DetNet Controller Plane Framework

draft-malis-detnet-controller-plane-framework-01

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• 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:
  • 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
  
• Management plane issues unique to DetNet
  • Provisioning with PREOF
  • DetNet OAM
Next steps

• DetNet WG is currently only chartered to work on the overall architecture (done), the data plane (almost done), data flow information model, and YANG models

• However, a controller plane solution is needed if DetNet is going to be put into operational use in real networks

• DetNet WG needs to be re-chartered to include a controller plane framework and solution specs
Until then …

• Please read the draft and comment!
• We will seek WG draft status once the charter has been updated to include the work
Thanks!