

Week 8 Discussion #1

Discuss which approach – SAN, NAS, or neither – is best suited to the following three scenarios:

- (a) Large e-commerce server farm with a dozen Web servers and two database servers. The goals are to improve performance and avoid redundant data storage on the Web and database servers.
- (b) Mid-size company with an active LAN and a Web server, database server, file/print server, email server, and 150 client workstations.
- (c) Small academic department with one server supporting a Web site and file/print sharing.

The large e-commerce server farm would achieve their goal of improving performance with a SAN solution. SANs often use Fibre Channel fabric topology, which is specially designed to handle storage communications, as opposed to NAS's, which use a higher-level protocol (Mitchell, 2009). As all the servers are located in the same geographical area of the server farm, file systems accessing the SAN won't have great distances to travel over the network to access their stored data; therefore, allowing them to maintain their own file-systems making block transfers for data won't unnecessarily increase complexity (Marshall, 2006). Both the SAN and NAS would have the benefit of consolidating storage, eliminating redundancy.

The mid-size company would also benefit from the SAN strategy; however, they might also benefit from a hybrid of SAN and NAS strategies as well. Since they already have a web and file/print server, they have candidate machines that may potentially be given additional NAS responsibilities; however, if these are highly-trafficked servers, the additional responsibilities may drag down their performance. If these servers are high-traffic, then the solution should weigh more heavily toward SAN or a NAS that has its own dedicated server.

Since the small academic department has only one server with its own IP address for web hosting and file/print sharing, it would make sense economically and practically to simply expand this server's responsibilities to also host the NAS. As additional storage space is needed, hard drives may be added to the server and treated as one continuous storage space. This solution is not optimal for performance reasons; however, the small size of the department and student body accessing the server's resources do not require a high-end solution (Mitchell, 2009).

Bradley Mitchell, *SAN vs NAS – What is the Difference?*, About.com, 2009. Retrieved from About.com Mar 8, 2009 at:

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David Marshal, *DataCore Reveals Top Ten “Lessons Learned”*, InfoWorld, 2006. Retrieved from infoworld.com Mar 8, 2009 at:

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