environment for multiple NTT and third-party cloud services, as well as an OpenStack environment. The goal is ITaaS: to enable enterprise IT to act as internal service providers. With the enhanced Enterprise Cloud, NTT Com is also betting the open source ecosystem will drive open-standards-based innovation on its platform.

---

## CONTEXT

NTT Com has already invested substantially in software-defined networking (SDN) technology and provided services based on network-function virtualization (NFV), extending cloud management capability all the way to the network layer. That being said, the extent of manageability has been limited to cloud platforms deployed and operated by the telecom operator. With the latest release of Enterprise Cloud, the company hopes to bring forth the concept of unified management, regardless of individual IT environment and vendor preference. In principle, customers will have full visibility and control of their workloads and applications using one business portal with single sign-on.

While leading telecom operators are undergoing datacenter consolidation exercises, NTT Com views datacenter investment as an integral part of its global cloud strategy. In 2015 alone, the company opened eight datacenters across the Asia-Pacific region, Europe and the US. NTT Com claimed more than 10,000 cloud customers in 2015. The company reported 118.2bn yen (\$1.05bn) in cloud-computing-platform revenue for the nine months ended December 31, 2015, an increase of 19.2% YoY.

## TECHNOLOGY

The enhanced Enterprise Cloud is positioned as an extension of the company's VMware vCloud-based Enterprise Cloud that uses a unified management framework, along with open source technologies and the microservice design model. Until now, the company's public and private hosted VMware clouds have used different management environments.

With its Cloud Management Platform (CMP), customers will now be able to manage third-party clouds (AWS, Microsoft Azure and VMware vSphere) to the extent that operational tasks such as resource discovery, tagged visibility, and cloud management and governance can be performed across cloud platforms. NTT Com has incorporated the product and technology capabilities of Cloudn, which has been built with OpenStack as well as CloudStack, into the enhanced Enterprise Cloud to enable the deployment of multi-tenant public clouds for cloud-native apps and microservices. NTT Com turned the CMP loose in October 2015 for early evaluation – it's an extension of the CMP it uses internally. It's initially for management and governance only, and will provide orchestration and then third-party tools for cloud migration in the future.

SDN is the network technology foundation for enhanced Enterprise Cloud. This means Enterprise Cloud customers are able to configure IP-VPN network connections between clouds and to datacenters for hybrid IT deployments using the cloud portal. Another network-related initiative is the availability of 10Gbps connections that connect Enterprise Cloud to and between more than 30 datacenter locations across the globe (APAC, EU, US). In the context of security, the company says it has developed a new security operation infrastructure and operation infrastructure system to provide threat management across the network – on-premises, hosted environments and in the cloud.

Taking an agile approach to product development, NTT Com is a strong advocate for open source technologies. To that end, the operator has made no secret about its commitment and contribution to the OpenStack community. It won the OpenStack Superuser Award in 2015 for a number of cloud projects, including its public cloud service and the soon-to-be-available Enterprise Cloud. Working together with NTT Lab, NTT Com has made a number of notable contributions to the OpenStack community – multiple-vendor plug-in support, global cluster replication improvement and Amazon S3-compatible API support. While productizing several of its offerings based on OpenStack or OpenStack-compatible API, like other enterprise-focused cloud providers, NTT Com extends service capabilities through overlay development and leveraging open source software like Cloud Foundry for PaaS.

For cloud-native applications, it has incorporated the microservice architectural design model. Thus, each service component is developed independently, but interacts with others through API calls. NTT Com says this can help shorten time to market and provide greater agility because different components (microservices) will now be developed concurrently while enjoying more efficient scaling – scale-out as opposed to the traditional scale-up deployments. The company believes this is an important step forward to support hybrid IT deployments from which enterprise developers can easily deploy cloud-native applications leveraging open source APIs and ecosystems.

Multi-cloud management and operational governance are important differentiators for the new version of Enterprise Cloud. In the back end, the company uses its proprietary API to enable centralized control of APIs, servers, storage and SDN technologies provided by different vendors. Customers can manage the entire lifecycle of services and products – discovery, provisioning, management and monitoring – running in NTT Com clouds or third-party clouds via a front-end Cloud Management Platform.

## PRODUCTS

While enabling the self-deployment and management of an Enterprise Cloud environment is nothing new, it is the ability to orchestrate and govern multiple clouds provided by NTT Com and third-party cloud providers that is worth noting. Accordingly, the unified cloud management platform, which can be deployed under white-label, enables enterprises to manage and monitor resources, performance metrics, logs and access control – among other things – with full visibility into tagging, metadata and cost allocation of their resources.

NTT Com says it will continue providing its existing VMware hypervisor-based cloud platform and the new bare-metal OpenStack/KVM-based platform. Accordingly, these two environments are L2-interconnected with SDN technology, which allows customers to use the two environments side by side to build their systems without hustle. Existing VMware-based Enterprise Cloud customers are not obligated to migrate to the enhanced Enterprise Cloud. For customers looking to migrate from on-premises to the new cloud environment – running in a public, hosted private or hybrid cloud deployment depending on system characteristics – NTT Com says it can be done without major reconfiguration of enterprise IT systems. The company says it will have the updated Enterprise Cloud commercially available in eight datacenter locations spanning seven countries across the US, Europe and Asia-Pacific in 2016.

## STRATEGY

Whether with datacenter investment, network-enabled cloud with SDN, or agile cloud-native software development using open source technology and microservice architectural design, removing the complexity of hybrid IT management is still the order of the day for NTT Com. While the notion of having a complete unified cloud management mechanism to orchestrate and govern end-to-end business processes resonates with the trends in enterprise digital transformation, it's still a work in progress at the industry level. On the collaboration front, NTT Com is betting big on the fast-growing open source ecosystem to drive open-standards-based innovation. Together with its own IP, the telco hopes to become the aggregation point of control.

## COMPETITION

While telecom peers such as CenturyLink, Verizon, Telstra and Tata Communications have built out their network-enabled cloud platforms with extended management capabilities and enhanced features, NTT Communications focuses on closing the service gap between traditional IT and cloud-native IT while extending manageability – all is delivered in an automated manner. This somewhat stands in contrast to cloud providers looking to add value with a high-touch managed service approach. Companies such as Datapipe, Rackspace, Secure-24, OneNeck IT Solutions (a TDS company), PCCW Solutions, Sify Technologies and Nxtra Data, among others, are in this group. Technology and IT providers such as Accenture, Capgemini, IBM, Hewlett Packard Enterprise, Fujitsu, NEC, TCS, HCL Technologies, Wipro and Infosys have already played a role in supporting transforming enterprises, and are likely to ramp up their investment in digital technologies. NTT Communications is arguably under pressure from hyperscale cloud providers like AWS, Google and Microsoft Azure, which have gained good traction among cloud-native enterprises. Nevertheless, they could serve as collaboration partners under NTT Com's unified cloud management framework.

## SWOT ANALYSIS

### STRENGTHS

The company has made good efforts in building its cloud credibility with strategic investment in technologies and datacenter facilities. The notion of the new-generation Enterprise Cloud resonates with enterprise requirements for an agile development model.

### WEAKNESSES

It's important for the company to provide proof points with a collection of real-world examples in preparation of its global launch.

### OPPORTUNITIES

Digital transformation is a recurring theme in every industry around the globe, yet progress varies greatly from industry to industry. The good news is that it has been a big push among local authorities across geographies, which opens up a world of opportunities for companies large and small.

### THREATS

Educating enterprises transitioning into the digital era is as important as keeping pace with technology innovation. As businesses continue to be overwhelmed by emerging technologies and tools, providers are challenged to bring clarity to the market.