

RFC793bis  
TCP Specification Update  
draft-ietf-tcpm-rfc793bis

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# Status of WG Item

- Adopted as a working group item after mailing list poll and discussion at Dallas IETF meeting
- Milestone added to charter:
  - November 2017 – Submit RFC793bis document to the IESG for publication as Internet Standard
- The main difference between the initial draft-ietf-tcpm revision and the last draft-eddy revision is rework of the section on segmentation to address comments from the mailing list

# Plans

- Plan to continue to submit incremental revisions that address only one or a small number of issues
  - The rfcdiff output should be useful to see how an individual issue was resolved
- Incorporating RFC1122's changes and additions is the near term work planned
  - List of other planned changes and items to consider is in the document
    - “TODO” list at the end of Section 4 “Changes from RFC 793”

# Contributing

- Document's XML source is also available in a git repository:
  - <https://bitbucket.org/weddy/rfc793bis>
  - Please keep technical discussion on the official TCPM mailing list
- The normal IETF consensus process applies and the working group mailing list, meetings, and other IETF tools are not replaced by use of “git”
  - It's just a revision control tool for sharing the document source and possibly tracking changes

# Status of Update Work

- Errata have been incorporated
  - Except for Errata #3305 on sequence number validation
- Urgent pointer changes incorporated
  - From RFC 1122 and 6093
- Initial sequence number generator changes incorporated
  - From RFC 6528
- Section on “segmentation” added to collect:
  - MSS clarifications (RFC 6691)
  - Recommendation to support PMTUD and PLPMTUD
  - Nagle algorithm (from RFC 1122)
  - Interaction with jumbogram support (from RFC 2675)

# Open Question on Scope

- Some items proposed for incorporation as changes to RFC 793 have not been strict outputs of IETF consensus process
- Examples:
  - Nagle variation from draft-minshall-nagle (variation implemented in Linux kernel)
  - Description of checking the reserved bits that “Must be zero”
  - How to fix the sequence number validation description:
    - I.e. draft-gont-tcpm-tcp-seq-validation
- If these types of changes will be in-scope for this update or not should be a matter of consensus in the working group
- If such changes are allowed in-scope of this update, then consensus for each should be clearly called in the working group

# Open Question on Content

- Should all 2119 requirements language be captured in an 1122-style table at the end of the document? E.g.:

F					S	
o					H	
o					O M	
t				S	U U	
n				H	L S	
o				M O	D T	
t				U U M		
t				S L A N N		
FEATURE		RFC1122	T D Y O O			
e		SECTION			T T	

- This is fairly easy to do if people find it valuable, and it helps ensure uses of requirements language are crisp and clear

Aggregate or queue un-pushed data	4.2.2.2			x		
Sender collapse successive PSH flags	4.2.2.2		x			
SEND call can specify PUSH	4.2.2.2			x		
If cannot: sender buffer indefinitely	4.2.2.2				x	

# Next Steps

- Add pointers to optional 793 changes and other Informational clarifications, e.g.:
  - RFC 5961 state machine option for robustness to blind reset DoS attacks and RFC 4953 describing other mitigations
  - RFC 6191 reducing TIME-WAIT using timestamps
  - RFC 5461 discussion of soft-error treatment
  - RFC 6429 clarification of ZWP/persist state
- Add pointers to other necessary documents that TCP implementers must consider:
  - 7323, 5681, etc.
- Continue to process other items marked as “TODO” in the draft, used to bookmark necessary future changes
- Incorporate feedback from working group