Port Extension Extended Addresses

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Background

- PE currently specifies a 14 bit address
  Suitable for direct lookup vs. table search
  Two most significant bits define unicast / multicast

- Comments from the 2.1 ballot review provided evidence that this may not large enough for certain applications
  These applications will probably require a much larger address space (requiring a lookup)
Goals

- Enable the construction of a PE using the current addressing scheme, tag, and direct lookup

- Enable an optional PE extension that:
  - Provides a significantly larger address space
  - Interoperates with the base Port Extenders
Approach

- **Approach:**
  
  *Define a E-CID to be 22 bits instead of 14*
  
  - The two most significant continue to indicate unicast/multicast (GRP bits)
  - The currently defined remaining 12 bits are the least significant bits of the ECID
  - A newly defined group of eight bits become the extension bits
    
    *Uses the currently reserved bits in the E-TAG*

  **A PE that supports the larger address space:**
  
  *Has a per-port default extension bit value that is used when connecting to a base PE on a Cascade Port.*
  
  *Sets the ingress_ECID_base field to zero on outbound frames whose ECID extension bits do not match the default (i.e. do not do echo cancellation).*
Thank You!