

The Client

Our Client is a top Electronic Discovery vendor and full service provider for data access, restoration and processing solutions. It is an international organization with data centers located in Atlanta, GA, New York, NY, and Cardiff, UK giving its worldwide client base timely and local access to state-of-the-art electronic data discovery services.

The Industry

Data Management

The Challenge

The rapidly changing business and market requirements as well as increased customer expectations forced The Client to create a next generation non-native tape restoration system to provide consistency between multiple systems accessing shared data within the network.

The Solution

Impressed with the quality of its recent Import Application project executed by TEAM International, The Client chose to partner with and offload design and development of its distributed shared memory system to TEAM as well.

The Engagement Model

Dedicated Development Center DDC

The Scope of the Project

The Application is a multithreaded, distributed shared memory architecture that uses atomic locks to provide consistency between multiple systems accessing shared data within the network. This architecture needed to be integrated with other existing components of The Client's data processing media devices such as a headless file processing application and Online Repository, a database containing metadata.

The Goals of the Application:

- to keep the media drives (tape devices) spinning without cessations
- to simplify the entire design of the system by pulling off data while allowing threads on multiple systems to process the data in a tiered and interface logical level, i.e. eliminating the need for 'landing' all of the data first.

Deliverables:

- A multithreaded, distributed shared memory system that allows several high speed local media drives (tape devices) to connect to a single system or to spread across several commodities-off-the-shelf.

- The logical interfaces to provide flexibility for post-processing data, i.e. searchable file systems with metadata repositories spread across an array of interconnects on networked clusters.

The overall system performance:

- Read data from tape device or dup file
- Restore data from tape data format (e.g. ArcServ)
- Pull restored data to the next logical interface which is out of the project scope

The Approach

TEAM's development team decided to base the application on a commodity-off-the-shelf solution to meet The Client's present and future computing needs.

Number of Resources

- Project Manager 1
- Team Lead 1
- Developers 2
- Total 4

Technology Used

- Operating System *NIX (linux/bsd)
- Programming Language C++
- Database SQL compliant



Application components functionality:

- Device manager
- Multithreading layer
- Handler

The Results

Upon completion of the project The Client received a multithreaded, distributed shared memory system that uses a high-speed fiber-optic backbone to mesh together computer clusters dedicated to simultaneously restoring data from multiple tape drives. This application allowed The Client's customers to save a tremendous amount of time by removing unnecessary processing cycles.