Mosko
Solis

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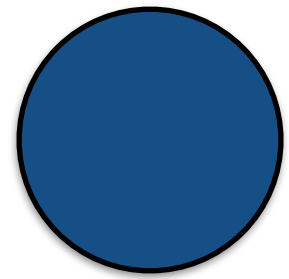
CCNx over UDP

Status

→ Initial discussion

Interest/authors

draft

Mailing list discussion

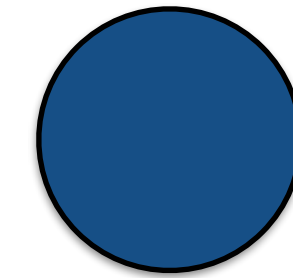Tracker submission

IETF 94 proposal / adoption

Scope

A way to transport CCNx messages between 2 nodes over UDP.
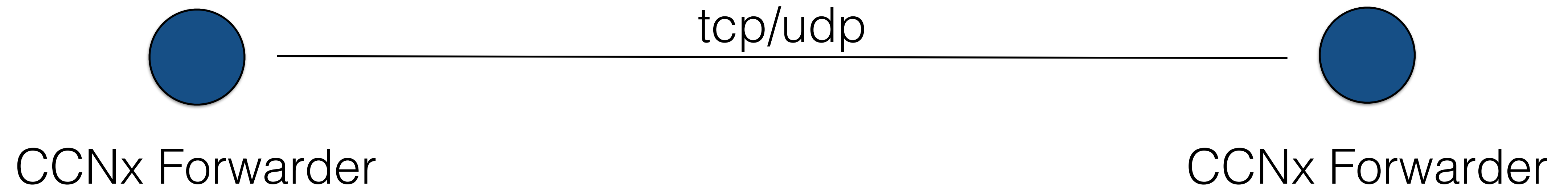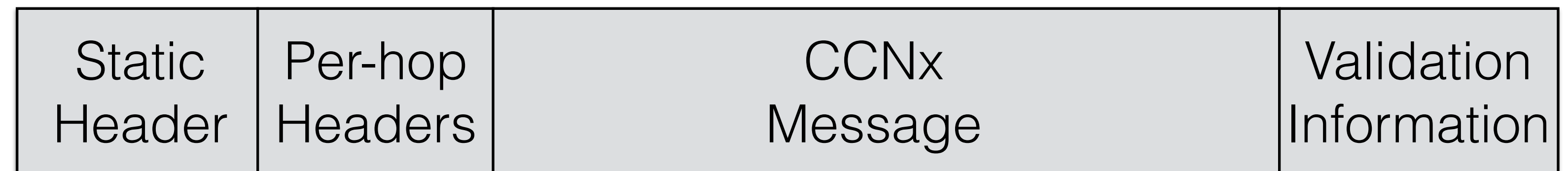
Basic Model

CCNx Forwarder

CCNx Forwarder

Basic Model

virtual link

CCNx Forwarder

CCNx Forwarder

Basic Model

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tcp/udp

CCNx Forwarder   CCNx Forwarder

Packets

IP	UDP	CCNx Packet

Static Header	Per-hop Headers	CCNx Message	Validation Information

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Done?

A trivial link is not trivial

CCNx-over-UDP link

Need protocol to set up link

Universal protocol (all forwarders)

Application / Peer

Authentication needs

Security of link

CCNx-over-UDP link

Multiplex protocols (link negotiation / ccnx / ndn?)

Link fragmentation / MTU

In order delivery assurance

Drop detections

Link events (up/down detection)

Retransmissions

CCNx-over-UDP link

Multiple links over same UDP port

Auto-accepting links

CCNx-over-UDP link messages

Setup Messages

    Use bare CCNx over UDP message

    Use per-hop header in CCNx-over-UDP

    Use separate protocol

Maintenance Messages

    Keep-alive

    Headers?

CCNx-over-UDP headers

Separate CCNx-over-UDP header

Use per-hop headers for CCN-over-UDP

Differences / Similarities

CCNx-over-Ethernet? (other hop-by-hop protocols?)

CCNx-over-multicast?

CCNx-over-TCP?

CCNx-over-IPC (local)?

Discussion

Define needs and scope

Interaction with ICN Link Control Protocol

Discuss in ICNRG mailing list

Basic manifest in tracker by IETF 94