



Suzhou Gas Works with VMware to Build Business Cloud Infrastructure and Boost Business Growth

Sector

Energy

Location

Jiangsu Province

Main challenges:

- The conventional siloed IT infrastructure lacks the ability to flexibly expand and makes it hard to support fast user growth.
- IT infrastructure is deployed in the main data center of in the company's office building, with redundant devices and data and insufficient disaster prevention capabilities, which make it hard to meet the safe production requirements for gas businesses.
- The conventional IT system architecture cannot provide the cloud computing capabilities required by the new gas business models.

Solution:

Based on VMware Cloud Foundation, a unified SDDC platform was built. As the core and peripheral business applications are migrated to the platform, the IT system response speed and IT resource utilization are improved.

Next, the disaster recovery and active-active business system are set up for multiple data centers, so as to guarantee business continuity. The cloud platform of Suzhou Gas will then be constructed to support fast business expansion to more regions as well as a cost accounting system that transparently reflects current resources.

Suzhou Gas Group Co., Ltd (Suzhou Gas) is a large-scale state-owned enterprise involved in gas production, engineering design, pipeline construction, gas operation management, and customer services. At present, Suzhou Gas has 400,000 users and the enterprise has become the largest natural gas & clean energy operator in Suzhou area. The energy industry is closely related to our society and daily life. Because of this, Suzhou Gas advocates safe, environment-friendly, energy-saving, and sustainable development and promotes the philosophy of "people-centered, sincerity & honesty, secure services, and benefits to local residents". Suzhou Gas aims to build a business data center that serves more than one million users and, at the same time, expand its business to more cities.

Adhering to the service philosophy of "customer first", Suzhou Gas is committed to providing quality natural gas resources and professional services to its users. By setting up an integrated customer service system across areas and departments, Suzhou Gas strives to provide users with considerate one-stop services before, during, and after sales. With the establishment of fast and comprehensive control and response mechanisms, Suzhou Gas allows gas consumption by users to proceed in a worry-free and convenient way.

Currently, with the rapid increase in the number of gas users, the conventional IT infrastructure can hardly keep up with business development. This means businesses face growing risks in business security, continuity and scalability over time.

Conventional IT systems are confronted with the challenges posed by rapidly growing business demands

First of all, the conventional IT architecture lacks elastic scalability and can barely support rapid user growth. With its business rapidly growing, Suzhou Gas expects to see the number of its users grow from 400,000 to more than 1,000,000 within a short time. It is therefore essential to quickly expand the storage, computation, and network resources of the IT system. However, under the conventional siloed IT architecture, each business system has its own servers, storage devices, and network requirements, with standalone management tools and databases. As resources cannot be shared by different systems, isolated islands of resources and information come into being. If the conventional architecture remains unchanged as businesses develop, the IT infrastructure will inevitably become more and more complicated, resulting in increasingly low resource utilization and high purchasing and maintenance costs.

In terms of computation resource management, Suzhou Gas relies mainly on a physical computation architecture, with a small amount of virtualized computation.

It is an absolute necessity to shift from conventional physical computation to virtualized computation.

In terms of storage resources, Suzhou Gas currently uses a centralized storage architecture, which restricts unified resource provisioning among storage devices. However, rapid business development requires the flexible and dynamic adjustment of storage performance and space and on-demand storage scalability.

Regarding network resources and security, Suzhou Gas' network is built upon conventional physical network equipment. The adoption of virtualized network architecture is required not only by current security isolation and protection need, but also for the future deployment of business systems across data centers and even clouds.

Second, rapidly growing data storage and concurrent business request needs have posed increasingly high risks to the single data center architecture, making it increasingly difficult to ensure business continuity. Restricted by their storage backup technology and the device conditions, conventional data centers are vulnerable to SPOF faults and downtime accidents when processing large volumes of data and numerous concurrent business requests. In the case of a power failure or other disaster, it is hard to ensure normal business operation.

Third, the conventional IT architecture cannot provide the cloud computing capabilities necessary for the development of gas businesses. To be specific, to support the fast expansion and business mergers and acquisitions in different regions, the IT system must be capable of fast deployment. To keep different business regions relatively independent in business management and financial accounting, the IT system must be capable of serving multiple tenants. To adapt to actual business needs, the IT system must provide self-service capabilities, so that resource requests can be dealt with at all times.

VMware Success Stories

VMware Products and Services

VMware Cloud Foundation
vCenter Server

H/W Platform

HPE DL380 Gen9 Server

Launch Date
January 2017

"With the aid of VMware virtualization technology, we have built virtualized resource pools and consolidated the IT resources of our data center. Such efforts help us save on costs and improve resource utilization, while reducing the complexity of project construction and guaranteeing quick business launch and quick responses to business demands. This accelerates Suzhou Gas' cloud platform construction."

- Zhao Xiaoyun
IT Department General Manager
Suzhou Gas Group Co., Ltd.

In short, the IT infrastructure of Suzhou Gas should serve the business development strategy of promoting growth, ensuring security, and achieving regional expansion, as well as support the rapidly expanding user base and the multi-region, multi-tenant development model, with the aim to build a business cloud on the virtualization infrastructure, thus providing an agile, secure, and easily-scalable informatization platform for business development.

The VMware Cloud Foundation solution helps boost the business development of Suzhou Gas

As the industry leader in virtualization, VMware has strong technological expertise and a high level of product sophistication and market recognition. The company has a global virtualization software market share of over 80%. After repeated communication, discussion, investigation, and analysis, Suzhou Gas finally decided to use VMware Cloud Foundation to build its enterprise-level cloud computing infrastructure and lay a foundation for cross-cloud solutions in the future.

After carefully studying the business demands and informatization system status of Suzhou Gas, especially its cloud computing strategy, VMware formulated a three-step plan for the company:

Step 1: Set up a fully virtualized data center and migrate core and peripheral business applications to the platform. As a unified platform for software-defined data center (SDDC), VMware Cloud Foundation can consolidate VMware vSphere, vSAN, and NSX into an integrated native system, thus providing private and public clouds with an enterprise-ready cloud computing infrastructure.

Step 2: Set up an IT infrastructure platform across data centers, as well as disaster recovery and active-active business systems for multiple data centers. With the advanced hyper-converged architecture of VMware, distributed multi-active data can be achieved. Through SRM, a complete backup strategy can be established to provide business systems with a robust and reliable architecture for disaster recovery and backup. This ensures data security and continuous and stable business operation.

Step 3: Build a business cloud platform for Suzhou Gas, so as to meet the demands for fast deployment, multiple tenants, and self service, providing powerful support for the regional expansion of businesses.

In January 2017, with the successful implementation of Step 1, that is, the software-defined data center, generating significant business benefits.

Benefits

VMware Cloud Foundation has increased network security and scalability. With VMware NSX, VMware Cloud Foundation has elevated the hyper-converged infrastructure to new heights, extending beyond computation and storage to the network connection domain and thereby enhancing network security and scalability.

As the SDDC deployment time has been shortened to several hours, the response of the IT system to businesses is significantly enhanced. The virtualization technology and distributed architecture of VMware allows for the virtualization of computation resources, greatly facilitating the expansion and provision of computation resources and thereby accelerating the launch of applications and business systems.

The SDDC solution helped Suzhou Gas set up a software-defined data center at a low cost. With the virtualization solution, the IT resources are consolidated by more than 80%, greatly reducing purchasing and O&M costs. At the same time, the adoption of standard virtualized hardware equipment has significantly streamlined O&M management.

The VMware SDDC can be scaled across data centers, which lays a foundation for the construction of disaster recovery and active-active business centers for multiple data centers in the next step. In the near future, the comprehensive business continuity assurance will help Suzhou Gas fulfill its social responsibilities in a better way.

Looking to the future

In the future, Suzhou Gas will continue to work with VMware to accelerate its cloud platform construction. On the basis of the SDDC, Suzhou Gas will set up disaster recovery and active-active business systems for multiple data centers, so as to ensure business security and continuity. On this foundation, cloud platform construction will continue. This equips the IT system with rapid deployment, multi-tenant, and self service capabilities, allowing it to support rapid business expansion to more regions.

