MPTCP – Multipath TCP

WG Meeting

Toronto, IETF-90, 21st July 2014

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- Note taker
- Jabber [IMPORTANT]
- Please include “-mptcp-” in your draft names
- Please say your name at the mike

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Agenda

1. Chairs - 10 min
2. Experience with Multipath TCP - Olivier Bonaventure - 30 mins
3. Use-cases and Requirements for MPTCP Proxy in ISP Networks - Lingli Deng - 10 mins
4. MPTCP proxy mechanisms - Xinpeng Wei - 10 mins
5. Some thoughts on MPTCP proxies and middleboxes - Ed Lopez - 10 mins
6. Processing of RST segments by Multipath TCP - Olivier Bonaventure - 10 mins
7. TFO support for Multipath TCP - Olivier Bonaventure - 10 mins
8. New MPTCP congestion control algorithm - Anwar Walid - 10 mins

Milestones

- Dec 2012: Consensus on what high-level changes are needed to the current MPTCP Experimental document in order to progress it on the standards track
- Apr 2013: Implementation advice (Informational) to IESG
- Aug 2013: Use-cases and operational experiences (Informational) to IESG
- Dec 2013: MPTCP-enabled middleboxes (Informational) to IESG
- Dec 2013: MPTCP standards track protocol to IESG

WG Item Status

- draft-ietf-mptcp-attack
  - Publication Request has been submitted to IESG
- draft-ietf-mptcp-rfc6824bis
  - No changes. Waiting for operational experience document to be done
  - TCPInc WG formed
  - May be updated if WG adopts TFO & RST drafts?
  - May be updated by MPTCP proxy work?

Implementation Updates

- FreeBSD
  - Version 0.4 released (July 11)
    - http://caia.swin.edu.au/urp/newtcp/mptcp/tools.html
  - Nigel will work on implementation full-time thanks to funding from FreeBSD Foundation

- Please let us know if you have any updates!

Charter item:
Use-cases and operational experiences

- The working group will also explore and document results with several of the proposed use cases for MPTCP in more detail, to ensure that MPTCP works well in practice and that operational experiences and issues are understood and captured. Likely use cases are to offload traffic from 3G to WiFi, and to manage traffic within a data centre. Another scenario is to enable, without changing the MPTCP protocol, operation of a single-homed, MPTCP end host on a campus network that has multiple providers.
- Prior to publishing a Standards Track specification, the working group will document experimental results and operational experiences to-date. This should consider not just experience with well-connected fat-pipe networks and long-lived flows, but also consider a broader links and types of applications; particularly looking for cases where MPTCP could be detrimental in some way.

Charter item: MPTCP proxy

- Finally, the working group will explore whether an MPTCP-aware middlebox would be useful, where at least one end host is MPTCP-enabled. For example, potentially helping MPTCP's incremental deployment by allowing only one end host to be MPTCP-enabled and the middlebox acts as an MPTCP proxy for the other end host, which runs TCP; and potentially helping some mobility scenarios, where the middlebox acts as an anchor between two MPTCP-enabled hosts.
- The working group will detail what real problems an MPTCP-enabled middlebox might solve, how it would impact the Multipath TCP architecture (RFC6182), what proxy approach might be justified as compared against alternative solutions to the problems, and the likely feasibility of solving the technical and security issues.
- Some discussion on the mailing list about potential IPR
  - https://datatracker.ietf.org/ipr/2364