

# MEF and L2SM

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# Relevant on-going MEF Work

- \* LSO Reference Architecture
- \* Carrier Ethernet Services Management Information Model
  - \* Final Letter Ballot
  - \* Published as MEF 7.3 (January 2017).
- \* YANG Models for MEF Services

# How to access MEF work

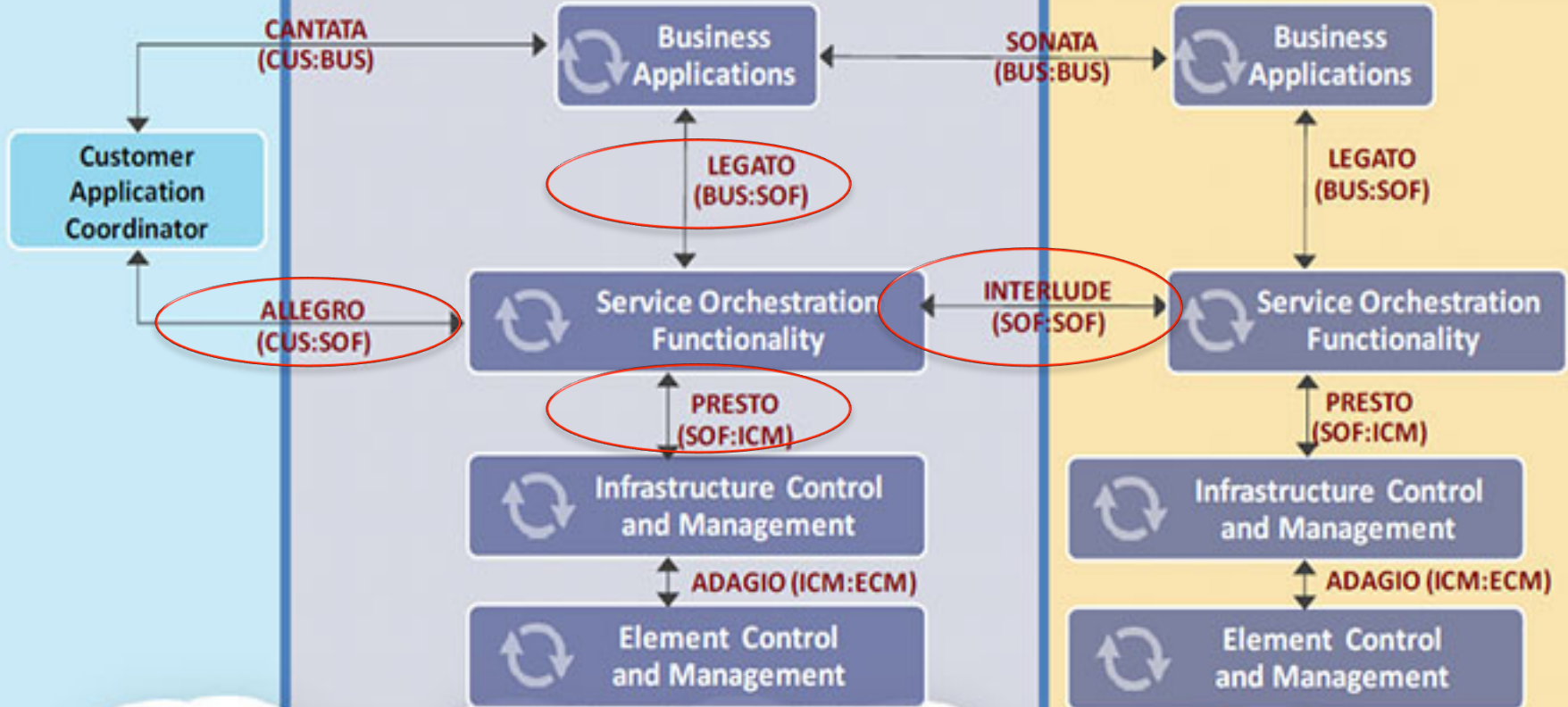
- \* Find on-going work that was liaised here...
  - \* <https://mef.net/liaison-login>
  - \* Username: mef
  - \* Password: M3F3030
  - \* The MEF meets next in Los Angeles, CA, USA on Jan 23-26, 2016.

# REFERENCE ARCHITECTURE

## Customer Domain

## SP Domain

## Partner Domain



Network Infrastructure

# LSO Requirements for Legato

- \* Decompose **customer order** into one or more **service provisioning activities**
- \* Activities are assigned, managed and tracked
- \* Ensure that the customer order is complete
- \* Orchestrate multiple activities
  - \* Billing
  - \* Delivery of CPE device etc.

# Terminology

- \* Agree on a given set of terminology

- \* Service Provider

IETF - “The organization responsible for operating the network that offers VPN services to clients and customers.”

MEF- SP provides an end-to-end service to an end user (Subscriber). Operator provides a service to a SP or another Operator.

- \* Subscriber, Provider, EVC, UNI, Operator, OVC etc.

# Service Model Coverage

- \* Subscriber or Operator Services or both
- \* Customer orders products not services
- \* Order includes
  - \* Services
  - \* Pricing
  - \* Invoicing
  - \* SLA agreement and penalties
- \* Does not include technology or protocols

# What has MEF defined?

- \* Carrier Ethernet Services
  - \* EVC Based Services (MEF 6.2)
  - \* Ethernet Service Attributes (MEF 10.3)
  - \* Operator Service Attributes (MEF 26.2)
  - \* Operator Virtual Connections Based Services (MEF 51)



# CE Services (MEF 10.3)

## E-LINE

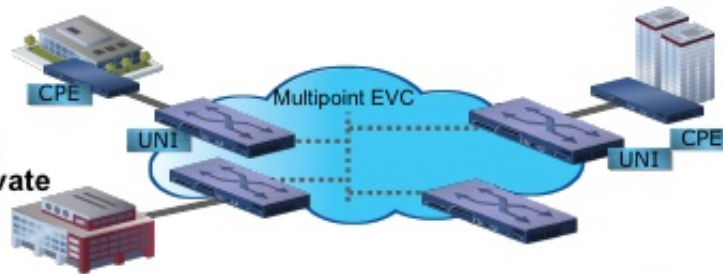
EPL: Private Line  
EVPL: Virtual Private Line



**Point to Point**  
Site2Site L2 VPNs

## E-LAN

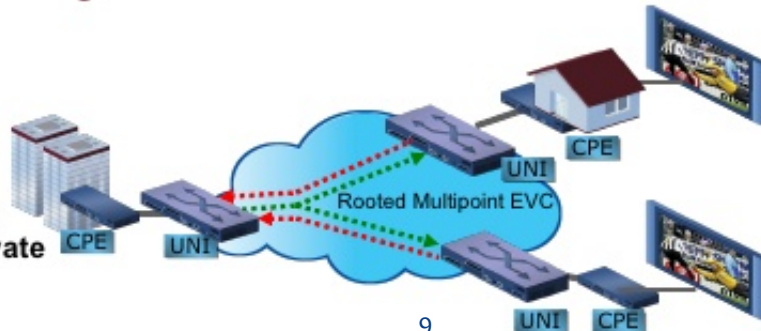
EP-LAN: Private LAN  
EVP-LAN: Virtual Private LAN



**Multi-Point to Multi-Point**  
Multi-Site L2 VPNs  
Transparent LANs

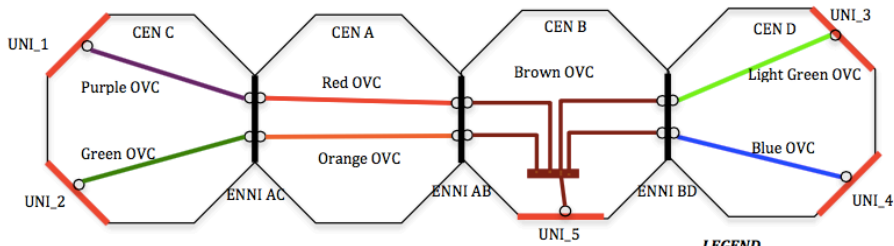
## E-TREE

EP-Tree: Private Tree  
EVP-Tree: Virtual Private Tree



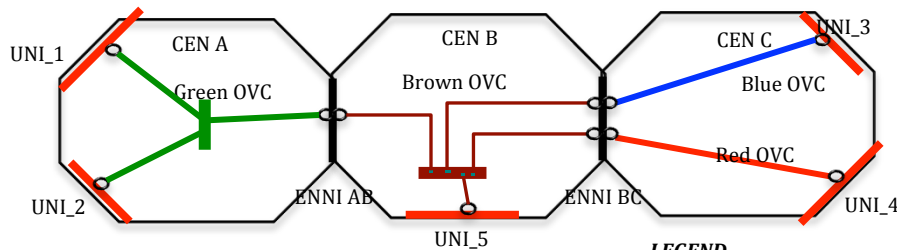
**Point to Multi-Point**  
Broadcasting Services  
Triple Play backhaul  
Mobile backhaul

# OVC Services (MEF 51)



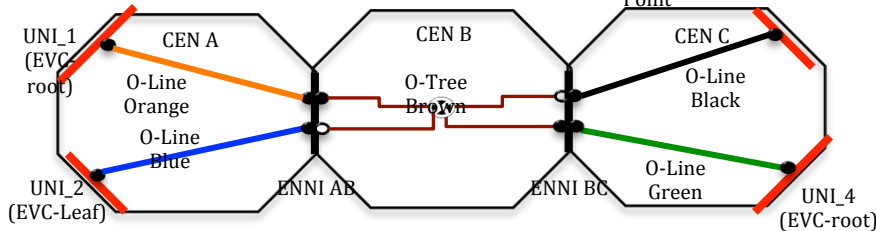
**LEGEND**  
○ OVC End Point

O-Line



**LEGEND**  
○ OVC End Point

O-LAN



**LEGEND**  
● Root OVC End Point  
○ Leaf OVC End Point  
○ Trunk OVC End Point  
⊙ RMP OVC, constrained forwarding

O-Tree

# Way forward

- \* Agree on terminology
- \* Cross Reference Documents
- \* Augment rather than duplicate

# Q&A