



# RoE OAM PDU

A new packet subtype is proposed for exchanging parameters

# Background

- ❑ Current PAR precludes defining OAM methodology/procedures – how to set up a flow
- ❑ Does not preclude (probably requires) us to define how parameter values are encapsulated in packets
- ❑ We already have the parameter nomenclature outlined
- ❑ All we need to do is enumerate our objects and parameters and define new opCode(s)

# Object enumeration

## □ enPDU=

1. Ethernet Link – eth[ethID]. *parameter name=parameter value*
2. CPRI links – cpri[cpriID]. *parameter name=parameter value*
3. Mapper – mapper[mapperID]. *parameter name=parameter value*
4. Mapper Container - mapper[mapperID].[contID]. *parameter name=parameter value*
5. Demapper – demapper.[demapperID]. *parameter name=parameter value*
6. Demapper Container - demapper[demapperID].[contID]. *parameter name=parameter value*
7. *SeqNum*

# Parameter enumeration

## □ Ethernet object example

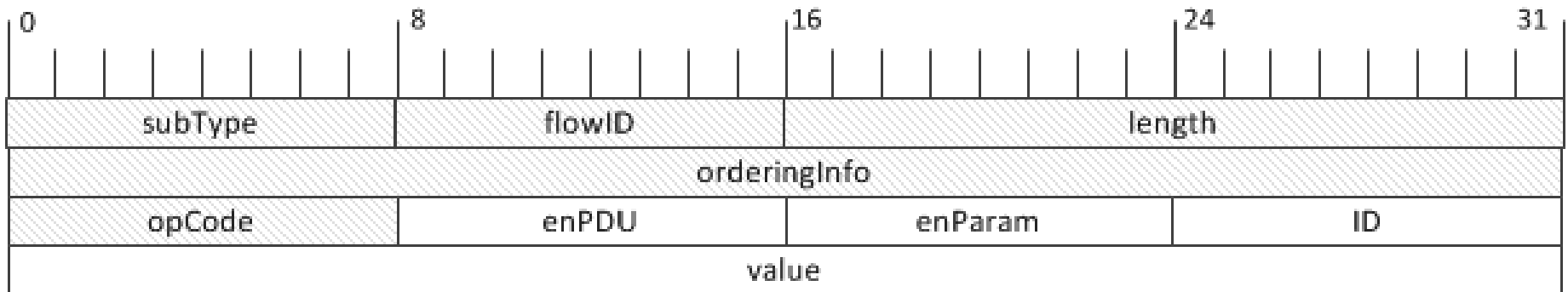
ID	Parameter	Bits	Name	Default	Description
0	Identifier	8	<b>.ethID</b>	0	Each Ethernet port in a given node has a unique identifier
1	Encryption	4	<b>.encrypt</b>	0	Selects/enables encryption on the entire Ethernet link. 0x0 is no encryption
2	Compression	4	<b>.compress</b>	0	Selects/enables compression on the entire Ethernet link. 0x0 is no compression

## □ enParam =

1. Identifier
2. Encryption
3. Compression

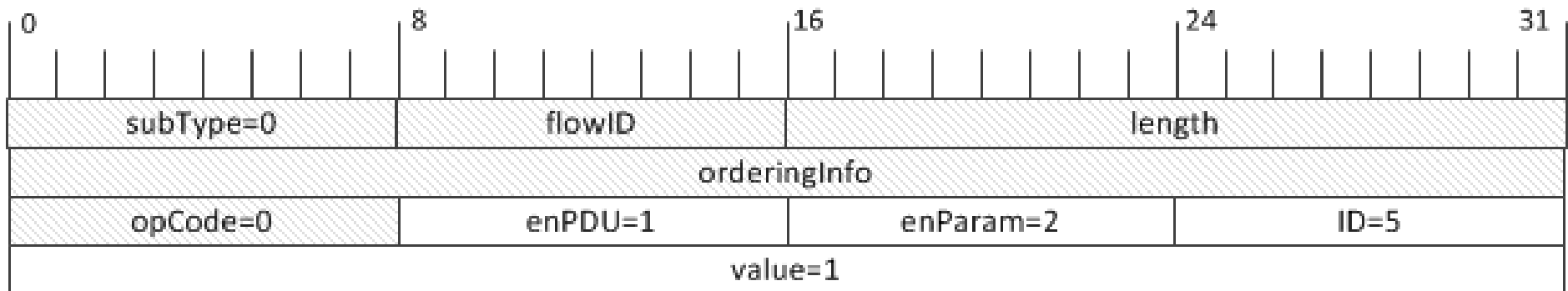
# OAMPDU Packet description

- ❑ subType = 0, opCode=0, flowID=0
- ❑ orderingInfo = seqNum
- ❑ enPDU: points to object type
- ❑ enParam: points to parameter type
- ❑ ID: points to specific object
- ❑ value: new setting



# Example

- ❑ We want to set the 5<sup>th</sup> ethernet port to use encryption scheme 1
- ❑ Equivalent to `eth[5].encrypt=1`
  - subType = 0 (RoE control)
  - opCode = 0 (new - currently reserved)
  - enPDU = 1 (enumerated object type for ethernet port)
  - enParam= 2 (enumerated parameter for encryption)
  - ID= 5 (the 5<sup>th</sup> ethernet port in this example)



# Baseline proposal

- ❑ Add enumeration to parameters and objects in the hierarchy
- ❑ Define new opCode= 0
  - RoE OAMPDU control type
- ❑ Add some text to describe this type
- ❑ Further work?
  - It would be nice to set multiple parameters together
  - seqNum & flowID handling
  - ACK/NACK scheme (or responseCode)
  - Parameter enquiry? Value empty?
  - More PDUs for enabling loopback, status etc.