

Network Coding and CC

Objective : reflexion and potential issues on the joint-use of NC and CC

Draft proposal outline (TBD)

- NC-layer placement
 - User-space NC library (with or without encapsulation)
 - AL-FEC (coding library used by a given application)
 - Middleware AL-FEC (socket-like API, encapsulation, proxy, tunnel, ...)
 - Kernel NC layer (i.e. without encapsulation)
 - Below a reliable transport layer (e.g. MPTCP/IP, TCP/IP, SCTP/IP, DCCP/IP, TFRC/IP, ...)
 - Below a non-reliable transport layer (e.g. UDP/IP)
- Congestion-controlled coded transport layer solutions
 - Kernel solutions
 - Coded-TCP, Coded-MPTCP, Coded-SCTP, Coded-CMT-SCTP, TCP Instant Recovery (draft-flach-tcpm-fec-00.txt), ...
 - User-space solutions (above UDP/IP)
 - QUIC, ...
- Non-congestion controlled coded transport layer solutions
 - Unicast
 - FECFRAME, TETRYS
 - Multicast
 - DragonNet, DRAGONCAST, TETRYS, SCORE, DONC (Delay-based Opportunistic Network Coding Protocol)