



BPoE

ietf://dtn/meetings/117

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Motivation

- BP Agents might be directly connected over an Ethernet link
- ... or a link that emulates Ethernet, e.g.:
 - some types of Virtual Private Cloud networks
 - many types of RF links
 - approx. everything
- IP + TCP/UDP/... CLA might not be needed
- MTU might not be a concern
 - “jumbo frames”
 - link-native fragmentation/reassembly might be supported (e.g., GSE)

Proposal

- Just send Bundles in Ethernet frame payloads
 - use a dedicated EtherType
 - first payload byte differentiates BPv6 from BPv7
- [draft-ek-dtn-ethernet](#) draft -00 says basically this
- w.r.t. EtherTypes:
 - did not find an existing EtherType for anything like this
 - an IETF protocol may request of IEEE an EtherType
 - for procedure see: [draft-ietf-intarea-rfc7042bis](#)

Considerations

- Single sender agent/single receiver agent
 - src MAC to dst MAC
 - additional src/dst discriminators would require a small header
- MTU might still be a factor for some networks/workloads
 - BP fragmentation at sender works, but repeats Primary Blocks
 - could add [RFC 8200 §4.5](#) Fragment Header -style option
- Extensibility
 - could declare a registry of first byte values, but zero-overhead for BPv[67]
 - extend, somewhat [GRE](#)-like, later on

questions for the wg

1. Worth pursuing?
 2. If so, how fancy?
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thanks

