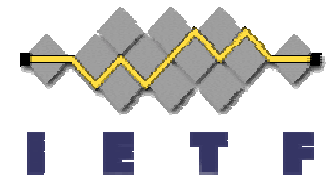


# NFSv4 Interim Meeting

Rob Thurlow  
robert.thurlow@sun.com



# Minor Revisioning

An unfinished conversation ...

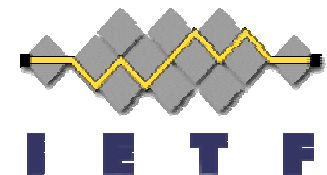
Connectathon 2003 discussion was useful

But discussion on alias was limited

Remember: the alias wins!

Have you expressed your opinion yet?

Some concern about AD's reaction



# Minor Revisioning

A recap of the current proposal:

Keep the rules from RFC3530

Adopt “train model” for regular minor revisions:

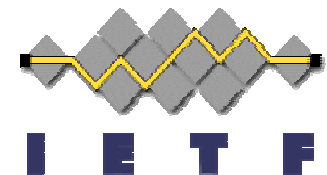
Initial draft needed by June 1

Consensus by August 15

Combined draft October 1

Test at Connectathon by about March 1

Keep common sense: no empty revisions or overly complex ones, keep to charter, close WG when done



# Minor Revisioning

Issues raised so far:

Use a feature model (“Enough Stuff”) instead

How full or empty to change default?

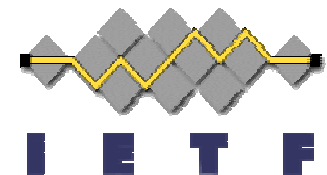
Ads won't like it – WG in perpetuity?

Not the intent, we just have a big job

WG chairs “measure and cut” a minor rev

Prepare feature list and desirable end date, but allow reasonable slip to get an “interesting” revision

Really need to hear something from you!



# RPC Numbering Transfer

Transfer RPC authority from Sun to IANA (doh!)

Will transfer program and auth flavor numbering

Tracked down prior Sun-IANA history

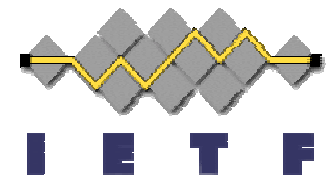
Simplified past ideas and wrote an I-D:

`draft-ietf-nfsv4-rpc-iana-00.txt`

Also respun RFC1831 to revise application info:

`draft-ietf-nfsv4-rfc1831bis-00.txt`

Fairly straightforward stuff



# RPC Numbering Transfer

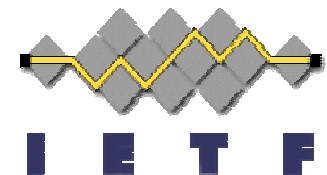
draft-ietf-nfsv4-rpc-iana-00.txt summary:

Documents past Sun assignment practices

Proposes a policy for IANA to issue new individual numbers and number blocks in both number spaces

Does NOT enumerate past assignments: Sun will transfer these to IANA and IANA will publicize them as it sees fit

Does NOT document application procedures, but does detail minimum information IANA needs



# RPC Numbering Transfer

draft-ietf-nfsv4-rfc1831bis-00.txt changes:

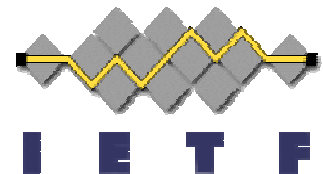
rpc@sun.com -> iana@isi.edu

Document procedure to apply for new numbers

Clean up references, e.g. Normative vs. Informative

Add a non-null Security Considerations

Very slight modernizations, but doc still compares well side-by-side with the old one



# Replication & Migration

Where were we?

Currently focusing on server-to-server protocol to transfer or replicate a filesystem

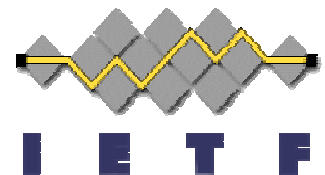
Had a draft-ietf-nfsv4-repl-mig-design-00.txt

Was a respin of a personal draft

Had a draft-ietf-nfsv4-repl-mig-proto-00.txt

Widely regarded as unimplementable (sigh)

Promised a respin to an RPC protocol at IETF56



# Replication & Migration

Respin now available!

Highlights of draft-ietf-nfsv4-repl-mig-proto-01.txt:

Now an RPC protocol (3 procedures :-)

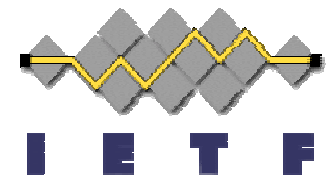
Specifying SNEGO and RPCSEC\_GSS security

SEND RPC & 12 ops to move data/metadata

Simpler session management and multiple sessions

Continuous replication possible

Filled in holes (deleg state, links, unlocks)



# Replication & Migration

Work yet to be done:

Rsync-like mode

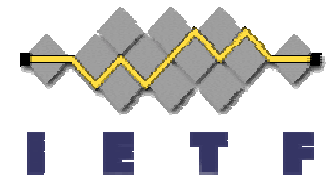
Capabilities negotiation detail

Compression algorithms

Working with NFSv4 minor revisions

What next?

Prototype implementation!



# NFS Global Namespace

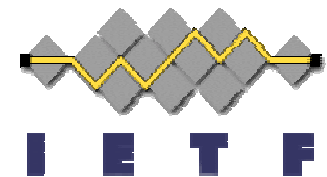
Repl-Mig highlighted need for a namespace to find replicas and manage migration

AFS/DFS customers and others already saw gap

Automounter not enough of a solution

Personal draft offers an idea for an effective client-server protocol tweak and discusses the rest of the problem

Want to add a charter item to write a problem statement and a requirements document



# NFS Global Namespace

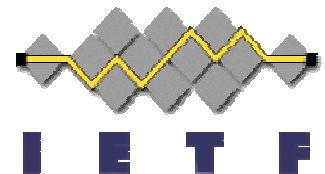
What do we want here?

Permit customers to create at least an enterprise-level unified namespace, with global possible

Needs to be secure, scalable, manageable by the right people from anywhere

Do this based on a de jure standard akin to RFC3530

... So it should be done in the IETF's nfsv4 WG



# NFS Global Namespace

draft-thurlow-nfsv4-namespace-00.txt summary:

Customers needs are documented

Problems breaks down to:

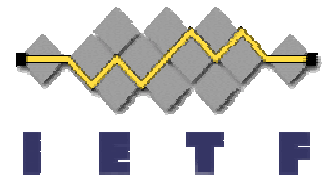
- Finding global root

- Finding and handling a referral to another location

Could implement in a couple of ways, but having server present image to client seems good

NFSv4 minor revision to extend LOOKUP sought

Discusses server-side choices without conclusion



# NFS Global Namespace

What do we do about this?

Real problem for customers with AFS/DFS EOL

Solves some problems with already-chartered  
Replication/Migration

Would like to add this charter language:

NFS Namespace – To solve problems found during work on Replication/Migration and to solve other customer needs, the working group will produce a problem statement and a set of requirements for possible global namespace extensions to NFS (in the context of a minor revision).

