

MPTCP – Multipath TCP

WG Meeting
18th & 20th July 2016
Berlin, Germany

Philip Eardley
Yoshifumi Nishida

- Note taker
- Jabber
 - start your jabber comments with “[mike]” if you want them spoken at the mike
- Please say your name at the mike

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IETF-96

1. Hackathon – any interest?
 1. Saturday July 16, 2016 and Sunday July 17, 2016
2. Applied Networking Research Workshop 2016, Saturday July 16, 2016
 1. An enhanced socket API for Multipath TCP. Full Paper ; Benjamin Hesmans (UCL) and Olivier Bonaventure (UCL).
 2. Towards a Multipath TCP Aware Load Balancer. Short Paper ; Simon Liénardy (Université de Liège) and Benoit Donnet (Université de Liège).
 3. <https://irtf.org/anrw/2016/>
3. We have two WG sessions
 1. Monday 1540-1740 – Charter items
 1. Implementation news
 2. Bumping the version number
 3. Progressing /finalising rfc6824bis
 1. Alan Ford – draft-ietf-mptcp-rfc6824bis
 2. Fabien Duchene - draft-duchene-mptcp-add-addr
 2. Wednesday 1400-1530 –
 1. Continuing Monday’s discussion
 2. non-Charter items
 3. (if time) possible re-chartering

Implementation news

Bumping the version number - Introduction

- ? Should rfc6824-bis have:
 - the same version number as rfc6824
 - or a new version number (& deprecate rfc6824)
- History:
 - We had an earlier discussion & decided to bump the version number <http://www.ietf.org/mail-archive/web/multipathtcp/current/msg02572.html>
 - Further recent discussion at the interim etc <https://www.ietf.org/proceedings/interim-2016-mptcp-01/minutes/minutes-interim-2016-mptcp-01>
 - (today) Is there clear consensus to change our decision? (if not, we keep with it)
- Pros
 - We can make MP-CAPABLE reliable
 - Simple to add other new features that seem desirable (support for stateless server, load balancer; save option space in SYN)
- Cons
 - Have to migrate between MPTCP versions
 - New features less important
- Data points
 - Data on importance of making signalling reliable (Christoph Paasch)
 - Are people with deployments worried about the migration issue?

Bumping the version number - HUM

- Stick with the original decision to bump the version number
- Change decision and don't bump version number (to be confirmed on list)

RFC6824bis - Introduction

- Suggested aim is to do (first?) WG last call as soon as possible
- We will need implementation(s) before we forward to IESG
- Alan Ford - draft-ietf-mptcp-rfc6824bis
- Fabien Duchene - draft-duchene-mptcp-add-addr

Wednesday

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- Meetecho
 - Please get in the meetecho queue
- Please say your name at the mike & check your name & comment in the etherpad

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Summary of Monday's meeting

- Consensus that we bump the mptcp version number in the bis
- Further discussion needed on the list about whether we add (to the bis)
 - "G" bit and thus the exchange of tokens not keys in the MP_CAPABLE handshake [draft-paasch-mptcp-application-authentication] (build from application-layer authentication)
 - 4 proposed additions to ADD_ADDR option [draft-duchene-mptcp-add-addr]:-
 - "E" (Echo) flag (reliability)
 - "B" "Backup" Flag in the ADD_ADDR option (back-up)
 - 3 "priority" bits in the ADD_ADDR option (priority)
 - 4 bits describing a "Community" (path diversity)

Today's agenda

- Chairs (5mins)
- Combined slot (30 mins)
 - Link bonding with transparent Multipath TCP - Bart Peirens
 - An MPTCP Option for Network-Assisted MPTCP Deployments: Plain Transport Mode - Mohamed Boucadair
 - Use cases & motivation - Bart
 - Deployment scenarios & solution - Med
- MPTCP API - Olivier (10mins)
- NFS, RDMA & MPTCP - Chuck Lever (5 mins)
- A Linked Slow-Start Algorithm for MPTCP - Runa Barik (10 mins)
- Possible re-chartering (30mins)

Document status

- Jan 2015: Use-cases and operational experiences (Informational) to IESG
 - draft-ietf-mptcp-experience: submitted to AD
- Jan 2015: MPTCP standards track protocol to IESG
 - draft-ietf-mptcp-rfc6824bis – works continues. We'd like to WG last call as soon as possible, though sending to IESG will need implementation(s)
- Apr 2015: MPTCP-enabled middleboxes (Informational) to IESG
 - we've had various discussions, but no WG doc
 - See re-chartering discussion later
- Chairs /AD:
 - As agreed a while back, need to remove paragraph about documenting implementation advice

Possible re-chartering - Introduction

- Charter item: MPTCP-enabled middleboxes (Informational)
- Finally, the working group will explore whether an MPTCP-aware middlebox would be useful, where at least one end host is MPTCP-enabled. ... 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.
- Limited work /individual drafts towards this
- Real-world MPTCP deployments have proxies at both ends (eg CPE & aggregation node are both MPTCP-enabled)
- Should we delete the Charter item, or change it?
- Other additional work items?