DCO status

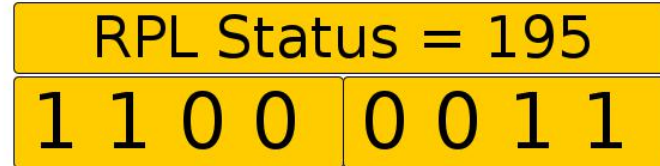**draft-ietf-roll-efficient-npdao-18**

- Rahul (IETF 107)

Updates

This document specifies a change in the Transit Information Option to contain the "Invalidate previous route" (I) flag. This 'I' flag signals the common ancestor node to generate a DCO on behalf of the target node with a RPL Status of 195 indicating that the address has moved. The 'I' flag is carried in the Transit Information Option which augments the reachability information for a given set of RPL Target(s). Transit Information Option with 'I' flag set should be carried in the DAO message when route invalidation is sought for the corresponding target(s).

Value 195 represents 'E' and 'A' bit in RPL Status to be set as per Figure 3 of [I-D.ietf-roll-unaware-leaves] with the lower 6 bits with value 3 indicating 'Moved' as per Table 1 of [RFC8505].
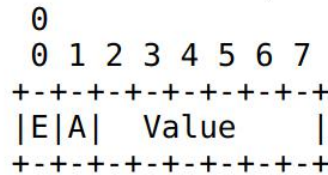
Why 195?

DCO

RPL Status = 195

1 1 0 0   0 0 1 1

RFC 8505 Table 1

```
 0
 0 1 2 3 4 5 6 7
+-+-+-+-+-+-+-+-+
|E|A|  Value    |
+-+-+-+-+-+-+-+-+

Figure 3: RPL Status Format
```

unaware-leaves

```
+--------+-------------------------------------------------------------+
| Value  | Description                                                 |
+--------+-------------------------------------------------------------+
|  0-2   | As defined in [RFC6775].  Note: A Status value of 1         |
|        | ("Duplicate Address") applies to the Registered Address.    |
|        | If the Source Address conflicts with an existing            |
|        | registration, "Duplicate Source Address" MUST be used.      |
|        |                                                             |
|   3    | Moved: The registration failed because it is not the most   |
|        | recent.  This Status indicates that the registration is     |
|        | rejected because another more recent registration was       |
|        | done, as indicated by the same ROVR and a more recent       |
|        | TID.  One possible cause is a stale registration that has   |
|        | progressed slowly in the network and was passed by a more   |
|        | recent one.  It could also indicate a ROVR collision.       |
|        |                                                             |
```

Use same Status of Moved from both RPL and 6Lo handling