

# Digital Crime Investigation Department Government of the Netherlands

## Customer Results

- + Investigating time reduced and made more efficient
- + Streamlined workflow
- + Easy access and handling of data
- + Reduced storage requirements
- + Improved server failover architecture for business continuity
- + Reduced administration and management time

## Customer Application

Data Mining Application within a Digital Crime Investigation Department of the Government of the Netherlands.

## Overview

Given the increasing importance of digital information in investigating criminal activity, the Dutch government has established a department that mines various forms of digital data for evidence. This department turned to DTA Systems to build a storage system that would allow multiple investigators to have concurrent access to all of the potential digital evidence. DTA Systems is a Sanbolic sales partner and one of the leading system integrators of high end storage, backup and archiving solutions in the Netherlands.

DTA Systems developed a shared storage system for 15 data-mining workstations that allowed all investigators shared access to a large pool of potential digital evidence. Each station is connected to a shared storage array using iSCSI over a standard Cat 6 network. Sanbolic's Melio Clustered File System enable all workstations shared read and write access to the storage pool, and provide for dynamic scalability. The resulting solution has been performing well, is very cost effective, and is easy to administer.

## Customer Requirements

The digital crime department within the Dutch government investigates digital crime by impounding, processing, and archiving data that comes from a range of data sources such as



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flash cards, memory cards, CDs, DVDs, hard disk drives taken out of servers, personal computers, phones, and cameras.

Once the data is collected it is transferred onto the shared storage. The single pool of storage is accessed by fifteen investigators who examine and mine the data using workstations running Windows XP. The data is then documented, archived, and made available for up to 5 years.

### Specific requirements for the system included:

- Shared access to data from multiple workstation for intensive data mining without replicating the data for each workstation.
- Ease of use; the customer was looking for simple monitoring and administrative tools that would not disturb the actual work process. The file system had to be installed and remain "invisible" with no or minimal administration.
- Business Continuity; a tremendous amount of data is transferred between the workstations and the storage 24/7.
- Investigators needed to be able to access the data even if a workstation were to fail.
- Compatibility; ability to move data coming from multiple data sources onto the Windows SAN.

### Solution

DTA systems implemented an iSCSI SAN, using Melio File System to provide concurrent shared read and write access to a common pool of evidence data from all workstations. The workstations have reliable direct access to the data over the SAN, and since all data can be accessed from any workstation, the architecture provides an inherent failover solution in the event of workstation hardware failure.

The SAN at the Dutch Government Digital Crime Department has been in production since September 2005 and it fulfills the customer's requirements. Melio provides shared access to the 6.4 terabyte storage array, and eliminates the need to replicate data for each workstation, allowing much more efficient storage utilization. The ease of installation and use allows the investigators to focus on their work, and the process has become significantly more efficient and streamlined with the SAN. Melio FS provides the stability and the 24/7 business continuity that the customer application demands.

### Solution Components

- Sanbolic Melio File System IT Enterprise
- Windows XP Professional SP2
- ATTO IPBridge 2500 iSCSI bridge
- QLogic 4010C iSCSI HBA's
- Cat 6 UTP Cabling
- 3Com Managed 12 Port Gb Ethernet Switch
- Infortrend 16Bay SCSI Ultra320 - SATA (16x 400GB SATA Seagate HDD RAID 5 with hot spare)

DTA plans to integrate a second RAID unit to expand the total storage environment. Sanbolic's LaScala clustered volume manager will allow the customer to expand volumes on the fly. Melio File System will expand to fully utilize the enlarged volume set while workstations continue to access data. LaScala can also create high performance stripe sets across multiple arrays, efficiently aggregating bandwidth for high performance applications. Remote management of the volume structure on the SAN is also possible with LaScala Disto.

### Customer Benefits

The solution allows the investigators to simultaneously access and process data from the single storage pool, greatly improving storage utilization. Processing data has become more efficient which, in turn, has given the customer an opportunity to process more cases, and increase like likelihood of identifying key evidence. A large amount of data can be transferred without interfering with client work, processes or applications. The solution fulfills the customer's requirements of business continuity and reliability.



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Melio File system reduces the amount of administration since it is not necessary to replicate data. Once the file system was installed, there is little or no administration required. Since all data can be accessed from any workstation, the architecture provides inherent business continuity enhancement, since an investigator can easily move to another workstation should their hardware fail.

The solution can easily be expanded to meet future requirements. Additional workstations can easily be given access to the shared storage pool without interrupting the work on existing workstations, LaScala volume manager allows the storage pool size to be expanded dynamically and existing volumes enlarged without taking the system off line.



### About DTA Systems

DTA Systems specializes in storage solutions for Industrial, Financial and Government customers. Delivering high end Storage, Archiving and Backup solutions since 1993. DTA Systems (Disc and Tape Archiving) is one of the leading Storage solutions Integrators operating in the Benelux. With a wide product range of NAS SAN iSCSI Storage and Sanbolic Software Solutions, DTA Systems provides top-rated products with the best Service Program available.



### About Sanbolic

Sanbolic, Inc. is a privately held company located in Watertown, Massachusetts. Sanbolic's products address the growing customer need for tools that simplify data storage management, increase system flexibility, and enable high bandwidth shared access to data. The product offerings are Melio FS, an advanced symmetrical cluster file system and LaScala, a symmetrical cluster volume manager. Sanbolic distributes its products worldwide through a network of distributors, OEMs, VARs and system integrators.

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