NAT and SCTP

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Internet Drafts

Single Point Traversal

+--------+                           +--------+
|  SCTP   |    +-----+     +-----+    |  SCTP   |
|end point|====| NAT |=::==| NAT |====|end point|
|    A    |    +-----+     +-----+    |    B    |
+--------+                           +--------+
Multi Point Traversal
General Considerations

• Changing part of an SCTP packet requires the complete recalculation of the CRC32C checksum.

• Changing the port number (like in NAPT) requires a synchronization between NAT engines on different paths.
SCTP Specific Variant of NAT

- NAPT uses client side port numbers to distinguish multiple clients behind a NAT using the same local port number and talking to the same server.
- The method proposed in draft-stewart-behave-sctpnat-03.txt uses the verification tag for this.
- This is an SCTP aware NAT with NAPT capabilities.
- Port numbers and therefore packets do not need to be changed.
Handling Local Port Number Collisions

• If two clients behind the NAT use the same port number talking to the same SCTP endpoint, the later association looks like a restart of the earlier one from the server perspective.

• Add a NAT-supported parameter, which disables the restart feature and allow multiple associations between two SCTP end-points.
Handling of Local Port Number and Verification Tag Collisions

• There is nothing which can be done here... But it is not likely, since two $14+32 = 46$ bit random numbers have to match.

• The middlebox can send an ABORT using an M-bit indicating that the client has to reinitiate the association.
Question

• Any technical questions?
• Can the IDs be adopted as WG items?