

# ENS Case Study: Deister Machine

## CHALLENGE:

Deister's key production servers were critically short of free disk space which was impacting business operations and initiatives. The short term strategy to manage the disk space needs had been to delete unnecessary data or move the data to external disk drives. Ultimately, efforts to maintain adequate free disk space were not keeping up with growing data storage demands. Deister's IT team also recognized the company's dependency upon physical servers and the potential downtime each server represented in the event of a failure.



## SOLUTION:

VMware virtual host environment using a Storage Area Network (SAN) of a sufficient capacity to meet data storage requirements for the next 1 to 2 years with expansion capability to meet anticipated data storage needs for next 3 to 4 years.

VMware virtual environment provided a highly-available server environment to keep downtime to a minimum.

- For redundancy and availability, multiple hosts were specified to allow for automatic fail-over and mobility of virtual machines between hosts.
- In the event of a host failure, the virtual machines are automatically started on alternate hosts.
- Scheduled maintenance can be performed during business hours by moving the virtual machines between hosts while users are actively using the servers.

The backup design employed a disk-to-disk-to-tape methodology (SAN to NAS to Tape).

Existing key production physical servers were converted to virtual machines (P2V) with no more than 30 minutes downtime.

New virtual machines were then built to replace other servers and applications were re-installed on the new servers.

## Company Profile:

Deister Machine Company, a family owned business incorporated in 1912, manufactures custom aggregate sizing equipment primarily for quarrying and mining industries worldwide. Now with the family's fourth generation in the executive staff, Deister Machine Company continues to plan for the future by investing in manufacturing and information technology for the purpose of remaining number one in the industry. Deister operates six facilities in the Fort Wayne area.

## Why ENS Was Selected:

History and proven track record with Deister over 15 years and several upgrade projects

Willingness to work aggressively with Deister to find creative ways to gain project approvals such as;

- Identifying hardware and software manufacturer special offers and financing options
- Creating project plans that can be phased over months or years

When considering the ENS proposal along with those provided by two other companies, the ENS proposal stood out as it was a more technically appealing with a better cost.

Broad range of capabilities (crafting hardware and software system solutions, support, training)

Personable relationships with many ENS staff

## BENEFITS:

Enabled planning and implementation of new cost saving initiatives;

- Document management solutions
  - Engineering drawings repository (AutoDesk Vault)
  - Safety & training records (From paper to on-line)
  - MSDS records distribution (From paper to on-line)
- Reduced labor to manage and update MSDS records at all facilities
- Other projects are now under consideration in Sales, HR, Purchasing, and Accounting.

Productivity increases through improved access to on-line files. Employees were experiencing daily difficulties accessing file stored on external drives.

Virtual environment enabled a cost effective, low-impact effort to relieve over taxed servers. Applications were dispersed to new virtual machines running "like" applications. This redistribution of applications permits servers to be worked on without affecting other servers thus minimizing the affected internal customers. Examples include:

- Financial applications were reconfigured without affecting engineering applications or company network file shares.

- Print Drivers & Windows Update Services moved from an over taxed server to a utility server. Utility server backup requirements are less stringent. Key servers can be backed up and restored quicker.

Virtual environment enables a cost effective test environment.

Temporary servers or pre-production servers can be configured and tested prior to release for use in a production environment.

- Testing application upgrades (Microsoft Navision upgrade)
- Testing server or data recovery procedures

Increased data center power efficiency

- Deister is now running fourteen servers using the same power consumption we used when they had five physical servers.

Reduced hardware & software maintenance costs

- Three aging servers were able to be retired immediately; another server will be retired or repurposed within three months.