Dongkuk Steel Mill

Dongkuk Steel Mill deploys HP Storage Essentials solution to boost performance of SAP ERP system.

DONGKUK STEEL

Dongkuk Steel Mill successfully completed DOPIS (Dongkuk Process Innovation Success), a management innovation process that helps place the steel manufacturer on the growth path. As Dongkuk Steel Mill introduced the SAP ERP system in conjunction with the DOPIS project, the huge upsurge in data volume caused a slow down in the system's performance. HP Storage Essentials solution effectively improved the performance of the legacy SAP ERP system without the need to install additional hardware.

HP customer case study: HP Storage Essentials solution helped optimize and promote the efficient management of storage and IT resources of Dongkuk Steel Mill's SAP ERP system

Industry: Manufacturing

Objectives

- Analyze the cause of system slowdown due to hike in data volume and implement solution to increase SAP ERP response time.

Approach

- HP Storage Essentials was introduced to the integrated IDC (Internet Data Center) where SAP ERP storage was installed in August 2008.
- To promote optimization and maximize efficiency of storage resources in the Dangjin computing center.

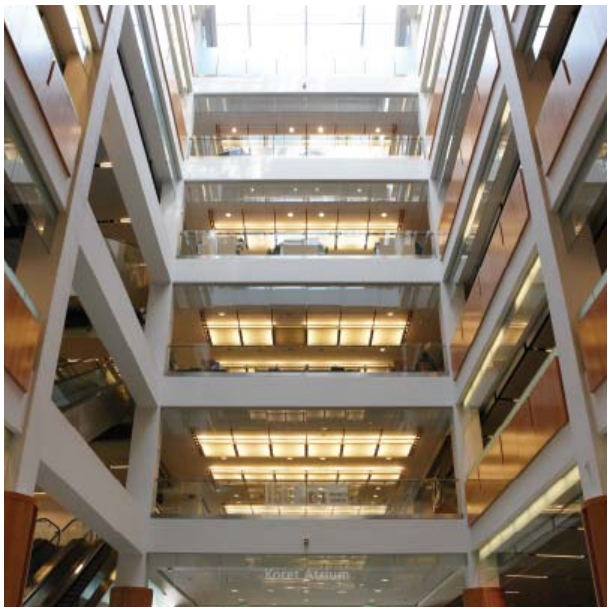
Business technology improvements

- Improved customer satisfaction by reducing delays in production, order processing and customer respond time.
- Increase speed of processing of orders and production.

Business outcomes

Accelerate business growth

- The management innovation system was optimized.
- Achieved improvement in SAP ERP system's response time.



Dongkuk Steel Mill was established in 1954 as Korea's first private steel manufacturer. Since the year 2000, the incumbent has been gearing up for further growth by increasing its global competitiveness in the key business functions of production, management, quality and IT support. To meet its rising global demand, Dongkok Steel Mill decided to increase its production capacity with a new plant in Brazil. Due to complete in 2010, the Brazil factory will boost the company's production volume by 1.5 million tons a year. The establishment of the new commercial production system will continue to be supported by raw material purchases in U.S., Japan and China.

Between 2005 and late 2006, Dongkuk Steel Mill implemented DOPIS – a management innovation process – to improve the efficiency of its processes. However, with an upsurge in data volume and systems interaction, Dongkuk Steel Mill experienced a slow down in system response, especially during the

Customer solution at a glance:

- Efficient management of storage resources and improvement of DOPIS through the introduction of HP Storage Essentials

Primary application

- HP Storage Essentials Storage Resource Management Enterprise Edition Software Suite

Primary hardware

- Server: HP Integrity Superdome
- Storage: HP StorageWorks XP12000 and XP10000

Primary software

- HP Storage Essentials Enterprise Edition
- HP Performance Advisor
- HP Data Protector

HP Services

- System architecture configuration consulting
- System implementation and testing

period when 10 systems were simultaneously connected. This made it difficult to identify the order and production status, and ultimately resulted in customer dissatisfaction.

The legacy SAP ERP system had become inefficient due to the rapidly increasing data volume. As a cornerstone of the entire business process, a slow down in the SAP ERP system could result in costly delays in the key areas of production, delivery, stock and sales. To meet customers' demands, Dongkuk Steel Mill needed a solution that will quickly improve the performance of its SAP ERP system.

Improved performance without additional hardware

As part of its global strategy, Dongkuk Steel Mill plans to produce quality slabs in the Brazil factory and ship them over to the Dangjin plant in Chungnamdo (slated to be completed by August 2009) to be turned into steel plates. This win-win arrangement is set to reduce operational costs and add value to the manufacturing process.

The existing Storage Resource Management (SRM) tool supporting the legacy SAP ERP system provides current status analysis and report, performance and capacity management, fault management, and automatic policy management functions. To improve its operational efficiency, Dongkuk Steel Mill implemented the HP Data Protector solution to enable reliable backup of stored data. However, the company is concerned that once the Brazil and Dangjin plants are in operation, its SAP ERP system will not be able to cope with the anticipated increase in data volume. Hence, eroding the steel manufacturer's global competitiveness.

One common solution to boost a company's storage resource system is to extend the hardware. However, this is a costly option and has limitations in terms of monitoring the operational status.

In addition, while the volume of data may increase exponentially, the utilization rate for data storage is usually very low. With Dongkuk Steel Mill's IT requirements and budget in mind, HP Korea introduced the HP Storage Essentials to help optimize the SRM function of its legacy SAP ERP system. HP Storage Essentials makes it possible to efficiently utilize the existing storage resources without the need to add hardware. With just a small investment, the company is able to realize greater efficiency in its storage resource management function.

3 terabytes of ERP data volume

After the introduction of its SAP ERP system, the data volume of Dongkuk Steel Mill continued to increase and reached 3 terabytes. This is a crucial point where the agility of the IT system gets tested. With the introduction of the DOPIS, the amount of data input into the SAP ERP system cannot be reduced. In fact, production and order volume, along with data volume, are set to greatly increase after the Dangjin and Brazil plants are completed in 2009 and 2010 respectively. If the system is not able to accurately and rapidly extract warehousing and delivery status of orders, as well as execute new orders without delays, it could result in customer dissatisfaction and even the lost of business.

To opt for hardware extension whenever data volume increases could lead to run-away IT costs. After due consideration, Dongkuk Steel Mill selected "system improvement" over hardware extension to strengthen the efficiency of their SAP ERP system.

Synergy with HP Data Protector

Dongkuk Steel Mill first introduced HP Data Protector to support the stable backup of data, prevent data loss, and maintain the system speed. HP Storage Essentials was introduced at a later stage to maximize the utilization of the existing resources. Together with HP Data Protector, it is possible to visualize the backup configuration and recovery capabilities. Both tools enable the entire backup process status to be monitored on a daily basis. HP Storage Essentials is able to analyze the cause of a slowdown accurately and quickly when it occurs, improving the response time that was previously affected by disk I/O.

Besides this, HP Storage Essentials Suite also performs a variety of functions including storage management, integrated information management, charging, capacity and configuration management, data security management, fault management, performance and availability management, policy management, quota management, remote management, etc.

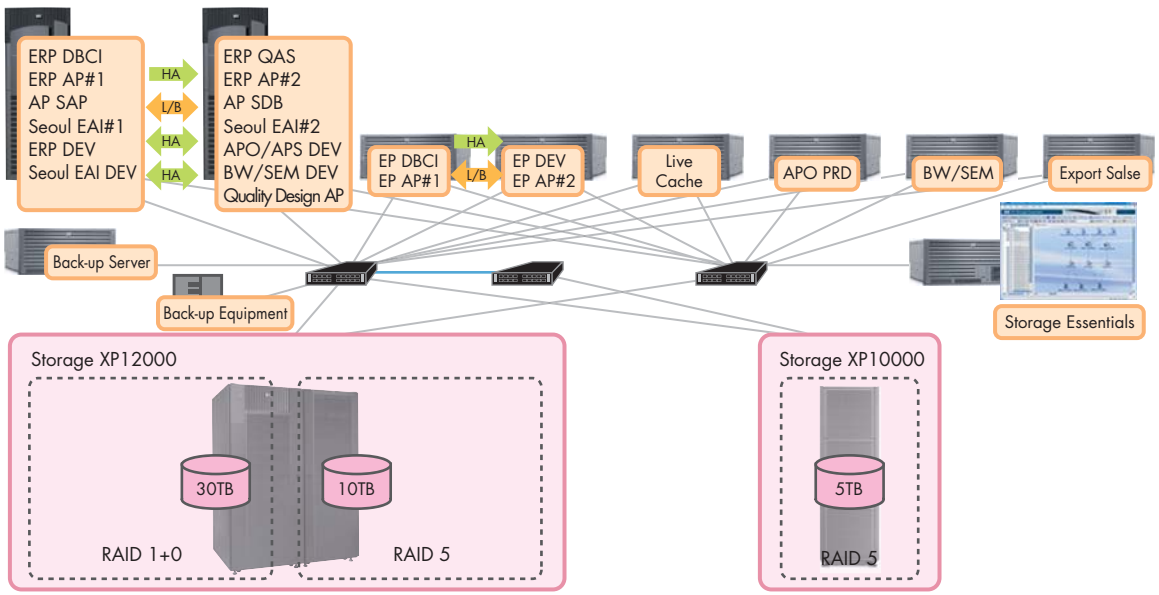
The SRM application integration software of HP Storage Essentials for SAP AAC (Adoptive Computing Controller) makes it possible for customers to move SAP ACC among physical servers if there is a need for larger storage space through the SAP application service, and supports the visualization of SAN storage and infrastructure resources. This makes it suitable for the SAP test environment.

With an increase in the synergy among HP Data Protector and HP Storage Essentials, the company's SAP ERP system is able to function more smoothly and efficiently.

Establishment of a management innovation system

Dongkuk Steel Mill established a management innovation system from early 2007 after successfully launching DOPIS in December 2006, and started the DENIS (DOPIS Expansion for New Innovation Success) project in mid 2007, which is still in progress as of August 2008. The DENIS project plays a key role in ensuring the success of the Dangjin plant as well as in realizing Dongkuk Steel Mill's growth vision.

System configuration diagram related to Storage Essentials



Improvement in ERP operating speed

Il-Ryong Jeon
Data Center Manager, DKUNC

What is the background of the project

Since the large-scale innovation project–DOPIS–was established 2 years ago, it has encountered inefficiency in the management of IT resources. HP Storage Essentials was introduced to optimize and efficiently manage the current IT resources and is currently still in progress.

What was the main reason for selecting HP

As data volume and storage size hit 3 terabytes after the establishment of SAP ERP, Dongkuk Steel Mill needed to improve the response time of the legacy ERP system, as well as its storage capability and current status management. After careful consideration of all solutions, the company decided to proceed with storage performance improvement without the need for hardware extension. This led to the adoption of HP Storage Essentials.

What was achieved through this project

The influence of disk I/O on the response time of applications was tremendous. By taking a preventive measure of adopting HP Storage Essentials, we were able to effectively improve the system's reaction time, and avoid future delays.

What are the upcoming IT tasks

HP Storage Essentials is currently extended to the Integrated IDC. It will also be applied to the Dangjin computing center, scheduled to be completed in 2009 and targeted for full operation in 2012., as well as to the Integrated IDC in Bundang.

Technology for better business outcomes

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