



Japan firm meets strong demand for cloud services

Tosys Corporation upgrades to 10-Gigabit network to support cloud service delivery and achieves optimal performance and operational efficiencies



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Toshiro Matsubase, manager, cloud services division, IT business department, Tosys Corporation

Customer profile



Company	Tosys Corporation
Industry	Technology
Country	Nagano City, Japan
Employees	700
Website	www.tosys.co.jp

Business need

Tosys Corporation experienced high demand for the company's cloud services offering and as a result needed to upgrade the network infrastructure to deliver high-speed performance to customers.

Solution

The company migrated all systems within their virtualized data center to a 10-Gigabit Ethernet network based on Dell™ Networking switches connected to Dell PowerEdge™ servers and Dell EqualLogic storage.

Benefits

- Strong demand for cloud services is met through highly stable 10-Gigabit Ethernet network
- Profitability is maximized due to efficient service delivery
- Service offering expands from increased flexibility and improved system knowledge
- Cloud services quality improves through centralized management approach

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Tosys Corporation (Tosys) offers companies in Japan a set of collaborative, cloud-based products and services called 'Lifestyle'. In addition to offering standard applications, the company allows third-party add-ons as well as customization. This flexible approach to service delivery created high demand for their services from companies both in metropolitan Tokyo and throughout the country.

"Cloud services will be the focus of Tosys' business growth in the years to come. The new Dell based system infrastructure and 10-Gigabit Ethernet network is essential to supporting our vision."

Yoshinori Ichimura, division director, cloud services division, IT business department, Tosys Corporation

As a result, Tosys realized that their network bandwidth needed to be upgraded to meet the predicted growth of their cloud service.

Tosys is the result of the 1997 merger between Niigata Telephone Industries (NTT), and Shin'etsu Communications Construction. Since being established Tosys has grown their communication infrastructure technology business as an NTT-certified company, and has developed operations in both network integration and system integration. In addition to providing digital signage systems and authentication technologies for managing room access security, Tosys is meeting strong competition in the sector through expanding the company's services to include one-stop internet service provider (ISP) solutions that range from network design through to operations.

This focus on service expansion included packaging and delivering cloud computing services through the company's Lifestyle service website. Lifestyle provides a suite of collaborative products and services, such as a mail collaboration service with Microsoft® Exchange Server 2013, a collaborative platform using Microsoft SharePoint® 2013, and an infrastructure operations and administration solution called Managed Private Cloud Service. Unlike conventional cloud services, Tosys supports third-party add-ons as well as delivering highly flexible customization for each client. As the Lifestyle service grew, issues surfaced with the performance of the system infrastructure leading the company to migrate to a virtualized server environment running Windows Server® 2008 R2 with Hyper-V™. At the time, Tosys was operating 30 physical servers

running 200 virtual servers. However, due to the popularity of cloud services, traffic increased dramatically and the network bandwidth provided by the existing 1-Gigabit Ethernet was insufficient to deliver optimal system performance on tasks such as fileserver replication.

Kazuki Miura, cloud sales engineer, Tosys Corporation, says, "We hadn't predicted the huge demand for our cloud services offering when we planned our virtualized technology platform. The conventional 1-Gigabit Ethernet that we used to build our network environment delivered insufficient bandwidth once user numbers began to increase, which impacted on the speed and quality of our service delivery."

Technology at work

Hardware

Dell™ Networking S4810 switches

Dell PowerEdge™ R910 with Intel® Xeon® X7560 processors

Dell PowerEdge R810 servers with Intel Xeon E7-8867L processors

Dell EqualLogic PS6110XV, PS6000E and PS5000XV

Software

Dell Networking Open Automation Framework

Dell OpenManage™ Essentials Console

Windows Server® 2008 R2

Strong demand for cloud services met through highly stable 10-Gigabit network

Tosys wanted a highly scalable network that could cope with significant spikes in traffic. To provide a solid foundation for the cloud services business, Tosys decided to undertake a complete upgrade of the network infrastructure and move the entire environment to run on 10-Gigabit Ethernet. After completing an information gathering phase and holding detailed discussions with a number of vendors, Tosys selected Dell™ as the network partner and a solution based on a Dell Networking S4810 10/40-Gigabit Ethernet core switch.

Toshiro Matsubase, manager, cloud services division, IT business department, Tosys Corporation, says, "Our system needed to scale and due to the database I/O we needed sufficient bandwidth, which could only be achieved from a 10-Gigabit Ethernet environment. After comparing different switch products from a range of vendors, the Dell Networking S4810 switch clearly had the best price/performance ratio." The network design has built-in fallback redundancy through deploying two Dell Networking S4810 switches to deliver high network reliability. Tosys chose to replace their existing servers with Dell PowerEdge™ R910 with Intel® Xeon® X7560 processors, and Dell PowerEdge R810 servers with Intel Xeon E7-8867L processors, connected to Dell EqualLogic PS6110XV, PS6000E and PS5000XV SANs.

Services profitability maximized due to efficient service delivery

Tosys has a solution that maximizes the profitability of cloud services by reducing previously manual processes, and decreasing the operating costs associated with solution delivery. Tosys now has the ability to fine-tune settings for network and virtual switches to match the behavior of the virtual machines. The company does so through using the Dell Networking Open Automation Framework to deliver

network automation within the virtual data center environment. Matsubase says, "Currently we have 120 virtual servers running in the data center, and this number will grow as we scale our services. The Dell Open Automation Framework helps us to ensure we have highly efficient operational management and control within the new system."

Service offering expansion achieved from increased flexibility and system knowledge

Tosys can now offer cloud services with the flexibility and speed that customers demand. For example, time spent backing up data has been reduced to a fifth, freeing up resources to focus on other maintenance services to keep customers happy. Moving forward, the company will look to develop the cloud-based business further and will rely on the network infrastructure as the enterprise grows. Yoshinori Ichimura, division director, cloud services division, IT business department, Tosys Corporation, says, "Cloud services will be the focus of Tosys' business growth in the years to come. The new Dell based system infrastructure and 10-Gigabit Ethernet network is essential to supporting our vision."

Tosys also intends to leverage on and use the experience and knowledge gained from this project to enhance the solutions proposed to customers. In real terms, this means adding the Dell Networking S4810 switch to the list of services aimed at companies looking for new value added services powered by scalable, virtualized solutions. Additionally, existing services are reaching a larger number of users now. There has been a 15 percent year-on-year increase in the number of Lifestyle users since the infrastructure has been moved to Dell solutions.

Cloud services quality improves through centralized management approach

Tosys is providing a range of customer solutions through

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citing a comprehensive range of communications capabilities, as well as price/performance and operational management functionalities when delivering to customer requirements. Tosys plans to use Dell OpenManage™ Essentials Console to provide centralized management across the entire system, to deliver improved efficiencies in operational management as well as higher quality cloud services. "To meet user demands, we needed to put together an efficient system within a very short timeframe. Following the implementation of the new cloud infrastructure, we look forward to working closely with Dell as our partner and having their end-to-end support from product selection through to integration," concludes Ichimura.

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