Packetization Layer Path MTU Discovery for Datagram Transports
draft-ietf-tsvwg-datagram-plpmtud-01

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Changes since
draft-fairhurst-tsvwg-datagram-plpmtud-01

- Updated state machine
  - New State (PROBE_DISABLED)
- Search algorithms
- QUIC
- PTB Handling
PROBE_TIMER expiry
(PROBE_COUNT = MAX_PROBES)

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Reachability probe acked
or PROBE_TIMER expiry
(PROBE_COUNT = MAX_PROBES)

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PROBE_TIMER expiry
(PROBE_COUNT < MAX_PROBES)
Implementation Status

- FreeBSD patch sets for 12-CURRENT
- SCTP patch against individual -00
- UDP Options patch
  - Available soon™
PTB Signals

• How should we validate ICMP PTB
  • Protection from off path attacks
  • At least rebuild 5-tuple

• How should we use PTB signals
  • Probe to validate size?
  • Use as search end?
  • Repeat if needed
Current Problems

• Some constants and times do not yet have recommended values
• When to set maximum packet size?
• How to handle inconsistent results
  • Discard PTB with a MTU larger than probe size
  • How to handle forwarding (path) inconsistency
Next Steps

• Revise draft
  • Update state machine for PTB processing
  • Check algorithm against code
    • SCTP
    • UDP Options
    • QUIC
  • Interested in PMTU experience
Acknowledgement

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Implementation Status

• Implementation for FreeBSD
  • [https://github.com/uoaerg/freebsd](https://github.com/uoaerg/freebsd)
    • branch udpoptions-plpmtud—ietf101