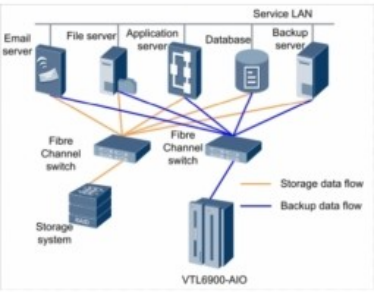
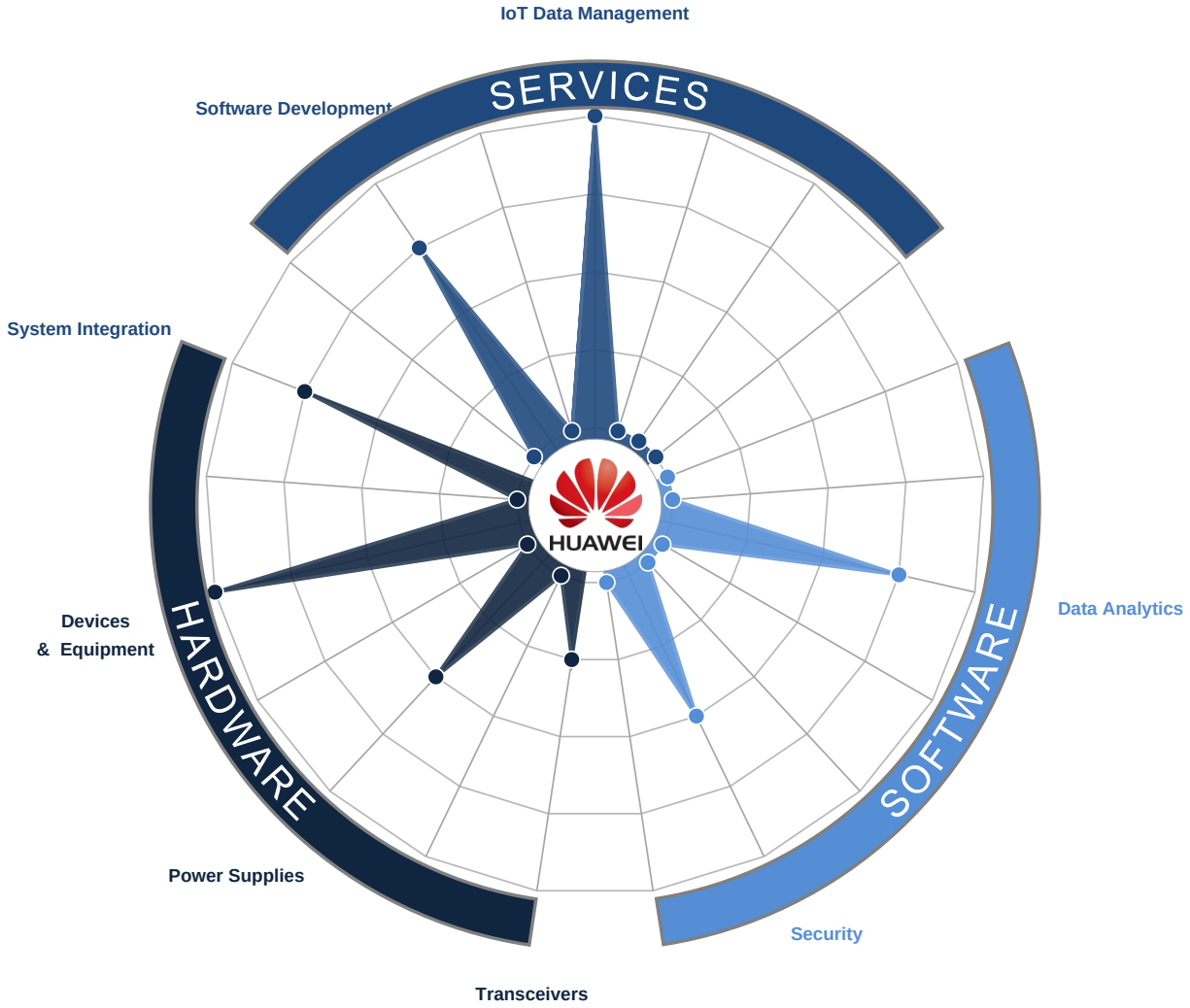


New Backup System Solves Legacy Problems



Overview

Applicable Industries

Furniture & Home Appliances

Applicable Functions

Information Technology

Production - Manufacturing

Challenge

Midea's outdated IT infrastructure in some sites could no longer keep pace with company's growth, putting operational reliability at risk. The legacy data backup system could not backup at some production sites. Some sites were still using the x86 server’s local hard disks as the backup media, resulting in limited backup size. The existing backup system was inefficient.

Customer

The Midea Group is one of the largest white goods household appliance manufacturers and exporters in China. Midea Group has approximately 135,000 employees and more than 60 branches outside of China, selling products in more than 200 countries.

Solution

Huawei’s solution replaced the outdated servers at the three production sites with Huawei’s RH2288 V2 servers and used software to virtualize the servers to improve the utilization of server resources and simplify device Operation and Maintenance (O&M). Midea also deployed one Huawei VTL6900 with an all-in-one architecture and a maximum of 48 TB capacity as the backup media.

Software Components
- Symantec Backup Exec 2010 software

Data Collected

Enterprise data about operation, management, product development, manufacturing, logistics, and eCommerce

Solution Type

IT

Solution Maturity

Emerging (technology has been on the market for > 2 years)

Operational Impact

Impact #1	Data Aggregation - Cloud solutions enable aggregation of 'big data' to enable more robust analysis and lower costs.
Impact #2	Data Safety - Data reliability and security enables Midea to generate data sets and utilize them in an actionable way.
Impact #3	System Flexibility - Ongoing application development and improvements are relatively quick and inexpensive to implement due to the system's flexibility.

Quantitative Benefit

Benefit #1	The VTL6900 improves the efficiency of massive small file backup to a maximum of 2.34 TB per hour.

Technology

Hardware

Server RH2288 V2

Huawei

RH2288H V2 Rack Server is a two-socket, 2U rack server supports two Intel Xeon E5-2600/E5-2600 V2 series processors. Designed for Internet, Big Data, cloud computing, High-Performance Computing (HPC), ...

Virtual Tape Library System

Huawei

OceanStor VTL6900 is a virtual tape library (VTL) product from Huawei. It provides users a rich set of cutting-edge, reliable, and flexible data protection functions.

New Backup System Solves Legacy Problems

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Background

The Midea Group is a large conglomerate focused primarily on the household appliance industry. It is one of the largest white goods household appliance manufacturers and exporters in China. Midea Group has approximately 135,000 employees and more than 60 branches outside of China, selling products in more than 200 countries.

Challenges

As the leader in white goods household appliance manufacturing, Midea was among the earliest enterprises in China to utilize IT-enabled manufacturing. Since 1995, Midea has established a series of IT systems, including Enterprise Resource Planning (ERP), Human Resources (HR), Product Lifecycle Management (PLM), Product Data Management (PDM), Quality Information System (QIS), Manufacturing Execution System (MES), and an eCard system. The deployment of these IT systems has played an active role in streamlining internal management by improving product quality and service while reducing production costs.

Enterprise data about operation, management, product development, manufacturing, logistics, and eCommerce has become a large asset supporting Midea's growth. This rapid growth, however, exposed a weakness in data backup at some production sites.

The outdated IT infrastructure in some sites could no longer keep pace with growth, putting operational reliability at risk. Problems related to the legacy data backup system were in the following areas:

- Production data could not be backed up at some production sites. For example, the loss of PDM system files would affect the execution of production orders, lowering efficiency; the loss of MES system files would interrupt normal production, leading to waste of devices and human resources; and the loss of eCard system data would affect routine monitoring of employees' attendance, access control, and consumption
- Some sites used the x86 server's local hard disks as the backup media, resulting in limited backup space (less than 10 TB), performance, and reliability. In addition, the x86 servers only supported full rather than incremental backup, which greatly reduced storage space usage and failed to meet Midea's technical requirements for remote and centralized data backup
- The existing backup solution was extremely inefficient in file backup. Since much of the data generated by IT systems, such as PLM, PDM, and QIS, is unstructured, one full backup would involve hundreds of thousands of data files. Due to limited I/O bandwidth and processing performance, 1 TB data backup would take about 5 hours. If the data to back up exceeded 3 TB, the existing backup system was likely to fail to complete the backup within off-peak hours

Solution

To transform the IT infrastructure at the production sites, Midea Group initiated a public bid. After analysis and assessment of solutions offered by different vendors, Midea chose Huawei's IT solution, consisting of Huawei-provided servers and storage devices.

Huawei's solution replaced the outdated servers at the three production sites with Huawei's RH2288 V2 servers

and used software to virtualize the servers to improve the utilization of server resources and simplify device Operation and Maintenance (O&M).

To address the challenge of data backup, Midea deployed one Huawei VTL6900 with an all-in-one architecture and a maximum of 48 TB capacity as the backup media at each of the three production sites. The VTL6900 works with Symantec Backup Exec 2010 software to locally back up data from PLM, PDM, QIS, MES, and eCard systems.

The VTL6900 offers the following compelling features:

- **High security**: The VTL6900 enables local data backup at the three production sites to eliminate security risks and ensure service continuity
- **High reliability**: The VTL6900 binds multiple network ports to ensure network communication reliability and uses dual-parity RAID 6 technology and hot-spare design to ensure high reliability of the local backup system
- **High efficiency**: The VTL6900 improves the efficiency of massive small file backup to a maximum of 2.34 TB per hour. This allows the IT department at each production site to complete a full backup within 3 hours, which fully meets the requirements of backup time duration

In addition, the VTL6900 supports global data de-duplication (at a maximum ratio of 20:1) and remote replication functions, which greatly reduces bandwidth requirements, cuts communication costs, and lays a solid technical foundation for Midea's remote and centralized data backup.

Benefits

Midea Group has successfully deployed Huawei's VTL6900 data backup solution, providing a valuable IT infrastructure transformation example for Midea's other production sites.

The high-performance and cost-effective VTL6900 not only meets Midea's current needs, but also meets its future business growth requirements.

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