IP Measurement Protocol
draft-ietf-mcgregor-ipmp-00.txt

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The Problem

When the network is bad you want to know where its broken.

If there are high latencies you want to ping to each hop along the way.

Current protocols have limitations.

- multiple packets
    - things change
    - false routes

- can't ICMP to points along the path
    - ICMP may be handled by the central CPU on many routers
    - path from the router back to the source may be different
    - want to measure both forward and reverse paths

IPMP Proposal

- Echo request/reply with path record

- Path record has IP address and timestamp

- Path record may be inserted by a router

- Router may use any timestamp it has available

IPMP Proposal

Internet Service Provider

Measurement Host

IPMP Enabled router

IPMP

Non-IPMP Router

Peering point

IPMP

Target Host

IPMP

header	header	header	header	header

1
Packet leaves
measurement host
(one path record)

2
Path record added
at first IPMP
enabled router

3

no change

4
Path record added
at second IPMP
enabled router

5
Packet leaves
the kernel on the
target host