

IGP extensions for Advertising Offset for Flex-Algorithm

[draft-chan-lsr-igp-adv-offset](#)

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Problem Statement

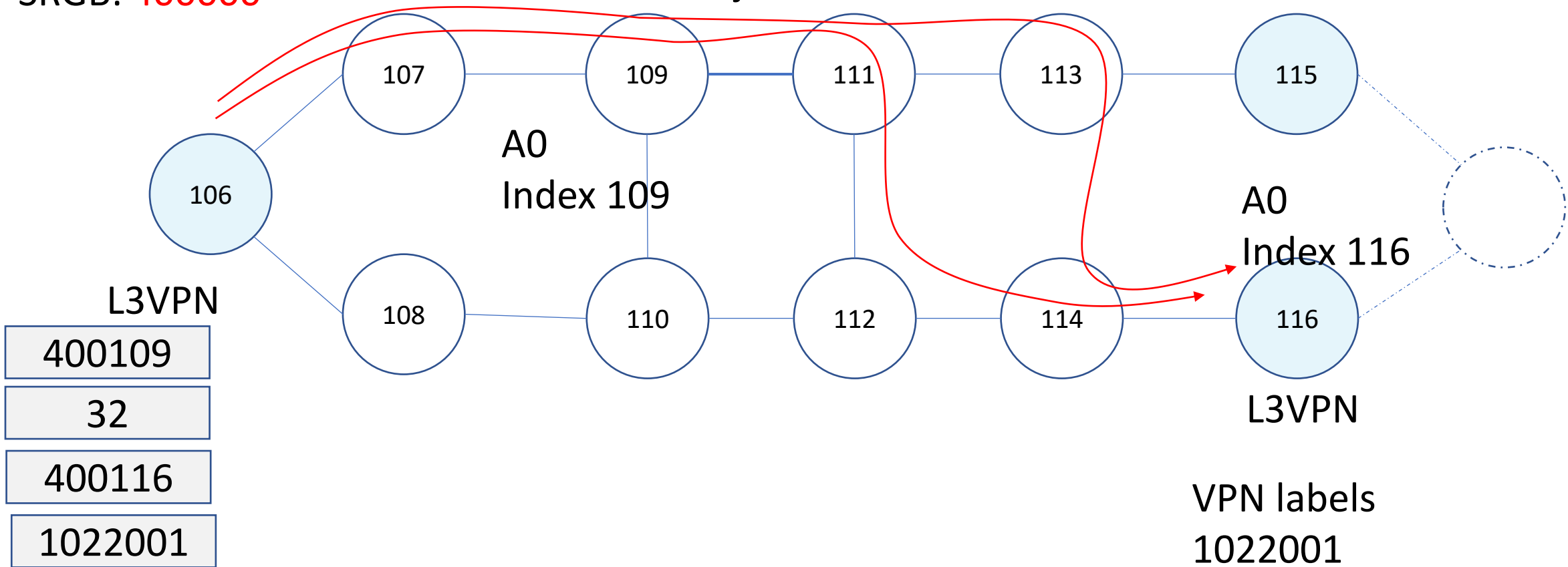
- Purpose:
 - Reduction of IGP advertisement scale for Flex-Algo Adj-SID's
 - Use offset value to predict each and every Flex-Algo Adj-SID instead of individual advertisement
 - e.g. For a node with 1,000 links, reduction is about 1000 times.
 - Introduction of Virtual Flex-Algorithm (VFA) in -02 draft
 - Similar relationship between VLAN and Port
 - Reduce the re-calculation if sharing the base Flex-Algo
 - Different Prefix-SID and Adj-SID for VFA
 - E.g. VFA 600 & VFA 601 share the same topology of FA129
- Updated draft
 - draft-chan-lsr-igp-adv-offset-02

Algo 0 – SR-TE

SRGB: 400000

Adj SID: 32

This Adj-SID 32 is shared among all Flex-Algo



Advertising Offset per Algorithm

Algorithm Offset for Adj-SID

[illegible]

e.g.

Algo = 129

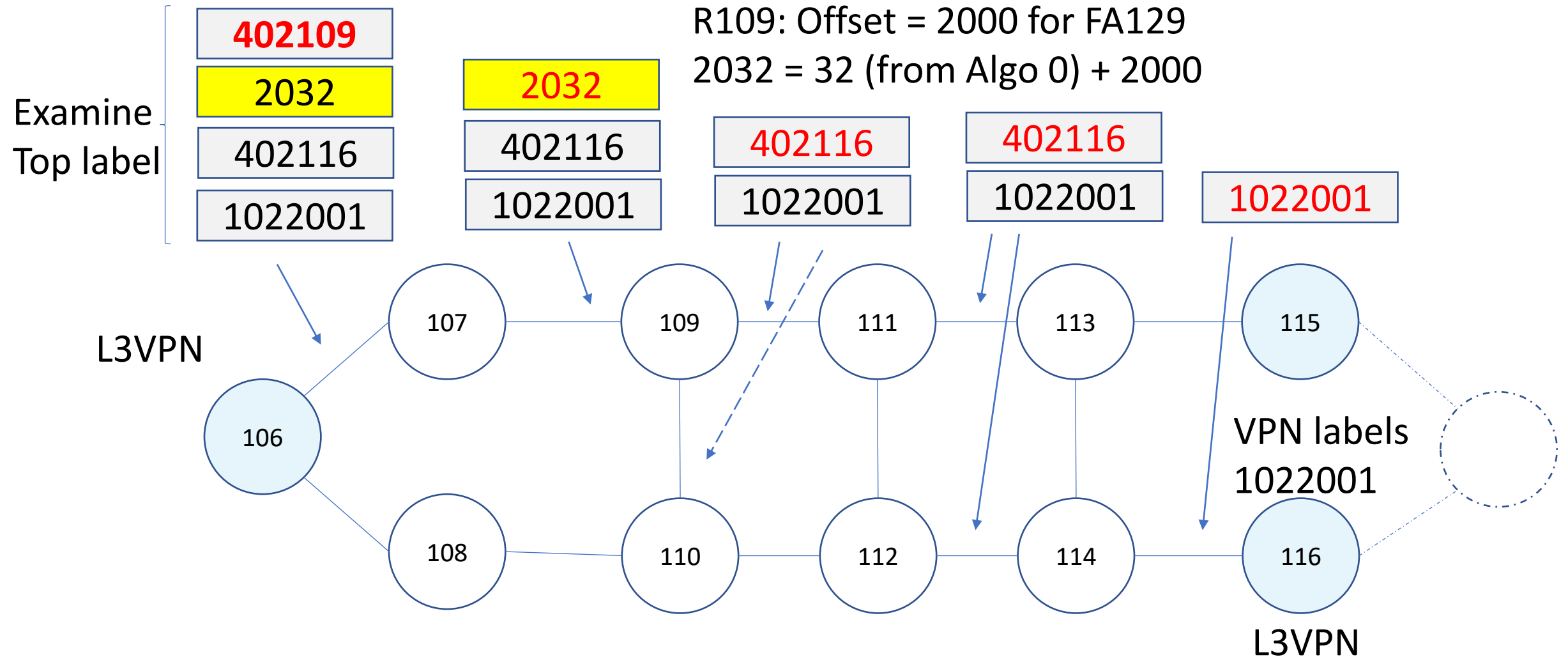
Base offset = 2000

Flex-Algo 129

Algo 129: **402**xxx

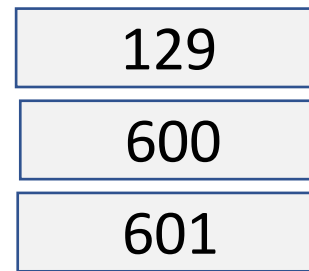
R109: Offset = 2000 for FA129

2032 = 32 (from Algo 0) + 2000

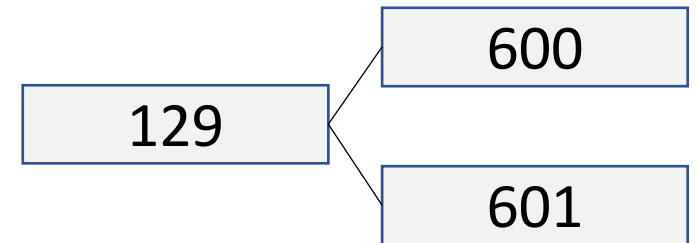


Virtual Flex-Algorithm

- For example
 - VFA 600 & VFA 601 share FA129 topology
- Relationship could be
 - Parallel
 - Parent and child (similar to VLAN)



Parallel



Parent/Child

Advertising Prefix Offset for additional Algo

Algorithm Offset for Prefix SID

The purpose is to advertise additional Flex-Algo prefix via offset method

[illegible]

Example on Virtual Flex-Algorithm

- Existing SID from a Node as an example
 - Algo 0 – Prefix – 400001, Adj-sid's for interfaces - 32, 33, 34....130

Value	Algo 0	FA129	VFA600	VFA601
Adj-SID offset	n/a	2000	6000	7000
Prefix-SID offset	n/a	n/a	6000	7000
Prefix-SID (Node)	400001	402001	406001	407001
Adj-SID for Intf #1	32	2032 (32+2000)	6032 (32+6000)	7032
Adj-SID for Intf#2	33	2033 (33+2000)	6033	7033
Adj-SID for Intf#3	34	N/A (no participation)	N/A	N/A
.....				
Adj-SID for Intf#99	130	2130	6130	7130



Derived value