

Path MTU Discovery  
IETF 64, November 2005  
draft-ietf-pmtud-method-05.txt

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# Overview

- Major document revisions
  - Generally relaxed over-specifications
  - Removed specified changes to ICMP processing
    - Now strictly an extension to classical PMTUD
  - Decoupled probing from verification
  - Did away with the MPS term
- Implementation status update

# Relax over-specifications

- Only a small part needs to be described in precise standards language
  - What a probe is
  - When it's okay to ignore a loss of a probe as a congestion signal
- Much of the document frames heuristics
  - Appropriate heuristics often highly protocol-dependent (e.g. search strategy)

# Remove specified changes to ICMP processing

- Decided we could make this independent
  - Possibly additional future draft, or merge with Fernando Gont's work(?)
- Makes the current draft strictly an extension to classical PMTUD
  - Current draft works correctly in all cases where classical PMTUD works, and in most cases where classical PMTUD fails
  - Fixes one case where probing might falsely raise the MTU

# Decoupled probing from verification

- Mentioned as an idea at IETF 62 (Minneapolis)
- Simplifies state and description for both processes
- Greatly speeds probing process
- Allows relaxed specification of verification
  - Probing is fairly straightforward, but verification is a heuristic with room for future improvement

# No more MPS

- Everything back to MTU
- Packetization protocol **MUST** understand the whole probe IP packet size

# Implementation Status Update

- Status page:
  - <http://www.psc.edu/~jheffner/projects/mtup/>
- Since last meeting (March 2005):
  - Removed Verification phase
    - Plan to add something back independent of probing per new draft recommendations
  - Added black hole discovery
    - Allows default connection pmtu to now be full MSS+headers as in classical PMTUD
    - Also will work for very small MTUs (after repeated timeouts)
  - Still TODO: add state to cache