

BGP Extensions for Segment Allocation

draft-wu-idr-bgp-segment-allocation-ext-00

Shunwan Zhuang(zhuangshunwan@huawei.com)

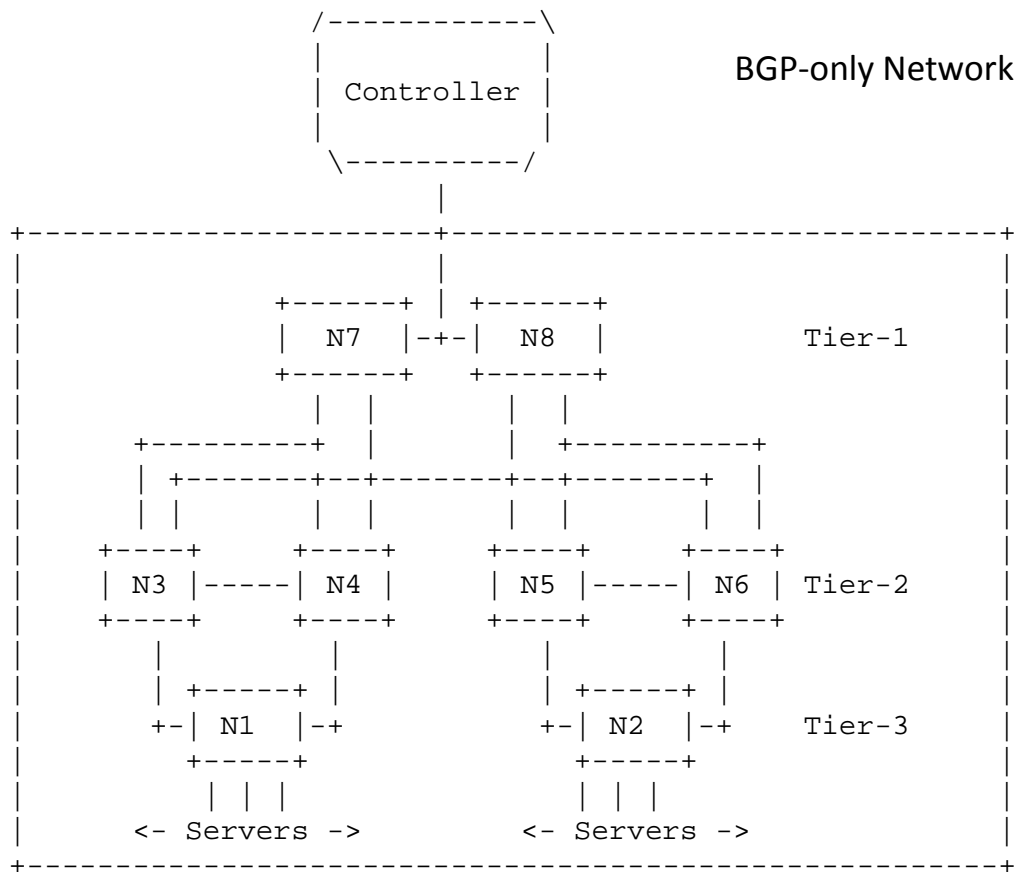
Nan Wu(eric.wu@huawei.com)

IETF94, Yokohama

Motivation (1)

▣ Allocating SIDs in BGP-only Networks

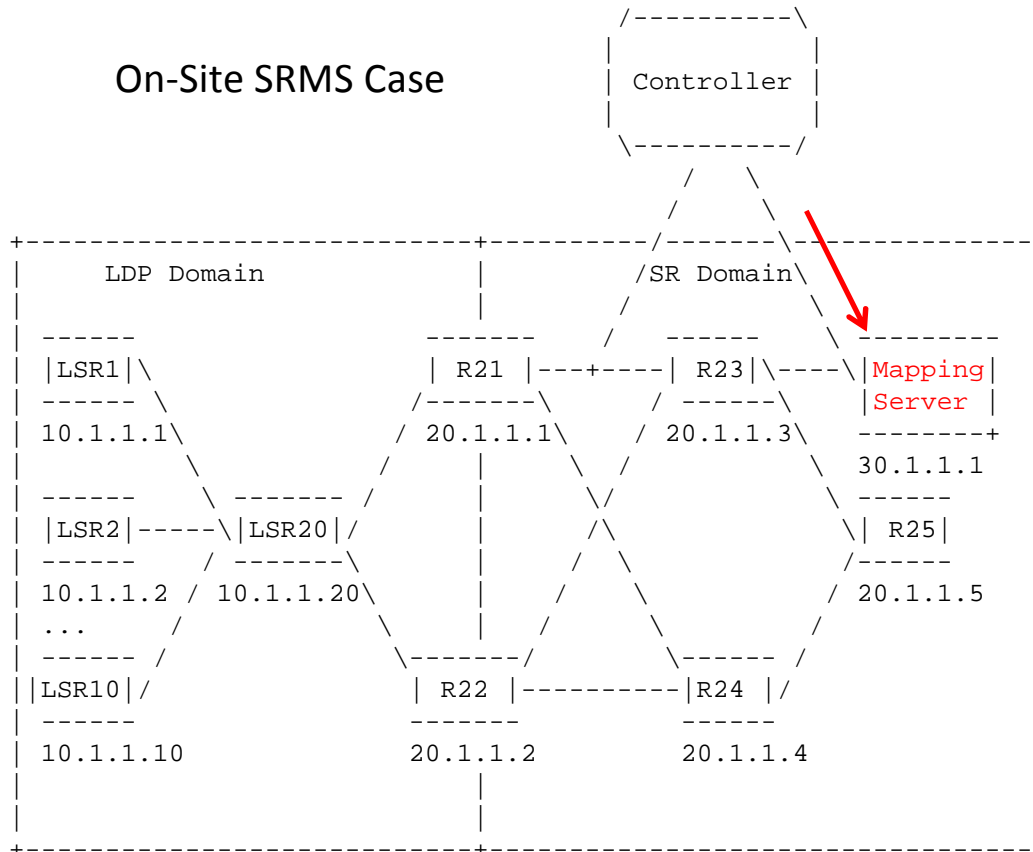
- No IGP flooding mechanism to advertise SRGB.
- Be better to allocate SIDs through BGP in a centralized way.



Motivation (2)

□ Allocating SIDs to a on-site SRMS

- In SR&LDP interoperation scenario, an on-site SRMS is used.
- SIDs for mapping entries are allocated by a remote network planning tool.
- BGP may be one of candidate signaling protocols.



Choice of Protocol Extensions

- Option 1: Totally reuse the existing BGP-LS for Segment Allocation
 - Existing BGP-LS is always to carry IGP link-state information from IGP network to collector.
- Option 2: New BGP Extensions for Segment Allocations
 - Introduce a new protocol ID: The use of a new Protocol-ID allows separation and differentiation between the NLRIs carrying Segment Allocation information from the NLRIs carrying IGP link-state information
- The document prefers the option 2.

Protocol Extensions

- New Protocol-ID: BGP-Segment-Allocation (TBD)
- Use existing BGP-LS-TLV:

NLRI	TLV Code Point	Description
NODE	1034	SR Capabilities
NODE	1035	SR Algorithm
LINK	1099	Adj-SID
LINK	1100	LAN-Adj-SID
LINK	1036	Peer-SID
LINK	1037	Peer-Set-SID
PREFIX	1158	Prefix SID
PREFIX	1033	SID/Label Binding

Next step

- ❑ Solicit comments on the choice of protocol extensions.
- ❑ Refine this draft