

# Transport Slice Intent

<draft-contreras-nmrg-transport-slice-intent-01>

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# Summary of the draft

- Target: to leverage on IBN technologies to request transport slices
- Use case:
  - Upper systems processing end-to-end network slices will elicit requirements for setting up transport slices
    - E.g., 3GPP Management System processing SLOs from slice templates to connect radio access and core slice parts for 5G services
  - Transport slices will be requested as intents to Transport Slice Controllers
- Benefits:
  - Portability of the solution across implementations
  - Simple way of expressing transport slice needs by e.g. vertical customers
  - Focus on what, not on how

# Updates from -00 version

- Text clean up
- Improvement on translation approaches section
- Update on intent definition
  - *Intent is a declaration of operational goals that a network should meet and outcomes that the network is supposed to deliver, without specifying how to achieve them. Those goals and outcomes are defined in a manner that is purely declarative – they specify what to accomplish, not how to achieve it*
- Addition of Jeff Tantsura as co-author

# Link with IETF TEAS transport slicing activity

- TEAS WG chartered a design team to work on developing a framework for delivering Network Slicing using existing IETF technologies
- Several documents on-going
  - Both definitions and framework drafts extensively discussed, close to be ready for adoption
  - Some initial work on transport slice YANG models have emerged
  - Additional work on NBI parameters is being developed
- This work complements TEAS work by offering an intent-based approach for slice request through transport slice controller NBI interface

# Next steps

- Keep developing IB capabilities for transport slices
- Keep analysing GST attributes and their impact in transport
- Align with progress in TEAS NS DT
- Request comments and inputs for new versions
- Positioning this draft as NMRG intent use case (WI#5)

# Backup - Transport Slice Controller

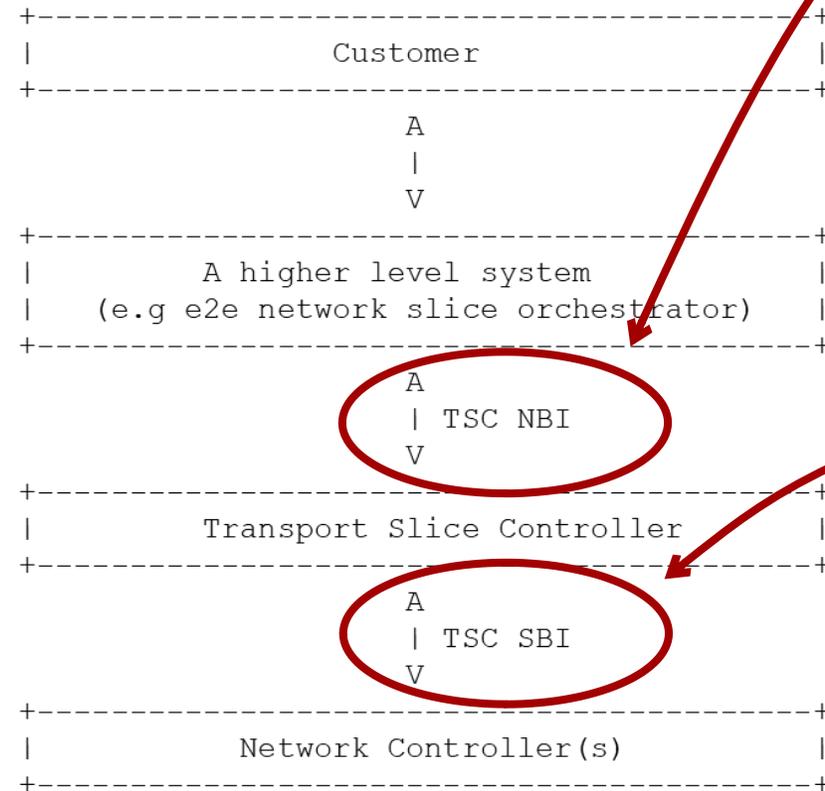


Figure 3: Interface of Transport Slice Controller

- Northbound Interface (NBI)

**Description**

- ✓ SLOs and connectivity requirements
- ✓ Translate requirements to lower layer entity and receive runtime state for monitoring

- Southbound Interface (SBI)

**Realization**

- ✓ Above requirements are mapped into technology specific manner
- ✓ May require particular extensions or enhancements.
- ✓ May or may not be slice-aware (optional)

# Backup - Generic Slice Template Attributes (examples)

- Maximum Supported Packet size
- Downlink Throughput per user
- Uplink Throughput per user
- Downlink Throughput per slice
- Uplink Throughput per slice
- Reliability
- Device velocity
- Radio spectrum
- Delay Tolerance
- Synchronicity
- Positioning support
- Supported Access technologies
- Multicast
- Support for non-IP traffic
- Deterministic communication
- Terminal number and density
- Performance Monitoring
- Real-time Charging/Billing
- User Management openness
- Performance prediction
- Location based message delivery
- Security Model
- Isolation
- Custom user plane termination
- Session and Service Continuity
- Root cause Investigation
- Coverage