

DetNet Controller Plane Framework

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

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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:
 - 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!