Traffic Selector for Internet Key Exchange version 2 to add support Differentiated Services Field Codepoints (DSCP)

`draft-mglt-ipsecme-ts-dscp-00`

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Goal

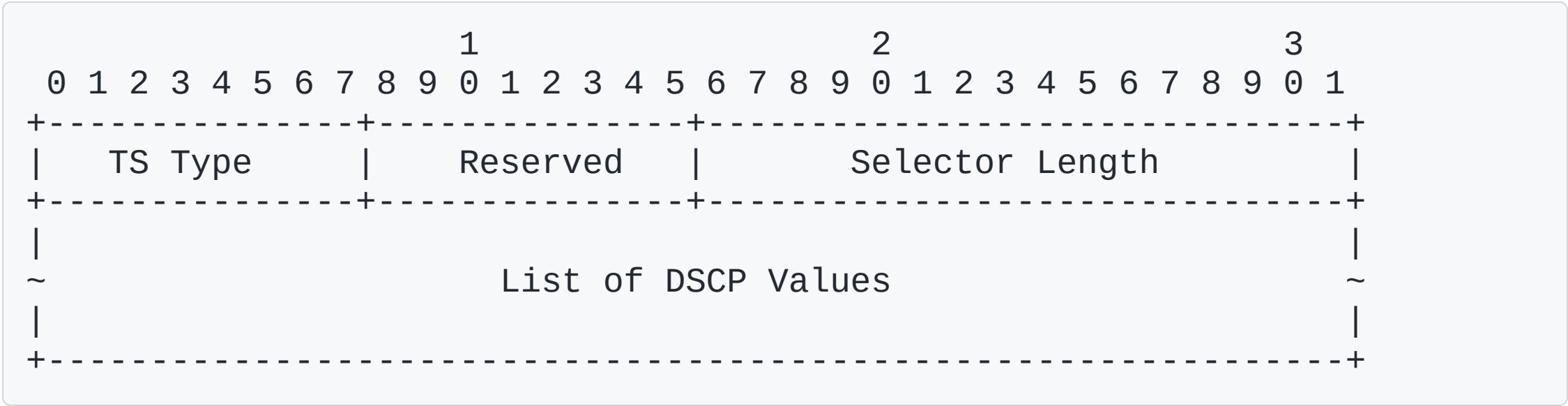Specifying a new TS Type TS_DSCP for IKEv2 to negotiate DSCP as additional selectors for the SPD.

RFC4301 Section 4.1 acknowledges that aggregating traffic with mutliple DSCP over the same SA may result in inappropriate discarding of lower priority but recommends a **classifier** mechanism which dispatches the traffic over multiple SAs.

Such **classifier** results in inbound and outbound traffic may take SA negotiated via different IKEv2 sessions and thus makes:

- SA management more complex with an unnecessary SAs.

This is especially an issue with hardware implementations are designed with a limited number of SAs

Defining new TS that includes a range of acceptable DSCP: TS_DSCP_LIST

```
                           1                   2                   3
 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
+----------------+----------------+------------------------------+
|    TS Type     |    Reserved    |        Selector Length       | |
+----------------+----------------+------------------------------+
|                                                                | |
~                      List of DSCP Values                       ~
|                                                                | |
+----------------------------------------------------------------+
```

The CREATE_CHILD_SA request for rekeying a Child SA is:

```
Initiator                                      Responder
-------------------------------------------------------------------
HDR, SK {N(REKEY_SA), SA, Ni, [KEi,]
    TSi, TSr}    -->
    with:
      TSi = ( TS_IPV6_ADDR_RANGE, TS_DSCP_LIST1 )
      TSr = ( TS_IPV6_ADDR_RANGE )


                              <--  HDR, SK {SA, Nr, [KEr,]
                                        TSi, TSr}
    with:
      TSi = ( TS_IPV6_ADDR_RANGE, TS_DSCP_LIST1 )
      TSr = ( TS_IPV6_ADDR_RANGE )
```

We are looking for a call for adoption.

Thanks!