

DSCP Control and Monitoring in TWAMP

draft-bailmir-ippm-twamp-dscp-ctrl-mon-00

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What and why

- DSCP marking signifies CoS in IP
- Tunneling IP may change DSCP marking – that may be intentional or erroneous
- Change in DSCP marking may cause change in QoS and, as result, different SLA be applied to the data
- Identify that the problem is not service degradation but change in CoS is not trivial task
- Ability to control DSCP marking and monitor its changes in a single TWAMP test session – valuable enhancement

How

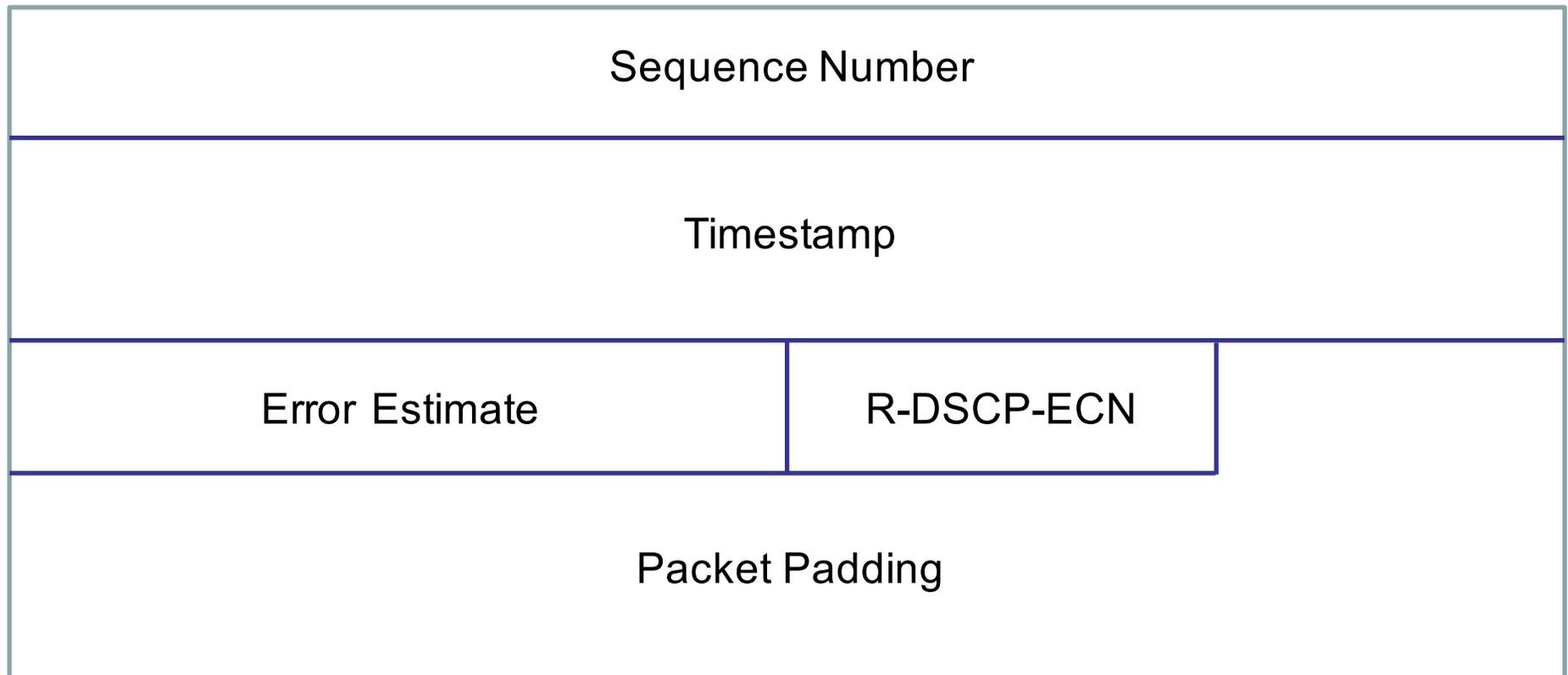
- RFC 7750 introduced DSCP Monitoring extension that reports DSCP in forward direction and does not support use of different DSCP values in forward and reverse directions in controlled manner
- RFC 5357 states that DSCP value advertised by the Control-Client SHOULD be used by the Session-Reflector. In other words, Session-Reflector MAY use DSCP values other than advertised by the Control-Client on behalf of the Session-Sender

TWAMP-Control

- Add new DSCP Testing Capability flag to TWAMP-Modes
- Combine with DSCP Monitoring Capability to be able to monitor CoS mapping in forward and reverse direction

TWAMP-Test

R-DSCP-ECN field added to communicate DSCP value from Session-Reflector to use for the reflected TWAMP test packet.



Session-Reflector uses R-DSCP-ECN value to set DSCP field in reflected TWAMP Test packet. DSCP value from the received TWAMP test packet returned in S-DSCP-ECN field of the reflected test packet.

Use it

- Test set of DSCP values:
0x00 (CS0), 0x01, 0x03, 0x0A (AF11), 0x0B, 0x0D, 0x2E (EF PHB), 0x2F, 0x2C (VOICE-ADMIT), 0x2D
- Use values from the set as DSCP field and S-DSCP-ECN values by Session-Sender for the test packet with sequence number N_i
- Session-Reflector copies DSCP value from the received test packet to R-DSCP-ECN and uses S-DSCP-ECN to set DSCP value of the reflected test packet
- Session-Sender receives the reflected test packet with Sender Sequence Number N_i , DSCP value and S-DSCP-ECN. N_i points to tested value from the set.

Next Steps

- Welcome questions, comments
- Address comments
- Adopt by WG

Thank you