

Softwire Mesh Multicast

draft-xu-softwire-mesh-multicast-02

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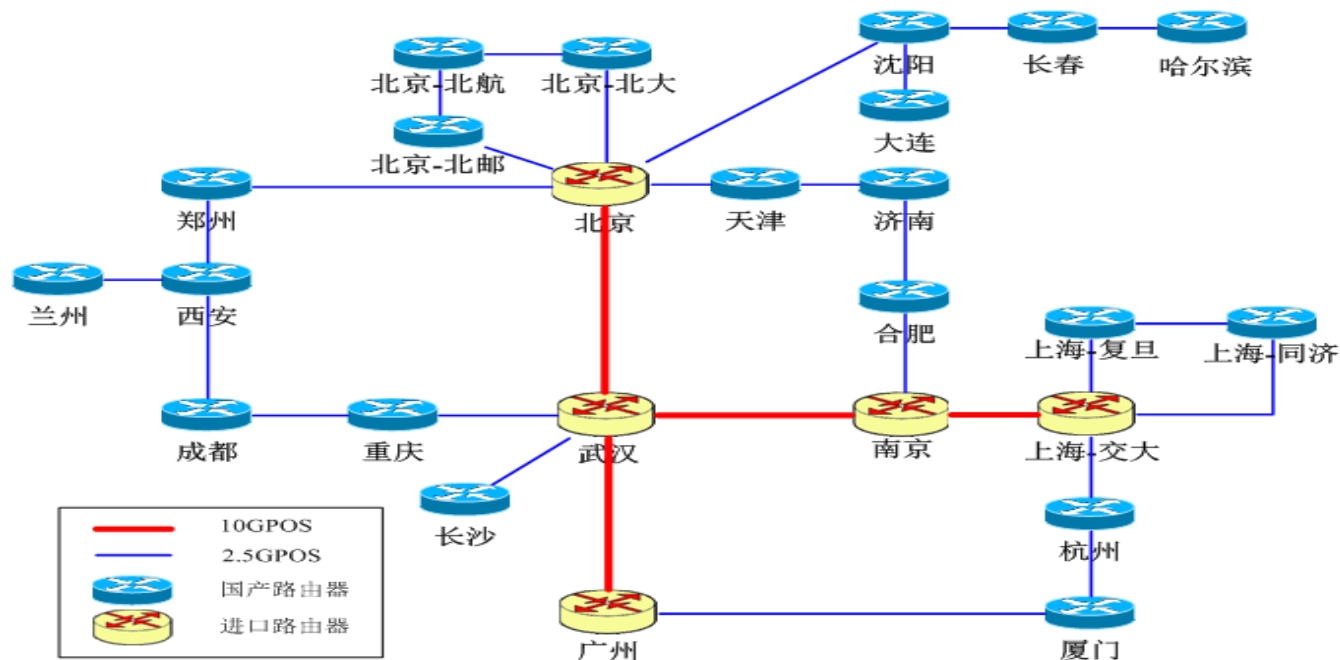
Cisco

IETF81 Meeting, Quebec

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Softwire Deployment in CERNET2

- Softwire gateways will be deployed in **100** campus networks in September, 2011
- Next step: Implement multicast modules in softwire gateways

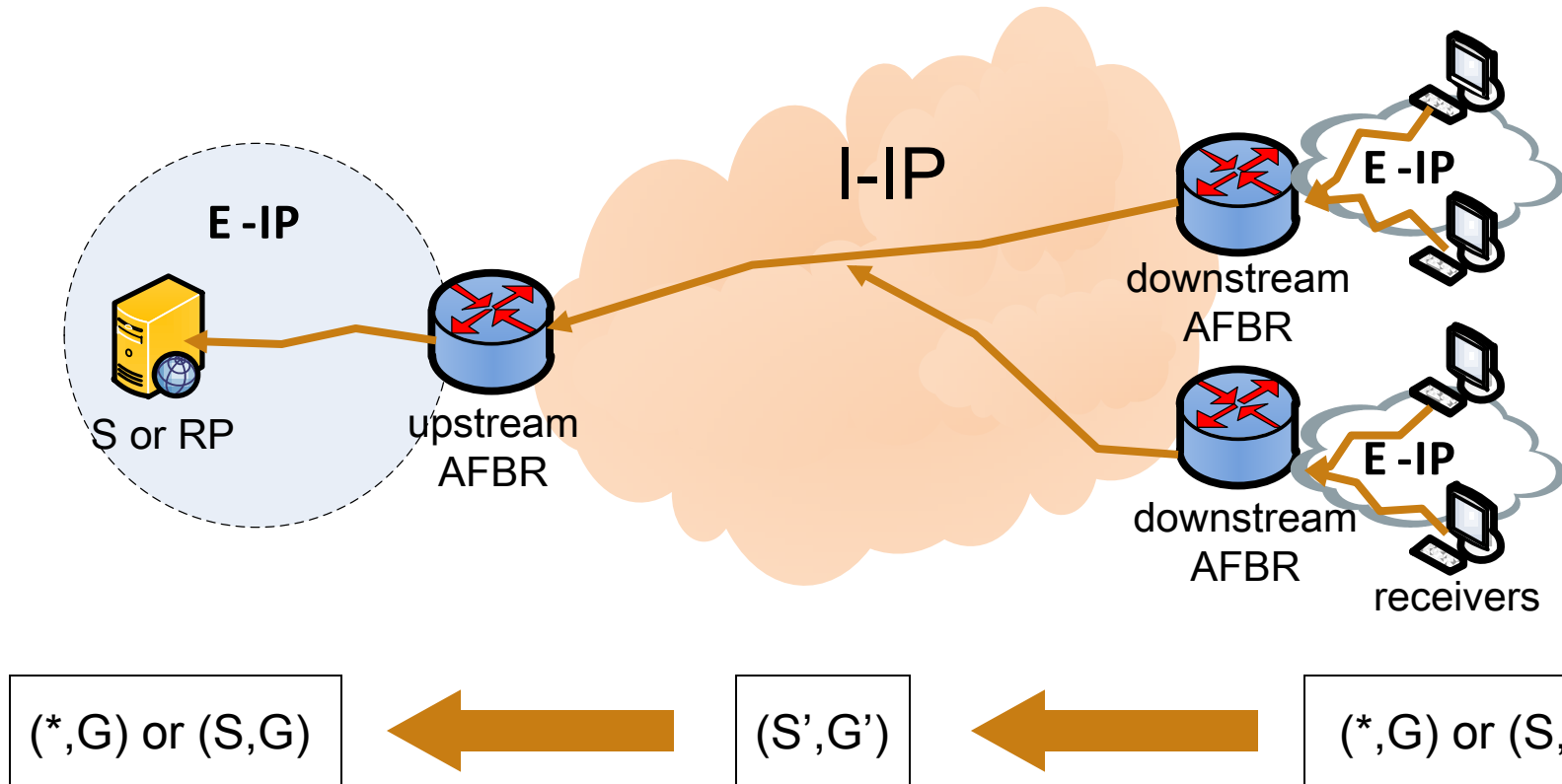




Changes from Version 01

- Separated description for SSM and ASM
- Stateless source address mapping instead of RPF vector in 4over6 scenario
- Stateless source address mapping instead of AFBR signaling in 6over4 scenario

Scenario of Software Mesh Multicast



To simplify the process, stateless one-to-one source address and group address mapping is applied

Four Detailed Scenarios

- E-IP supports SSM, I-IP supports SSM
 - S should be embedded in S'
 - S' must lead the message to the upstream AFBR
- E-IP supports SSM, I-IP supports ASM
 - The same as the first scenario
- E-IP supports ASM, I-IP supports SSM
 - * should be embedded in S'
 - S' must lead the message to the corresponding upstream AFBR (RP')
- E-IP supports ASM, I-IP supports ASM
 - The same as the third scenario

Source Address Mapping (4over6)

0 32 64 72 96 128



prefix: a “well-known” prefix or a ISP-defined prefix

○ An existing “well-known” prefix is 64:ff9b, which is defined in RFC6052

● v4: the IPv4 address of the E-IP interface of upstream VLABR

● u: must be set to zero

● suffix: reserved for future extensions and should be set to zero

Source Address Mapping (6over4)

0

96

128

prefix

v4

prefix: a “well-known” prefix or a ISP-defined prefix

- An existing “well-known” prefix is 64:ff9b, which is defined in RFC6052
- v4: the mapped I-IPv4 address of S or *

Group Address Mapping

0 8 12 16 20 32 36 96 128



ASM mode



SSM mode

64IX:

M	r	r	r
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draft-boucadair-behave-64-multicast-address-format-02

- scop & flag: Defined in [RFC4291].
- 64IX: When "M-bit" is set to 1, it indicates that an multicast IPv4 address is embedded in the "v4 address" field. All the remaining bits MUST be set to 0.
- sub-group-id: The default value is all zeros.
- v4 address: include an IPv4 multicast address when the M-bit is set to 1

Next Step



- WG document adoption?
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