BGP Well Known LargeCommunity
draft-heitz-idr-wklc

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IETF 107
March 2020
Large Community

- Global Administrator is usually an ASN.
- The owner of the ASN defines the Local Data Part.
- Typical Usage
  1. Others tell the ASN owner how to treat the route.
  2. ASN owner tells others properties of the route.
Well Known Large Community


**Usage**
- Like a Well Known Community where extra data is required.

**Examples**
- No Export to a specific ASN
- No Export from a specific ASN
- Down Only indicator from a specific ASN for route leak detection
Encoding

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

| 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 |
|-----------------------|----------------|-----------------|-----------------|
| +-----------------------|----------------|-----------------|-----------------|
| 1 1 1 0 1 | T | WKLC ID | Data 1 |
| +-----------------------|----------------|-----------------|-----------------|
| Data 2 |
| +-----------------------|----------------|-----------------|-----------------|
| Data 3 |
| +-----------------------|----------------|-----------------|-----------------|

- Fixed 6 bits to indicate WKLC
  - Reserves a range of ASNs 4093640704 to 4160749567. A small range below the private ASNs.
- T – 2 bit Transitivity of the WKLC across ASes
  - Transitive, Non-transitive, Admin Transitive, One-time Transitive.
- 1 Octet ID
- 10 Octets WKLC specific data
- Data 1 can be used to extend the ID space for IDs that require 8 octets or less
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