

LLDP Extensions for SRv6

draft-gong-spring-lldp-srv6-extensions-01

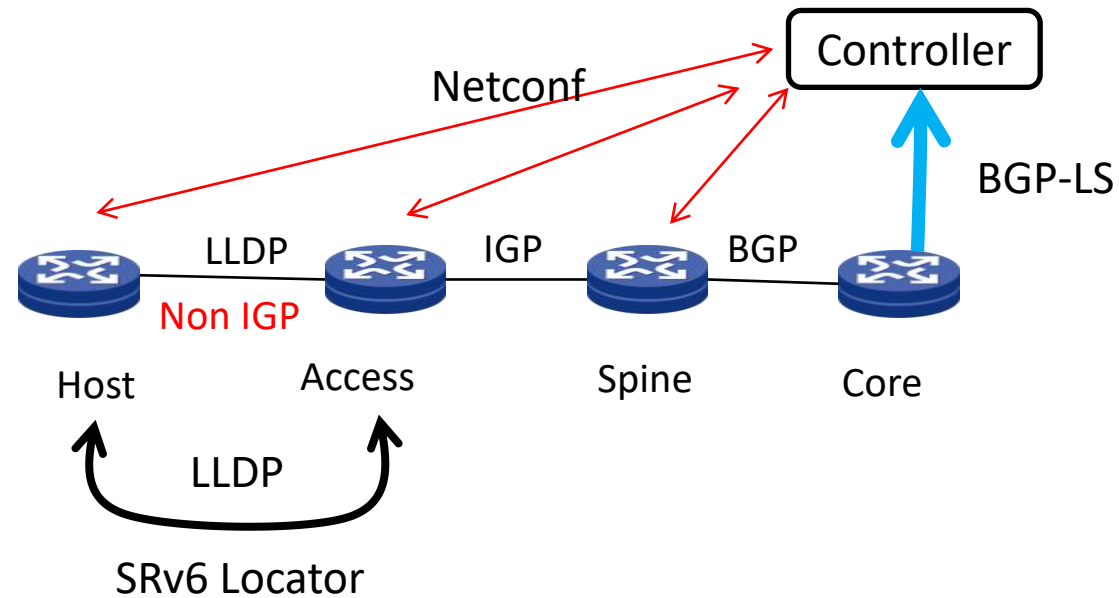
Liyan Gong(China Mobile)

Changwang Lin (New H3C Technologies)

Zheng Zhang (ZTE)

IETF-121

Background & Solution



Problem:

- Telecom IP Network hosts have deployed SRv6
- Large-scale hosts
- Wide geographical distribution
- Hosts are not equipped with IGP

Solution:

- The SRv6 Capability and SRv6 Locator are advertised in LLDP between Host and Access
- Dynamically learn SRv6 locator subnet routes and SRv6 Endpoint
- Simplify configuration of SRv6. Hosts and Access

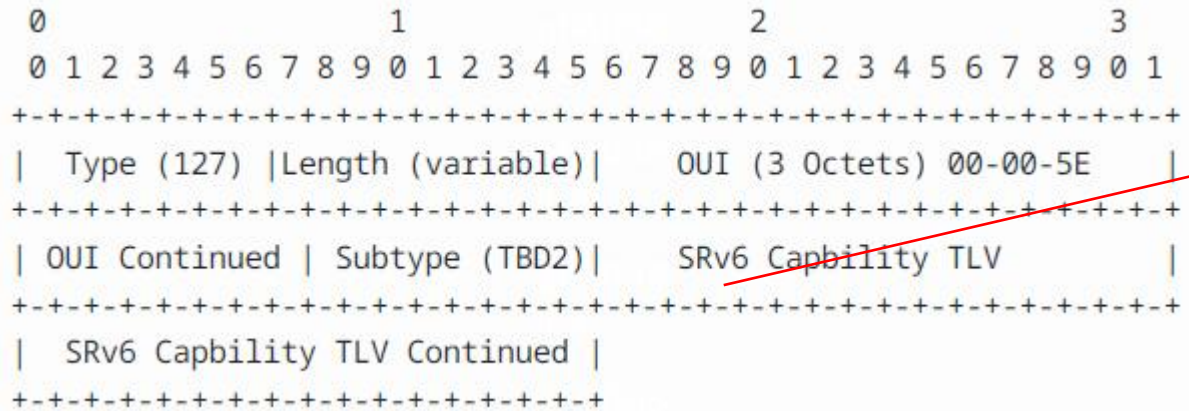
Proposal

SRv6 locator was advertised by LLDP

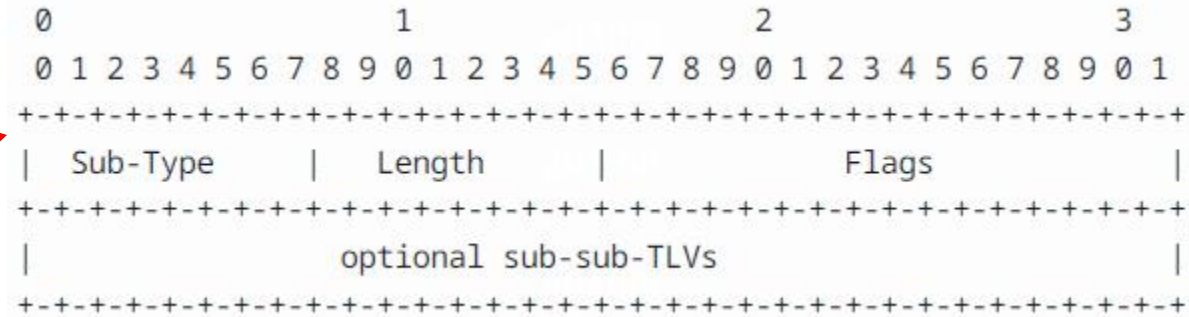
1. SRv6 locator was advertised by LLDP between Hosts and Access.
2. Access advertised SRv6 Locator of Hosts in IGP.

LLDP Extension

New Subtype(TBD2) is requestd for SRv6 Capabilities TLV in LLDP :



Format of SRv6 Capabilities TLV in LLDP is same as [RFC9352]:



LLDP Extension

SRv6 Locator TLV in LLDP:

0										1										2										3									
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
Type (127)										Length (variable)										OUI (3 Octets) 00-00-5E																			
OUI Continued										Subtype (TBD)										SRv6 Locator TLV																			
SRv6 Locator TLV Continued																																							

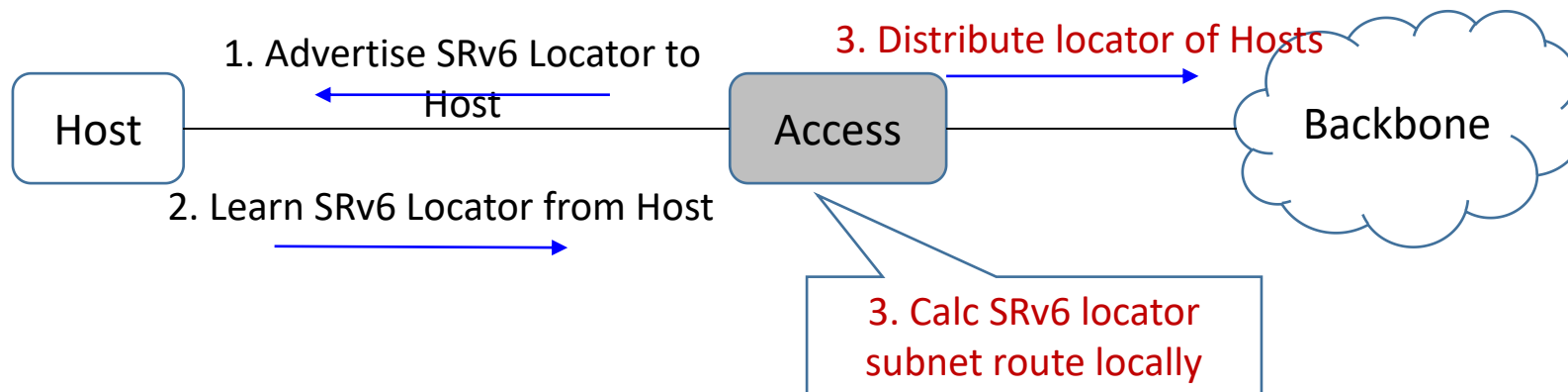
Format of SRv6 Locator TLV in LLDP is same as [RFC9352]:

0										1										2										3									
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
Sub-Type										Length										R R R R MTID																			
																				Metric																			
Flags										Algorithm																													
LocSize										Locator (variable)																													
sub-tlv-len										Sub-Tlvs (variable)																													

Scenario: SRv6 Locator advertised via LLDP

Access behavior:

1. Advertise all IGP SRv6 Locator in LLDP to Host.
2. Learn SRv6 Locator of Host.
3. Distribute SRv6 Locator learned from LLDP into IGP.



Next Steps

- Refine the description of Chapter 2 to more clearly articulate the purpose of the draft
Thanks for Joel's comments
- Any questions or comments are Welcome

THANKS