

RSVP-TE extension for extension for signaling Objective Function and Metric Bound

draft-ali-ccamp-rc-objective-function-metric-bound-04.txt

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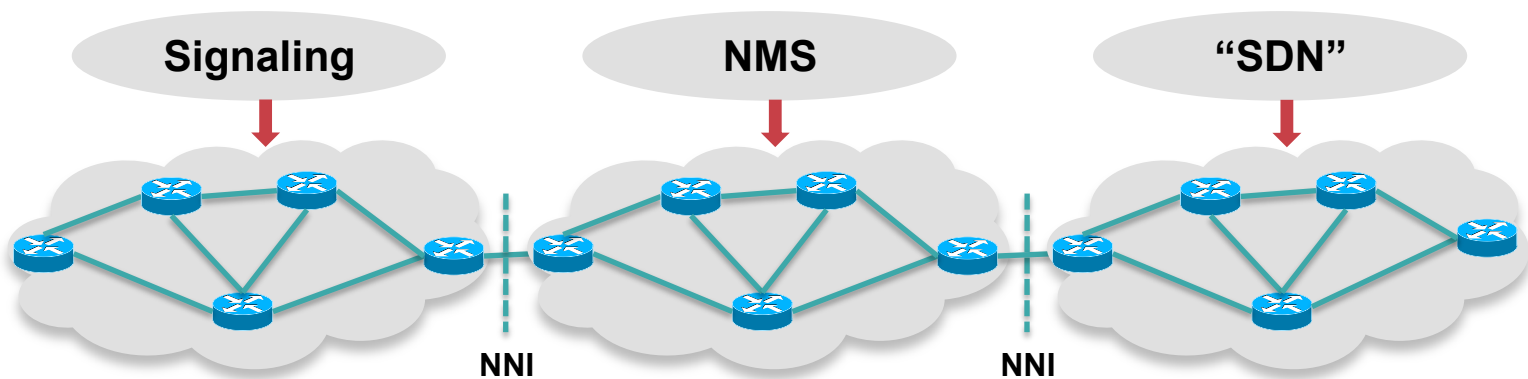
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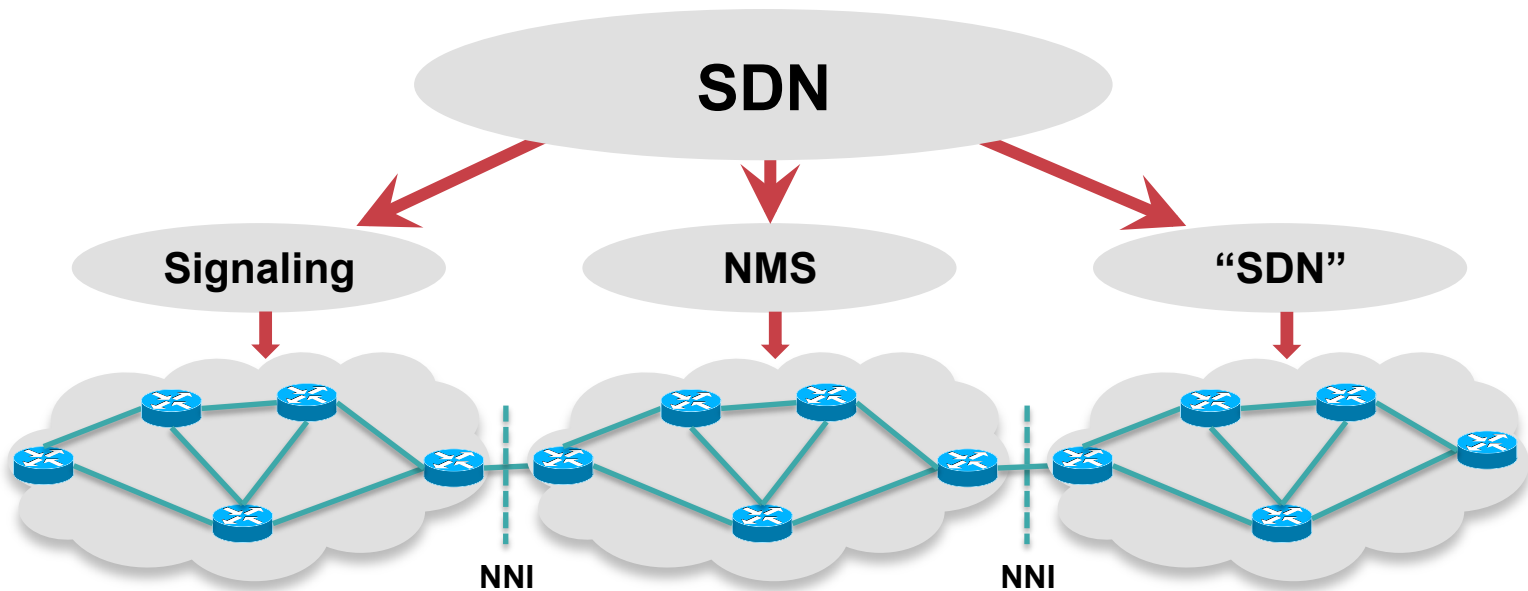
Large SP Transport Layer Environment

- Mixed Vendor Environment; Possible Dual Cores
- Several Vendors in access
- No PCE is deployed
- SDN not yet deployed
- Multiple operations groups



Large SP Transport Layer Environment

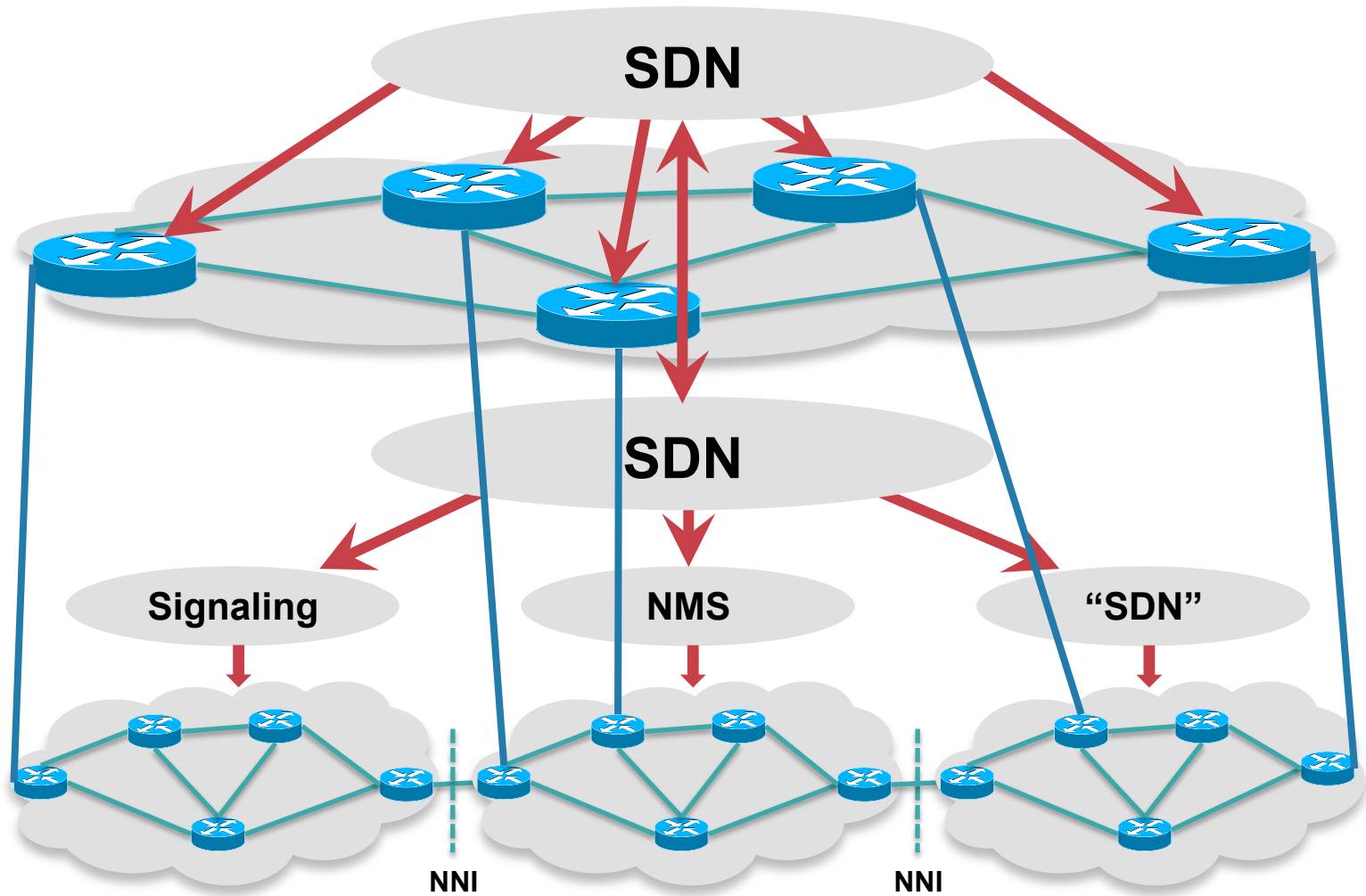
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Operational Culture

- Good fences make good neighbors
 - UNI exists to solve a political problem
 - otherwise we'd just have GMPLS
- Fewer protocols is better (whether or not true, it is perceived)
 - Less training
 - Less configuration
 - Simpler debugging
 - Above sums to less OpEx
- Resistant to allowing devices outside their control to participate in their protocols

The full picture



Recovery Requirements

- Restoration needs to be performed in fully distributed fashion.
 - The entity that provisioned the path options may not be accessible/ active during a failure, e.g., SDN controller, planning tool, manual, etc.
 - That entity may be overloaded during failure scenarios
 - Involving that entity will slow down the restoration.
- A centralized entity may provide more relaxed constraints to be used in the event of a hard failure
 - (i.e. the primary constraints or ERO cannot be met)
- This approach offers the benefits of centralized planning, but gives network autonomy to find restoration paths
 - Note that centralized planning could be an off-line exercise

Motivation behind in/exclude route & OF

- RFC4208 restrictive in scope
- Idea is to open it up to information that parties are willing to agree to share
- Allow User to learn SRLGs and latency
- Allow User to specify requirements in more abstract, but highly relevant terms
 - Diverse from another path
 - Follow another path
 - Meet a bound on latency
 - Meet some other objective