ConEx Concepts and Abstract Mechanism

draft-ietf-conex-abstract-mech-01.txt

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# ConEx Concepts and Abstract Mechanism

- **working group draft:**   draft-ietf-conex-abstract-mech-01.txt
- **intended status:**   informational
- **immediate intent:**   attract review comments, then WGLC
- **milestone target:**   Jul 2011

recall

- defer encoding to avoid obscuring underlying design
    - abstract design of algorithms & protocol
    - encoding in different protocol headers can follow (IPv6, v4)
- scope
    - loss-based (for incremental deployment), not just ECN
    - any transport, ConEx just using TCP as first concrete step

basic signals and functional units

3
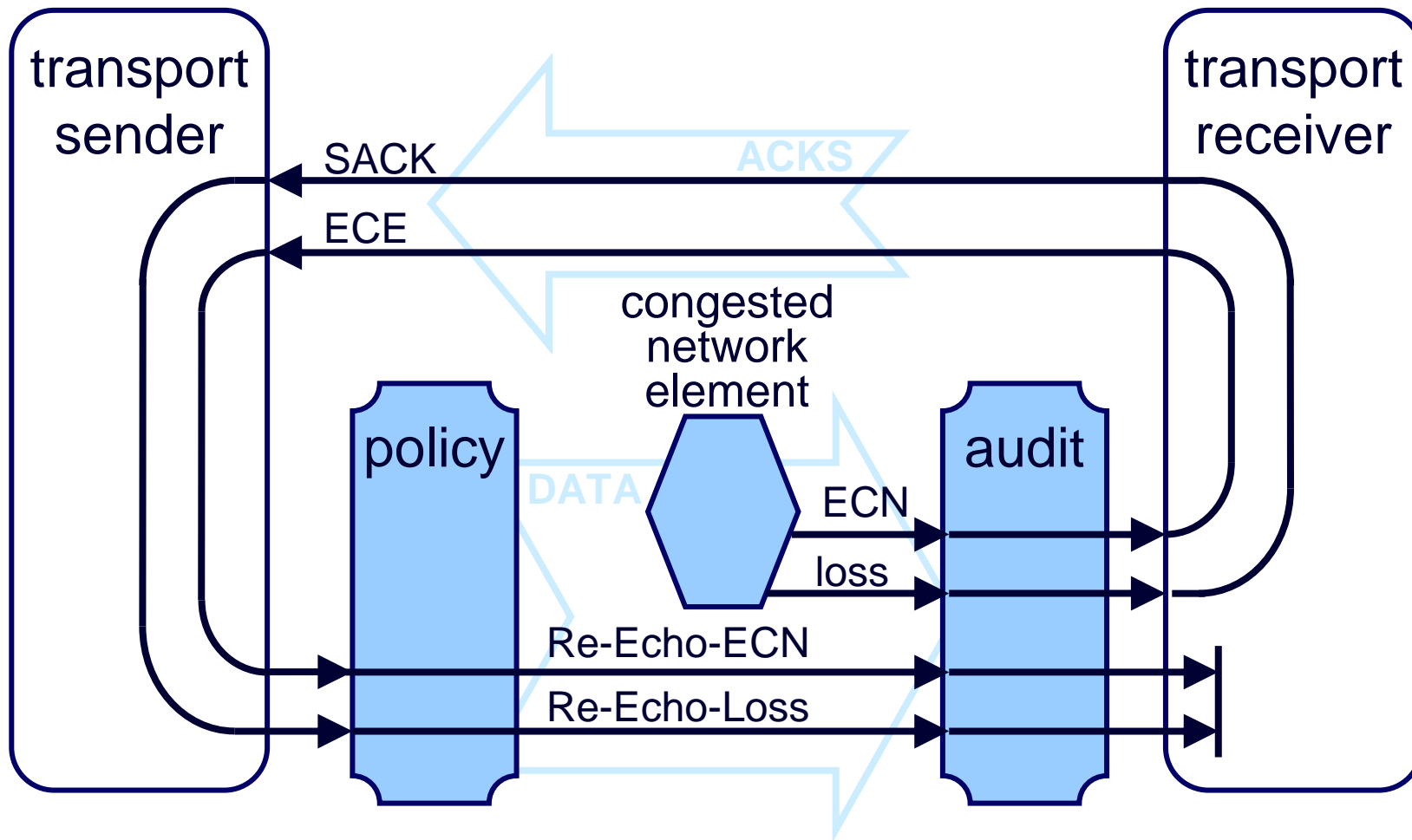
improvements to draft

- what ConEx is not (requested on & off list)
    - sender does NOT expose congestion to network so that routers can do detailed congestion control

- rational for Credit signal (presented in Beijing)
    - simplify audit by making e2e transport responsible for RTT delay

- change to TCP ECN feedback could have wider use than ConEx
    - feeding back all congestion events, not just one per RTT
    - data centre (DCTCP) needs this, and others...?
    - chartered ConEx-TCP draft should make this feedback a separate module

- behaviour constraints for audit function (see next slide)
    - normative text in an informative draft

- monitoring against policy as most generic function (insight from concepts-uses)
    - combined with other actions
        - capacity upgrade, penalty clause, charge, warning
    - congestion policing → policy monitoring + congestion policing

behaviour constraints for audit function

- Minimal false hits

- Minimal false misses

  - responsive – pref at first packet that sends balance negative

- Transport oblivious

- Sufficient sanction

  - even against tradeoff attack between policer & audit

- Non-vulnerability to memory exhaustion

- Non-vulnerability to identifier white-washing

minor mods

- updated filename etc (wg item)

- general clarifications and tarted up ASCII art

- acks: Toby M, Nandita D, Mirja K, Caitlin B

  - oops – missed off acking Marcelo's review

main item left on To Do list: partial deployment

- propose new section collecting pointers to all aspects of partial deployment

  1. ConEx and/or non-ConEx packets

     - encoding [abstract-mech]

  2. ConEx and/or non-ConEx receivers

     - ConEx Components [abstract-mech]

  3. Interwork with loss and/or ECN queues

     - encoding & reqs [abstract-mech]

  4. Some networks use ConEx signals, others don't

     - partial deployment [concepts-uses]

  5. other non-e2e arrangements

     - eg. ConEx proxy [draft-kutscher-conex-mobile]

status & plans

- more "What ConEx is NOT"

- more & better ASCII art
    - e.g. the architecture I just showed

- new section to collect partial deployment pointers

- consider interaction between ECN & drop

- get wider review

- otherwise, looking in fairly good shape

- could go to WGLC then queue for concepts-uses?

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Q&A