Contents, Discussion, Future Steps

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For nfsv4 WG Meeting at IETF-117
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Overview

• Motivations
• Contents
  • What’s in it.
  • What is yet to be done.
• Topics for Discussion
  • Things done in -01
  • Things mentioned in -01, but not yet done.
  • Anything else people want to raise
• Process going forward
Motivations
What we started with

• Need to separate out areas that were common to all minor versions
• Tons of errata reports
• Need to Incorporate the material from documents updating rfc8881 (e.g. rfc8434)
• Unsatisfactory Treatment of Security in existing Spec
  • No Threat Analysis.
  • Discussion of AUTH_SYS presents it as OPTIONAL
Motivations
Related Documents (Slide One of Two)

• Internationalization -06
  • WG document, now having ARTART review.
  • Reviewer assigned
  • Target date of 7/14 has not been met.
  • Need to figure out next steps.

• Security
  • Need to discuss WG adoption
  • Will need to arrange help from Security Directorate.
Motivations
Related Documents (Slide Two of Two)

• Rfc5662bis-00
  • Need to schedule WG adoption

• RFC8178
  • Need to reference as definitive in rfc5661bis
  • Already in -01.

• RFC8434
  • Need to incorporate in rfc5661bis
  • Probably post-02
Motivations
Quality issues found as we worked with docs

• Use of RFC2119 terms not in accord with the definition

• A lot of confused terminology to clean up:
  • Different meanings for “client owner”.
  • Handling of the word “verifier”

• A number of troubling areas
  • Handling of directory delegation needs clarification.
  • Requirements (e.g. atomicity) for persistent reply cache makes it unimplementable.
  • Discussion of memory-mapped IO does not make sense
What’s in it
Finding out yourself

• For changes in -01, can just diff it against -00.
  • Most of what shows up is really a change, rather than an artifact
  • Should be explained in Appendix B.5.1

• For the changes, in -00 a diff against rfc8881 shows a lot of changes, but many are not real
  • Thousands of lines added/deleted/changed, but a lot are ignorable.
    • Missing page numbers in rfc8881
    • Reference format changes
    • Section number changes, due to reorganization of Sections 1-2.

• Explanation in Appendices B.1 through B.3 or ask on list.
What’s in it
Shift from rfc8881 to -00

• Organizational changes
  • New Section 1 with old Section 2 being reorganized.
  • Changes to adapt to internationalization, extension, and security being dealt with in separate documents

• Addressing a lot of errata reports

• Shift from “RECOMMENDED” to “recommended” attributes

• Addition of Appendices
  • A: Nature of changes
  • B: Status of changes
  • C: Issues Requiring Discussion
What’s in it
Shift from -00 to -01 (Slide one of three)

• Revised handling of Retry/EOS (described in Appendix C.2.1)
  • Get rid of “MUST” meaning “It really would be nice if things worked this way”
  • Get rid of “MUST NOT” meaning “This is a bad idea, and we feel really strongly about that”.
  • Makes explicit that EOS provides “at-most-once” semantics, which it does.

• Rewrote section about memory mapping and locking (described in Appendix C.2.3), because the old one
  • Neglected the effects of OPEN
  • Misunderstood byte-range locking. Needed correction since,
    • Advisory hockinga has no effect on IO.
    • Mandatory locking does not cause locks to be taken, leading to deadlock.
What’s in it
Shift from -00 to -01 (Slide two of three)

• Terminology Clarifications
  • Distinguished “client owner” and “client owner id”
  • Explain multiple uses of the word “verifier”
• pNFS terminology
  • Created “file data provider” to cover both “data server” and “storage device”.
  • Moved from ‘storage protocol” to “data protocol”
  • Clarified the discussion of “control protocol”
What’s in it
Shift from -00 to -01 (Slide three of three)

• Re-organization of discussion of pNFS security
  • Security requirements are common to all mapping types
  • How those requirements are met differs for three mapping type groups
    • Data protocols using RPC with separate control protocol
    • Data protocols using RPC w/o separate control protocol
    • Data protocols not using RPC.
  • Threat analysis for pNFS will be organized similarly, but,
    • For data protocols using RFC, issues between client and data provider will be dealt with in the security document.
    • For control protocols, issues between server and file data provider are addressed in this document.
What’s will be in it
Already scheduled for draft -02

• Remaining errata reports
• Revisit “RECOMMENDED” Attributes
  • Since are not all equally “recommended”
  • Particular issue for authorization-related attributes.
• Clean up description of Named Attributes.
What’s will be in it
For draft -02 and beyond

• Items from Appendix C.2
  • Needed revisions for directory delegation (as described in C.2.2)
  • Needed work regarding persistence (as described in C.2.4)
    • Description of persistent reply cache presents it as unimplementable.
    • Possibility of lock persistence not clearly discussed
  • Reorganization of attribute descriptions

• Threat Analysis for pNFS
• Address remaining errata
• Other things that need doing
Topics for Discussion
Things done in -01

• Any problems with new text introduced by changes described in C.2.{1,3}?
• Any comments/issues regarding other, more minor changes?
• Any comments regarding work already scheduled for -02 (see Slide #11)
• Suggestions as to priorities for additional work in -02?
Topics for Discussion
Things mentioned in -01, but not yet done.

• Directory delegation
  • Clarify situations with regard to cookie changes.
  • Exclude batching and time-based delay from directory notifications

• Persistence Issues
  • Persistent sessions
    • Clarify atomicity requirements so they don’t make implementation impossible
    • Allows server reboot to terminate COMPONDS
  • Clarify possibility of lock persistence via continuation of existing clientid
Topics for Discussion
Anything else?

• Have I missed anything?
  • Almost certainly I have.
  • Please bring up issues as soon as possible.
  • If you want to discuss at a forthcoming meeting, best to raise them on list first.
Process  Going Forward
My expectations as author

• Have the following channels for discussion:
  • Meetings such as IETF117 and this meeting.
    • Will discuss this document and future drafts when needed
    • At least monthly but not weekly
    • Need consensus regarding scheduling of Interims.
  • The WG mailing list
    • Best to discuss issues there first
    • Also a place for follow-up discussions

• Future Drafts
  • At least two before requesting WGLC