

## Enterprise Services

### Storage Area Networks (SAN) Architecture

Customer: Defense Logistics Agency (DLA) | Period: 5/9/2005 – 9/30/2010



### Why Triple-i?

Qualified civilian and defense industry  
experience with enterprise services

Secret and top secret  
security clearance

Comprehensive design and  
implementation methodologies

Best practices that eliminate waste  
and redundancy

A Service-Disabled Veteran-Owned  
Small Business

#### Customer Profile

The Defense Logistics Agency (DLA) is a U.S. Department of Defense (DoD) agency that provides wide-ranging logistical support for peacetime and wartime operations, as well as emergency preparedness and humanitarian missions. The agency currently employs over 28,000 civilian and military employees working in 50 states and 28 foreign countries.

#### Business Challenge

As DLA provides its worldwide support, deployed resources often become underutilized, resulting in increased DLA operational costs and an increased risk that technologies will remain in production beyond their useful life. Continual support also naturally increases the risk of outages and interruptions in operations as technologies age.

As part of its Business Systems Modernization program, DLA has identified several strategic technology initiatives aimed at:

- Leveraging its technology assets and increasing the level of utilization
- Increasing its conformance with DoD technology and security standards
- Reducing its overall information technology costs

One of these technology initiatives is the implementation of Virtual Data Centers or an Enterprise Data Center (EDC) that consolidate many of the DLA global IT data centers.

#### Our Solution

A major factor in the success of the EDC initiative is the design and architecture of consolidated Storage Area Networks (SAN) that support business applications.

When the project is complete, DLA will have a modernized IT infrastructure better able to support new DLA mission requirements. The new architecture will also allow for early control and standardization of residual application development through consolidation of test beds and Web servers.

The guiding principle in developing DLA's SAN architecture was an infusion of best business practices across the enterprise. The new architecture will also reduce IT inventory (e.g., servers, applications, and storage) and associated costs through optimal utilization of equipment and, where possible, consolidation of applications, resulting in a reduction in the total cost of ownership.

Specific activities Triple-i conducts to reach these improvement goals include:

- Identification of underutilized servers and storage arrays at DLA data centers that can be eliminated from production or consolidated
- Determination of platform design and goals and establishing key business interfaces with DLA customers to align their business needs with the platform goals
- Anticipation of potential operations interruptions and implementation of effective plans to eliminate any potential interruptions associated with the migration of servers and storage arrays to the new data centers

- Coordination with system administrators and network administrators to determine hardware and network configurations to support customers' platform goals
- Ensuring that platforms sufficiently support existing applications and applications in development
- Coordination with system administrators and network administrators to facilitate platform performance upgrades

For this project, Triple-i developed a methodology that allows for the new infrastructure to progress without impacting day-to-day consolidation of DLA operations. This methodology has enabled Triple-i to:

- Remove and consolidate devices from the current data centers and create a consolidated environment in the new EDC
- Ensure that data remains in synch during the phasing of devices
- Conduct adequate testing to ensure that all components have been properly configured
- Provide storage capacity to meet production and testing needs of migrated activities
- Provide redundant Storage Area Network infrastructure to ensure required up time is met as dictated by DLA
- Provide for anticipated and unplanned storage capacity growth needs

#### **Operating platforms for this project include:**

- Sun Solaris
- HP UNIX
- Windows
- AIX

#### **Automation tools used during this project include:**

- ScanMaster for reporting
- HP OpenView for reporting and trouble tickets
- Storage Essentials for workflow management
- HP StorageWorks CommandView for Web-based management of globally distributed disk arrays

#### **Other Customers**

In addition to providing Storage Area Network (SAN) utilization services to DLA, Triple-i has also provided services such as testing, systems administration, interface development, portal and oracle development, and help desk support. Triple-i has also provided Web design and development, software development, and independent verification and validation (IV&V) for the Defense Contract Management Agency (DCMA).

**To find out more about these and other contract services, visit our website at [www.iiinfo.com](http://www.iiinfo.com) or contact [sales@iiinfo.com](mailto:sales@iiinfo.com).**