

Scalability Considerations for Network Resource Partition (NRP)

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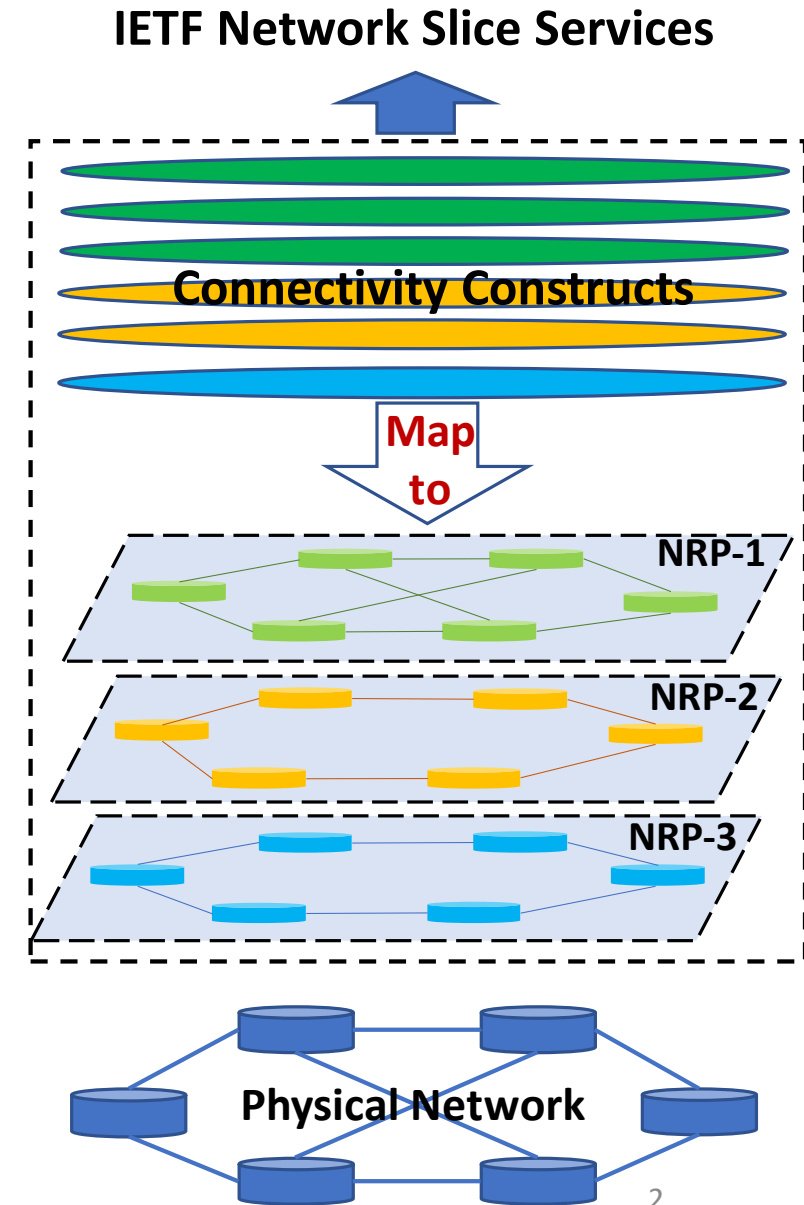
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Recap of Network Slice and NRP

- The concept and general framework of “IETF network slice ” are described in RFC 9543
 - IETF network slice services can be realized by mapping network slice connectivity constructs to NRPs in the underlay network
- An NRP consists of a set of network resources, and is associated with a (filtered) topology
 - Can be used to support one or a group of network slice services
- The scalability of NRP is important for the widely deployment of IETF network slices
 - This document provides the design principles and considerations about NRP scalability in both the control plane and data plane
 - Some scalability optimization mechanisms are investigated and recommended



Discussion on TEAS Mail List

- Revisiting NRP Selector (thanks to the chairs for initiating this discussion)
 - What do we call this dedicated identifier field?
 - The feedback so far shows “Data Plane NRP ID” is preferred
 - Length of the dedicated identifier field: Is it okay for this to be different for different data-plane types?
 - The feedback so far shows it is OK to have different ID length for different data-plane
 - Indicator for “strict match”: Is it useful to have an explicit indicator to determine what to do with a packet that cannot be mapped to an NRP?
 - The feedback so far shows the indicator for “strict match” is useful
 - The actual encoding of this “indicator” could be different for different data-plane types
- Please send feedback to the mail list if you have other opinions

Updates in -06 Version

- Updated the terminology to reflect the feedbacks on the “NRP selector” discussion
 - For the data plane dedicated identifier, “NRP ID” is replaced by “data plane NRP ID”
- Clarified that the encoding of the data plane NRP ID is specific to the data plane protocols
- Some editorial changes

Next Steps

- Reflect WG consensus on the general design of the dedicated identifier for NRP
- Review and refine the scalability design principles to see if there is anything unclear or missing
- Move this document towards WG LC

Thank You