

RFC 1323.bis update IETF 74

TCPM WG, March 23, 2009

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Wind River

Changes since draft-ietf-tcpm-1323bis-00.txt

- TCP Options and MSS discussion moved to separate document: draft-ietf-tcpm-tcpmss-00.txt
- Added window retraction issue [Mathis08] due to granularity of window scale
- Added a real “Security Considerations” section
 - Large windows increase vulnerability to forged packets
 - Middle boxes that remove TSopt, defeating PAWS
 - With large window, Jumbograms weaken the TCP checksum
- Updated discussion on high speed networks

Changes since draft-ietf-tcpm-1323bis-00.txt (cont.)

- Changed all “RFC-XXXX” to “RFC XXXX”
- PAWS: Changed “PROTECT AGAINST ...” to “PROTECTION AGAINST ...”
- Formatting and Boiler plate fixes
- Grammatical changes, e.g.
 - Change keepalive to keep-alive (consistency with RFC 1122)
 - Change un-symmetric to non-symmetric
 - etc.

Open Items

- **DONE: Move “TCP Options and MSS” to a separate ID**
 - draft-ietf-tcpm-tcpmss-00.txt
- **DONE: Fix end of section 3.3, “The RTTM Mechanism”**
 - It ended with “For example,”
 - Added two examples & explicitly stated that no particular algorithm is endorsed by this document
- **Remove description of changes from RFC 1072 and RFC 1185, and update changes from RFC 1323.**
- **NEW: draft-gont-tcpm-tcp-timestamps-01.txt**
 - Timestamp generation ala ISN in RFC 1948:
 - $\text{timestamp} = T() + F(\text{localhost}, \text{localport}, \text{remotehost}, \text{remotepport}, \text{secret_key})$

Next steps

- **Are there any other issues that need to be resolved?**
- **Submit the next version for WG Last call?**

TCP Options and MSS

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Comparing who adjusts for options

	MSS is adjusted to include options	MSS isn't adjusted to include options
Sender adjusts length for options	Packets are too short	Packets are the correct length
Sender doesn't adjust length for options	Packets are the correct length	Packets are too long

Conclusions

- **Receiver can only guess what options the sender might include**
- **Sender must adjust down size of packet to account for:**
 - TCP options
 - IP options
 - Additional IPv6 headers
- **MSS option does *NOT* include adjustments for TCP or IP options**
 - Only adjusted for fixed TCP and IP header length

Next Steps

- **Any changes for the ID?**
- **Proposed Standard or Informational?**
- **Should it have “Updates: 793 1122”?**
- **Is it ready for a WG Last Call?**

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