RPC-over-RDMA
Version Two
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RPC-over-RDMA v2 Goals

• Original goals were narrow:
  • Integrate support for transport properties
  • Enable extensibility via an RFC 8178-like process

• Later, we added:
  • Enable support for generic remote invalidation
  • Richer error reporting
Potential Extensions

- Making use of Send/Receive for in-place data transfer (proposed in draft-dnoveck-nfsv4-rpcrdma-rtrext)

- Reducing/eliminating the use of Reply chunks (proposed in draft-cel-nfsv4-rpcrdma-reliable-reply)

- Machine authentication similar to TLS (not yet proposed)
RPC-over-RDMA v2 Goals

• One more goal was discussed at IETF 102: Instead of accounting for RPC Call/Reply round-trips, account for RPC messages. This would provide support for:

  • Retransmits and Call-only operation

  • Messages not associated with an RPC, like transport control plane messages

  • Other possibilities arising in future extensions
Prototyping

- Linux NFS client and server support transport properties à la draft-ietf-nfsv4-rpcrdma-cm-pvt-data

- This provides the ability to detect support for basic remote invalidation, also now implemented in Linux NFS client and server

- There is interest in these areas in other implementations

- Extensibility and rich error reporting have not yet been prototyped
Document Status

- Document reached original goals by revision -07

- No recent changes due to:
  - Focus on higher priority matters such as RPC on TLS
  - draft-ietf-nfsv4-rpcrdma-cm-pvt-data relieves pressing issues with RPC-over-RDMA v1
Discussion

• Do we need deeper prototype implementations before proceeding?

• Is the document ready for promotion to WG status?

• Will the charter milestone be met, or should it be adjusted?

• Is the initial transport property list complete?

• Should an extension be included in the document?