

Dissuasion, Working Group Scope and Deliverables

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Carry-over discussion

- Use cases

Carry-over discussion

- Problem statement
 - Representative solution

Proposed Areas of Work

For DetNet WG

- Data plane (including OAM)
- DetNet flow characterization
- Control plane
- Management plane

Data Plane

- Problem to be solved:
 - What does a DetNet flow look like on the wire?
 - What does OAM for a DetNet flow look like on the wire?
- Deliverables
 - Architecture (section)
 - Standards Track specification(s)
- In scope
 - Use of standard sub-net/link technologies
 - e.g., 802.1 (TSN) hosts and bridged networks interconnected over routers
 - Liaisons to other SDOs
 - Use of existing encapsulations and L3 forwarding
 - Coordination with owning WG if limitations found
 - Definition of OAM adaptations
- Out of scope
 - Other SDO specifications
 - Modification or extensions
 - Modification of L3 forwarding
 - Including: IP, MPLS, DiffServ,
 - Modification of encapsulation formats
 - Code point assignments are okay
 - Modification of OAM formats

DetNet Flow Characterization

- Problem to be solved:
 - What information (i.e., parameters and values) is needed to describe a DetNet flow?
- Deliverables
 - Informational document
- In scope
 - User data flows and OAM
 - Protocol independent information model for use by control and management planes
- Out of scope
 - Mechanism specification

Control Plane

- Problem to be solved:
 - What control plane mechanisms should be used to provision a DetNet flow?
- Deliverables
 - Architecture (section)
 - Coordination with other WGs
- In scope
 - Identification of which protocols should be used to control a DetNet flow (e.g., PCEP, RSVP)
 - Identification of limitations / required new functions
 - Coordination with protocol-owning WG on limitations / requirements
 - Document/provide information as needed
- Out of scope
 - Definition of control plane protocol extensions

Management Plane

- Problem to be solved:
 - What additional YANG models are needed for DetNet?
- Deliverables
 - Architecture (section)
 - YANG augmentations – coordinated with other WGs
- In scope
 - Identification of which models should be augmented
 - Identification of limitations / required new functions
 - Coordination with model-owning WG on limitations / requirements
 - Document/provide information as needed
 - Define augmentations
- Out of scope
 - Non-DetNet related models

Draft Charter & Deliverables

Text: <http://trac.tools.ietf.org/bof/trac/wiki/DetNet>

Deliverables (as standard track or informational RFCs)

- Overall architecture:
 - Covers data plane, OAM, management, control, and security aspects.
- Data plane specification:
 - Data plane method of flow identification and packet forwarding over Layer 3.
- Data flow information model:
 - Protocol independent information for use by YANG models and control protocol(s) (e.g. PCEP or GMPLS).
- Identification of additional YANG augmentations:
 - Cover device and link capabilities (feature support) and resources (e.g. buffers, bandwidth) for use in device configuration and status reporting.
 - May also be used when advertising the deterministic network elements to a control plane. The model should be independent from the protocol(s) that may be used to advertise this information (e.g. ISIS or GMPLS extensions).

WG sustaining documents

- (These documents will not necessarily be published, but may be maintained in a draft form or on a collaborative Working Group wiki to support the efforts of the Working Group and help new comers):
- Problem statement:
 - This document will identify the deployment environment and deterministic network requirements which need to be supported.
- Vertical requirements:
 - A number of documents will expose the requirements for deterministic networks in various industries, including, but not limited to, pro-audio and smartgrid.

Open Discussion

- Starting with scope and deliverables

Wrap-Up

Reminder: BoF Objectives

1. Gauge interest in forming a DetNet WG
 - Time for polling
2. Provide input to the AD and the IESG

Question 1:

- Who thinks the described problem needs to be solved?
- Results:
 -

Question 2:

- Should the we, the IETF, work on this problem?
- Results:
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Question 3:

- Who thinks the stated deliverables can be completed in a reasonable time*?
 - I.e., this is engineering not research
- Results:
 -

* -- 18-24 months is generally considered reasonable for new work

Question 4:

- Who is willing to author, review and otherwise contribute to a DetNet WG?
- Results:
 -

Next Steps

- Final words from AD?
- If there is support:
 - Define WG charter