

DLEP Extensions Update

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Post LC Drafts

- DLEP Latency Range Extension
 - draft-ietf-manet-dlep-latency-extension-04
- DLEP Link Identifier Extension
 - draft-ietf-manet-dlep-lid-extension-02
- DLEP Multi-Hop Forwarding Extension
 - draft-ietf-manet-dlep-multi-hop-extension-05
- DLEP Control Plane Based Pause Extension
 - draft-ietf-manet-dlep-pause-extension-04



Submitted to IESG

Credit Based Flow Control DLEP Extensions Update

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Summary

- Drafts have been split according to discussions at IETF 101 and 102
 1. draft-ietf-manet-dlep-credit-flow-control-03
 2. draft-ietf-manet-dlep-traffic-classification-00
 3. draft-ietf-manet-dlep-da-credit-extension-06
 4. draft-berger-manet-dlep-ether-credit-extension-01
- Only editorial changes made as part of split

Ready for LC

← Ready for adoption*

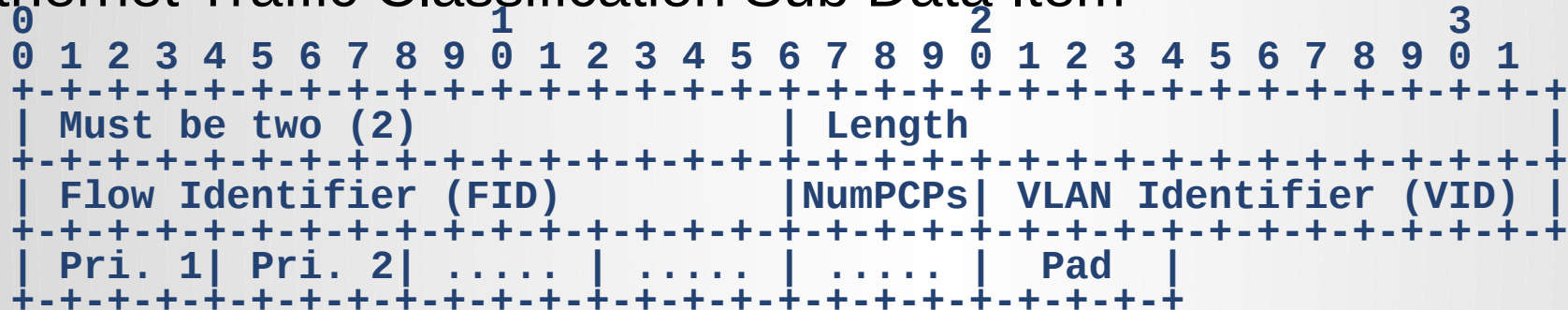
Based on Last Meeting

- Now in separate documents
 - Credit Window Control – [draft-ietf-manet-dlep-credit-flow-control-03](#)
 - Messages: Credit Control, Credit Control Response
 - Credit Window Data Items: Initialization, Associate, Grant, Status, Request
 - Stan (re) added as co-author
 - Traffic Classification Data Item – [draft-ietf-manet-dlep-traffic-classification-00](#)
 - DiffServ Traffic Classification Sub Data Item
 - Ethernet Traffic Classification Sub Data Item
 - No technical changes
- Other documents updated to reflect split
 - *No technical changes*
 - Use common credit window control and traffic classification data item
 - DiffServ Aware Credit Window Extension – [draft-ietf-manet-dlep-da-credit-extension-06](#)
 - IEEE 802.1Q Aware Credit Window Extension – [draft-berger-manet-dlep-ether-credit-extension-01](#)

Reminder: DLEP IEEE 802.1Q Aware Credit Window Extension

- Ethernet Traffic Classification defined in [draft-ietf-manet-dlep-traffic-classification-00](#)

o Ethernet Traffic Classification Sub Data Item



- [draft-berger-manet-dlep-ether-credit-extension-01](#)

o Defines usage of Ethernet Traffic Classification DI with Credit Window Control

o Requests IANA Extension Type

- TBA: IEEE 802.1Q Aware Credit Window

Next Steps

- Last Call
 - draft-ietf-manet-dlep-credit-flow-control-03
 - draft-ietf-manet-dlep-traffic-classification-00
 - draft-ietf-manet-dlep-da-credit-extension-06
- Adopt
 - draft-berger-manet-dlep-ether-credit-extension-01
- If interested in RFC8175 ...
 - MIT-LL DLEP code published on github
 - DLEP stack code: <https://github.com/mit-ll/LL-DLEP>
 - Wireshark Dissector Plugin:
<https://github.com/mit-ll/dlep-wireshark-dissector>
 - Minor updates coming: notably Sub-DI support

Control Plane Based Flow Control



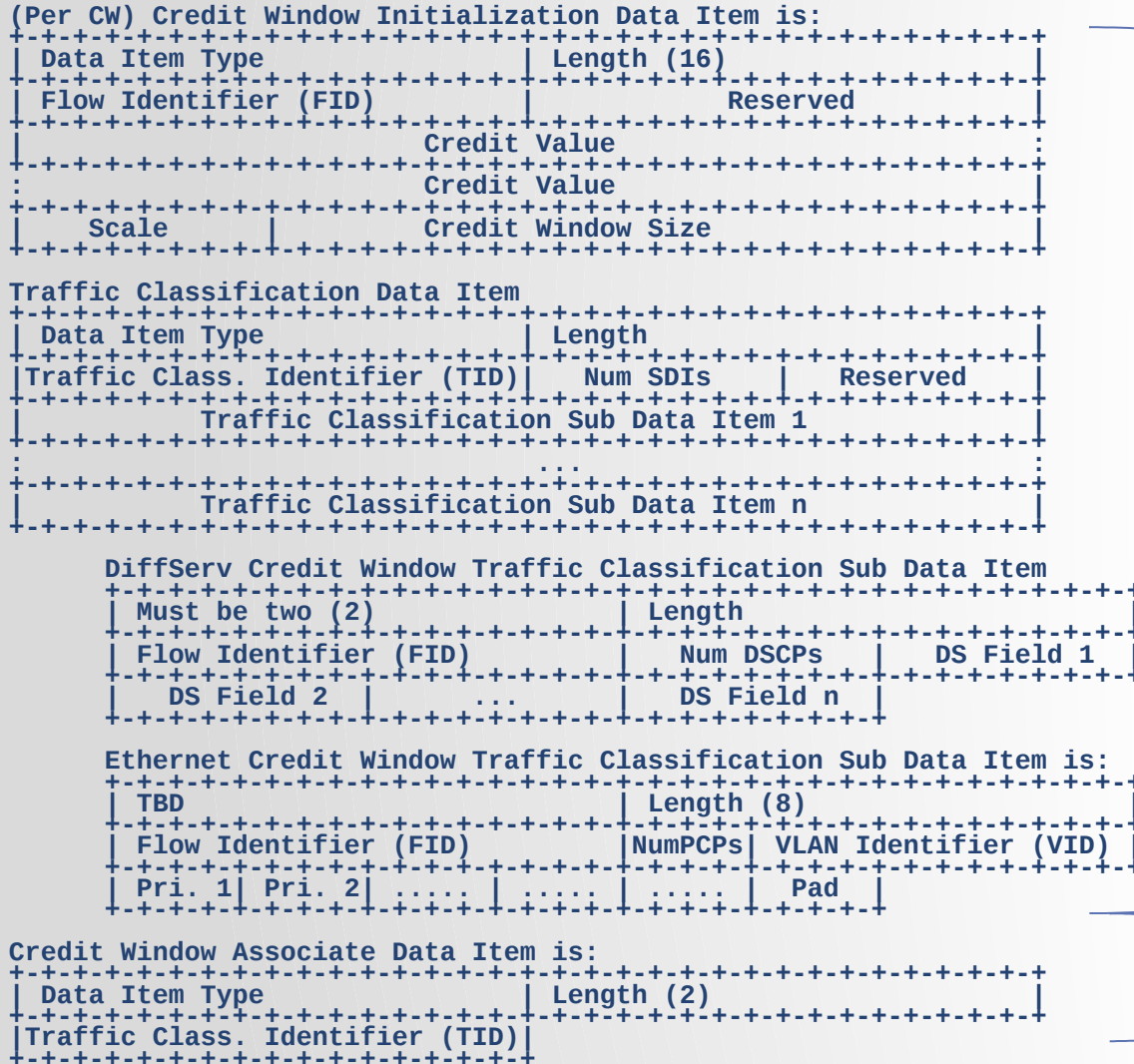
[draft-ietf-manet-dlep-pause-extension](#)

- A simple flow control mechanism
 - Useful when a simple control plane “xon/xoff” capability is good enough
- Modem can send DLEP messages to pause and restart traffic
- May be device wide or per destination
 - To match different link technologies
 - May be DSCP specific
 - For modems with multiple queues
 - Somewhat equivalent to Ethernet PFC, but without C-Tags (VLANs) and flow control is per destination

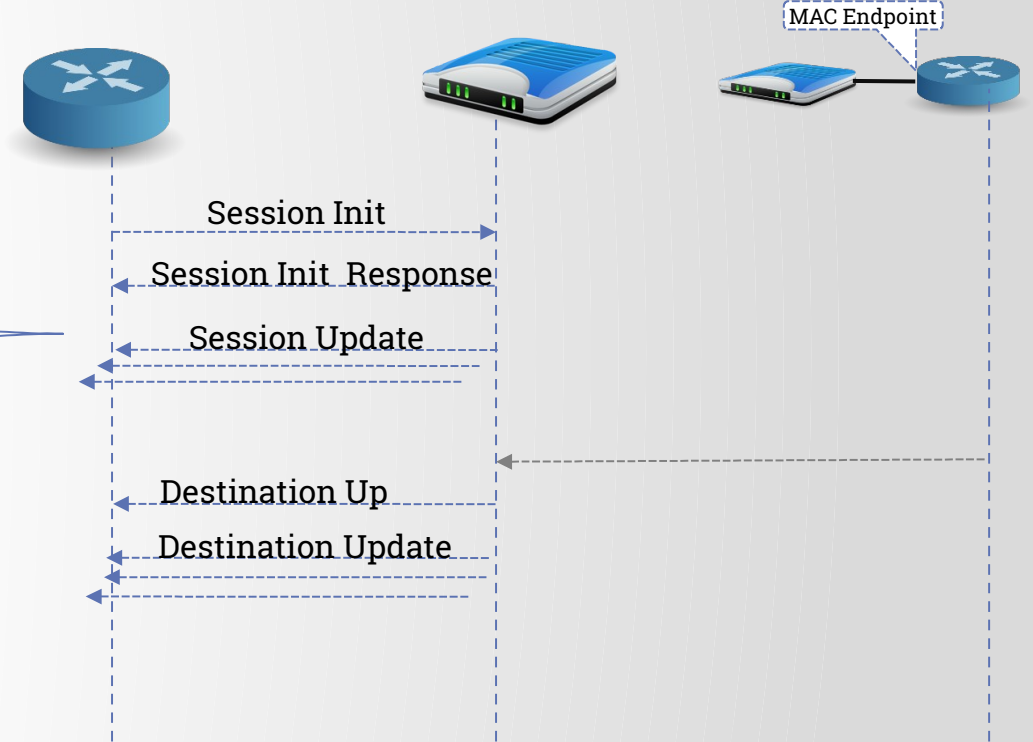
[draft-ietf-manet-dlep-da-credit-extension](#)

- Credit-window flow control
 - More sophisticated flow control, for a wide range of applications
- Modem send initial size and credit grants, routers only send traffic when have credits
- Credit Windows are device wide
 - May be shared across destinations or per destination to match different link technologies
 - Each window maps to a modem logical transmit queue
 - May be DSCP specific

Background: Current Operation



Simplified DLEP messaging



Destination messages