

# DSCP and ECN Monitoring in TWAMP

draft-hedin-ippm-type-p-monitor-02

Jonas Hedin [jonas.hedin@ericsson.com](mailto:jonas.hedin@ericsson.com)

Greg Mirsky [gregory.mirsky@ericsson.com](mailto:gregory.mirsky@ericsson.com)

Steve Baillargeon [steve.baillargeon@ericsson.com](mailto:steve.baillargeon@ericsson.com)

IETF90 July 2014, Toronto

# Background

- Same value of DSCP (found in the Session-Sender packet) MUST be used in the test packet reflected by the Session-Reflector.
- TWAMP-Test protocol does not specify any methods to determine or report when DSCP and/or ECN has changed or is different than expected in the forward or reverse direction.

# Summary

- OPTIONAL mode called DSCP and ECN monitoring feature.
- Allows the Session-Sender to know the actual DSCP value received at the Session- Reflector.
- Also tracks the Explicit Congestion Notification (ECN) value received at the Session- Reflector.
- The Session-Reflector uses the negotiated (or provisioned) DSCP value

# Changes to Control and Test

- DSCP-ECN Monitoring Capability
  - Server sets DSCP-ECN Monitoring flag (proposed 128) in the Modes field of its Greeting message
  - Client, if agrees, sets DSCP-ECN Monitoring flag in Setup Response message



Sender DSCP and ECN field format

- S-DSCP-ECN follows S-TTL field in Reflected TWAMP Test packet in unauthenticated, authenticated and encrypted modes
- Thus if DSCP-ECN Monitoring and Symmetrical Size to be used, Padding Length for Session-Sender in unauthenticated mode MUST be  $\geq 28$  octets

# Session-Reflector Behavior

- The Session-Reflector MUST extract the S-DSCP-ECN value from the DSCP and ECN values of received packets;
- The Session-Reflector MUST transmit each reflected test packet with DSCP set to the negotiated/provisioned value;
- If the negotiated/provisioned DSCP value is not known (e.g. TWAMP Light), the choice of the DSCP is implementation specific. For instance, Session-Reflector MAY copy the DSCP value from the received test packet and set it as DSCP in a reflected packet.

# TWAMP Light Consideration

- Appendix I of [RFC5357] does not explicitly state how value of Type-P descriptor synchronized between Session-Sender and Session-Reflector and whether different values considered as error condition and should be reported.
- We assume that by some means, e.g. CLI, Session-Sender and Session-Reflector of given TWAMP-Test session informed to use the same DSCP value. Same means, i.e. configuration, could be used to inform Session-Reflector to support DSCP and ECN monitoring mode by copying data from received TWAMP test packets. Then Session-Sender may be informed to use Sender DSCP and ECN field in reflected TWAMP test packet.

# Next steps

- Solicit comments & feedback from the WG
- WG adoption