

Network Coding and CC

Nicolas KUHN (on the behalf of Emmanuel LOCHIN)

Context and objective

- Context

- Multiple WG could handle NC and CC interaction
- Why NWCRG?
 - There are some NC&CC solutions
 - We have to start these discussion somewhere

- Objective

- Start the discussion here to see if a WG document can be envisioned
 - Should NC recovery be considered as congestion signals ? And how ?
 - Depending on where/how NC is applied
 - The impact on CC is not the same (and may not be relevant)
 - Signal the CC signals may not be possible

When can NC and CC interactions happen

User-space	Kernel NC
<ul style="list-style-type: none">• AL-FEC<ul style="list-style-type: none">• coding library used by a given application• QUIC	<ul style="list-style-type: none">• Below a reliable transport layer<ul style="list-style-type: none">• Coded-TCP, Coded-MPTCP, Coded-SCTP, Coded-CMT-SCTP, TCP Instant Recovery
<ul style="list-style-type: none">• Middleware AL-FEC<ul style="list-style-type: none">• socket-like API, encapsulation, proxy, tunnel, ...	<ul style="list-style-type: none">• Below a non-reliable transport layer<ul style="list-style-type: none">• Unicast<ul style="list-style-type: none">• FECFRAME, TETRYS• Multicast<ul style="list-style-type: none">• DragonNet, DRAGONCAST, TETRYS, SCORE, DONC

NC and CC interactions

- Towards a WG document on the NC and CC interactions
 - May be worth starting with a practical example (TCP? QUIC?)
 - Any thoughts?