

DetNet Controller Plane Framework

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Background

- To date, the DetNet WG has been primarily focused on the data plane
- The DetNet Architecture defines the DetNet Controller Plane in Sec. 4.4.2: The Controller Plane corresponds to the aggregation of the Control and Management Planes in RFC 7426 (SDN Layers and Architecture Terminology)
- Some DetNet drafts (such as the Data Plane Framework) include requirements for the Controller Plane

Purpose of this draft

- Compile all DetNet controller plane requirements in one place
- Provide an overview of possible control plane architectures, based on the requirements:
 - Distributed control plane and signaling protocols
 - Fully centralized control plane (SDN)
 - Hybrid control plane

Purpose of this draft (continued)

- Discuss other control plane issues that are unique to DetNet
 - Explicit paths and resource reservation with PREOF
 - DetNet integration with existing control planes
 - Traditional (non-SR) MPLS
 - Traditional (non-SR) IP
 - SR-MPLS
 - SRv6
- Document management plane issues unique to DetNet
 - Provisioning with PREOF
 - DetNet OAM
- Document gaps in existing control plane solutions
- (non-goal) This document will NOT document any actual solutions; this is a framework draft, not a solution draft

Next steps

- DetNet WG is chartered to do management and control plane requirements, and a gap analysis for existing control plane solutions (see discussion in the Montreal meeting)
 - WG is not chartered for to develop actual solution drafts, that would happen elsewhere (or following a re-charter)
- The authors believe that this draft is in good shape for WG adoption, and conforms within the current charter restrictions
- Once the draft has been adopted, the WG can continue to refine it and solution drafts based on the framework can be contributed elsewhere (TEAS, etc.)

Thanks!