

TEAS NSDT Draft Status

IETF Definition of Transport Slice

draft-nsdt-teas-transport-slice-definition-03

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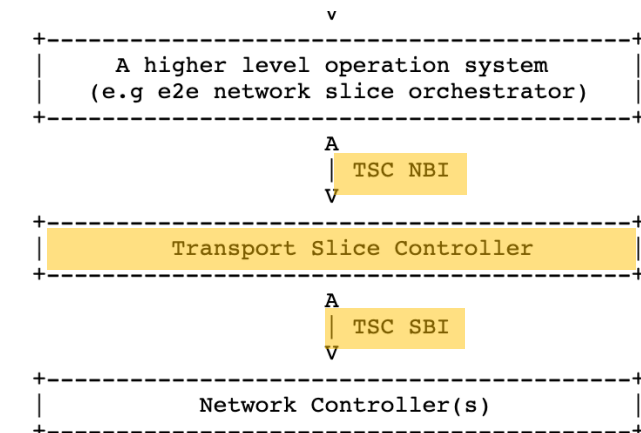
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and NSDT

IETF-108, Virtual 27-31 July 2020

Current Status

- Recap on Transport slice definition
 - "A transport slice is a logical network topology connecting a number of endpoints with a set of shared or dedicated network resources, that are used to satisfy specific Service Level Objectives (SLOs)".
- Presented at IETF 107
 - Presentation: <https://www.ietf.org/proceedings/interim-2020-teas-01/slides/slides-interim-2020-teas-01-sessa-4b-network-slicing-design-team-definitions-00.ppt>
- Content:
 - Definition of the Transport Slice
 - Transport slice Service Level Objectives (SLOs)
 - Characteristics and Terminology
 - Transport Slice Controller (TSC) and its NBI
 - Role of Transport slice in E2E Slices

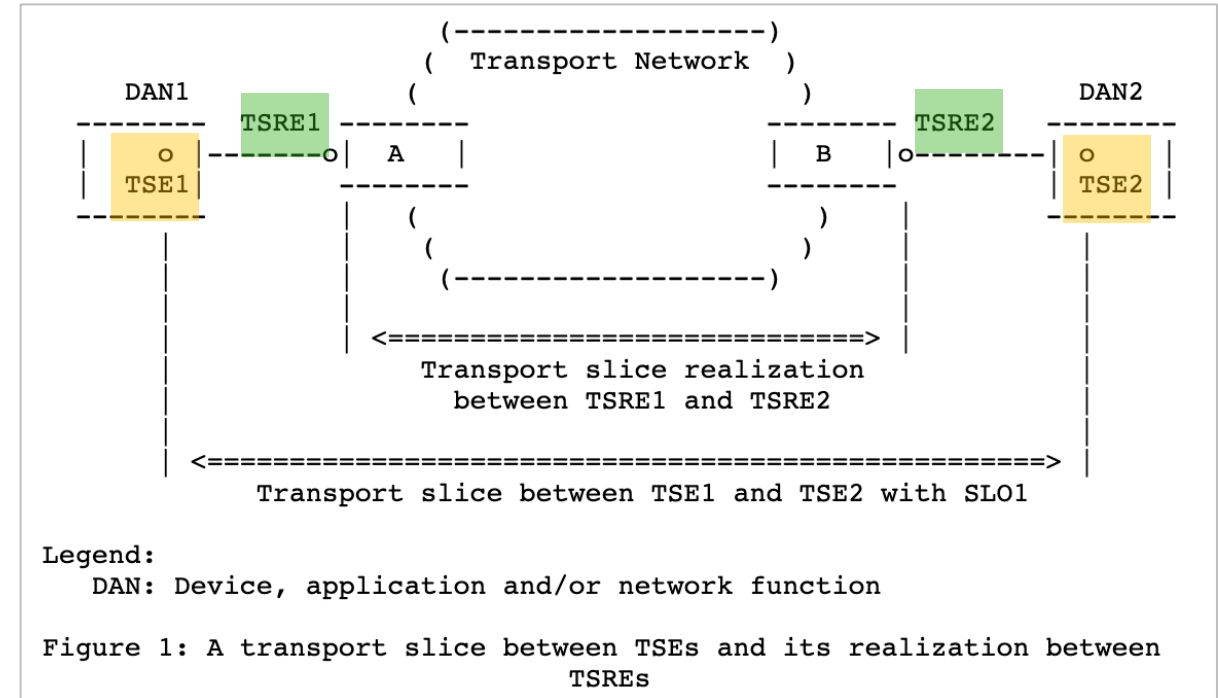


Changes to current draft since IETF-107 (1/3)

- Weekly call among draft co-authors
 - Plus some complementary calls from the draft authors team.
 - We looked at substantial comments/inputs in last few months
 - We referred many existing RFCs and drafts for this update. (i.e. using existing IETF drafts/RFCs)
- Lots of editorial changes based on the feedback from NSDT members and TEAS WG
- Rationale Section: Why Transport slices?
 - A construct which specified the connectivity requirements and unaware of the underlying infrastructure (so the term “Transport”)
 - Types of underlying technologies can be based on any combination of IP, Ethernet, MPLS, and optical technologies
- Why term “Transport”? The term "transport" in transport slice is derived from the definition of Transport Network in the [section 1.3.1 of \[RFC5921\]](#) :
- Defined minimal set of Service Level Objectives for Transport Slices:
 - **Directly Measurable Objectives:** e.g. Guaranteed Minimum Bandwidth, Guaranteed Maximum Latency, etc.
 - Other directly measurable objectives for transport slice could be specified
 - **Indirectly Measurable Objectives:** e.g. Security, geographical restrictions, maximum occupancy level, etc.
 - **Other optional objectives** might be needed for certain transport slices: Other traffic specific characteristics e.g. MTU, traffic-type IPv4, IPv6 etc.
 - Identification of references for supporting SLO definitions
 - Isolation is now considered a realization technique to implement the required service level objectives. Some implementation options are discussed in [Appendix A.1](#). This topic has been also revised based on comments/feedbacks

Changes to current draft since IETF-107 (2/3)

- New section for **transport slice endpoints (TSE)**
 - They are conceptual points of connection of a network function, device or application to the transport slice
 - TSE is different from access points (AP) defined in [RFC8453] as an AP is a logical identifier to identify the shared link between the customer and the operator
 - TSE is different from TE Link Termination Point (LTP) defined in [I-D.ietf-teas-yang-te-topo] as it is a conceptual point of connection of a TE node to one of the TE links on a TE node.
 - The TSE is similar to the Termination Point (TP) defined in [RFC8345] and can contain more attributes. TSE could be modeled by augmenting the TP model.
- overview or highlight of TSRE would be needed. **"Transport Slice Realization endpoints (TSREs)"**



Changes to current draft since IETF-107 (3/3)

- Document improvements based on comments on TEAS and NS-DT mailer list/weekly discussions.
 - Cleanup of Characteristics section as explained in previous slide
 - Define what transport term means within the scope.
 - Most of the terminology is normalized and definitions refer to existing RFCs.
 - Additional insertion of related definitions of SLA, SLO, SLI to improve the discussion on objective guarantees.
 - Improved NBI and SBI description (removed unnecessary text that seemed too much details)
- Ongoing discussions
 - Further comments being discussed, we may move Appendix to framework and refer to that when it happens.
 - TSRE in the figure to be clarified.
 - Discussion description of slice occupancy

Next Steps

- Request WG adoption
- TEAS WG review and comments
- Draft posted at:
<https://tools.ietf.org/html/draft-nsdt-teas-transport-slice-definition-03>
- For latest draft, refer to GitHub:
<https://github.com/teas-wg/teas-ns-dt/tree/master/definitions>

Thank you