

Evolving File Systems to Leverage Networked Storage

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Flexibility

- Freedom of choice
- Greater ROI through using what you already have
- Reduce training costs by using one tool for multiple environments
- Chose the components that best meet your IT infrastructure needs

Performance

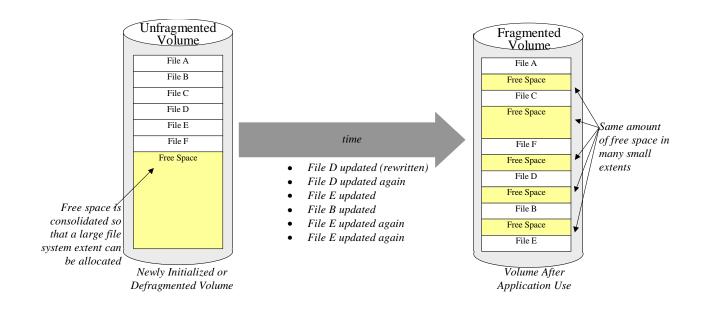
- Advantages of extent-based allocation
 - Groups multiple blocks into large writes
 - Faster than block-at-a-time based operations
 - Metadata overhead is reduced
 - Less overhead is necessary with sequential reads
 - Lessens fragmentation to increase performance
- Bypass file system cache for large writes

Recovery

- Advantages of a journaling file system:
 - Faster recovery after system failure
 - Logs file system changes before they are made
 - Maintains data integrity
- Critical for HA environments

Online Everything

- Online expansion to accommodate:
 - More products and services
 - More users
 - Analysis of a longer transaction history
- Online defragmentation



Shared Storage Environments

- Clustered File System Advantages
 - Transparent access to shared data with no modifications to existing applications required
 - File System accessibility from multiple servers reduces failover time in case of server failure
 - Simplified cluster-wide management of shared data

Networked Attached Storage

- Rapid Deployment
 - Easy to install
 - Quickly meets increasing storage demands
- Predictable, repeatable performance with built-in reliability
- Simple storage management solutions that are easy to use and administer

What to Look for in a File System

- Flexibility to operate in a heterogeneous environment
 - Platform independence
 - Storage hardware independence
 - Connectivity protocol independence
- High performance through extent-based allocation
- Fast recovery using journaling
- Online administration to increase uptime
- Extension to shared storage environments
 - Effective storage utilization via shared file access
 - Server scalability due to lower CPU processing load
 - Faster failover for high-availability environments
 - Lower hardware costs as a result of storage consolidation