

## Enterprise Systems: Storage Area Networks (SAN)

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**Definition(s):**

Storage area networks (SANs) are not a single product but an architecture composed of individual components that comprise an integrated SAN solution. A SAN is a high-speed special-purpose network (or sub-network) that interconnects different kinds of data storage devices with associated data servers on behalf of a larger network of users. SAN components include fibre channel, switches, directors, host bus adapters and SAN storage devices – servers, tape backup devices and tape libraries (silos), and disk subsystems. This architecture makes all storage devices available to all servers on a LAN or WAN, and enables backups of critical data to leverage robotic tape systems and storage silos.

**Rationale:**

It is recommended that all State critical data be stored on networked storage devices rather than individual workstations or mobile computing devices (i.e. laptops, hand held devices and mobile data terminals). Users are demanding increased service levels from their network, including online access to universal data stores. A SAN promotes storage consolidation and offers a modular storage solution that can grow with agency data storage needs. Using SAN and fibre channel connectivity to standard tape drives, backup/recovery of critical data can be enhanced by ease of set up, automating backup/recovery, a shortened backup cycle, and without degrading of the network.

**Approved Standards:**

Must support fibre channel infrastructure (FC1 and FC2), multiple open system platforms such as Unix and Intel-based operating file systems and user-defined RAID.

**Approved Products:**

EMC/Dell, using Brocade switches

**Guidelines/Technical Considerations:**

Agencies will work with the vendor to customize a solution for their agency that includes storage, fibre channel components, software, installation and maintenance. See ITB for equipment standard of performance. Tape backup hardware and software is optional.

**Review Cycle:**

As needed.

Office of Information Technology Standard

**Timeline:**

Issued: March, 2003; Revised: September, 2007

**Transition:**

Not applicable.

**Procurement:**

Pricing shall be based on discounts as per the Office of State Purchasing Contract # [405351](#), effective March 7, 2003 through March 6, 2008.

Procedures:

- 1) Agencies preview current EMC price list on Dell Premier Web Page.
- 2) Agencies must obtain a SAN solution quote from Dell in accordance with the percent discount(s) in the SAN contract.
- 3) Each SAN solution quote is uniquely numbered, and this unique quote number must appear within the text of the Purchase Order.
- 4) Dell must provide the agency a copy of the most current EMC GSA Schedule Price List with each quote. This EMC GSA Schedule Price List may also be viewed and/or printed on the Dell Premier Web Page.
- 5) Upon expiration of the three-year warranty period, maintenance may be obtained from Dell at 25% discount from the then most current Dell List price.

Date: \_\_\_\_\_

Approved by: \_\_\_\_\_