DetNet Controller Plane Framework

draft-malis-detnet-controller-plane-framework-02

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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!