

# **RFC 1323.bis update IETF 74**

**TCPM WG, March 23, 2009**

**David Borman**

**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:
  - $\text{timestamp} = T() + F(\text{localhost}, \text{localport}, \text{remotehost}, \text{remoteport}, \text{secret\_key})$

# 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

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

# 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?**

**WIND RIVER**