



Technical Specification

MEF 26.0.2

OVC Layer 2 Control Protocol Tunneling Amendment to MEF 26

January 2011

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Table of Contents

1	Introduction.....	1
2	New Terminology.....	1
3	New Section 7.2.19.....	1

List of Tables

Table A – New Row in Table 1	1
Table B – MAC Addresses that Identify a Layer 2 Control Protocol ENNI Frame.....	1
Table C – Format Relationships for Tunneled L2CP Service and ENNI Frames	2

1 Introduction

This document amends MEF 26¹ as described below. The purpose of this amendment is to define what it means to tunnel a Layer 2 Control Protocol on an Operator Virtual Connection.

2 New Terminology

Add the row shown in Table A to Table 1 in MEF 26 after the External Interface row.

L2CP Tunneling	The process by which a frame containing a Layer 2 Control Protocol is transferred between External Interfaces.	This document
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Table A – New Row in Table 1

3 New Section 7.2.19

7.2.19 Layer 2 Control Protocol Tunneling

The Layer 2 Control Protocol Service Frame is described in MEF 10.2. [5]. An ENNI Frame with a Destination MAC Address shown in Table B is defined to be a Layer 2 Control Protocol ENNI Frame. Additional ways of denoting a Layer 2 Control Protocol ENNI Frame at a given ENNI can be agreed to by the two Operators involved in the given ENNI.

MAC Addresses ²
01-80-C2-00-00-00 through 01-80-C2-00-00-0F
01-80-C2-00-00-20 through 01-80-C2-00-00-2F
01-80-C2-00-00-10

Table B – MAC Addresses that Identify a Layer 2 Control Protocol ENNI Frame

- [R1B] When a L2CP Service Frame or L2CP ENNI Frame is tunneled, the frame **MUST** be delivered to all OVC End Points, other than the ingress OVC End Point, that are associated by the OVC and the format relationships detailed in Table C **MUST** be maintained.
- [R2B] An ingress L2CP Service Frame that is not mapped to an existing OVC End Point **MUST NOT** be tunneled.
- [R3B] An ingress L2CP ENNI Frame that is not mapped to an existing OVC End Point **MUST NOT** be tunneled.

In view of [R20], [R3B] means that an ingress L2CP ENNI Frame that does not have an S-Tag is not to be tunneled because the Operator has no information on which OVC to use to tunnel the frame.

¹Metro Ethernet Forum, MEF 26, *External Network Network Interface (ENNI) – Phase 1*, January 2010.

²Hexadecimal canonical format

Ingress Interface	Egress Interface	Egress Frame Format ³
UNI (L2CP Service Frame)	UNI (L2CP Service Frame)	Identical to the ingress frame.
UNI (L2CP Service Frame)	ENNI (L2CP ENNI Frame)	All fields from the Destination Address through the Payload of the ingress Service Frame present and unchanged. S-Tag added in after the Source Address.
ENNI (L2CP ENNI Frame)	UNI (L2CP Service Frame)	All fields from the Destination Address through the Payload except the S-Tag of the ingress ENNI Frame present and unchanged. No S-Tag is present.
ENNI (L2CP ENNI Frame)	ENNI (L2CP ENNI Frame)	All fields from the Destination Address through the Payload of the ingress ENNI Frame present. The content of the S-Tag can be changed while all other fields are unchanged.

Table C – Format Relationships for Tunneled L2CP Service and ENNI Frames

³ The Frame Check Sequence in the egress frame might need to be recalculated.