

MPTCP – Multipath TCP

WG Meeting

Orlando, IETF-86, March 2013

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

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Agenda

- WG and Implementation status update (10 mins)
- Potential implementation survey discussion (10 mins)
- Technical Presentations (40 mins)
 - Multipath TCP Algorithm [Anwar Walid, 14min]
 - Congestion Control of MPTCP:
 - Performance Issues and a Possible Solution [Ramin Khalili, 18min]
 - Multipath Time Synchronization [Tal Mizrahi, 5min]
 - Double MPTCP proxy [Sam Xiongchunshan, 3min]

Please ask for presentation slots early, so we get enough meeting time!

WG Item Status

- TCP Extensions for Multipath Operation with Multiple Addresses (draft-ietf-mptcp-multiaddressed-09)
 - RFC6824
- MPTCP Application Interface Considerations (draft-ietf-mptcp-api-07)
 - Status: AUTH48

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

Implementation Status

- FreeBSD 10
- Linux v.3.5.7

Multipath TCP For FreeBSD

- Kernel patch for revision 238537 of FreeBSD-10
- Features
 - Compatible with Standard TCP
 - Multipath operations (establish, terminate, adding subflows to mptcp sessions)
 - MPTCP signalling (MP_CAPABLE, MP_ADD_ADDR, MP_JOIN and DSS are supported)
- Limitation
 - IPv4 only
 - CC is not supported yet
- See the following URL for more info!
 - <http://caia.swin.edu.au/urp/newtcp/mptcp/tools.html>

Linux implementation status

Linux Kernel MPTCP

Implementation Status

Christoph Paasch, Gregory Detal, Fabien Duchêne
IP Networking Lab (UCLouvain)

<http://www.multipath-tcp.org>

Survey (1)

- Get useful info about current implementations
 - Questions on deployment would make it too long?
(Just ask for any brief general comments?)
- Help us with our charter
 - Document implementation advice
 - Advance protocol on standards track
- Mechanics
 - Create I-D of proposed survey
 - Allow anon replies (unannounced implementations?)
 - Via Chair(s) + ?

Survey (2)

- Support of MPTCP options
 - MP_CAPABLE; MP_JOIN; DSS (32 or 64 bits? Dss checksum?); ADD_ADDR; REMOVE_ADDR; MP_PRIO; MP_FAIL; MP_FASTCLOSE
- Coupled congestion control?
- Fallback to regular TCP?
- Security?
- IPv4 and v6?
- Implementation info
 - OS, plans, independent...
 - Max number of subflows supported?
 - On end hosts or mptcp-enabled middlebox
- Interop tests?
- Creation of subflows
 - via multiple IP addresses? Add addresses that appear after connection? Client or server?
- Experiences about Heuristics
 - Port usage; delayed subflow start; failure handling; sender buffer; receiver buffer