Problem Statement

- pNFS clients receive valid layout to a DS but cannot access data server
- MDS has no information about why client is doing all I/O through server
- This is a serious scalability problem for pNFS defeating its purpose
Changes from -02 version

- Use additional layout return types
  - Drop approach of extending layout-type-specific layout return data
- Extend use of layout return types to cover any loss of client to data server connectivity
  - Not just access permission issues
  - Example: Partial network outage
- Single op can report multiple inaccessible data servers
- Drop the callback
  - Removes server ability to ask clients to check device access
To Do list

- Client guidance on when to report problems
  - Client should try a few times before report
  - Report will be treated as serious/persistent
- NFS4ERR_PERM was misused and will be replaced with NFS4ERR_ACCESS
- List NFS errors that can be used

REQUEST: Accept as WG draft
Questions for discussion

- Label allowed NFS errors as MANDATORY vs. OPTIONAL?
  - Purpose of doing this?
- Dealing with problem resolution
  - How does MDS or client find out?
  - No protocol mechanisms to detect restored data server access in -03
- Extend to report SCSI errors?
  - Recommendation: No.
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