draft-chairs-6lo-dispatch-iana-registry-00

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Background

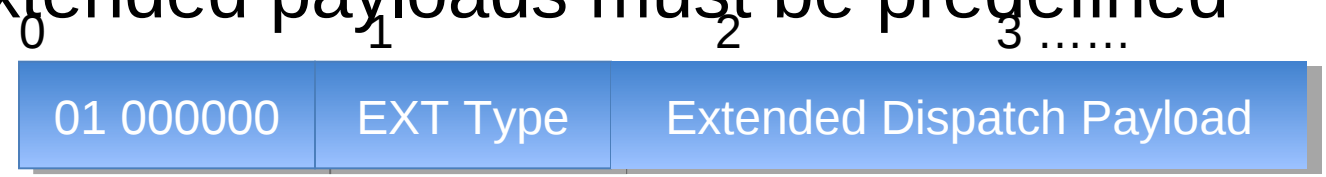
- RFC 4944 and RFC 6282 do not define ESC Dispatch extension bytes and their usage clearly
- Roll RPL likes to re-use some of the dispatch header space
  - draft-thubert-6lo-routing-dispatch-05
  - Possibly reclaim some of the dispatch bytes from mesh header
- ITU-T G3-PLC reported their use of ESC bytes dispatch header space along with Mesh Header
  - Deployment of their use of ESC bytes
    - ESC byte Dispatch values 1-31 for command frames [No IANA assignments]
  - Thierry Lys – April, 2015

Purpose of this document

- Define ESC bytes for 6loWPAN
  - We have more experience now on possible deployments
  - 6LoWPAN has progressed and adopted at many SDOs and forums
- Communicate to other SDO about ESC bytes usage and IANA assignment policies
- Consider other IETF requirements for Dispatch header use
- Record IANA assignments for ESC dispatch values

Usage of ESC bytes

- EXT Type => New dispatch extension types
  - ESC dispatch type values are orthogonal to other dispatch values
- Extended payloads must be predefined



EXT Type ESC Dispatch Values	Description	Reference/Comment
0, 255	Reserved	Future use
1 - 31	ITU-T use	ITUT-G.9903
32-254	Unassigned	Specification Required for IANA assignment

WG Comments

- Several comments from WG members
  - Johnathan Hui, Robert Cragie, Thierry Lys, Carsten Bormann, Pascal Thubert, Patricia Brett, Paul Daffy
  - Concern over ITUT-T usage of IETF code-space without IANA notification
  - How to resolve issues with legacy 6lowpan nodes?
  - How to define node behavior when unknown EXT-type is received?
    - Can’t skip unknown dispatch types
  - How many sequence of ESC and dispatch bytes to allow?
  - Feeling of not being able to design the ESC bytes according to IETF requirements [Ex: 6loRH and other future enhancements]

New proposal [To be updated]

- Use the existing ESC byte [01 000000] as defined in draft-chairs-6lo-dispatch-iana-00 draft
  - Accommodate with ITU-T needs

- Assign new ESC bytes [from unused code spaces]
- WG will define new ESC bytes with Compressed TLV bytes[ex:1 byte for T+L]
- New ESC bytes type values may provide
  - Link specific behavior capabilities
  - Other IETF WG Requirements [ex: RPL compression]

Next Step

- Update the draft with new proposal
- Send LS to ITU-T and other SDO
- Target WG approval of this draft by IETF94