

Inter-domain SLA Exchange

<http://www.ietf.org/id/draft-ietf-idr-sla-exchange-00.txt>

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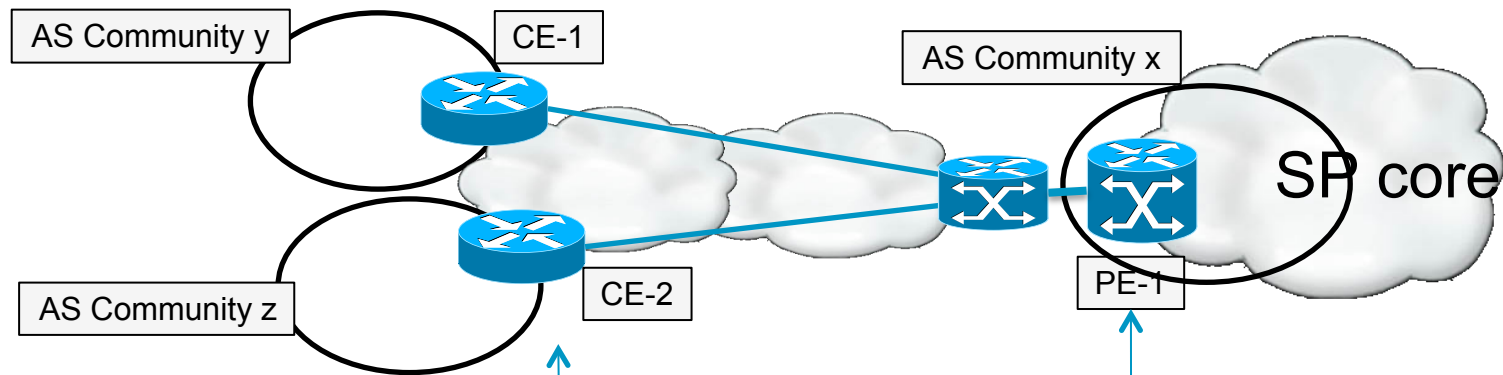
Topics

- Motivation
- PE-CE Use case (In today's deployment)
- PE-CE Use case (leveraging draft proposal)
- Why BGP a choice of protocol
- Proposed Solution
- CE-CE Use case
- Evaluate re-use of existing IANA types
- Questions

Motivation (but not limited to)

- To address out of band QoS SLA exchange between administrative (or inter-domain) boundaries
- Provide In band method for QoS SLA exchange
- Cut-down provisioning complexities and cost

PE to CE Use case (Today)



Unmanaged:

- Get on paper PE contract
- Define QoS policies aligned with PE

Managed:

- Manual or intelligent system overhead to get QoS policies to CE

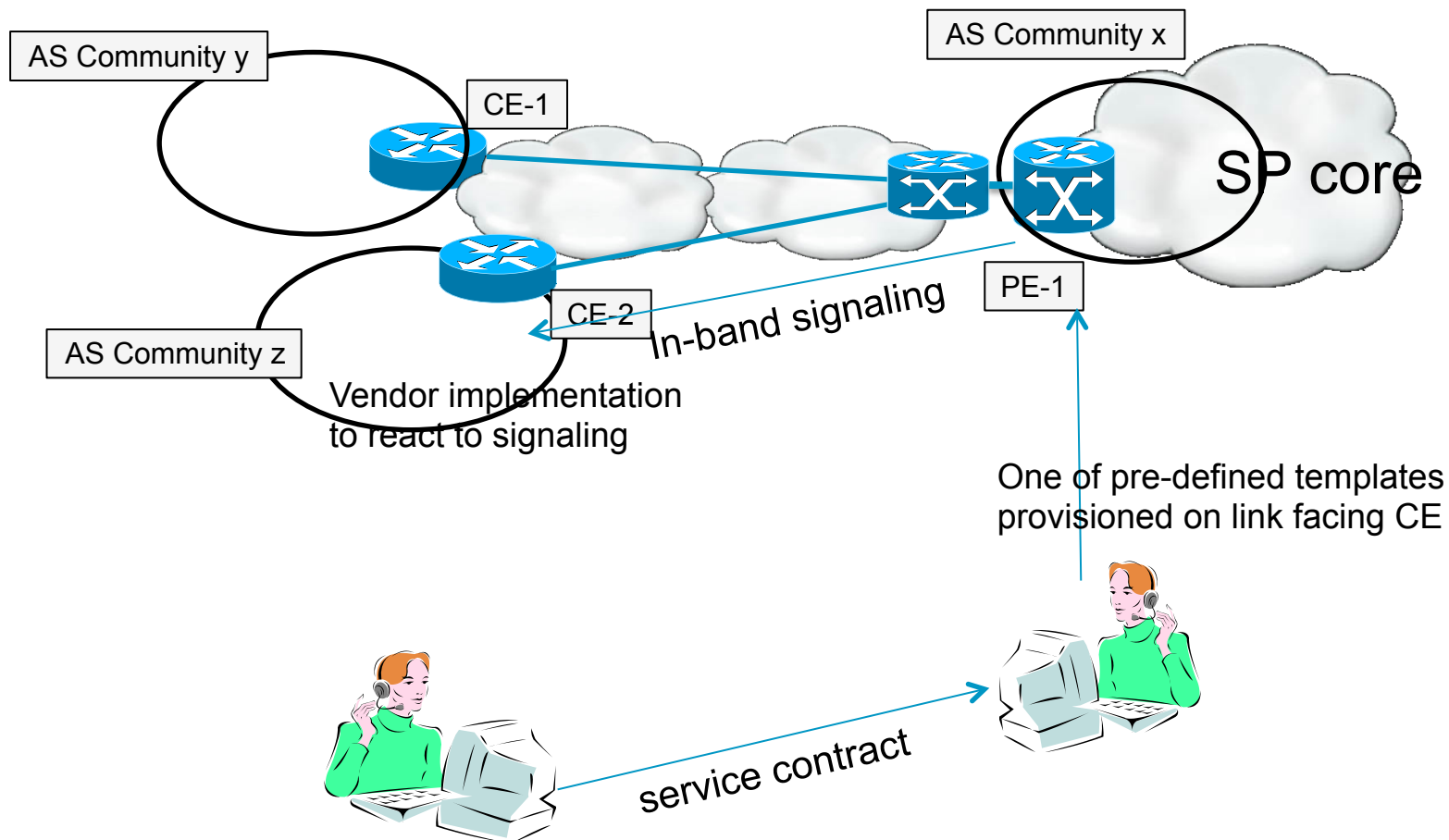
In both cases:

- Provision QoS policies based on Vendor's provisioning language

One of pre-defined templates provisioned on link facing CE



PE to CE Use case (leveraging draft proposal)



Why BGP a choice of protocol

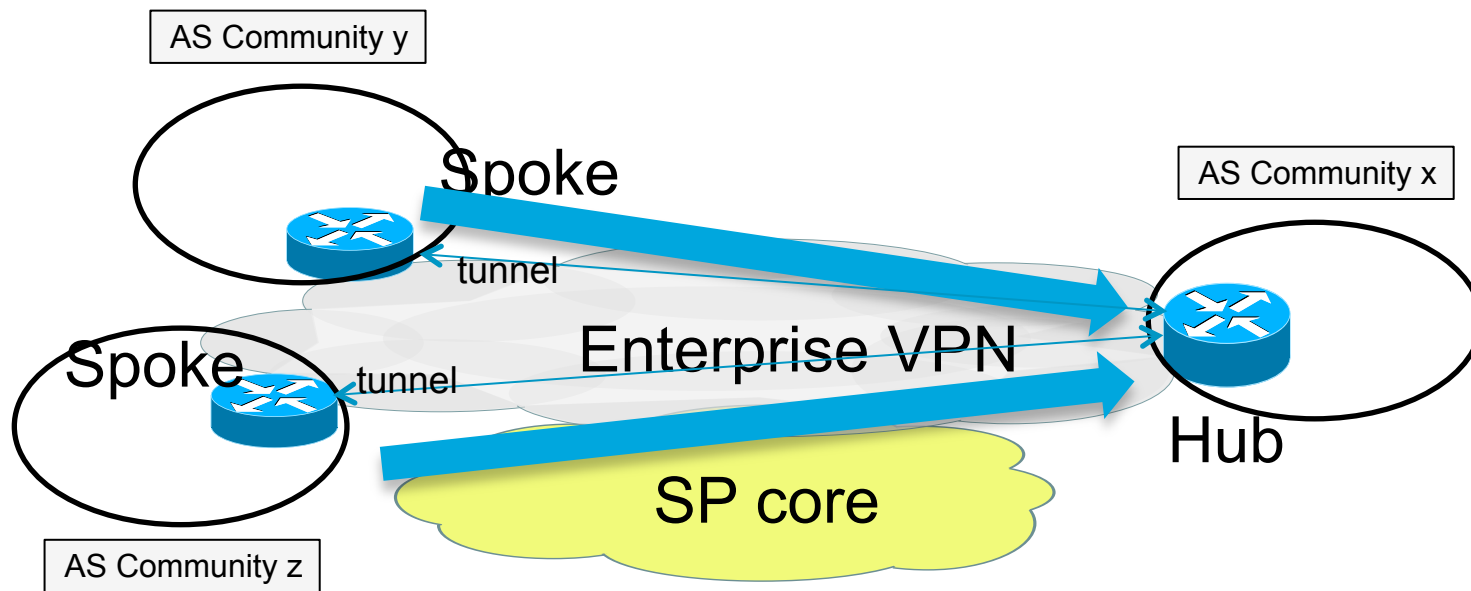
- It is a widely used Inter-domain Protocol
- Aligns with the purpose of advertising SLA across administrative boundaries
- Cost effective to extend BGP to support such application (instead of defining any new protocol)

Proposed Solution in the Draft

- A new attribute defined in BGP to encompass QoS related parameters
 - It is an optional transitive attribute
 - QoS attribute scope generic to hold any future QoS related applications
- SLA is defined as a sub-type within QoS attribute
 - Detailed parameters of SLA are defined in the draft
 - Traffic-classes and Service-types for each traffic class in each direction
- Advertised SLA is from source AS to destination AS in the context of prefix
- Example: In the case of SLA for a point to point connection. i.e. for
 - Physical link between BGP peers or
 - Logical link like tunnelsprefix is an ip address of the source end-point

CE to CE Use case

- Hub and Spoke



QoS SLA between Hub and Spokes thru BGP updates

Evaluate re-use of existing IANA types

- RFC 5102 - IPFIX Information Element ids to represent Traffic Class (IANA Type = IPFIX Information Element Identifiers)
Re-use only Element Id + Abstract data-type
- RFC5575 – BGP Flow Specification (IANA Type = Flow Spec Component Types)
Limited set of traffic class
- RFC5975 – QSPEC Template (ref. QSPEC parameters)
Parameter ID IANA type
Limited set of traffic class
Some of the parameters are irrelevant to SLA

Questions?