

BGP Update for 5G Edge Service Metadata

draft-ietf-idr-5g-edge-service-metadata-22

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Metadata Path Attribute

- An optional Non-Transitive BGP Path attribute to carry metrics and metadata about the edge services attached to the egress router
- only a few prefixes BGP advertisement include the metadata path attribute
 - local configuration dictates which prefix has Metadata Path Attribute attached.

GitHub Issue Tracking:

<https://github.com/ietf-wg-idr/draft-ietf-idr-5g-edge-service-metadata-14>

Changes to Address Mailing List & GitHub Comments

- Moved Section 5 (Service Metadata Influenced Decision Process) to Appendix as it is implementation details
- Explicitly listed all the SAFI that the Metadata Path Attribute can be packed: SAFI values 1 (Unicast); 2 (Multicast); 4 (MPLS Labels); 65 (VPN); 128 (MPLS labeled VPN); 129 (Multicast VPN); 133 (MPLS-based VPLS); 134 (EVPN); and IPv6 Anycast.
- Added the Route Churn Consideration
- The Security Consideration addition to ensure boundary nodes not leaking Metadata on accident
 - RR attach NO-ADVERTISE well-known community to the UPDATE.
 - Non-Transitive for Metadata Path Attribute. BGP speakers that does not recognize the attribute will not propagate it to other BGP peers to prevent the Metadata Path Attribute from being leaked to peers outside the domain.

Discussion Points: Need WG feedback

- Jeff Haas suggested applying for a new Route Target code point for the purpose of constraining Metadata Path Attribute distribution
- Question to WG: should we get a new SAFI for constraining Metadata Path Attribute distribution? Currently the SAFI =132 is for Route Target Constrains.
 - We assumed to use the same SAFI =132 for Ingress routers to send out the Route Target Membership NLRI Advertisements for the interested service IP prefix.
 - Section 4 of the RFC4684 states that “Route targets can then be expressed as prefixes”.

IANA Registry

- A new path attribute from the "BGP Path Attributes" registry. The symbolic name of the attribute is "Metadata".

Value	Description	Reference
TDB	Metadata Path Attribute	[this document]

- Metadata Path Attribute Sub-Types

Sub-Type	Description	Reference
0	reserved	[this document]
1	Site Preference Index	[this document]
2	Site Availability Index	[this document]
3	Service Delay Predication	[this document]
4	Raw Load Measurement	[this document]
5	Service-Oriented Capability	[this document]
6	Service-Oriented Utilization	[this document]
7	AS-Scope	[this document]
8-254	unassigned	[this document]
255	reserved	[this document]

Next Step

- Need Early Allocation
- WGLC