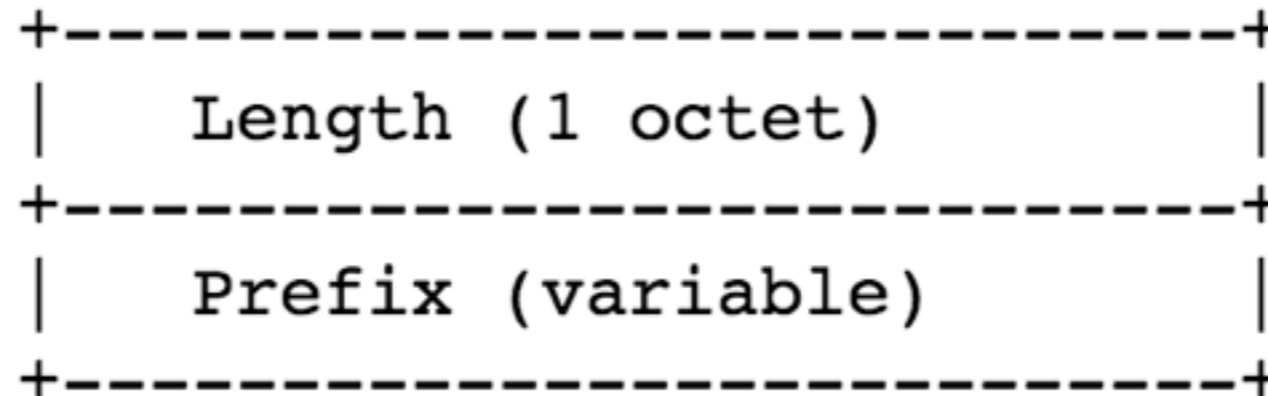


Multi-Threaded Routing Toolkit (MRT) Routing Information Export Format with BGP Additional Paths Extensions

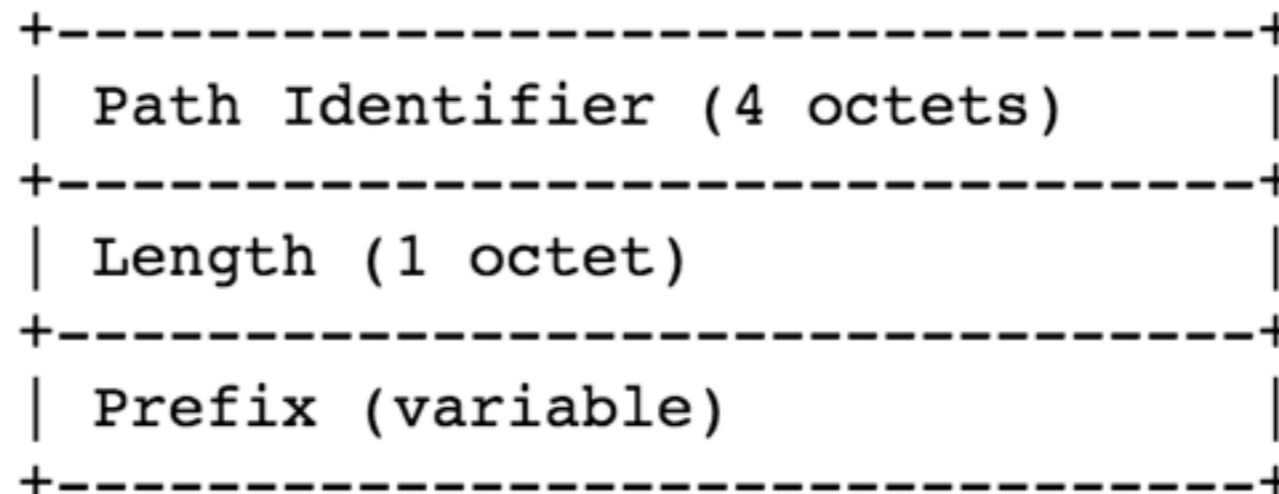
Colin Petrie
IETF94, Japan

- Advertisement of Multiple Paths in BGP
- draft-ietf-idr-add-paths-11
- Defines new NLRI encoding for BGP messages
- Negotiated via BGP capabilities

Before:



After:



Problem statement

- A current MRT (RFC6396) parser (e.g. BGPdump) cannot know how many bytes should be in the NLRI
- Parsing this message requires knowledge of the capabilities negotiated at OPEN of session
- Desire to preserve this new Path Identifier in both raw UPDATE messages, and RIB table dumps

Existing examples

- BGP4MP Type
 - BGP4MP_MESSAGE vs BGP4MP_MESSAGE_LOCAL
 - Carries the semantics of whether this message was received, or locally generated
- BGP4MP Type
 - BGP4MP_MESSAGE_AS4 & BGP4MP_MESSAGE_AS4_LOCAL
 - Tells the parser how many bytes to expect in ASN fields of the MRT record and the AS_PATH attribute

Proposal

- Add new Subtype codes to signal to a parser how to interpret the NLRI and MP_NLRI
- new BGP4MP subtypes:
 - BGP4MP_MESSAGE_AP
 - BGP4MP_MESSAGE_AS4_AP
 - BGP4MP_MESSAGE_LOCAL_AP
 - BGP4MP_MESSAGE_AS4_LOCAL_AP

Proposal

- Add new Subtype codes to signal to a parser how to interpret the NLRI and MP_NLRI
- new TABLE_DUMP_V2 subtypes:
 - RIB_IPV4_UNICAST_AP
 - RIB_IPV4_MULTICAST_AP
 - RIB_IPV6_UNICAST_AP
 - RIB_IPV6_MULTICAST_AP
 - RIB_GENERIC_AP

Proposal

- draft-petrie-grow-mrt-add-path
- Adds these new subtype codes, to indicate to a parser how many bytes to expect in the NLRI
- Permits representation of Additional Paths data within MRT export format

Feedback

- Comments?
- Questions?
- Co-author?
- WG adoption?