

Local Storage, Network Storage, and Backups

Roundtable

Nomenclature

- A Hard Drive defined
- An SSD defined
- A Hybrid Drive defined
- A Fusion Drive defined
- RAID defined (0, 1, 5, 6, and 10)
- RAID types supported within Disk Utility

RAID

- In 10.7 & 10.8, RAID doesn't allow recovery partition.
- Why is external RAID a great idea?
- Hardware RAID vs. software raid
- 3rd party RAID software options
- 3rd party RAID hardware options

RAID

- Regardless of which RAID level you choose...
- Improves the resiliency
- NOT the recoverability after deletion / corruption / theft.

Fusion

- Address limitations in partitioning
- Real world examples of performance benefits
- How Apple's Fusion Drive offering is different from a Hybrid drive from Seagate.

Bus speeds and how they affect performance

- Bus speeds for USB, Firewire, eSATA, SATA I, II, and III, and Thunderbolt
- What is the performance chain, and identifying the bottleneck
- What is the throughput from an external drive to it's connection bus?
- What is the data throughput of a 5400 RPM drive to it's connection bus?

Performance (cont'd)

- What is the data throughput of a 7200 RPM drive to its connection bus?
- What is the data throughput of an average SSD to its connection bus?

Performance (cont'd)

- The final analysis, what is the best recipe? 7200 RPM Firewire? SSD with USB3? Obviously there is a point where the drive in the case can't keep up with the bridge technology leading to the data bus. What is that sweet spot? Provide numbers, do the analysis, pull the latest research. As the months progress, and more studies are done, the data will change.

Backups

- Constructing a safe and sane backup plan that allows your customers to recover from likely threats to their data
 - accidental deletion
 - intentional deletion (mal intent)
 - hardware failure
 - software corruption
 - natural disaster, fire, flood

Backups (cont'd)

- Using Time Machine connected to a local drive
- Using Time Machine connected to a Time Capsule
- Using Time Machine connected to a Mac OS X Server Time Machine Network Destination

Backups (cont'd)

- Using unproven third party File Servers, or NAS devices as network Time Machine destinations
- Using Carbonite and other Cloud offerings
- Using CrashPlan
- Using Retrospect

Backups (cont'd)

- Clone utilities
 - Carbon Copy Cloner
 - SuperDuper
 - Disk Utility
- Using other backup utilities
- The importance of "off-site" storage in a disaster recovery scenario.

The real test

- Regardless of which tools / approaches you suggest to your client, implore them to run (or have you run) fire-drill type restore tests, for both their protection and yours.