

pNFS Access Permissions Check

draft-faibish-nfsv4-pnfs-access-permissions-check-03.txt

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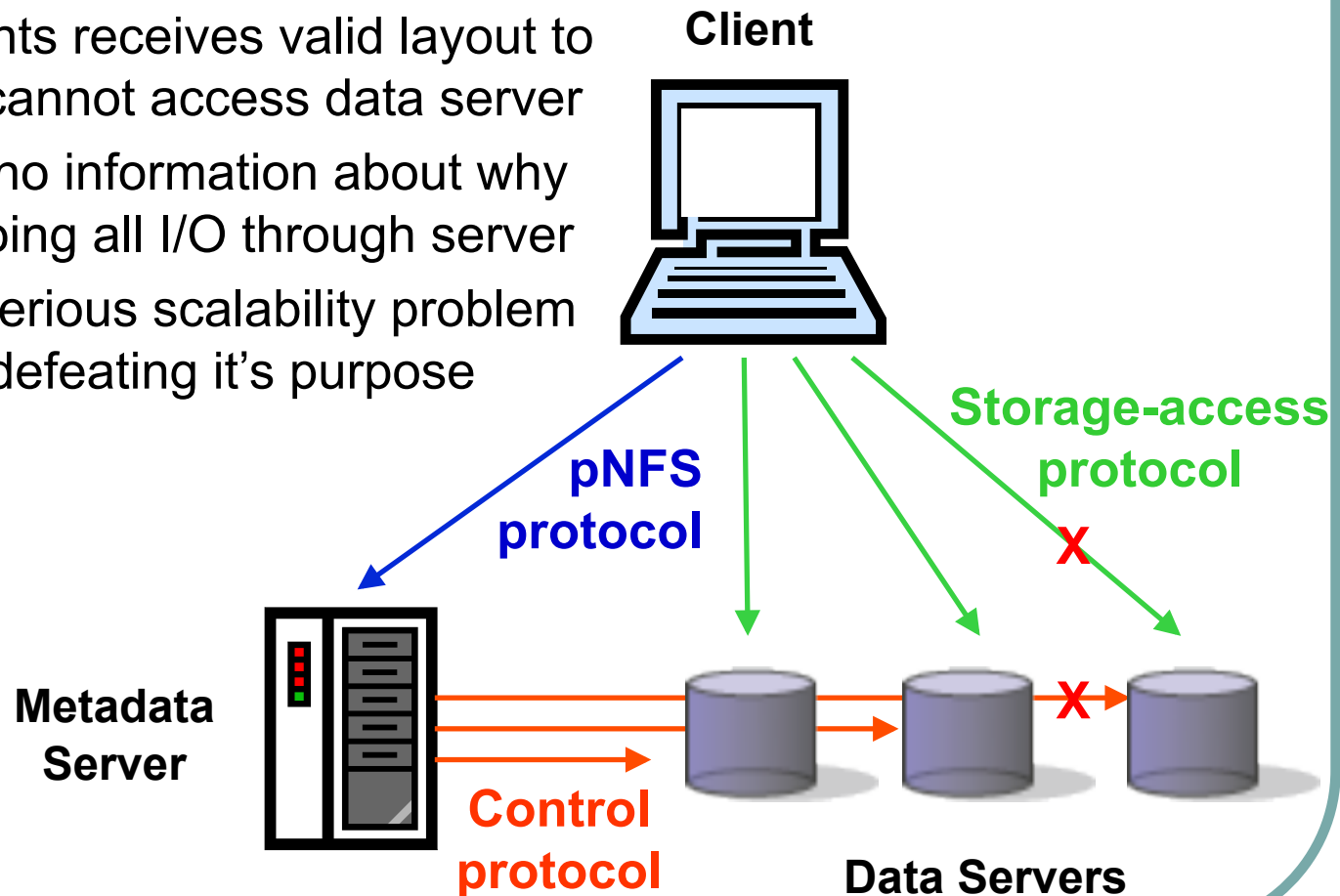
David Black - EMC

Mike Eisler - NetApp

Jason Glasgow - Google

Problem Statement

- pNFS clients receives 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 it's 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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