Rfc5661bis Effort

Doc Status and Next Steps

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Nfsv4 Interim WG Meeting
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## Document Status

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Changes in -04  (Slide One of Three)

• Address Persistence Issues (Cited in C.2.5)
  • Current Unimplementability
    • Clarify Atomicity needs.
    • Do not force request to be continued across server restart.
  • Clarify relationship between persistence of reply cache and persistence.
  • Clarify relationship between persistence of session and clientid.
  • Address client discovery of level of persistence and possible need for grace period.
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Changes in -04 (Slide Two of Three)

• Address Directory Delegation Issues (cited in C.2.2)
  • Stability guarantees re directory cookies and entry order.
  • Clarity regarding batching and delay of notifications — that they only apply to attribute changes.

• Completed handling of pending errata reports.

• Clarification of semantics/timing of DELEG_PREV claim types.
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Changes in -04 (Slide Three of Three)

• Address important issues related to security that relate
to text in 61bis (resolution mainly in security document)
  • Absence of attributes for named attribute directories
  • Use of “SHOULD” regarding client support for data privacy
    for RPCSEC_GSS
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Milestones achieved

• Drafting concluded to address all of the issues cited in Appendices C.2.2 through C.2.6
  • Need to review and discuss results.
  • Is further work needed /doable for C.2.2 and C.2.6?

• All remaining errata reports dealt with
  • Two REJECTED reports were incorporated
  • Will need WG consensus on those
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Next Steps

• See if there is anything else to be done.
• No specific plans for -05 yet.
  • Will be publishing periodic updates, reflecting WG discussion.
  • Frequency will be approximately monthly.
• Start to organize review process.
• Start planning for completion of overall effort:
  • Submission of 61bis needs to happen last, after the other docs are ready.
  • See Discussion in Slides 21-24.
Security
Changes in -09

• Completed the split-out of ACLstuff by moving one additional section.

• Cleaned up cross-document references.

• Addressed issues related to lack of attributes for named attribute directories.

• Added a new recommendation to deal with the fact that client implementation of data privacy for RPCSEC_GSS had been a “SHOULD”.

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Security

Next Steps

• Need to complete adoption mechanics.
• Need to begin document review effort
• No existing plans for -10
  • Will do updates resulting from review
  • Need to draft additional material for Security Considerations but will focus on other document for a while.
Acls

Inherited from -00

• Initial Split-out of ACL-related material
• Reorganization of relationship of two ACL models
  • UNIX ACLs are the core functionality, with NFSv4 ACLs presented as a series of OPTIONAL extensions
  • Previously, NFSv4 ACLs were presented as primary with UNIX ACLs accommodated by being extremely lax about semantics.
• Reorganize description of ACE mask bits:
  • Two subsections for bits in accord with model in which extra bits are finer-grained variants of the three permission bits
  • Two subsections for bits that don’t fit that model
Acls

Expected in -01 (Slide One of Two)

• Will be submitted by the end of the week
• Complete Split-out of ACL-related material
  • Begun with -00
• Reorganization of ACE mask bit definition
• Revised ACE4_{READ,WRITE}_NAMED_ATTRIBUTES
  • To better interact with the new POSIX-based approach to named attribute directories.

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Acls

Expected in -01 (Slide Two of Two)

• Completed description of Aclfeature extension
  • Will be an NFSv4.2 extension.
  • Provides support information about mask bits, flags, who values.
• When not available /implemented:
  • Will rely on inference based on the set of supported ACE types.
  • Unfortunately, that leaves a lot of information gaps within each of the two ACL models
Acls

Followup Work (Slide One of Two)

• Needs WG to read and review
• Needs information about implementations. In particular,
  • How do clients deal with multiple methods of computing mode?
  • What variants of computing mode exist and are there differences in how mode change are reflected ACLs?
  • Which of the NFSv4 ACL extensions are actually implemented?
  • Which of those extensions are used/needed/desired?
Acls

Followup Work (Slide Two of Two)

• Need to focus on potential changes to Acl feature
  • Should it be expanded to represent more potential behaviors?
  • Can anything be taken out?
  • Can we use it to delimit a set of *RECOMMENDED* behaviors?
    • If so, can that set be made small enough to be workable in v4.2?
    • Could it be converted to *REQUIRED* in v4.3?
Internationalization

Current status

• Drafting all done
• Has multiple external reviews.
  • Now have to deal with the fact that they are different
• Have focused on other documents for a while
• Now time to shift back to this one and decide how to move toward completion.
  • After all, this one of the easiest pieces of this effort
Internationalization
External Reviews

• Three external reviews:
  a) Early review by N. Williams:
      • Had important suggestions about client-caching and normalization and case-insensitivity (adopted those)
      • Also proposed I write an entirely different document ($ Nobody$ liked that)
  b) Unofficial review by J Klensin
      • Much worry about complexity of these two equivalence relations, particularly case-insensitivity
      • (implicit) suggestion that these not be dealt with.
  c) Official review:
      • Generally positive. No major issues.
Internationalization

Next steps

• Decision to be made on path forward:
  1) Use -07 as a base for an eventual submission
  2) Cut back to a document with internationalization like that of RFC7530
  3) Something in the middle.

• I18n-extrevtry would be an attempt to explore 3)
  • -00 (PD) Expected by 5/21.
  • Will put most stuff about dealing with string equivalence into Appendices
  • Dealing with canonical equivalence (i.e. normalization) will stay as it is in RFC 7530.
  • Dealing with internationalized case-insensitivity would require a v4.2 extension, to be done in a separate document.

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Current Status

• Current draft is -01
  • Personal draft
  • Small set of changes relative to RFC5662
  • I think it is in pretty good shape

• Has not had much working group discussion
  • Needs more focused discussion on the limits of acceptable XDR changes before considering WFGadoption.

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Next steps

• Will prepare message for regarding XDR change limits in the bis context.
  • Intend to discuss on WG list.

• Will produce -02
  • Will propagate the PREV_DELEG XDR comment changes.
  • Make sure regarding match of 62bis and other docs.
  • Expect submit before 5/21

• Will propose WG adoption of this draft
Planning for Completing Effort
Original Goals and Current Status

• Goals
  • Multiple documents serving as collective bis for v4.1

• Current Status
  • Documents where we have a clear path to completion
    • 61bis, security, internationalization, 62bis
  • For the ACL document, we are just starting and have a long learning process, so completion of the bis might be years away.

• Need to look at bis plans that do not require all that work, as we do in Next Slide.

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Planning for completing effort
Looking at Alternatives (Slide One of Two)

• What could we say about ACL attributes in v4.0 and v4.1?
  • “They are a total mess” is probably not acceptable.
  • “They are Experimental” is at least the truth.
  • If we agree that the truth is necessary, could wordsmith something that conveys the reality.
  • How would this modify existing documents:
Planning for completing effort
Looking at Alternatives (Slide Two of Two)

• How would we follow up for v4.2?
  • Depends on results of investigation (See Slides 14-15)
  • Will need a bis of the acl document
    • That could include the extension, or that might be separate

• What do we do when we have true interoperability (v4.3 or later)?
  • V4.3 RFC would point to security
    • Would make AclFeature REQUIRED
    • Also make it clear that RECOMMENDATIONS in security/acls were obligatory.
  • Security document would point to aclbis
Planning for Completing Effort
Suggested Approach Going Forward

• Continue work on getting ACL implementation knowledge, as described in Slides 14-15, but not forever.
  • Make a decision at IETF120
  • Or at an interim one month later.

• Based on progress at that time, either
  • Continue as originally planned with a 5-doc bis effort
    • Switch to 4-doc effort and defer the job of de-experimentalizing ACLs.
    • Could be done in v4.2 or v4.3 given further consideration.