

FRAMESSTORE

Making movies with Lustre :
Fun and Fantasy with Furry creatures.

John Leedham

Head of Systems Architecture

Daire Byrne

Senior Systems Administrator

James Rose

Senior Systems Administrator



Facts and figures

Largest 'VFX' House in Europe

- But we also do....
 - Feature animation
 - High-end and mainstream Commercials
 - Digital Film grading and finishing
 - Film scanning and recording.
- 800+ employees
 - Offices in London, New York, and Reykjavik
- Oscar for VFX on The Golden Compass
 - Many others...VES, BAFTA,
 - Technical Oscar for Digital Grading innovation
- Recently completed the first Feature Animation in Europe

But enough of that

...on with the show



Work-load

Two types

- Playback
 - Streaming medium sized file I/O typical of compositing and interactive access.
- Rendering
 - CPU bound, large data sets, seek heavy, typical of textures, fur/feathers and particle systems.

Constraints

- Both access patterns need to coexist
 - Equally important,
 -but mostly at differing times of day.
- The compute farm can grow quickly as production deadlines demand
- Different 'shows' compete for resources.

Implementation

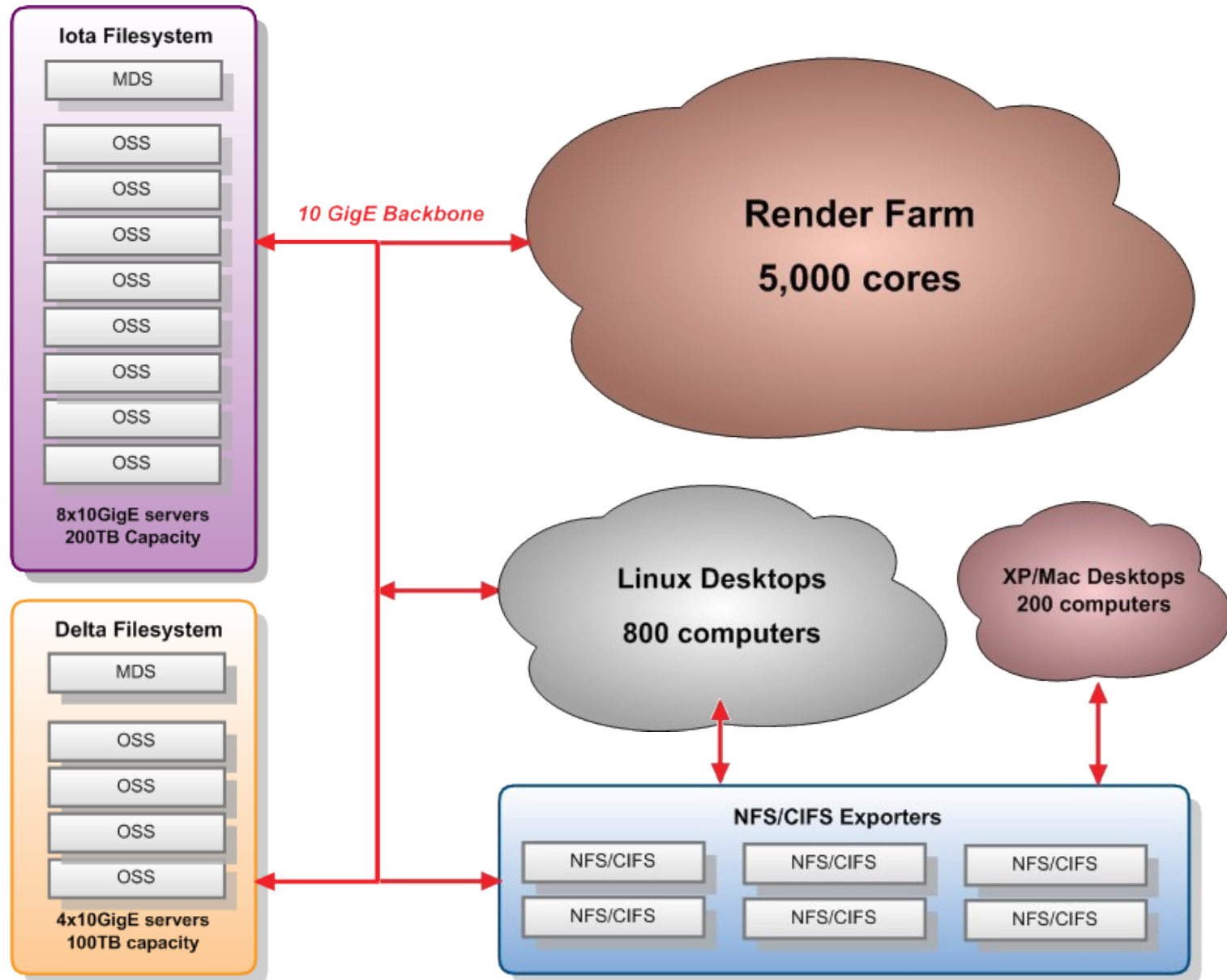
Historic

- Ad-hoc single namespace
 - Multiple NFS Servers
 - Symlinks
 - AutoFS
- The extreme case circa 2005 –
 - One master server is a collection of symlinks to multiple slave servers with tools to round-robin image sequences between them..
 -what other file system does that sound like?

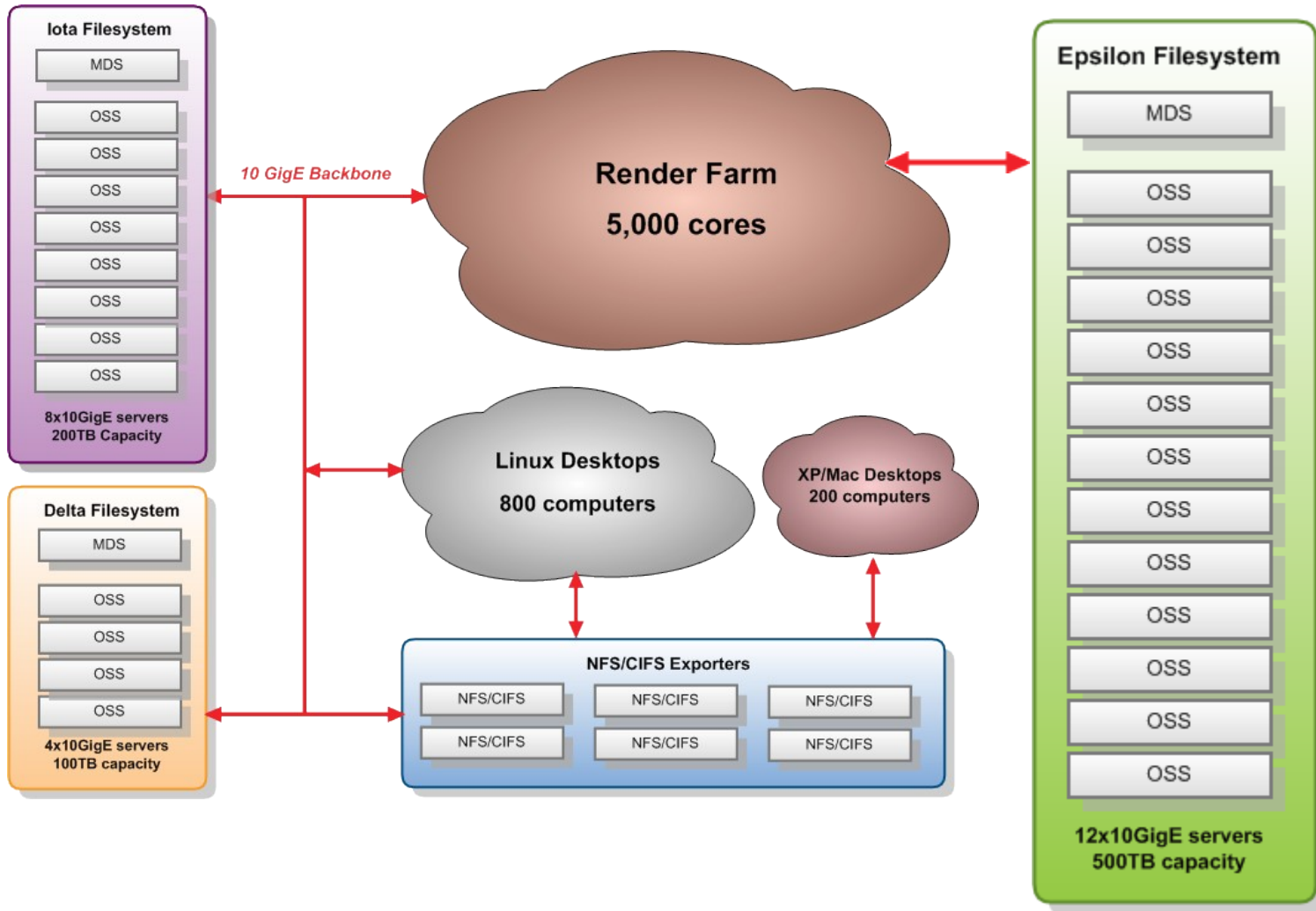
Current

- Began using Lustre in production somewhere around v1.4.5 (~3 years ago?)
 - Compute farm growth does not need to change technologies
 - Slowly deprecating older Linux NFS servers
 - The feature animation "Tales of Despereaux" was produced on a single 200TB Lustre file system

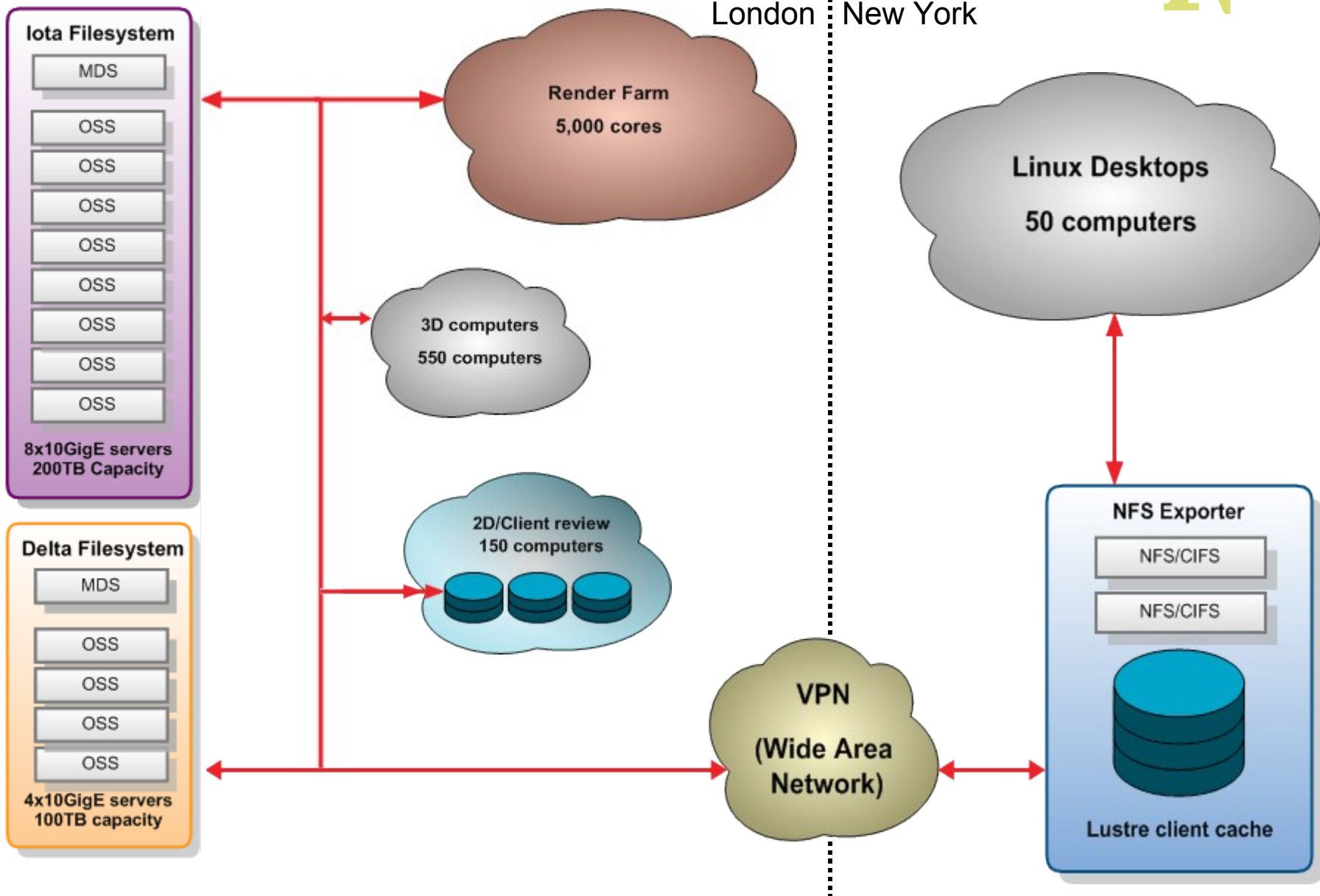
Current implementation



Backing it all up



Future desires



Questions?

THE END

<http://www.framestore.com/>