NFS and filesystem communications

- What features are problematic?
- Cache consistency issues
- Exporting filesystems via pNFS

Problematic filesystem features

- Acls

  - We have at least 3 models in Linux (posix, ntfs, nfsv4)

  - Mismatch between NFSv4 and Posix model

  - Will NFSv4.1 fix the ability to correctly export and render posix acls?

  - Andreas Grunebacher's NFSv4 acls for ext4?

Filesystem features (cont)

- Extended attributes?

  - 'labelled NFS' project addressing the needs of the LSM community

  - What other extended attribute features are needed? Motivation?

- What other filesystem features are being planned, that need NFS support?

  - Have IETF presence, and the ability to influence the NFSv4 process.

  - We have an NFS working group chair in the room

Cache consistency issues

- As noted in LSF'07, we have a problem on the client side w.r.t. detecting file changes
    - limited resolution on the mtime/ctime
    - lack of a "change attribute" (except ext4)
- Are there any plans for other filesystems to follow ext4's lead?
- Lease functionality is still not following the spec (more of a VFS problem than filesystem issue)