

DetNet WG

Chairs:

Lou Berger lberger@labn.net

Pat Thaler pat.thaler@broadcom.com

János Farkas janos.farkas@ericsson.com

Secretary:

Jouni Korhonen jouni.nospam@gmail.com

Online Agenda and Slides at:

<https://datatracker.ietf.org/meeting/101/session/detnet>

WG Information: <https://datatracker.ietf.org/wg/detnet/>

New IETF Note Well

This is a reminder of IETF policies in effect on various topics such as patents or code of conduct. It is only meant to point you in the right direction. Exceptions may apply. The IETF's patent policy and the definition of an IETF "contribution" and "participation" are set forth in BCP 79; please read it carefully.

As a reminder:

- By participating in the IETF, you agree to follow IETF processes and policies.
- If you are aware that any IETF contribution is covered by patents or patent applications that are owned or controlled by you or your sponsor, you must disclose that fact, or not participate in the discussion.
- As a participant in or attendee to any IETF activity you acknowledge that written, audio, video, and photographic records of meetings may be made public.
- Personal information that you provide to IETF will be handled in accordance with the IETF Privacy Statement.
- As a participant or attendee, you agree to work respectfully with other participants; please contact the ombudsteam (<https://www.ietf.org/contact/ombudsteam/>) if you have questions or concerns about this.

Definitive information is in the documents listed below and other IETF BCPs. For advice, please talk to WG chairs or ADs:

- BCP 9 (Internet Standards Process)
- BCP 25 (Working Group processes)
- BCP 25 (Anti-Harassment Procedures)
- BCP 54 (Code of Conduct)
- BCP 78 (Copyright)
- BCP 79 (Patents, Participation)
- <https://www.ietf.org/privacy-policy/> (Privacy Policy)

Also see: <http://www.ietf.org/about/note-well.html>:

Meeting Administrivia

- Audio Streaming/Recording
 - Please speak only using the microphones
 - Please state your name before speaking
- Joint minute taking **≡ Please contribute**
 - <http://tools.ietf.org/wg/detnet/minutes>
 - <http://etherpad.tools.ietf.org:9000/p/notes-ietf-101-detnet>
- Jabber:
 - detnet@jabber.ietf.org
- Online Agenda and Slides at:
 - <https://datatracker.ietf.org/meeting/101/session/detnet>
- Blue sheets
 - Please add your name

Agenda – Session 2

11:50-14:30 Friday Afternoon session I

Start TimeInformation

0 11:50 5 Title: Intro, WG Status, Draft Status

Presenter:Chairs

Draft:

1 11:55 10 Title: Intro: DetNet Data Plane Encapsulation -- Resolving open issues

Presenter:Chairs

Draft: <https://tools.ietf.org/html/draft-ietf-detnet-dp-sol-03>

2 12:05 130 Title: WG Discussion: DetNet Data Plane Encapsulation -- Resolving open issues

Led by: Balázs Varga/Jouni Korhonen/Norm Finn

Draft: <https://tools.ietf.org/html/draft-ietf-detnet-dp-sol-03>

3 14:15 15 Title: Wrap up: DetNet Data Plane Encapsulation -- Resolving open issues

Presenter:Chairs

Draft: <https://tools.ietf.org/html/draft-ietf-detnet-dp-sol-03>

4 14:30 10 Title: Time permitting: IGP-TE Extensions for DetNet Information Distribution

Presenter:X uesong Geng, Mach Chen

Draft: <https://tools.ietf.org/html/draft-geng-detnet-info-distribution-02>

Adjourn 14:30

DetNet Data Plane Discussion

- Data plane definition is the keystone deliverable in charter
- Data plane alternatives completed September 2016
 - Multiple options evaluated
- Design team initial I-D published March 2017
 - WG version published in October
- Three virtual interims calls held in January
- *Time to agree on core DetNet Data Plane Encapsulations!*

Focusing Today's Discussion

- **Reminder: DetNet services**
 1. Congestion protection and latency control: usage of allocated resources (queuing, policing, shaping).
 2. Explicit routes: select/apply the flow specific path.
 3. Service protection: recognize DetNet compound and member flows for replication and elimination.
- **Core DetNet scenarios (over simplified)**
 - TSN over DetNet
 - IPvX end to end service
 - Over compatible sub-net technologies (e.g., TSN and MPLS)

Focusing Today's Discussion

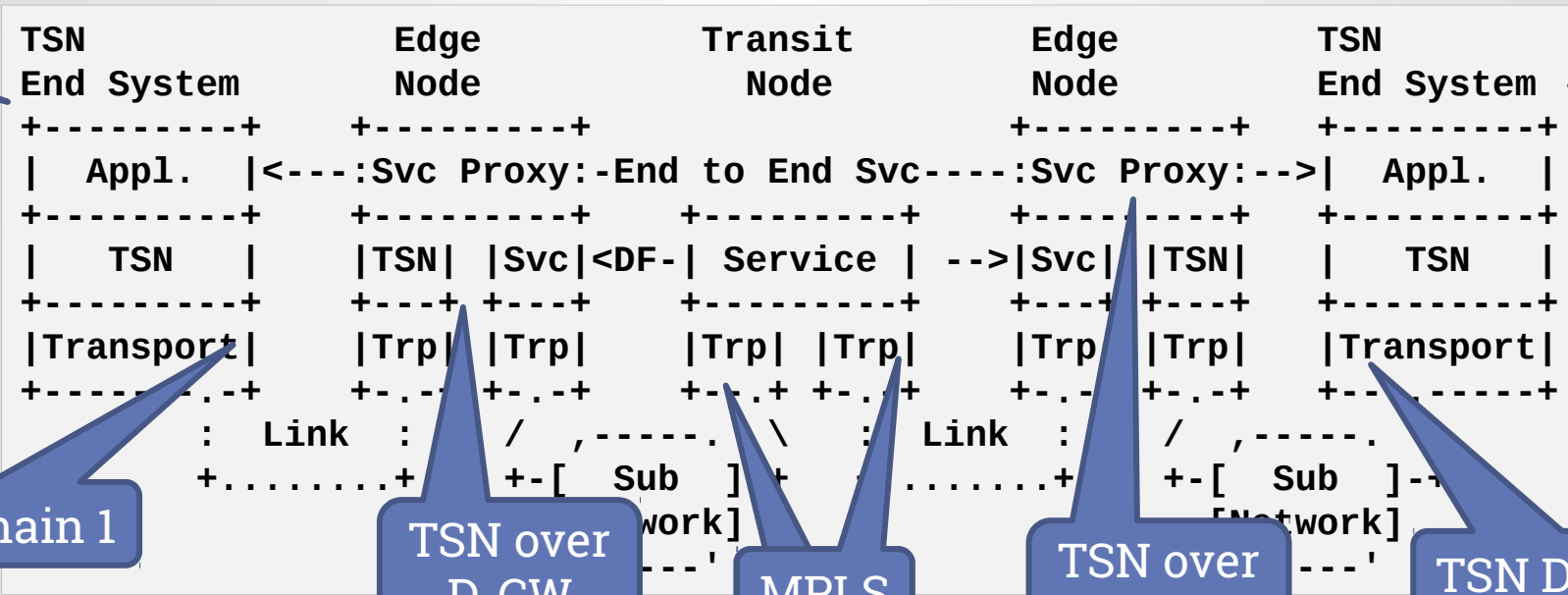
Key questions for today:

1. Do we have agreement on DetNet/MPLS encapsulation?
 - With and without PREF
2. Do we have agreement on the simplified IP approach for v4 and v6?
 - Proposed at Interim 2 – Existing IP headers, PREF at sub-net level only
- Other topics to consider – at least agree on approach
 - DetNet/IP over MPLS
 - Queuing
 - Aggregates
 - OAM
 - Transport protocol impact (Transport = TSV area)

TSN over DetNet

IP over TSN

IP over TSN



TSN Domain 1

TSN over D-CW

MPLS

TSN over D-CW

TSN Domain 1

- TSN Service is end to end (i.e., bridged, DetNet-aware L2VPN)
- DetNet Service is edge to edge
 1. Congestion protection and latency control: usage of allocated resources (queuing, policing, shaping).
 2. Explicit routes: select/apply the flow specific path.
 3. Service protection: recognize DetNet compound and member flows for replication and elimination.

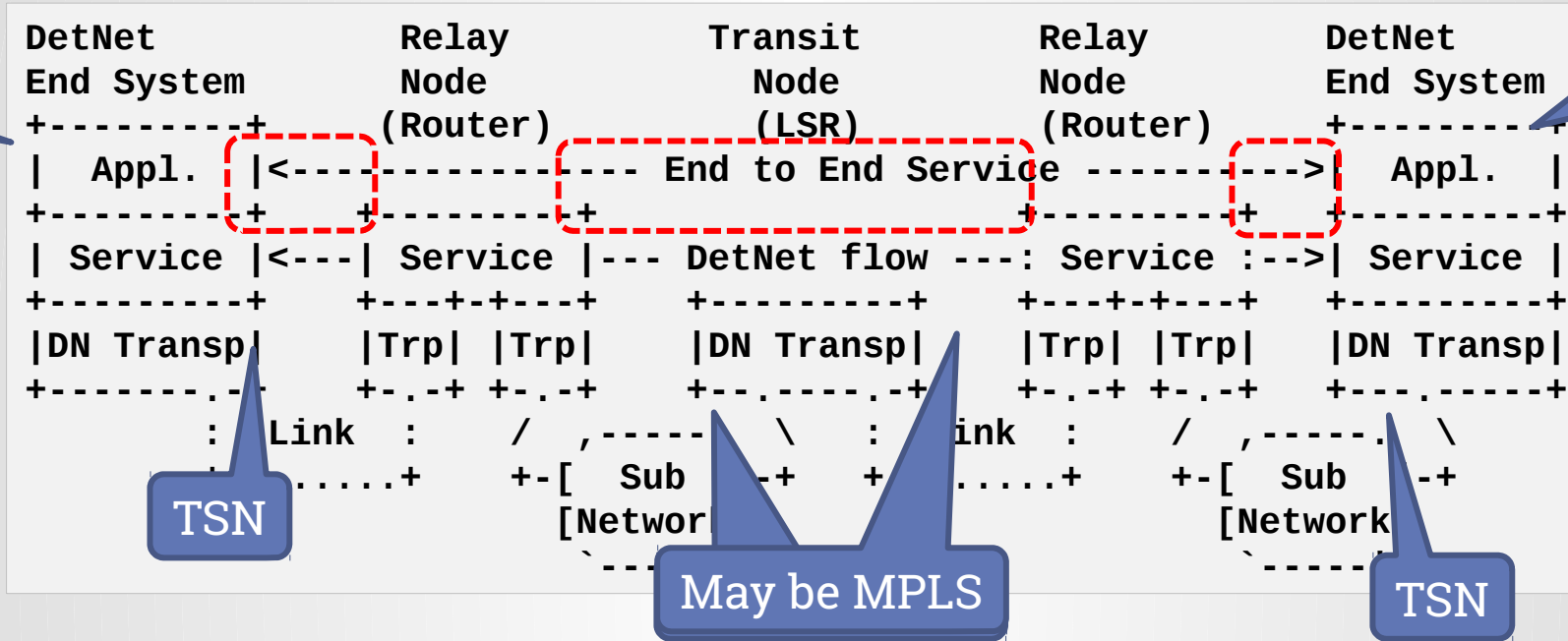
- Includes PREF

Simplified IPvX End to End Service

Application
L4 Transport
IPv(4|6)
TSN

Application
L4 Transport
IPv(4|6)
TSN

Pref
Domain



- DetNet Service is end to end, could be edge-to-edge

1. Congestion protection and latency control: usage of allocated resources (queuing, policing, shaping).
2. Explicit routes: select/apply the flow specific path.

- Service protection is per link/sub net

3. Service protection: recognize DetNet compound and member flows for replication and elimination.

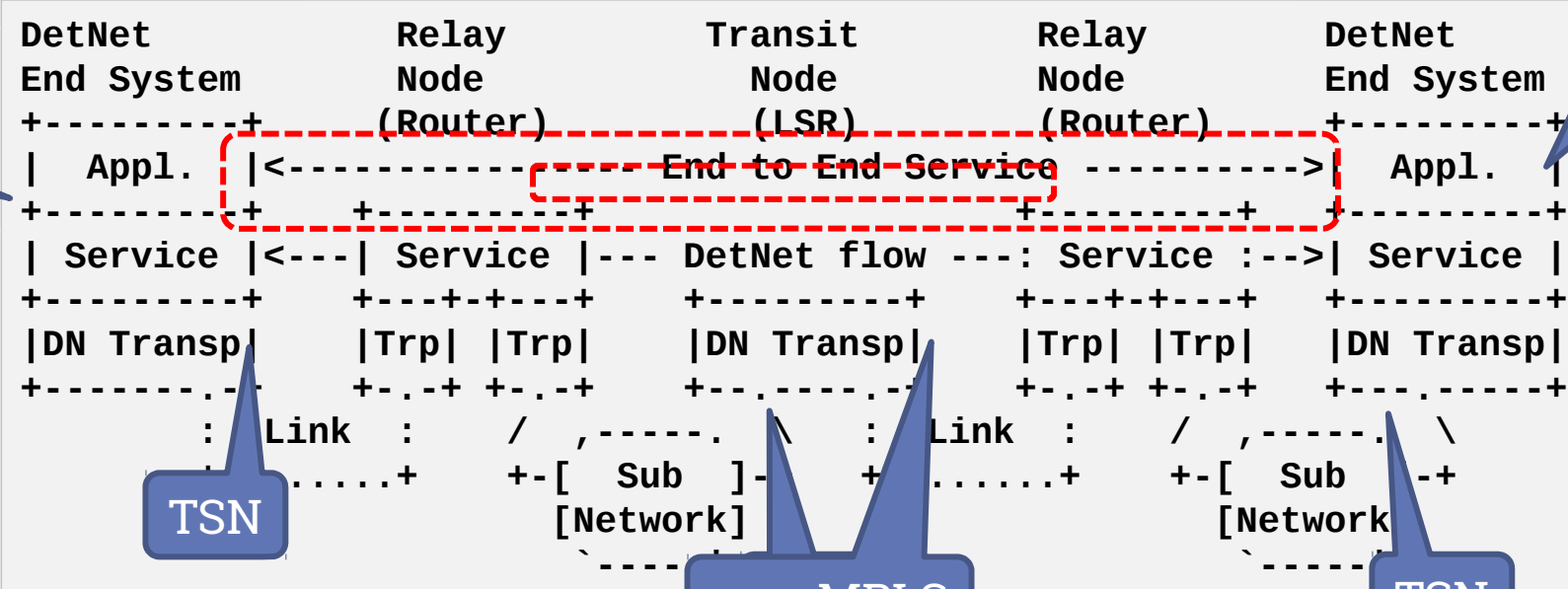
Time to confirm: no end-to-end (IP) PEF an acceptable simplification for the initial DetNet IP solution

Application
L4 Transport
D-CW/PW
IP
TSN

Unified CW IPvX End to End Service

Application
L4 Transport
D-CW/PW
IP
TSN

Pref
Domain



Based on
Balazs Varga
contribution

- DetNet Service is end to end (host to host)

1. Congestion protection and latency control: usage of allocated resources (queuing, policing, shaping).
2. Explicit routes: select/apply the flow specific path.
3. Service protection: recognize DetNet compound and member flows for replication and elimination.

Currently off the table as an initial solution

Wrap Up

Key Conclusions:

- DN-PW/MPLS
 - Non PREF*
 - PREF*
- IPv{4|6} DetNet
 - Baseline
 - IP over MPLS
- L2VPN/TSN over MPLS
- IP host
 - With TSN-like subnet
 - With non-TSN subnet
- Other topics
 - Queuing
 - Aggregates
 - OAM
 - Transport protocol impact (Transport = TSV area)

Next Steps

- Document split
- Capture results of this discussion
 - Text writing assignments?
 - Update, then confirm changes on list
 - Timing?
- Plan for addressing open topics?
- Working meetings?
 - Frequency, openness, reporting?
- Interim
 - Physical or virtual?
 - When?