



Update of ForCES LFB Library Draft

<draft-ietf-forces-lfb-lib-05 >

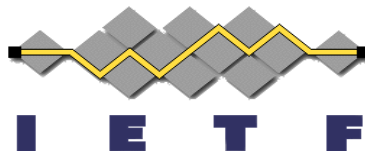
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Summary

- Draft Status
- Updates since Version 03
- Issues to be settled
- Next works



Draft Status

- Current Version 05, July 9, 2011
- Version 04 -- the interim update version for version 03
- Major updates since Version 03
 - Text : reorganized the text structure for readability (section 5), added some description text for Base Types (section 4).
 - LFBs definition: EtherEncap was redefined, ARP and ND were removed.
 - XML contents: updated some description for LFBs and BaseTypes.
 - IANA section fulfilled

Updates since Version 03

(1)

- Reorganized the text structure for readability (Section 5, LFB Class Description)
 - Description for an LFB was with 4 sub-sections
 - Data Handling
 - Components
 - Capabilities
 - Events
 - At the same time, LFB description texts were improved (by Evangelos)
- Added contents for Base Types (section 4)
 - Listed all defined types with a brief description: Data Types, Frame Types, Metadata Types
 - Data types section with sub-sections: Atomic, Compound Struct, Compound Array

Updates since Version 03

(2)

- Updated descriptions on Figure 1 - Sample LFB Class Application
- Added the contents of LFB Class Use Case (section 7)
 - Only two cases are proposed :
 - IPv4 Forwarding
 - description text for IPv4 Forwarding
 - ARP processing
 - Figure 2 and description text for ARP processing
 - Are above cases typical enough and do we need more?

Updates since Version 03

(3)

- ARP and ND are removed.
 - after discussions and consensus.
 - All related contents are removed, including text description and XML definition.
- Modified IPv4NextHop
 - Renamed OutputLogicalPortID to L3PortID for readability in IPv4NextHopTable.
 - Renamed EncapOutputIndex to LFBOutputSelectIndex in IPv4NextHopTable.
 - added "MediaEncapInfoIndex" in IPv4NextHopTable.
 - Removed "NextHopOption" from IPv4NextHopTable.
 - Add "MediaEncapInfoIndex" as the output metadata.
- Modified IPv6NextHop
 - Identical updates as IPv4NextHop.

Updates since Version 03

(4)

- Changed the LFB name:
 - EtherEncapsulator -> EtherEncap
- Redefined EtherEncap :
 - Deleted previous defined components:
ArpTable, VlanOutputTable, NbrTable
 - Redefined the component EncapTable, which merged former VlanOutTable information in. The table contents:
 - DstMac, SrcMac, VlanID, L2PortID
 - The index of the table is used to look up the table
 - If upstream is a nexthop LFB, the MediaEncapInfoIndex will be used as the index to look up the table
 - Removed two output ports: PakcetNoARPOut, PakcetNoNbrOut
 - Updated input and output metadata :
 - metadataExpected: MediaEncapInfoIndex, VlanPriority
 - metadataProduced in SuccessOut, : L2PortID
 - metadataProduced in ExceptionOut: ExceptionID, MediaEncapInfoIndex, VlanPriority

Updates since Version 03

(5)

- BaseTypeLibrary XML file:

- Deleted the data types which were used in ARP and ND:
Portv4AddrInforType, Portv4AddrInfoEntryType,
Portv4AddrInfoTableType, ArpTableType, ArpTableEntryType,
NbrTableType;
- Deleted the data types which were used in old EtherEncap definition:
VlanOutputTableType, VlanOutputTableEntryType;
- Added the data type which are used in current EtherEncap definition:
EncapTableEntryType, EncapTableType;
- Modified the contents of the following data types
IPv4NextHopInfoType, IPv6NextHopInfoType;
- Deleted metadata: OutputLogicalPortID;
- Added metadata: MediaEncapInfoIndex, L3PortID, ValidateErrorID ;
- Deleted some special values of ExceptionID which were related to
ARP/ND;
- Updated some descriptions for some types.



Updates since Version 03

(6)

- BaseLFBLibrary XML file:
 - Updated some descriptions for some LFBs and their components.
 - Updated the contents according to related LFB updates
 - major changes happen in IPv4NextHop/IPv6NextHop and EtherEncap.

Updates since Version 03

(7)

- Added the contents of IANA Considerations (section 10) :
 - LFB Class Names and LFB Class Identifiers
 - ID used from 3 to 65535 according to RFC5812
 - The following info is enough for IANA?

LFB Class Identifier	LFB Class Name	Description	Reference
3	EtherPHYCop	Define an Ethernet port abstracted at physical layer.	RFC????(this document) Section 5.1.1
4	EtherMACIn	Define an Ethernet input port at MAC data link layer.	RFC???? Section 5.1.2
5	EtherClassifier	Define the process to decapsulate Ethernet packets and classify the packets.	RFC???? Section 5.1.3

Updates since Version 03

(8)

- Added the contents of IANA Considerations (section 10) :
 - Metadata ID, Exception ID, Validate Error ID

Metadata ID 0x00000000-0x7FFFFFFF: IETF

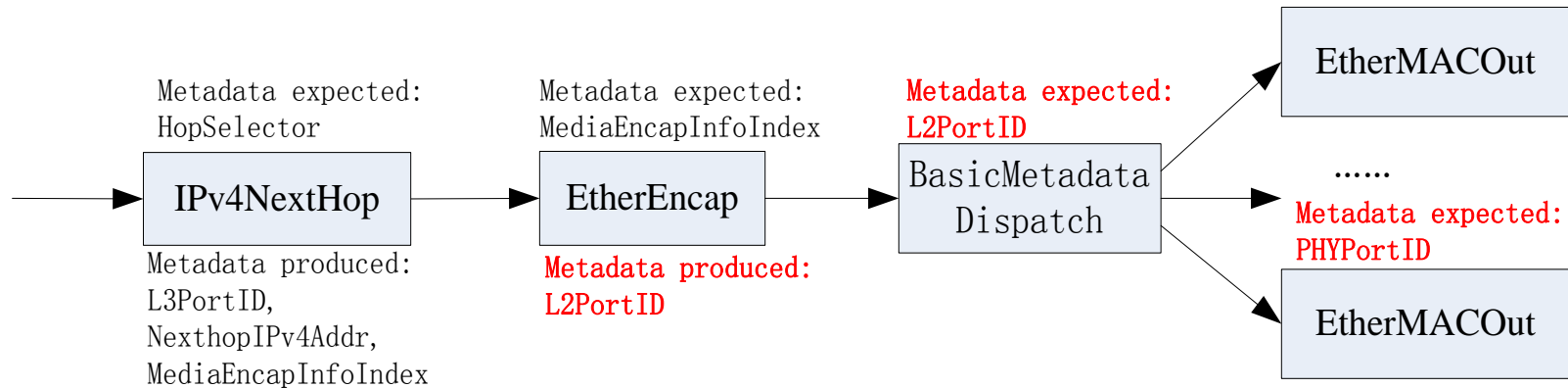
Metadata ID 0x80000000-0xFFFFFFFF: vendor use

The following is enough for IANA?

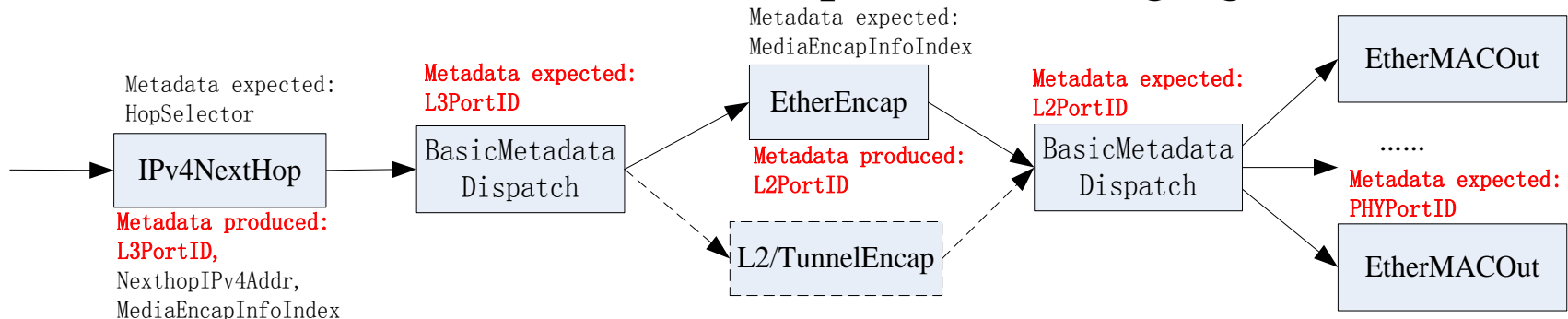
Value	Name	Definition
-----	----	-----
0x00000000	AnyUnrecognizedExceptionCase	See Section 4.4
0x00000001	BroadCastPacket	See Section 4.4

Issue - On Various Port IDs and Their Relationships: L3PortID, L2PortID, PHYPortID

- With a switch fabric after encap or without bridging/tunnel case



- With a switch fabric before encap or with bridging/tunnel case



- Question: what is the relationship between L2PortID and PHYPortID?
 - Can we say a L2PortID may be specified as a PHYPortID in some cases?



Next works

- Welcome comments to current update
- Settle the issues left
- Update new version
- Move forward to last call
 - Hopefully before ietf 82



Thanks!