

A Mechanism for ECN Path Probing and Fallback

draft-kuehlewind-tcpm-ecn-fallback-01

Mirja Kühlewind and Brian Trammell

IETF 88 Vancouver — 4 November 2013

The idea

- We want to turn ECN on by default
 - Increasing “server-mode” adoption, but almost no usage on the open Internet
- Need to increase confidence that default won't degrade connectivity or performance
- Dynamic detection and fallback to no-ECN

The document

- Algorithm for detection of ECN-unsafe paths after ECN negotiation
- Inject ECN marking pattern and observe the results
- Fall back if ECN causes connectivity problem (but not if it fails to echo CE)
- Update since Berlin: more illustration

The future

- -01 revision: ECN failure at start of flow post-negotiation.
- A better idea: explore how and when ECN can fail...
- ... and define approaches to detect and recover from failure
 - of which the present algorithm is an instance.
- Consider an expansion into guidelines for general-case fallback for optional transport features?
- -02 revision post-Vancouver, request for adoption after discussion.