TCP Maintenance and Minor Extensions (TCPM) Working Group Status

IETF 83 - Paris

March 2012

Note Well

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Agenda

- Agenda bash & WG status (5min)
- TCPM Rechartering (10min)
- WG items
  - TCP Fast Open (15 min)
    draft-ietf-tcpm-fastopen-00 / Jerry Chu
  - Increasing TCP's Initial Window (15 min)
    draft-ietf-tcpm-initcwnd-03 / Jerry Chu
  - IW10 in Low Bandwidth Environments (15 min)
    Hagen Paul Pfeifer
  - Survey of Security Hardening Methods for Transmission Control Protocol (TCP) Implementations
    draft-ietf-tcpm-tcp-security-03 / Fernando Gont
  - Proportional Rate Reduction (5 min)
    draft-ietf-tcpm-proportional-rate-reduction-01 / Matt Mathis
- Other items
  - Laminar TCP (15 min)
    draft-mathis-tcpm-tcp-laminar-00 / Matt Mathis
  - NAT functional extension for address resource restricted environment (15 min)
    draft-naito-nat-resource-optimizing-extension-00 / Kengo Naito
  - TCP option space extension - a brief discussion (10 min)
    draft-ananth-tcpm-tcpoptext-00 / Anantha Ramaiah

Recent RFCs

- Clarification of sender behavior in persist condition
  draft-ietf-tcpm-persist
  Status: RFC 6429

- Defending Against Sequence Number Attacks
  draft-ietf-tcpm-rfc1948bis
  Status: RFC 6528

WG Items Nearing RFC Publication

- The NewReno Modification to TCP's Fast Recovery Algorithm
draft-ietf-tcpm-rfc3782-bis
Milestone Target: Proposed Standard in April 2011
Status: RFC Editor Queue (RFC 6582)

- SACK Entry / RFC 3517bis
draft-blanton-tcpm-3517bis
Milestone Target: Proposed Standard in October 2010
Status: IESG processing

WG Items in WGLC or Being Revised Following WGLC

- MSS Option
draft-ietf-tcpm-tcpmss
Milestone Target: Proposed Standard in July 2009
Status: New version -04 with Post-WGLC comments (see list)
Action: **Move to IESG**

Active WG Items

- 1323bis
  draft-ietf-tcpm-1323bis
  Milestone Target: Proposed Standard in July 2009
  Status: Needs revision
  Action: Action with David Borman

Active WG Items

- TCP Security
draft-ietf-tcpm-tcp-security
Milestone Target: August 2010
Status: Version -03 with reduced scope (informational)
Action: Discussion during IETF 83

Active WG Items

- Increasing the Initial Window
  draft-ietf-tcpm-initcwnd
  Milestone Target: Experimental in September 2011
  Status: Under active discussion / review
  Action: **WGLC planned**

- Proportional Rate Reduction for TCP
  draft-tcpm-proportional-rate-reduction
  Milestone target: Experimental in May 2012
  Status: Under active discussion / review
  Action: **WGLC planned**

Active WG Items

- Shared Use of Experimental TCP Options
draft-ietf-tcpm-experimental-options
Milestone Target: Proposed Standard in Sept. 2012
Status: Under active discussion / review
Action: **Continue discussion on list**

- TCP Fast Open
draft-cheng-tcpm-fastopen
Milestone Target: Experimental in Sept. 2012
Status: Under active discussion / review
Action: Continue discussion

Under Poll to Become a WG Item

- None

Many other documents are under discussion, see WG status posted to the mailing list for a summary

TCP Maintenance and Minor Extensions (TCPM) Working Group Re-Chartering

March 2012

Motivation

- Current charter includes some outdated text
- Cleanup of "Specific Goals" required
- IESG approval required for every new milestone

➔ Minor change of charter text, no scope change

Suggested TCPM Charter (1)

TCP is currently the Internet's predominant transport protocol. To maintain TCP's utility the IETF has regularly updated both the protocol itself and the congestion control algorithms implemented by the protocol that are crucial for the stability of the Internet. These changes reflect our evolving understanding of transport protocols, congestion control and new needs presented by an ever-changing network. The TCPM WG provides a venue within the IETF to work on these issues.

Suggested TCPM Charter (2)

The WG serves several purposes:

 * The WG mostly focuses on maintenance issues (e.g., bug fixes) and modest changes to the protocol and algorithms that maintain TCP's utility, including incremental enhancements of the congestion control mechanisms.

 * The WG is a venue for moving current TCP specifications along the standards track (as community energy is available for such efforts).

 * The focus of the working group are minor extensions to TCP algorithms and mechanisms. In cases where these are directly applicable to other transports (e.g. SCTP or DCCP), the mappings to other transports may be specified alongside that for TCP, but significant additions and changes to other transports are not in scope.

Suggested TCPM Charter (3)

TCPM is the working group within the IETF that handles small TCP changes, or minor extensions to TCP algorithms and mechanisms. While fundamental changes to TCP or its congestion control algorithms (e.g., departure from loss-based congestion control) should be brought through TCPM, it is expected that such large changes will be handled by other working groups or require additional reviews, in particular by the IRTF Congestion Control Research Group (ICCRG).

Suggested TCPM Charter (4)

TCP's congestion control algorithms are the model followed by alternate transports (e.g., SCTP and (in some cases) DCCP), which are handled for instance by the Transport Area WG (tsvwg). The IETF has recently worked on several documents about algorithms that are specified for multiple protocols (e.g., TCP and SCTP) in the same document. Which WG shepherds such documents will determined on a case-by-case basis. In any case, the TCPM WG will remain in close contact with other relevant WGs working on these protocols to ensure openness and stringent review from all angles.

New TCPM milestones that fall within the scope specified within the charter can be added after approval of the working group and the responsible Area Director.