

DLEP Extensions Update

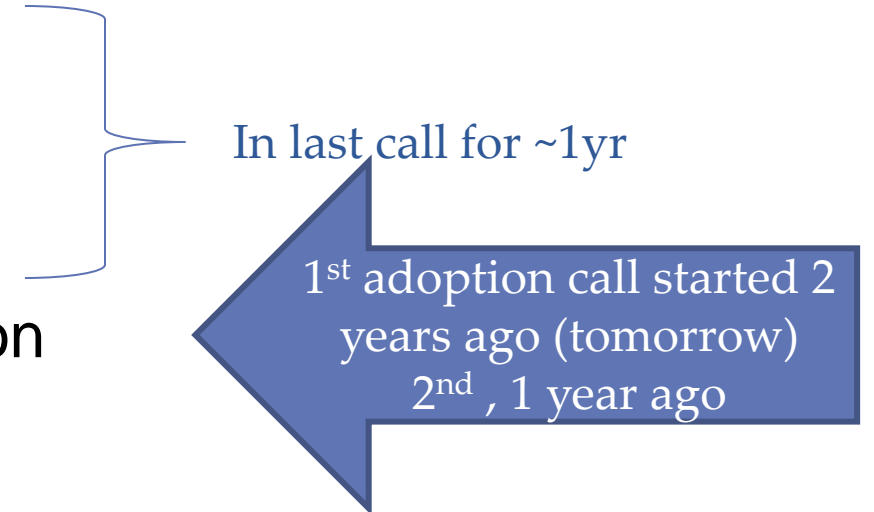
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Purpose of Update

- Remind WG where we are WRT
 - [draft-ietf-manet-dlep-credit-flow-control-07](#)
DLEP Credit-Based Flow Control Messages and Data Items
 - [draft-ietf-manet-dlep-da-credit-extension-10](#)
DLEP DiffServ Aware Credit Window Extension
 - [draft-ietf-manet-dlep-traffic-classification-04](#)
DLEP Traffic Classification Data Item
 - [draft-berger-manet-dlep-ether-credit-extension-05](#)
DLEP IEEE 802.1Q Aware Credit Window Extension
- Agree on next steps

Summary

- Drafts have been split according to discussions at IETF 101 and 102, unchanged for a very long time
 1. draft-ietf-manet-dlep-credit-flow-control
 2. draft-ietf-manet-dlep-traffic-classification
 3. draft-ietf-manet-dlep-da-credit-extension
 4. draft-berger-manet-dlep-ether-credit-extension



Next Steps

- Progress or abandon work?
- If interested in RFC8175 ...
 - <https://github.com/search?q=dlep>

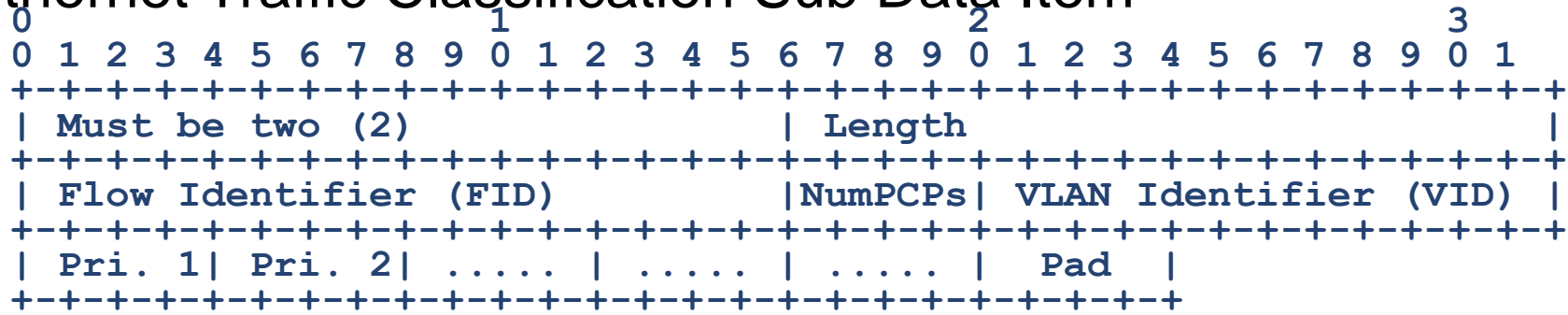
Presented at IETF103

- 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](#)

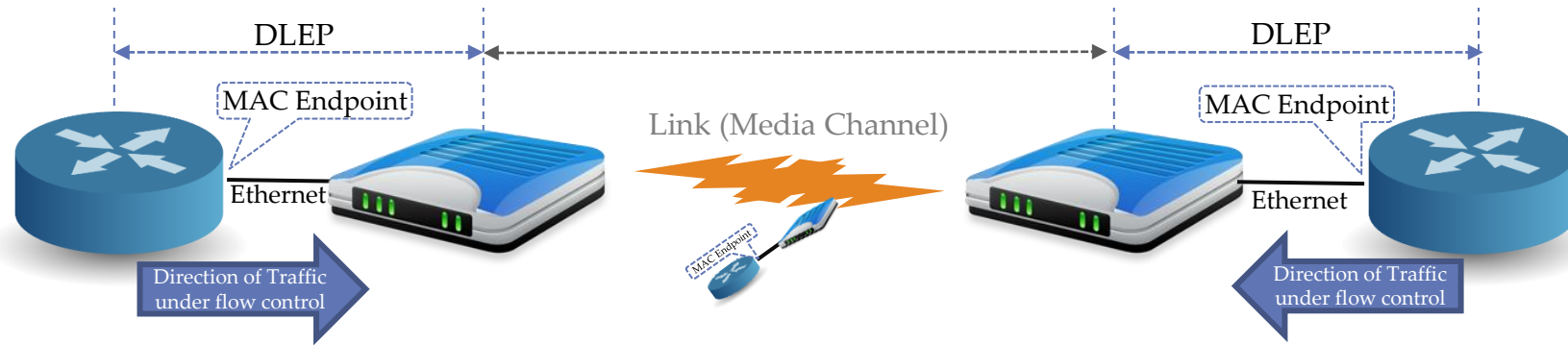
- Ethernet Traffic Classification Sub Data Item



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

- Defines usage of Ethernet Traffic Classification DI with Credit Window Control
- Requests IANA Extension Type
 - TBA: IEEE 802.1Q Aware Credit Window

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

(Per CW) Credit Window Initialization Data Item is:

Data Item Type	Length (16)
Flow Identifier (FID)	Reserved
Credit Value	
Credit Value	
Scale	Credit Window Size

Traffic Classification Data Item

Data Item Type	Length	
Traffic Class. Identifier (TID)	Num SDIs	Reserved
Traffic Classification Sub Data Item 1		
...		
Traffic Classification Sub Data Item n		

DiffServ Credit Window Traffic Classification Sub Data Item

Must be two (2)	Length	
Flow Identifier (FID)	Num DSCPs	DS Field 1
DS Field 2	...	DS Field n

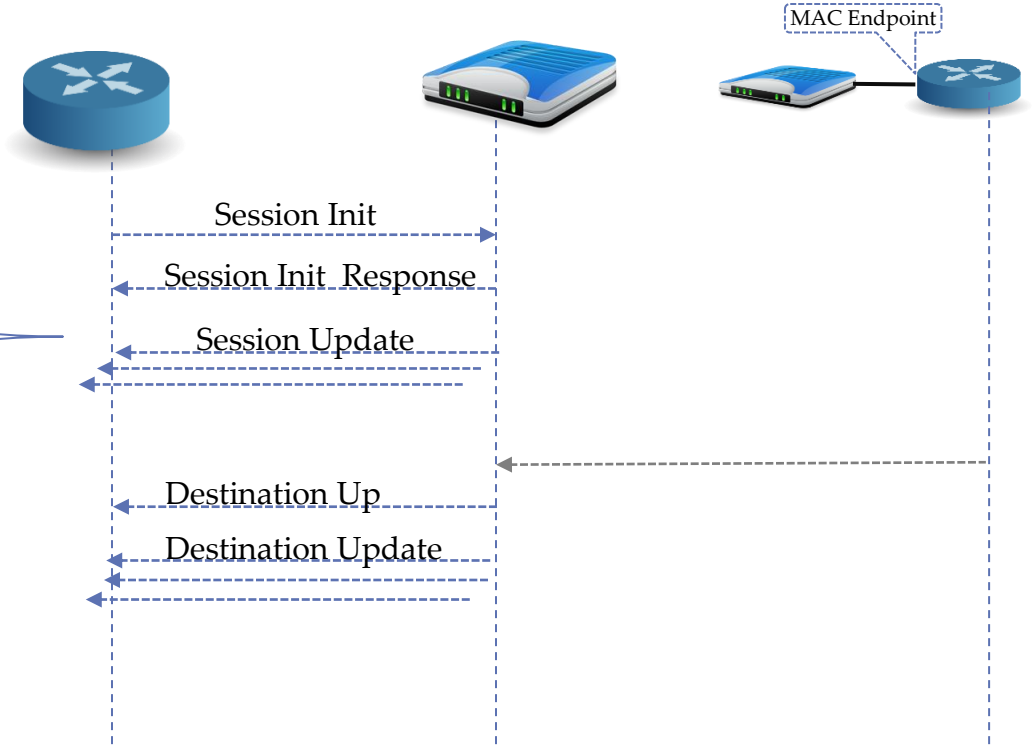
Ethernet Credit Window Traffic Classification Sub Data Item is:

TBD	Length (8)				
Flow Identifier (FID)	NumPCPs	VLAN Identifier (VID)			
Pri. 1	Pri. 2	Pad

Credit Window Associate Data Item is:

Data Item Type	Length (2)
Traffic Class. Identifier (TID)	

Simplified DLEP messaging



Destination messages