



Storage: Current and Future Needs

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Triple Constraint of Storage

CHEAP

FAST

RELIABLE...



Triple constraint of Storage

CHEAP

FAST

RELIABLE...

PICK TWO



Current State

But being technology, everything changes:

- 1. Commoditization drives cost;**
- 2. Consumerism drives experience;**
- 3. Expectations drive everything.**



Our Approach

Productization

We front the initial cap ex and rates cover cost



Our Approach

Productization

- ◆ Basic File Services
- ◆ Web Services (Apache & IIS)
- ◆ Virtual Server Service
- ◆ Share Point

Our Approach

Build it and they will come



What We Have

- ◆ **SAN (block based)**
 - ◆ iSCSI
 - ◆ Fiber Channel
 - ◆ InfiniBand

- ◆ **NAS**
 - ◆ NFS
 - ◆ CIFS

- ◆ **DAS**
 - ◆ Internal
 - ◆ JBOD



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In short: everything.

But what do you need?



Some Shared Successes

- ◆ Dell Quarterly Server Buy program has saved ~\$7M to date
(Commoditization + Volume = Savings)
- ◆ Grants contributed to the Lewis cluster
- ◆ “Cloud” hype is starting to clear way for strategy
- ◆ Internet2’s Net+ services are expanding
- ◆ Box trial is underway locally



...But what's next?



What we know

- ◆ “HPC,” “Big Data,” and Information Lifecycle management/data curation needs are no longer unique to “hard” sciences
- ◆ Storage needs are as diverse as the research they support
- ◆ Collaboration breeds success and drives innovation



What we know

We need clarity in DR/HA expectations;

We need FTE to facilitate efficient use of resources;

One size will fit few;

We have limited resources and will have to make hard choices;

We need to listen, communicate, and engage



What we know

It's time for me to stop talking and start listening.

What storage problems do you have, and what thoughts do you have on how we can solve them together?





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