

# BGP QoS SLA Attribute

<http://www.ietf.org/id/draft-svshah-bgp-qos-sla-attribute-00.txt>

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*IETF 83, Mar 2012, Paris, France*

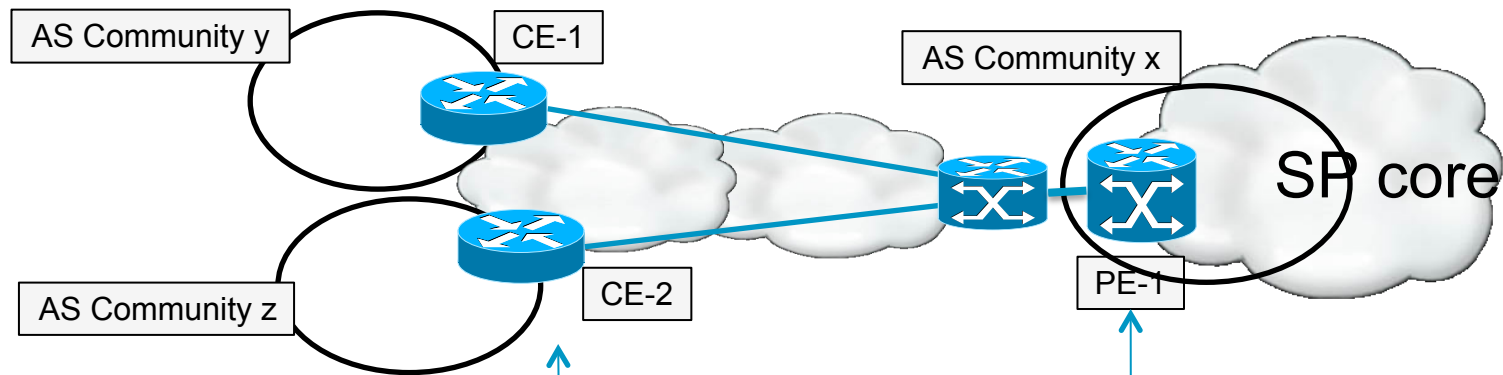
# Topics

- Motivation
- PE-CE Use case (In today's deployment)
- Why BGP a choice of protocol
- Proposed Solution
- PE-CE Use case (leveraging draft proposal)
- CE-CE Use case
- Possible changes in next revision
- 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
- Open a door for opportunities including cutting-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



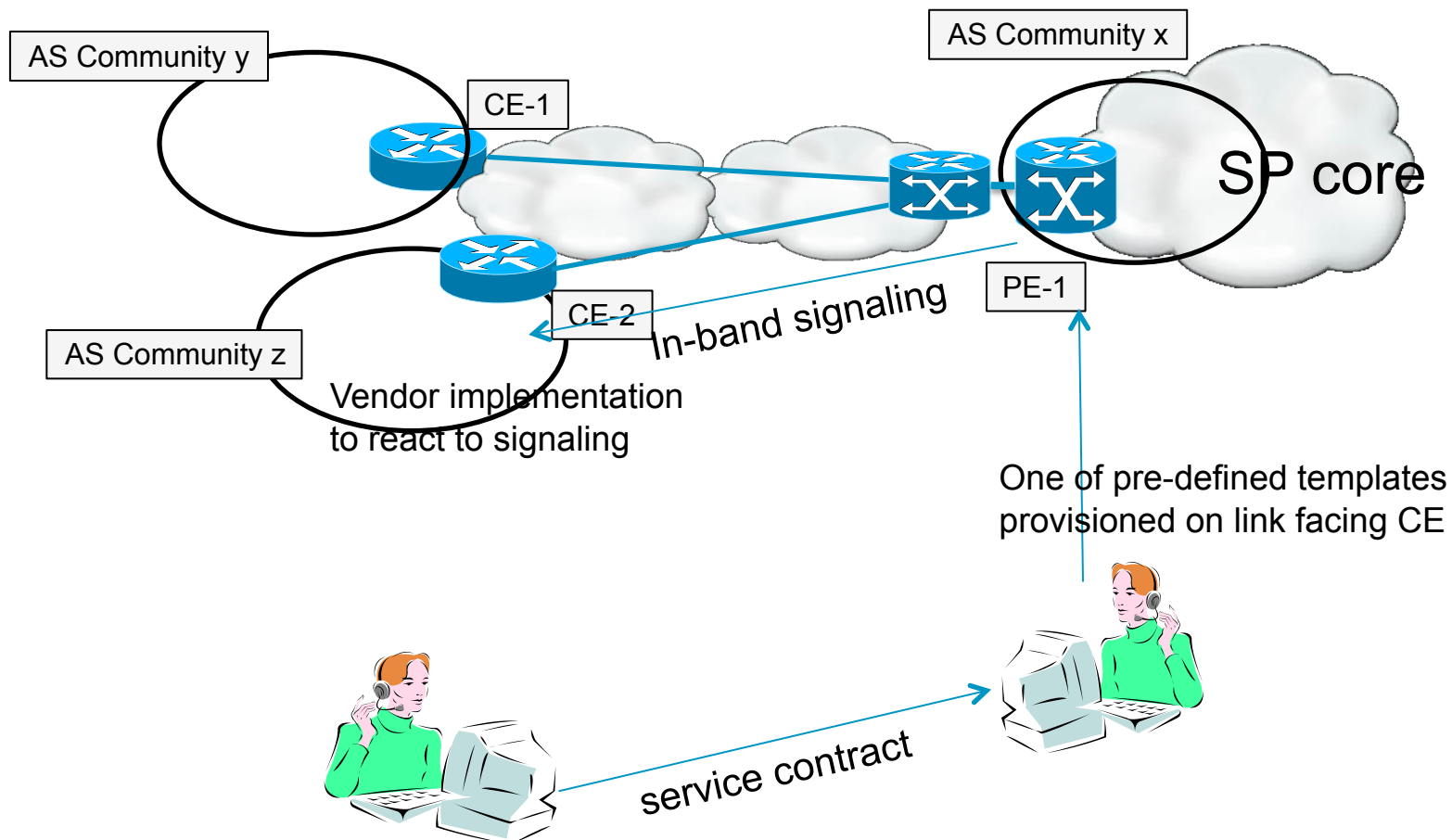
# Why BGP a choice of protocol

- 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

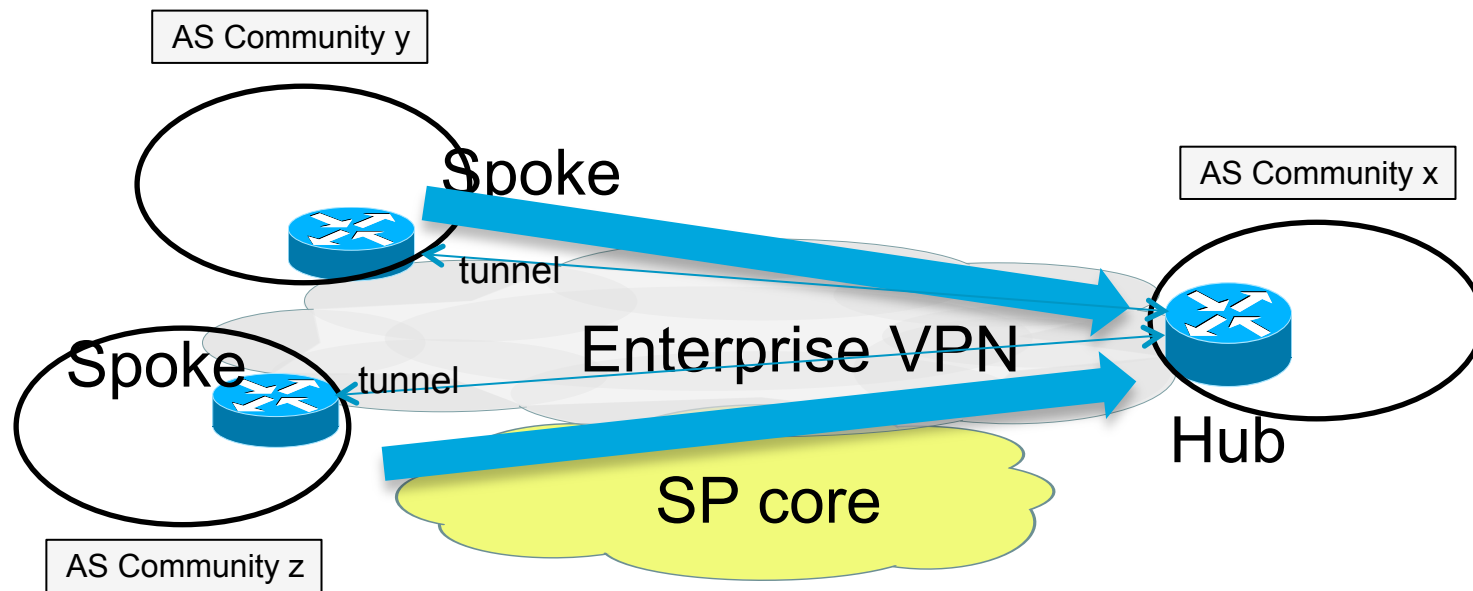
- A new attribute defined in BGP to encompass QoS related parameters
  - It is an optional transitive attribute
  - QoS attribute scope generic to hold any future QoS related applications
- SLA is defined as a sub-type within QoS attribute
  - Detailed parameters of SLA are defined in the draft
  - Traffic-classes 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

# PE to CE Use case (leveraging draft proposal)



# CE to CE Use case

- Hub and Spoke



QoS SLA between Hub and Spokes thru BGP updates



# Possible changes in the next revision

- Add drop probability parameters for a Traffic Class
- Add percent/time based unit along with rate based for some of the service types
- Investigate re-use of existing IANA types (eg. IPFIX Information Element ids for Traffic Class Element types)

Questions?