Wishing on Wavelengths

Dreams and desires of a centralized research storage provider

Brock Palen
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Globus World 2013

Shameless Plug

www.RCE-Cast.com
@brockpalen
@jsquyres
cac.engin.umich.edu

Problems

- Scale
  - Speed/Performance
  - Management
  - Low Cost First Bit
- Security
  - HIPPA/PHI/PII/Etc

Scale - Flux

http://www.engin.umich.edu/caen/hpc/

- Supports over 100 Unique Research Projects
- Less than 3 years old
- Scaleable

Scale for Research Storage

- Capacity Growth
- Speed Growth

- Management Growth/Auditing
- NFSv3,NFSv4.1,CIFS,GridFTP,HDFS

Security for Research Storage

- Will get worse over time

- Encryption over the wire/Encryption at rest
- Policy needs enforcement on a per project tenant basis

Additional Problems

- Deep Archive
- Migration for upgrades