

Encoding 3 PCN-States in the IP header using a single DSCP

[draft-ietf-pcn-3-in-1-encoding-10.txt](#)

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status

- Encoding 3 PCN-States in the IP header using a single DSCP
 - **IESG cleared:** [draft-ietf-pcn-3-in-1-encoding-10.txt](https://datatracker.ietf.org/doc/draft-ietf-pcn-3-in-1-encoding-10.txt)
 - **intended status:** proposed standard (obsoletes RFC5696)
 - **exec summary:** changes requested by IESG
applied changes before & after I-D deadline
final check with w-g

Glossary

NM = Not Marked

ThM = Threshold Marked

ETM = Excess Traffic Marked

	DSCP	00	10	01	11
Baseline RFC 5696	DSCPn	Not-PCN	NM	EXP	PM
3-in-1	DSCPn	Not-PCN	NM	ThM	ETM

PCN-ingress behaviour

DSCP = Diffserv codepoint
ECT = ECN-capable transport
CE = Congestion experienced
NM = Not marked
grey = TBA

- moved out of edge-behaviours
- rewritten to match architecture

1. classify

- if (filterspec matches an admitted flow)
define as PCN-packet

• extra step

- if (PCN-packet && ECT)
MUST do one of
 - tunnel OR layer (Default)
 - drop CE (NOT RECOMMENDED)
 - drop (NOT RECOMMENDED)
 - other RFC4774-compliant action

realised this is non-PCN traffic

- so we ought not to interfere
- but it will confuse PCN-nodes
- and it might be an attack

re-mark DSCP:

- effective but benign

2. police

- PCN-flow policing [see *-edge-behaviour]
 - rejected flows
 - packet-rate above flowspec
- if (Not-PCN-packet && PCN-DSCP && ECT)
MUST do one of
 - re-mark to Non-PCN-DSCP
(Default DSCP=000000)
 - tunnel;
re-mark outer to Non-PCN-DSCP
 - drop (NOT RECOMMENDED)
- in all cases, SHOULD log, MAY alarm

3. color

- MUST set PCN-DSCP
- MUST set NM

4. rate-meter

- [see *-edge-behaviour]

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Q&A

