HM Hospitales Implements Cloud Medical Care with Huawei Desktop Cloud Solution

Executive Summary

Industry
Medical care

Challenges
- Information sharing deficiency, hindering diagnosis efficiency
- High purchasing costs, low equipment utilization, and complicated O&M
- Information security loopholes

Huawei Solution
- Huawei FusionCloud Desktop Cloud Solution
- One E6000 blade server for computing and one S5500T for storage
- FusionSphere and FusionAccess software

Customer Benefits
- Quick deployment, improving efficiency by 50 times; centralized O&M, improving efficiency by 10 times
- Improved resource utilization, reducing power consumption by 70% per year.
- Enhanced information security, ensuring sensitive data security of the HM Hospitales.

Customer Overview

The HM Hospitales is a private hospital established in 1989. In Madrid, this hospital has six branches and about 4,000 medical care personnel. The HM Hospitales is dedicated to providing first-class medical care and health care services for patients and customers. This hospital has the most professional medical care personnel and most advanced medical care technologies. Among private hospitals in Madrid, the HM Hospitales has firstly obtained the DIN EN ISO 9001:2008 certification and functions as one of leaders in the Spanish medical care industry.

Challenges

The informatization of medical institutions around the globe starts from scratch in these years. From the initial standalone user management, to independent application in a cluster between different departments, and then the emergence of an integrated hospital information system, a mature informatization path is established. The medical care industry in West Europe is one of the most mature industry market applying virtualization technologies. In addition, the HM Hospitales always pioneers the application of advanced information technologies. For example, the HM Hospitales has deployed the patient information management system, system applications and products in data processing (SAP) system, and office automation (OA) system in its branches and generalized informatization management on its research, education, and training systems.

The HM Hospitales has six branches whose IT equipment of the information system and OA system is deployed, managed, and maintained independently. As a result, following problems are involved:

Information sharing deficiency, hindering diagnosis efficiency

Since each branch has an independent IT system, no unified information management and sharing platform is provided. What's more, the medical care, OA, and research systems of various branches are independent of each other, causing bloated and scattered systems. The conventional IT desktop system is not convenient for mobile access and information query during medical care and diagnosis. An integrated IT system is in urgent need for the HM Hospitales to share information among branches, facilitate access and information whenever and wherever, and improve work efficiency.

High purchasing costs, low equipment utilization, and complicated O&M

As IT systems and automated equipment are widely used in the medical care industry, hospitals have increasing concerns on maintenance, management, and cost issues of IT equipment. Since the IT systems of six branches of the HM Hospitales are deployed, managed, and maintained independently, with development of each branch and increase of investment on information service systems, problems like high purchasing costs, difficult maintenance, and low utilization will become more and more striking.

Information security loopholes

Some sensitive hospital data, such as the patient profile and medical care file, is prone to be

attacked and leaked out in the conventional IT system.

In this case, the HM Hospitales plans to integrate the information and OA systems of the six branches to increase the system manageability, reduce purchasing and operating costs, improve operating efficiency, reduce equipment space, and ensure that the overall IT system architecture works efficiently.

Huawei Solution

Upon careful technology comparison and solution selection, the HM Hospitales decides to adopt Huawei FusionCloud Desktop Cloud Solution, one of solutions proposed by TRC (Huawei's channel partner in Spain and also HM Hospitales' IT equipment supplier), to virtualize its OA system. A cloud data center is built and thin clients (TCs) are used in this solution to help the HM Hospitales build a green, secure, efficient, and easy-to-maintain desktop cloud OA system. In the first phase, 250 TCs are provided for the hospital.

This end-to-end Huawei FusionCloud Desktop Cloud Solution uses Huawei hardware devices, such as Huawei E6000 blade server and S5500T storage device, and Huawei virtualization platform, FusionSphere. These software and hardware devices are the virtualization infrastructure of the desktop cloud system deployed for the HM Hospitales and construct a cloud data center. TRC is responsible for building the data center and O&M, for hospital users remote access.

Huawei FusionAccess is used as the desktop cloud service software. In addition to the desktop access function, FusionAccess provides unified O&M for the desktop cloud system. With FusionAccess, IT administrators can deploy multiple desktops using obtained virtual machine (VM) templates within a few minutes, thereby implementing automatic deployment. Also, Huawei provides various IT optimization tools for IT administrators to upgrade software of VMs in the system and update virus databases. Compared with the conventional PC system, the desktop cloud system has O&M efficiency improved by more than 10 times.

To ensure high security, the Huawei FusionCloud Desktop Cloud Solution provides terminal access authentication, user rights authentication, user activity auditing, data transmission encryption, content encryption, and rights management. All office data is centrally stored in the back-end data center, and local TCs have no hard disks. All these measures ensure the highest level of data security.

Users use TCs to replace conventional computer chassis, contributing to the creation of a work environment with low noise and low heat dissipation. The desktop cloud system adopts the browser/server (B/S) architecture so that users can access the system using TCs at different places, thereby achieving mobile office.

Customer Benefits

After the FusionCloud Desktop Cloud Solution is deployed, TRC achieves quick desktop deployment, centralized O&M, and low OPEX; the HM Hospitales implements unparalleled strengths in reducing power consumption, ensuring information security, improving office environment, and decreasing IT expenditure, compared with before using the conventional office system.

- **Quick deployment and labor saving:** After the IT system is built for the HM Hospitales, TRC is responsible for O&M. With the desktop cloud system, all services and applications can be centrally managed using the data center through the VM templates. IT administrators prepare VM templates for different types of users. When a user account is created, they can deploy the desktop environment for that user within several minutes. The deployment efficiency increases by more than 50 times.

Meanwhile, the deployment and management workloads of TRC are decreased.

- **Centralized remote O&M, improved efficiency, and reduced O&M costs:** The Huawei FusionCloud Desktop Cloud Solution enables IT administrators to upgrade software, update the virus database, and provision application software in a unified manner, simplifying the management, scheduling, and deployment of virtual desktops. Compared with the conventional PC system, the desktop cloud system has O&M efficiency improved by more than 10 times. In addition, remote maintenance helps decrease maintenance costs and increase profits.

- **Resource utilization improved, power-saving, and environment-friendly:** Since hardware and software systems of various branches are constructed in a reduplicate manner and cannot be reused, virtual desktops can be allocated on demand, achieving flexible scheduling and maximizing IT resource utilization. Compared with conventional PCs, TC-based virtual desktops reduce up to 70% power consumption. TCs are designed free of fans, providing less noise and a better medical care environment.

- **Information security improved:** In the FusionCloud Desktop Cloud Solution, TCs and data are separated. Doctor and patient information is stored in the data center, implementing data sharing, backup, and management in a centralized manner. Sensitive hospital data, such as the patient profile and medical care file, is safeguarded by security mechanisms such as access authentication and transmission encryption. Authorized hospital personnel can access the data through virtual desktops whenever and wherever. In this way, intellectual achievements of doctors and patient profiles can be protected from leakage.

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