

Case Study

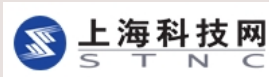
Shanghai Science & Technology Network Communications (STNC)

» Fujitsu's cloud computing platform enables STNC to deploy a cloud environment easily and efficiently«



CUSTOMER

Country: China
Name: Shanghai Science & Technology Network Communications Corporation (STNC)
Industry: Media and Communications



Founded: 2000
Capital: RMB 200 million (Around USD 31.6 million)
Website: <http://www.stnc.com.cn/About/investor.aspx>

CHALLENGES

- Solve physical machine resource and storage space limitations.
- Remove the complexities of resource allocation.
- Enable flexible deployment of all relevant servers, storage and service resources.
- Provide a more granular cloud computing service for STNC's customers in the cloud computing age

SOLUTION

- Fujitsu's tailor-made cloud infrastructure platform solutions based around PRIMERGY RX300 servers, ETERNUS DX440 S2 storage, ServerView Resource Orchestrator (ROR), VMware and other related management software.
- The Fujitsu solution also provided the transformation from scale-up expansion to scale-out expansion of applications at STNC.

The Customer

Shanghai Science & Technology Network Communications Corporation (STNC) started in 1995 as one of the Shanghai Government's major high-tech projects. In November 2000 it was officially established as a large scale leading telecom and internet network service provider (NSP) with investment from SVA Information Industry Co., Ltd (<http://svainfo.com/index.html>) and Shanghai Science & Technology. Now STNC delivers a comprehensive portfolio of advanced IP, data, voice and managed solutions to tens of thousands of enterprise customers including major carriers, Shanghai Government organizations, local large and medium hospitals, Fortune 500 enterprises and small/medium businesses. STNC has earned a good reputation and credibility with its high-quality networks based on cutting-edge IP technologies and its experienced team. These provide a diverse range of services including broadband access, IDC services, VPN and higher-value broadband products and services

Project Background/The Challenge

China's government is seeking ways to continuously enhance available ICT infrastructure and environments. This includes strongly promoting its "Smart City" concepts and plans, and accelerating construction of its Metro Optical Network (MONet), Three Network Convergence (Broadband, Communications and Broadcasting) and Cloud Computing projects.

STNC, as one of the largest IDC service providers in East China, is also looking to evolve and change with these policies and trends. As a result it is studying and planning for a high performance, reliable and flexible Cloud Computing infrastructure and services.

At the same time it was also facing problems, including insufficient physical machines and storage space. To guarantee a higher quality of service for its customers and also meet increasing demands for storage, STNC needed an immediate solution that would fit in with their more advanced cloud computing approach.

In response STNC set itself a goal to introduce a cloud computing environment, which could solve the existing problems including insufficient physical machine resources and storage space, as well as remove the complexities of resource allocation. In doing this they aimed at achieving flexible deployment of relevant servers, storage and service resources.

In addition, to provide granular cloud computing service models for its customers in the future; STNC required the cloud environment to maximize resources utilization, so as to enhance flexible network access and pricing models. Importantly their cloud environment would also be required to secure customer's privacy and guarantee safe use. Therefore, as a first step, STNC wished to establish an IaaS hardware platform based on validated cloud architecture.

THE BENEFITS

- The problems of insufficient machines and storage space were solved
- Utilization of all available resources was also maximized
- Flexible deployment and free allocation of both physical and virtual machines was also made possible
- Full integration and management of the computing, storage, network, OS mirroring and IP address resources was achieved
- Ability to provide a more granulated cloud computing service for STNC's customers.

PRODUCT AND SERVICE

- FUJITSU PRIMERGY RX300 S6 rack-mount server
- ETERNUS DX440 S2 storage system
- ServerView Resource Orchestrator (ROR)
- ServerView Virtual I/O Manager (VIOM)
- ETERNUS SF AdvancedCopy Manager for Storage Backup/Archiving
- ETERNUS SF Storage Cruiser for Storage Resource Management
- VMware vSphere 4 Standard

The Solution

Fujitsu created the cloud environment based on high performance / reliable ETERNUS storage systems and PRIMERGY servers with ServerView Resource Orchestrator (ROR) at its Numazu Software Development Cloud Center in Japan. The Fujitsu cloud infrastructure was also validated by its worldwide Fujitsu Global Cloud Platform (FGCP) service.

As a result Fujitsu proposed a tailor-made cloud infrastructure platform solution based on ETERNUS DX440 S2 storage and PRIMERGY RX300 servers plus ServerView Resource Orchestrator (ROR), VMware and other related management software. This would meet STNC's demands for a cloud computing platform and guarantee STNC could achieve flexible deployment and free allocation of both physical and virtual machines. Fujitsu would also provision projects to make the transformation from scale-up expansion to scale-out expansion of applications at STNC. The result would be full integration and management of the computing, storage, network, OS mirroring and IP address resources at STNC.

The Benefits

The Fujitsu cloud infrastructure solutions were able to effectively deploy and operate STNC's new cloud computing infrastructure. In addition it provided higher quality and more convenient tailor-made services for STNC's users. It has also struck a good balance between guaranteed service quality and satisfying customer demands for leasing space.

Addressing the challenge of insufficient storage space

The new Fujitsu Cloud Infrastructure Solution also effectively and immediately solved the problems of storage insufficiency. Importantly it also maximized utilization of all the new storage resources ensuring better return on investment in the future.

Maximum resource utilization

STNC will now be able to achieve unified control and management of all resources in the cloud environment. The cloud environment also makes deployment and use of applications much easier and more flexible, and this has further reduced costs. It has also improved the consistency and flexibility of system management and addressed common issues such as ineffective resource allocation of physical and

virtual machines. As a result operating costs have been reduced and speed of service delivery has been improved.

A Focus on improved services to customers

The resulting Fujitsu cloud infrastructure solution will grow into a complete cloud computing infrastructure comprising an infrastructure platform layer, virtualization layer and dynamic resource management layer. Based on the use of access platforms and portal systems for public clouds, STNC will be then be able to achieve automatic configuration management of resources through the open API system provided by Fujitsu. With the new open, dynamic and service-oriented cloud architecture, STNC will be better positioned to deliver value to their customers and their customers' customers, thus effectively fulfilling its own evolving strategy.

Conclusion

With completion of the deployment of the Fujitsu cloud computing platform, STNC has taken a solid step in its upgraded plans to full cloud operation. As a result STNC strongly believe Fujitsu has provided leading technology and products with a deep understanding of cloud computing, and has laid a solid cloud platform foundation for STNC to advance its service.

STNC commented "Since the Fujitsu cloud platform has excellent ability in flexible deployment; we will use it as the foundation for further individualized development using virtualization software to provide tailor-made services for customers. For the next stage, we are planning to further introduce Fujitsu's powerful ServerView Resource Orchestrator (ROR) software platform and establish the management links between applications, physical machines and virtual machines. This will allow development of featured applications such as user scheduling and resource management on a unified management interface."

As a world-leading ICT service provider, Fujitsu sees by its validated solutions that essential cloud services are passed the concept stage, and offering true value to customers; allowing them to transform their service models as has occurred at STNC.

Contact Information

Fujitsu (China) Holdings Co., Ltd.
Shanghai (Head Office in China)
Tel.: (86 21) 5887 1000
Fax: (86 21) 5887 5287
Zip code : 200120
Address: 10F, Citibank Tower, No.33, Huayuan Shiqiao Road, Pudong New Area, Shanghai

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