HERCULES

Automated Data Archive Manager

- *Infinitely Expandable Data Storage*

- *Fully Automated Operation*

- *Seamless integration with the HGL acquisition and analysis software*

- *Store, Back-up and Retrieve Mission Critical Data Transparently*

- *Total Data Transportability, including offsite locations*

- *High performance throughout*

Overview

Aerospace development and testing system require the capture and analysis of vast amounts of data; this demands a robust, dynamic archiving system for fast and secure data storage and retrieval.

The HGL Dynamics Hercules archiving system provides an automated scaleable storage system for large scale aerospace testing applications. It is infinitely expandable from simple, single tape drive systems to multiple drive, multiple robot storage systems.

Hercules is fully network enabled and can be operated locally or remotely over LAN, or WAN networks.

Hercules is based on a three-tier model, designed to provide the maximum speed and safety for data:

Primary Storage

Each Hercules includes a fast RAID5 storage system for instant access to regularly used files. These RAID systems are available in size from 500 Gigabytes to 50+ Terabytes. Hercules can also be used with 3rd party NAS systems if required.

Access to primary storage is near instantaneous (80-300 Megabytes/sec) for local users, and available to remote users through various networking solutions.

Hercules uses a sophisticated caching system to ensure that the data the users require remains on the fast primary storage for as long as possible.

ASAM MEMBER

Secondary Storage

The Hercules can be connected to a wide range of storage devices, including most popular tape media types together with robotic systems for automated operation.

Typical secondary storage sizes range from 1-60 Terabytes.

Access to secondary storage is largely hidden from users and is controlled by the Hercules itself. Access speeds depend on the speed of the storage media being used, but typically range from 12MBytes/sec to 90 Megabytes/sec for faster tape media.

When reading from secondary storage, the Hercules not only retrieves the requested files, but also restores files from surrounding locations in an attempt to ensure that other files requested by the same user will be on primary storage when they need to access them.

The Hercules can be heavily customised to optimise this restoration of secondary files based on business practices. In this way, delays are kept to a minimum and it appears that data is stored locally at all times.

Tertiary Storage

However large the primary and secondary storage, there is always a need to have data stored 'offline' which is considered tertiary storage. Tertiary storage is a safe, typically off-site location where older archived data is stored.

For accessing tertiary storage, Hercules maintains a database of locations and quickly informs operators of the location of the required media.

Operation

The Hercules operates as a file server with built-in automated archive and restore functions. A sophisticated database system is maintained for all archived data allowing immediate access to information about the data stored on different media. Data archived to tape from different sites can be imported, exported and copied to different Hercules systems through a fully automated data import/export system.
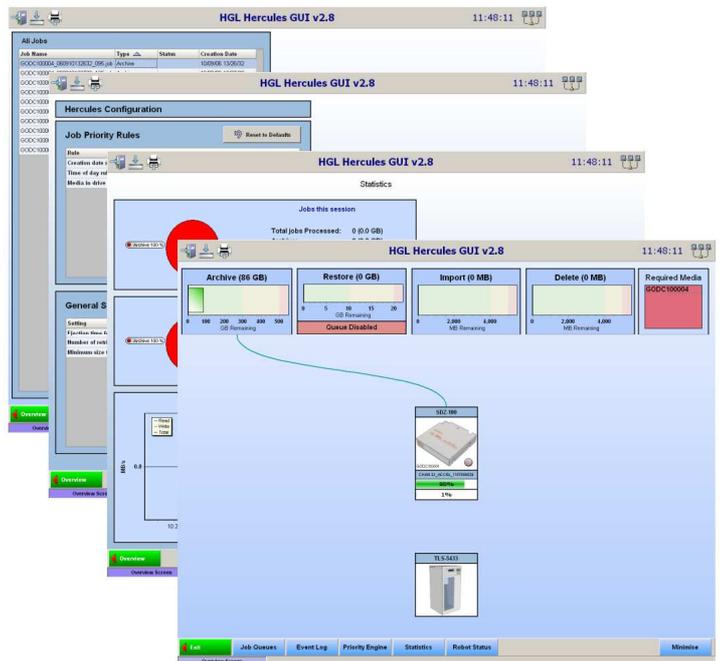
Operators and administrators are given access to the Hercules Graphical User Interface which provides users with a complete overview of the Hercules operations at a glance, as well as configuration and customisation options for administrators.

The Hercules interface gives administrators full control over archiving and restoring priorities, drive and robot configuration, multiple backup control and much more.

The interface may be set up in a single fixed location, or run from multiple computers attached by network to the Hercules.