

# Review of IETF100 conclusions, and related planned document updates

Detnet working group, January 2018 interim

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# IETF100

- Open issues discussed:
  - <https://datatracker.ietf.org/meeting/100/materials/slides-100-detnet-3-detnet-data-plane-encapsulation-resolving-open-issues/>
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  - <https://datatracker.ietf.org/meeting/100/materials/slides-100-detnet-3a-detnet-data-plane-encapsulation-resolving-open-issues-pref/>
- And decision listed:
  - <https://datatracker.ietf.org/doc/minutes-100-detnet/>

# DetNet dataplane decisions

- #1 On-wire formats:
  - Both MPLS and IPv6-based dataplanes have their own encapsulation formats.
  - Semantics are the same.
- #2 Split of dataplane documents:
  - Both MPLS and IPv6-based dataplanes will have their own documents.
  - Keep in the same document `_until_` solution baselines are clear.

# DetNet dataplane decisions cont'd

- #3 Sequence numbering:
  - Flat number space i.e., no reserved numbers.
  - Example: sequence number space  $2^{16}$ .. Thus numbers are from 0 to 65535.
- #4 Data plane solution:
  - “DetNet Dataplane”.
  - Describe “all” including dataplane encapsulation, and node semantics where needed (e.g., DetNet relay functionality).

# PREF decisions

- #5 Multiple layers of PREF e.g., for aggregation purposes. (rather a statement)
- #6 Both ring and ladder deployments have to work. (rather a statement)
- #7 Describe PREF function at a box level (normative). Internal behavior may be described for reference (informative).

# #1 On-wire formats – IPv6 way forward

- Encapsulation related:
  - Use SR extension as-is for fixed paths?
  - New option for “control word” (as in current draft)?
  - How to do flow identification..? Generic lookup into the packet? New extension? Just use flow label?
- DetNet Relay realization:
  - Proxying and tunneling approach?
- Provided services:
  - Can tunnel any packets or natively transport IP packets (e.g., the e2e case)..

# #1 On-wire formats – MPLS way forward

- Encapsulation related:
  - How to do flow identification..? Proposal: just labels as usual..
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- DetNet Relay realization:
  - How to realize?
- Provided services:
  - Can tunnel L2 packets (interconnection) or transport IP packets (e.g., e2e case but mainly as MPLS/IP type approach)..

# #3 Sequence numbering – way forward

- What is the size of the sequence number space?
  - Is 16 bits enough (would be ideal for interworking cases).
- Carried in every DetNet packet..
  - Similar to Control Word but our own construct.
- Management:
  - Who assigns and how?



# #4 Data plane solution – way forward

- Encapsulation (both formats).
- DetNet node semantics.
- PREF semantics.
  - Case DetNet relay
- Interconnect and e2e cases? Anything to specifically address here?
- What about control plane? Or other OEM type functions?

Thank you!