draft-osborne-mpls-extended-admin-groups-02

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Quick recap

- Current standards limit us to 32 link attributes (‘colors’) per link.
- This draft adds TLV-based link attributes to go >32; no explicit limit

Punchline

- I think it's ready for WG adoption
- Review Team comments and closure
- Open issues
- Next steps

Review Team comments and closure

- "Please justify this extension"

  Done in v-02 (see next slide).
- "Does this apply to just MPLS or also to GMPLS?"

  Answer: *Yes.*
- Proper encoding of desired attributes in RSVP
- Backward compatibility

Justification

- See draft section 1.1
- The only RFC which gives any hint towards use cases for the AG field is 2702 (TE Requirements). Example of such a case:

"5. Enforce traffic locality containment policies. That is, policies that seek to contain local traffic within specific topological regions of the network."

- Some operators do this today but at the metro level
- Most networks have >32 cities
- Reusing bits is a nightmare, we should not be introducing an extension that makes TE the new bottleneck
- How many bits do we need worldwide?

Proper encoding

- This is where it gets tricky (draft section 3.3)
- Existing SA is Class 207, C-Type 7 (SA_NO_RA) or 1 (SA_RA)
- New Class?
  - Class ESA_RA (11bbbbbb : preserved) + Class SA
  - Some combinations of ESA+SA are invalid – how to specify?
- New C-Type for Existing Class?
  - Would need multiple SESSION_ATTRIBUTES
  - Not legal, per 3209 sec. 4.7.4
  - 3209: “If a Path message contains multiple SESSION_ATTRIBUTE objects, only the first SESSION_ATTRIBUTE object is meaningful. Subsequent SESSION_ATTRIBUTE objects can be ignored and need not be forwarded.”
- Reuse C-Type
  - Redefine 207/7 as SA_NO_RA
  - How deployable is this?

Valid?	SA_NO_RA	SA_RA	ESA_RA
Y	x		
Y		x	
Y			x
Y		x	x
N	x	x	
N	x		x
N	x	x	x
N			

Backward compatibilty

- rfc3209 sec. 4.7.4 gives logic for exclude-all, include-any, include-all
- With draft-eag, length of signaled value may != configured link attribute
- Proposal is to pad the smaller to the length of the larger
- Need discussion among operators and implementors to make sure it doesn't break anything

Next steps

- WG Adoption?
  - Not all issues are closed. That's not a prereq for WG adoption
- Discussion, resolution of open issues
  - Encoding and requisite changes/updates
  - Bit-padding and logical operations