NVMe mapping for SCSI Layout

Christoph Hellwig

pNFS scsi layout status

- Enhancement / replacement of the block layout RFC to take advantage of uniqueue device identification and persistent reservations
- Explicitly tied into SCSI per discussion in Prague last year
- IESG last call three weeks ago

Multi-host NVMe devices

- Since version 1.1 NVMe allows access to the same namespace from multiple hosts
  - Using multiple "controllers"
  - Including a version of SCSI Persistent Reservations
- Multi host PCIe devices are a rather niche market
- In June 2016 the NVMe over Fabrics spec has been published
  - NVMe over RDMA, FC, etc

Using the SCSI layout with NVMe

- ❑ NVMe devices can implement all features needs for the SCSI layout

- ❑ The **NVM Express – SCSI Translation Reference** document translates the required features between NVMe and SCSI

Using the SCSI layout with NVMe

□ *"Using the Parallel NFS (pNFS) SCSI Layout with NVMe"* (**draft-hellwig-nfsv4-scsi-layout-nvme**)

– For now just points to the sections in the NVMe STLR document relevant for **draft-ietf-nfsv4-scsi-layout**

– Thus only published as informal

– Fine points of PRs vs multipathing might require a standards track document

Questions?