

# Campus Business Continuity and Disaster Recovery



## Overview

This solution is specifically designed for campus style environments such as Towns and Universities who have access to low latency, high bandwidth, and gigabit ethernet connections between facilities. This package will leverage that asset and provide you with an extremely robust, pre-configured, and simple to manage solution that ensures high availability of your applications and data.

All components will be pre-configured in our lab prior to shipment, making installation and migration to the new environment very straightforward. For anyone with a campus style network, this solution will provide you with a one-stop-shop business continuity and disaster recovery solution. Enclosed are preconfigured package prices. If you would like a custom configuration, our sales team can quickly provide you with a package that fits your needs.

## Components

1. VMware server virtualization
2. Storage virtualization platform
3. High performance server, storage, and switching hardware
4. Par 4 professional services & training

## Benefits

### Business Continuity Benefits

1. Automated failover from a facility/datacenter level failure.
  - Storage virtualization alternate pathing
  - Server virtualization auto failover/HA
2. Complete data protection and quick restore from various levels of failure such as volume corruption, file deletion, or OS corruption.
  - SAN snapshots for data recovery
  - Virtual Machine backups for image recovery
3. Zero downtime maintenance and upgrades for ANY component within the infrastructure, including SAN storage, host servers, and switches.
  - Live migration of virtual machines.

### Improved Services Levels

1. Quicker server deployments for new apps.
  - minutes instead of days
2. Faster recovery for file deletion or volume corruption.
3. Simplified application and OS patching, with reduced risk.
4. Instant failover for datacenter level failures.

### Cost Containment

1. Significantly less expensive than traditional hardware based replication solutions.
2. Reduced server footprint lowers utilities cost
3. Simplified management.
4. Storage replication between any hardware platform allows for seamless upgrades to different vendors.
5. Hardware agnostic solution will ensure flexibility for future growth at lowest possible cost.

## Requirements

1. Low latency (<5msec), GbE link between locations.

## Package Features:

1. Storage Hardware and Software
  - Snapshots
  - Synchronous Mirroring
  - Storage Virtualization
  - Thin Provisioning
2. Server Virtualization
  - Live migration
  - Automated failover (host and datacenter level)
3. Factory Integration
  - Pre-packaged and pre-configured solution
4. On-site Installation & Training (3 days)

PAR 4 PACKAGES	
<b>FT-03TB-STA-2VN</b>	- 3TB Raw Capacity - 2 Virtual Hosts w/16GB RAM - Supports 20 VMs with limited size for snapshots
<b>FT-06TB-STA-2VN</b>	- 6TB Raw Capacity - 2 Virtual Hosts w/16GB RAM - Supports 20 VMs with space for snapshots and growth
<b>FT-12TB-ST-3VN</b>	- 12 TB Raw Capacity - 3 Virtual Hosts w/16GB RAM - Supports 30 VMs with space for snapshots
<b>FT-4TB-SAS-2VN</b>	- 4Tb Raw High Capacity - 2 Virtual Hosts w/16GB RAM - Supports 20 VMs with some space for snapshots and growth. Used for databases with very random I/O patterns.

## Storage Specifications:

1. Scalable to 36TB; usable without software upgrade<sup>1</sup>
2. Unlimited snapshots to any media at either location
3. Virtualized platform, capable of leveraging any storage connected to EMC virtual storage node (including internal disk on storage server)
4. Thin provisioning
5. Alternate pathing
6. Synchronous mirroring
7. Asynchronous replication
8. Support for SAS, SATA, and FC2

<sup>\*\*1</sup>With upgrade to SAN Symphony, capacity is unlimited and additional controllers can be added.

<sup>\*\*2</sup>Support for FC backend disk requires FC HBA upgrade; Support for front-end FC requires HBA and software license upgrade.

## Virtual Server Cluster Specifications:

1. VMware ESX 3.5 Enterprise
2. VMware Virtual Center Management Server
3. HP DL380 G5, 2 x Quad core Xeon processors, 6 NIC ports, P800 Smart Array controller