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

draft-ietf-pcn-3-in-1-encoding-04.txt

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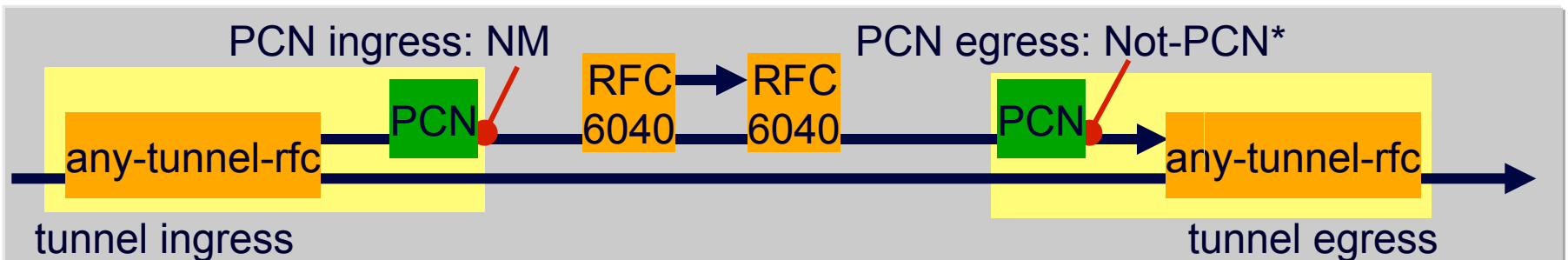Michael Menth, Uni Tuebingen

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BT

status

- Encoding 3 PCN-States in the IP header using a single DSCP
  - **mature draft:** draft-ietf-pcn-3-in-1-encoding-04.txt
  - **dependency:** RFC6040 (now Proposed Standard)
  - **intended status:** experimental → standards track
  - **exec summary:** very simple but complete draft
  - **immediate intent:** WGLC over, but some spare text needs a home

    Consider implications of "updates 5696"

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

additional section: support for e2e ECN

- 4 approaches in baseline encoding app'x are imprecise:
    1. tunnel across PCN domain
    2. encode e2e ECN into an extended PCN encoding
    3. signal lack of ECN support to source (e.g. by drop)
    4. remark ECN-capable packets to a non-PCN-capable DSCP

- now clearer what to recommend
    - lay out all the possible cases
    - esp. document precisely how PCN uses a tunnel to protect e2e ECN
    - flag when updates or deprecates each of the above 4 approaches

- main point: e2e ECN safe if PCN placed logically within tunnel
    - any tunnel endpoint within 3-in-1 PCN domain must satisfy RFC6040

PCN ingress: NM

PCN egress: Not-PCN*

| any-tunnel-rfc | PCN | RFC 6040 → RFC 6040 | PCN | any-tunnel-rfc |

tunnel ingress

tunnel egress

* experimentally, could leave PCN unchanged to trigger codec adaptation

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Q&A