

UDP Usage Guidelines for Application Designers

draft-ietf-tsvwg-udp-guidelines-04

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Content & History

- Guidelines to the designers of applications and application-layer protocols that use unicast UDP
 - List discussion and feedback from out-of-area reviews has resulted in two revisions since IETF-69
 - Contents
 - 3.1 Congestion Control Guidelines
 - 3.2 Message Size Guidelines
 - 3.3 Reliability Guidelines
 - 3.4 Checksum Guidelines
 - 3.5 Middlebox Traversal Guidelines
 - 3.6 Programming Guidelines
 - 3.7 ICMP Guidelines
- } changed since IETF-69
- } new since IETF-69

Quick Rundown of Changes (1)

- 3.1 Congestion Control Guidelines
 - new section 3.1.3 on UDP as a tunneling protocol **needs review!**
 - clarifications and editorial fixes to other sections
- 3.2 Message Size Guidelines
 - clarify IPv4 vs. IPv6 and payload size calculation
- 3.3 Reliability Guidelines
 - delay spikes and their impact on duplication detection

Quick Rundown of Changes (2)

- 3.4 **Checksum Guidelines**
 - clarifications on the purpose of the checksum
- 3.5 **Middlebox Traversal Guidelines**
 - align keep-alive interval with ICE
 - clarify that keep-alives are only recommended for applications where loss of middlebox state interferes with primary purpose

3.6 Programming Guidelines

- new section
- summarizes key differences between TCP and UDP sockets API
- not intended to be a complete reference
- section is getting long-ish; should not add much additional text

3.7 ICMP Guidelines

- new section
- notes that applications can utilize ICMP messages delivered for their communication sessions
- if they do, SHOULD be robust to transient reachability failures

Status

- need to incorporate some further off-list feedback on -04
 - security considerations need to make some stronger recommendation on what solutions are preferred
 - clarify wording on why the MSL is appropriate to use as assumption for max. UDP packet lifetimes
- should result in -05, probably after the holidays
- what then?

- **thank you, reviewers!**

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