

MPTCP – MULTIPATH TCP

Interim meeting #3
20th October 2011
audio

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- Scribes
- Jabber
- Please include “-mptcp-” in your draft names
- Please say your name
- Meeting being recorded
- Info at

<http://trac.tools.ietf.org/wg/mptcp/trac/wiki/>

[Interim_Oct_2011](#)

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Aim

- Close all remaining issues with the protocol draft
 - in particular concluding on the proxy issues
 - confirmed on the list
- WG last call as soon as new version
 - simultaneously last call the API doc
- Format: open discussion (no-one asked for presentation slot)

WG Milestones & Status

- Mar 2010 - Established WG consensus on the Architecture → **Done**
- Aug 2010 - Submit to IESG architectural guidelines and security threat analysis as informational RFC(s) → **RFC6181 & RFC6182**
- Mar 2011 - Submit to IESG basic coupled congestion control as an experimental RFC → **RFC6356**
- Mar 2011 - Submit to IESG protocol specification for MPTCP extensions as an experimental RFC → **closing any open issues today, then WGLC**
- Mar 2011 - Submit to IESG an extended API for MPTCP as an or part of an experimental or informational RFC → **ready for simultaneous WG last call**
- Mar 2011 - Submit to IESG application considerations as an informational RFC → **merged with API doc**
- Mar 2011 - Recharter or close

Topics

1. Proxy
2. Keys on various MP_CAPABLE msgs.
3. Fallback mode
4. Teardown of state when all subflows fail
5. Add Bulk_transfer_optimisation flag to MP-Capable?
6. Support of “Single-path mode”

Proxy

It has previously been agreed that

[1] we want to complete the protocol standard without deciding the detailed mechanism for supporting proxy operation,

[2] we want to allow future flexibility for extensions to support a proxy.

There are several possibilities for how to achieve this, some of which alter the current protocol,

see email discussion for the possibilities

<http://www.ietf.org/mail-archive/web/multipathtcp/current/msg01569.html>

Proxy

1) Add a byte to ADD_ADDRESS

pros: simple change to the current spec. good extensibility

cons: need one more byte

2) Use one bit of the address-id

pros: simple change to the current spec.

cons: less address-id space, low extensibility

3) Use more bits of the address-id

pros: simple change to the current spec, some extensibility

cons: much less address-id space,

4) Keep the current format and develop new option to describe the address (e.g DESC_ADDR)

pros: great extensibility. no need to change the current spec.

cons: might need another mechanism to sync 2 options reliably.

5) Keep the current format and develop new option to specify proxy or other addresses (e. g ADD_ADDR2)

pros: great extensibility. no need to change the current spec

cons: having 2 options for mostly the same feature might be a bit ugly design.

Current emerging consensus for Option 5?

Other topics

- **Keys on various MP_CAPABLE msgs.**
 - Email discussion concluded to go back to the approach in the -03 version of the draft, with key in SYN - as well as syn/ack ack (& ack for reliability). (Remember to update S2.1 as well)
 - <http://www.ietf.org/mail-archive/web/multipathtcp/current/msg01549.html>
- **Fallback mode**
 - proposed solution is to keep this simple, "Once MPTCP reverts to TCP, it MUST NOT revert back to MPTCP afterwards".
 - <http://www.ietf.org/mail-archive/web/multipathtcp/current/msg01555.html>
- **Teardown of state when all subflows fail**
 - This is a heuristics issue rather than a protocol issue,
 - <http://www.ietf.org/mail-archive/web/multipathtcp/current/msg01531.html>
- **Add Bulk_transfer_optimisation flag to MP-Capable?**
 - Don't add, seems like extra complexity for not much gain
 - <http://www.ietf.org/mail-archive/web/multipathtcp/current/msg01531.html>
- **Support of "Single-path mode" (an ambiguous term...)?**
 - No changes to the spec.
 - Could be subject of later work on exact requirements for "single path mode" and potential future work to extend the protocol.
 - <http://www.ietf.org/mail-archive/web/multipathtcp/current/msg01559.html>

Implementation News ?

Placeholder in case anyone wants to share
any news