BGP Extra Extended Community
draft-heitz-idr-extra-extended-community

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eXtra eXtended Community (XXC)

- Why Extended Community?
  - Easier to enhance than to invent brand new.

- 24 octets. Why fixed length?
  - Easier to enhance Extended Community code.

- Why bigger?
  - Easier to auto-derive by combining multiple existing identifiers: reduce configuration.
New Transitivity

Coarse grained, to prevent accidental distribution to the entire Internet, but still covers major use cases. Use route-policy for fine grained distribution.

• Administration Transitive
  • Non-Transitive, except when session is configured as “Same-Admin”

• One Time Transitive
  • For your neighbor only
  • Link-Bandwidth and LLGR_STALE could use this.
RT Constraint

+----------------------------------+
| AFI               (2 octets)      |
+----------------------------------+
| SAFI              (1 octets)      |
+----------------------------------+
| origin AS         (4 octets)      |
+----------------------------------+
| XXC value         (24 octets)     |
+----------------------------------+

Applies to routes with only this AFI/SAFI

Not necessarily a Route Target

XXC only. Not for Extended Community
XXC Types

• AS-Specific (4 octet AS only)
• IPv4-Address-Specific
• IPv6-Address-Specific
• EVPN

Type/sub-type copied from Extended communities.
Just a suggestion. Can structure it differently.
Sub-Type not optional, unlike in RFC 4360.
EVPN XXC Sub-Types

- EVI Route Target
- ES-Import Route Target
- ESI-EVI Route Target
- Overlay Route Target

The new EVPN Route Targets are to be used in addition to the existing Route Targets, not as a replacement.

New size allows the use of the complete Ethernet Tag ID and ESI.