Hitachi Data Systems cloud solution helps simplify storage management, significantly improves the storage utilization efficiency, and saves total investment on the storage by reusing the existing equipment.

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Dongfeng Automobile Co., Ltd. (DFAC)

| INDUSTRY | Manufacturing |
| SOLUTION | Enterprise Platform, Cloud |
| Hardware | Hitachi Virtual Storage Platform, Hitachi Universal Storage Platform® VM |
| Software | Hitachi Basic Operating System, Hitachi Basic Operating System V, Hitachi ShadowImage® Heterogeneous Replication, Hitachi Thin Provisioning (formerly Hitachi Copy-on-Write Snapshot), Hitachi TrueCopy®, Hitachi Universal Replicator, Hitachi Replication Manager |
Chinese Auto Manufacturer Builds Cloud Storage Platform on Hitachi Enterprise Storage

In its work to develop, design, manufacture and sell the Dongfeng series of light commercial cars and Dongfeng Cummins series of diesel motors, Dongfeng Automobile Co., Ltd., (DFAC) required unified management. In order to meet its business and management requirements, the company set out to build a centralized, easy-to-manage and easy-to-upgrade unified storage platform while reusing existing storage. Hitachi Data Systems answered DFAC’s challenge with a cloud storage solution based on Hitachi enterprise storage and replication technologies.

About DFAC

DFAC was founded independently by Dongfeng Automobile Corporation by way of public fundraising in 1998. DFAC has 4 subsidiaries, including Automobile Branch, Casting Branch, Compartment Branch and Changzhou Dongfeng Automobile Co., Ltd. Its 3 divisions include the engineering automobile division, overseas division and special automobile division. The company operates the business in Wuhan, Xiangyang, Shiyan, Zhengzhou and Changzhou.

The production and sales volume of Dongfeng light-duty commercial vehicle series are ranked 2nd in the industry.

Project Background and Requirement

DFAC’s IT environment included an IBM® DS4800 (2T) used for a bill of materials (BOM) system, which was acquired in 2005. It also employed 3TB on Hitachi Universal Storage Platform® VM (USP VM) with SAP.

DFAC wanted to reuse some of its existing storage while building a centralized, upgradable and easy-to-manage unified storage platform. The company’s storage virtualization platform is built in Xiangfan Data Center and Wuhan Data Center, respectively, to answer high demand for the data storage remotely and to meet the goal of cloud storage. In addition, the company wanted to ensure smooth evolution from its current data disaster recovery level to application-level or business-level disaster recovery. And, DFAC wanted to ensure that the remote asynchronous disaster recovery would be extended smoothly to the disaster recovery system, covering 3 centers in 2 cities in the near future.

Hitachi Solution Leverages Legacy Storage, Builds Cloud on Industry-Leading Technologies

Hitachi Data Systems (HDS) considered the storage requirements outlined by DFAC as well as the company’s business development plans for the next 3 years and proposed a cloud solution. Hitachi Virtual Storage Platform (VSP) serves as the core, virtualizing the existing IBM® DS4800 in DFAC’s Xiangfan Data Center to create a cloud storage platform in the production center. At the same time, HDS built the cloud disaster recovery platform with the existing USP VM in the disaster recovery center. Figure 1 illustrates the solution topology.

Hitachi Rolls Out Unified Storage Platform for DCAP

Hitachi Data Systems took the following steps to answer DCAP’s storage challenges:

- Virtualize the existing IBM DS4300 storage in the production center with Universal Volume Manager (UVM) to create cloud storage, and achieve...
**SUCCESS STORY**

unified storage, management and replication of all data. Future expansion and upgrade can be done on this storage platform.

- Virtualize IBM DS4800 storage in the disaster recovery center with USP VM to create a cloud storage architecture.

- Implement unified disaster recovery between the production center and disaster recovery center with Hitachi Universal Replicator (HUS) for VSP and USP VM, and implement 2-way replication between 2 data centers in the future to create active-active data center architecture.

- Manage and monitor the disaster recovery and replication with the disaster recovery monitor and Hitachi Replication Manager software.

**Solution Increases Flexibility, Reduces Costs**

Benefits DFAC achieved since deploying the Hitachi solution include:

**Cloud Storage Platform**

- The cloud storage platform built on VSP and USP VM achieves unified storage, management, replication and unified disaster recovery of the storage platform.

- Cloud storage consolidation allows storage space to be allocated to the server more flexibly, so all servers can use any storage space.

**Time Savings**

- Online data migration technology of HDS reduces the migration time by 50% compared with original mode.

**Cost Savings and Investment Protection**

- Data can be allocated flexibly to high-end, midrange or low-end storage according to its importance, which reduces the acquisition cost of unit storage.

- Elimination of the storage island improves the disk utilization, and reduces the number of disks that must be purchased.

- Asynchronous disaster recovery with Hitachi Universal Replicator greatly lowers investment on the disaster recovery link, and can guarantee data consistency.

- This cloud storage architecture can take full advantage of existing storage to protect existing investment.

**Industry Influence and Future Directions**

DFAC is a leader in the automobile industry, and it plays a critical role in the manufacturing industry, especially in the automobile industry. The implementation of the Hitachi cloud solution in DFAC is significant for its visibility in the Chinese manufacturing industry.

As DFAC moves ahead, the company is considering adding disaster recovery architecture in future system implementation to cover 3 centers in 2 cities to guarantee long-term business continuity.