

Metro Ethernet (ME) Access Technology

The Metro Ethernet (ME) network is a Layer 2 technology that delivers cost-effective, high-speed connectivity for metropolitan-area network (MAN) and wide-area network (WAN) applications. It is an Ethernet transport network that offers also reliability of communication and enhanced security connectivity in a MAN and between different Metros. Metro Ethernet provides point-to-point or multipoint connectivity services over a metropolitan area network (MAN).

Metro Ethernet supports multiple access technologies and they can work interchangeably.

ME Direct Fibre

- Data rate supported is 1-1000Mbps
- Standardised pricing for access less than 5km to the ME enabled exchange
- Feasibility study for access greater than 5km to the ME enabled exchange

ME – No Ethernet Demarcation Device (NO EDD)

- Data rate supported is 1-1000Mbps & 10G.
- No EDD option is applicable to client who are co-located and within 150 meters of the ME enabled exchanges; as well as is at the Teraco data centres.
- Standardized pricing

ME via Microwave Point to Point

- Supports a bandwidth of 1Mbps-340Mbps in increments of 1Mbps.
- Feasibility study will always be performed for a point to point microwave.

ME via Microwave Point to Multi-Point

- Supports bandwidth speeds of 1 - 40Mbps in increments on 1Mbps.
- Standardize pricing

ME via Service Port – GPON Fibre

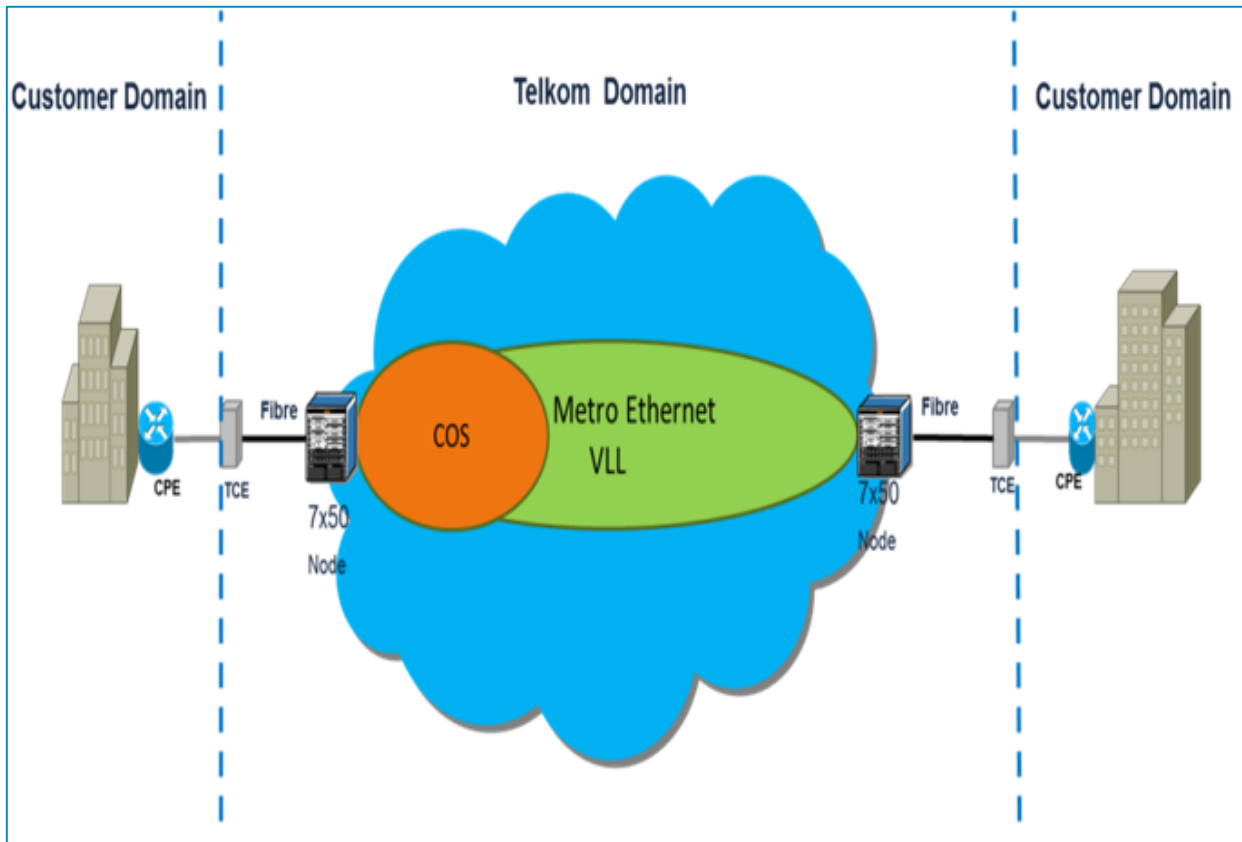
- Data rate service limit per Service Port will range from 1 - 40Mbps.
- Standardized pricing

ME via Satellite

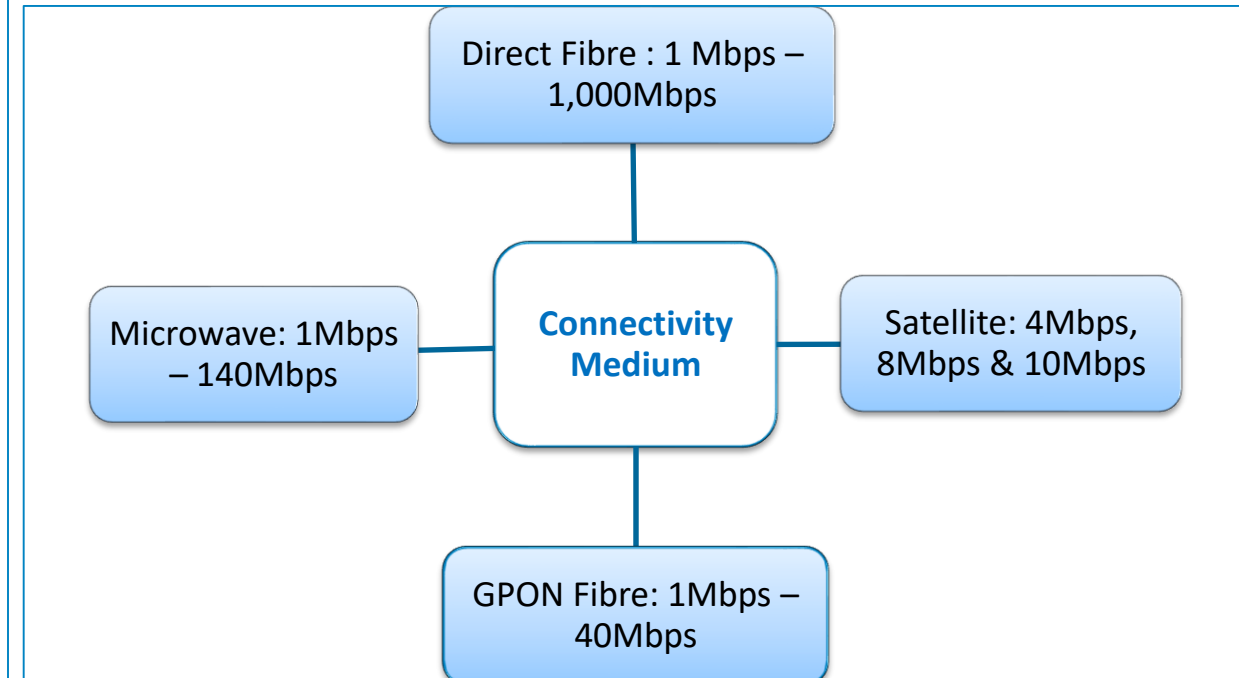
- Bandwidth speeds of 4Mbps, 8Mbps and 10Mbps will be supported
- Contended service and standardized pricing.

Metro Ethernet (ME) Access Technology Overview

- A cost effective, non-distance based product for connectivity within and between different cities.
- Metro Ethernet provides higher speeds, reliability of communication and enhanced security.
- Available in two options: MetroLan and MetroLink



Metro Ethernet can be accessed across a range of **connectivity mediums**, with package speed options of up to a 1Gbps.



MetroLink

MetroLink is a point-to-point Ethernet symmetrical service providing bandwidth options of 1-1000Mbit/s on Quality of Service (QoS) enabled shared infrastructure (Metro Ethernet).

It offers secure direct location-to-location connectivity for flexible transmission with higher bandwidth and service multiplexing. Bandwidth can be added in small increments via software changes – so you only pay for what you need. You can provision your own layer 3 services, like video or voice on the foundation of the MetroLink service giving you the flexibility you need for your connectivity needs.

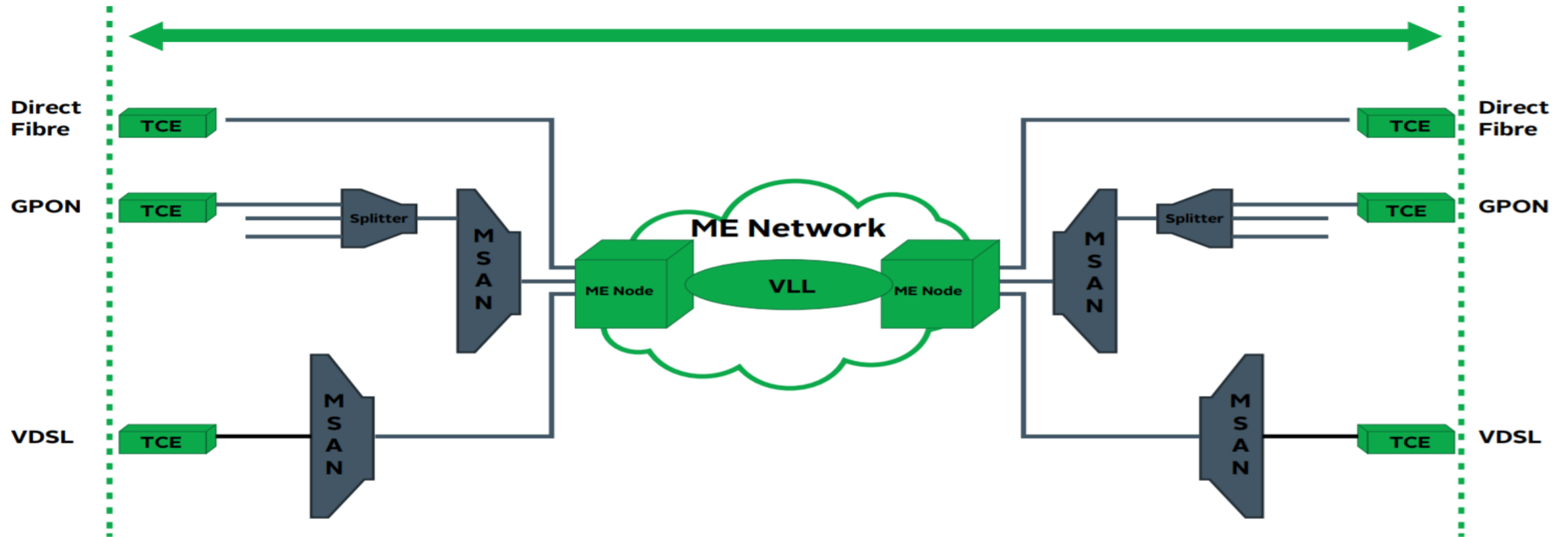
It can be configured as Ethernet Private Line (EPL) or Ethernet Virtual Private Line (EVPL). Bandwidth can be added in small increments via software changes – so you only pay for what you need. You can provision your own layer 3 services, like video or voice on the foundation of the Ethernet Express service giving you the flexibility you need for your connectivity needs.

Benefits

- Proactive-network engagement (NNOC) and reactive-service management.
- Cost-effective, high-speed connectivity in and between Metropolitan Area Networks (MAN).
- Service multiplexing allows for terminating various VLANs on one port. This is the multiplexing of two or more layer 2 VPNs/VLLs onto one physical port of an end-user device.

MetroLink Topology

- Designed for Secure, direct, location-to-location connectivity for flexible transmission with higher bandwidth and service multiplexing.
- Available as an intra-bandwidth service for connections within the same metros, or inter-bandwidth for fast, stable, and private networks between different metros



MetroLAN

MetroLan offers MultiPoint-to-MultiPoint (MP2MP) layer 2 Ethernet service providing bandwidth options of 1-1000Mbit/s on Quality of Service (QoS) enabled shared infrastructure (Metro Ethernet).

MetroLan is a Layer 2 service on the Metro Ethernet Network that provides intra and inter-metro connectivity and offers point-to-multipoint or multipoint-to-multipoint connectivity between customer sites. It offers end-users high-speed connectivity between multiple sites with increased economies of scale to higher bandwidths.

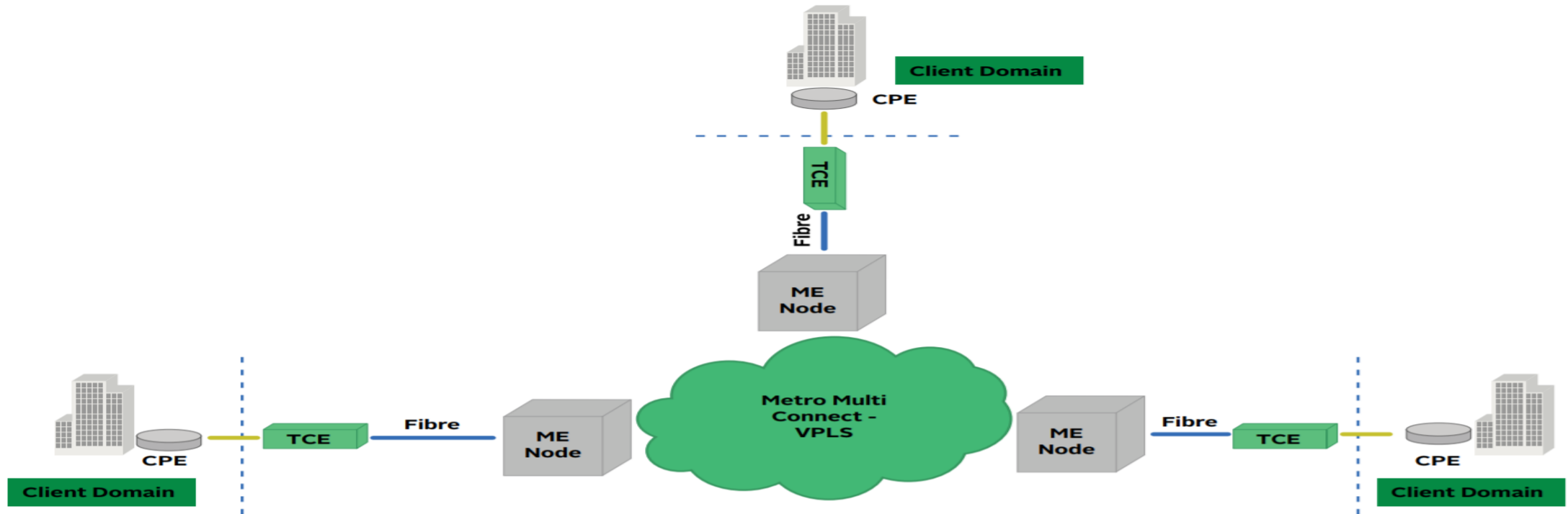
The product offers cost-effective, high-speed connectivity within and between cities designed perfect for your business to connect multiple locations. It can be configured as Ethernet Private LAN (EPLAN) or Ethernet Virtual Private LAN (EVPLAN). It offers three classes of service (real-time, business data and general data) concurrently.

Benefits

- Offers end-users high-speed connectivity between multiple sites. Increased economies of scale on higher bandwidths.
- Relatively inexpensive and bandwidth can be added in small increments via software changes.
- ME is a Quality of Service (QoS) enabled service and offers scalability based on customer needs.
- Metro Ethernet integrates easily with existing infrastructure
- MetroLan Point provides a speed from 1Mbps-1Gbps depending on the access type.

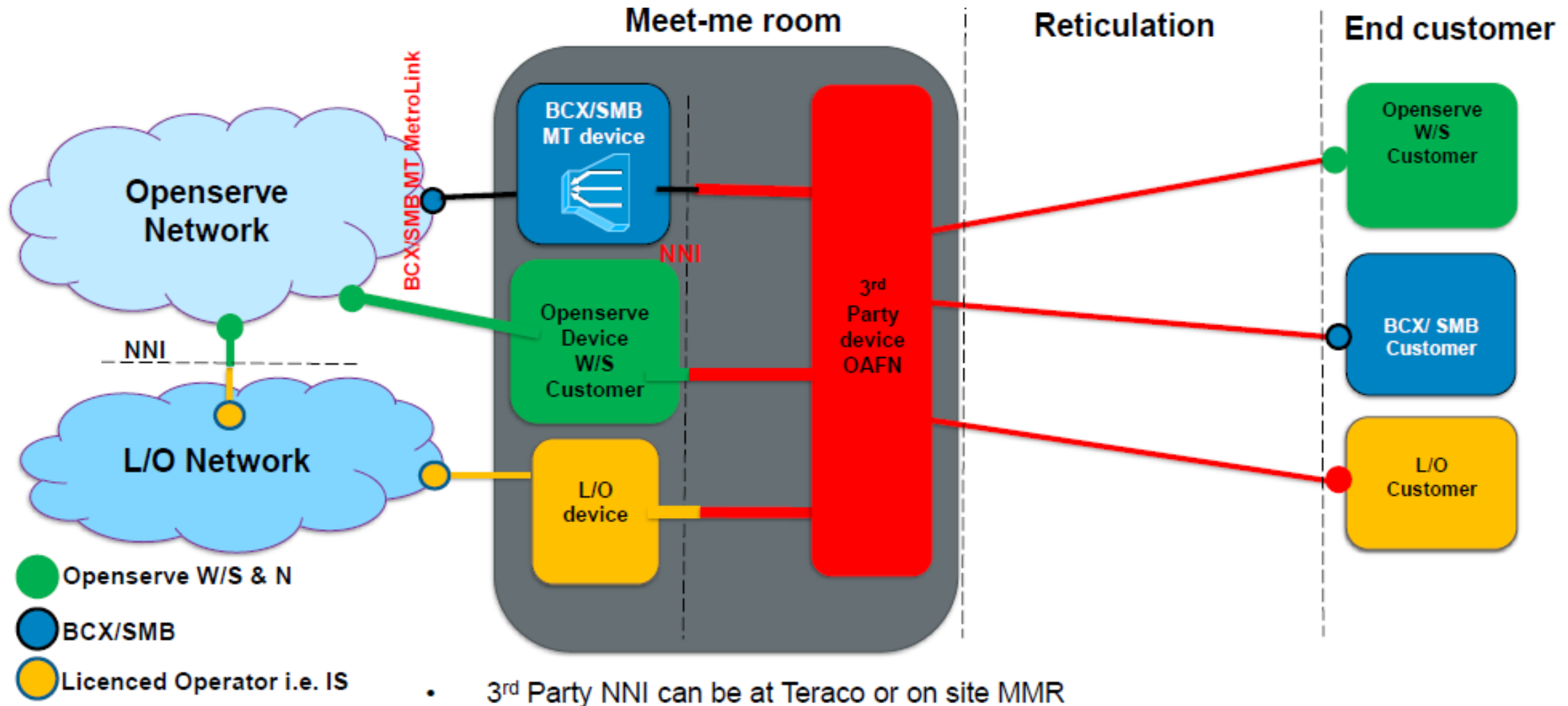
MetroLAN Topology

- Designed perfectly to connect multiple locations, point to multipoint or multipoint to multipoint.
- Available as an intra-bandwidth service for connections within the same metro, or inter-bandwidth for fast, stable, and private networks between different metros.
- You can even provision your own layer 3 services, like video or voice on the foundation of the MetroLan service, giving you the flexibility you need for your connectivity needs.



Multi-tenant Access 3rd Party

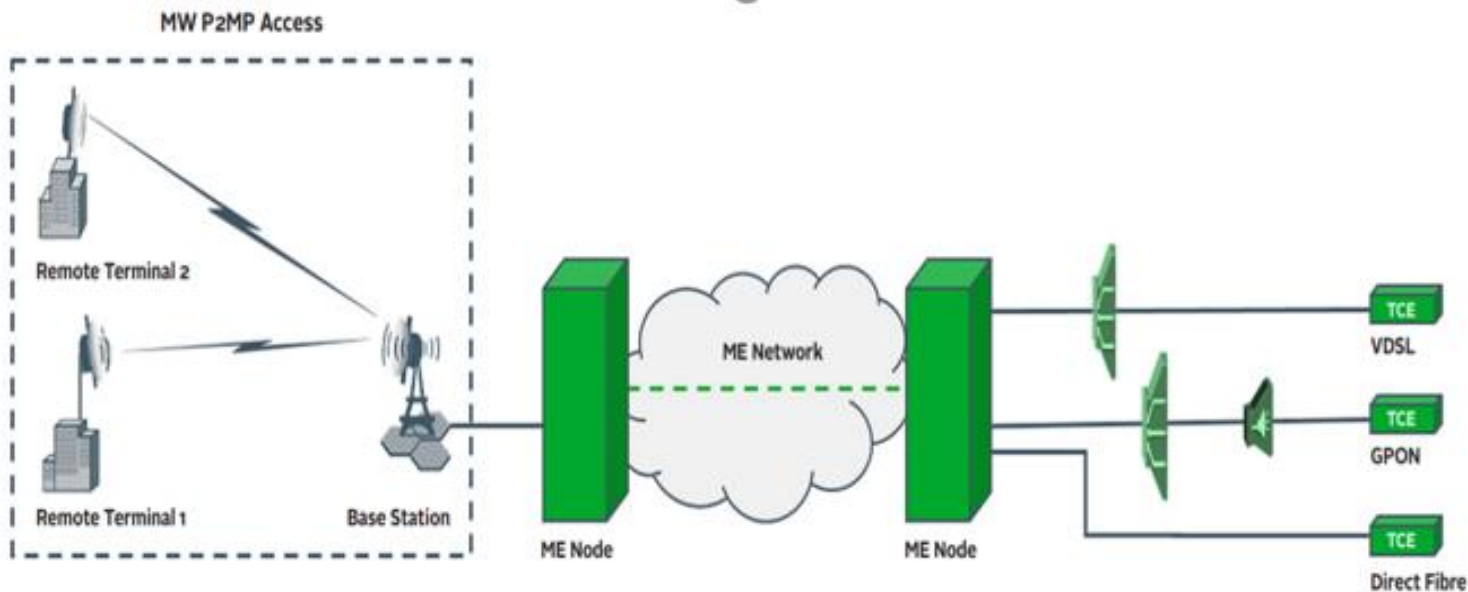
It is a capability to enable the provision of services to BCX customers at multi-tenant sites (Shopping malls, business parks/offices) using 3rd parties as last mile.



Metro Ethernet Via Microwave

- ME via MW P2MP access is a symmetrical, secure solution to enable connectivity between multiple sites via ME Network.
- This access technology supports a bandwidth of 1Mbps-140Mbps in increments of 1Mbps and requires a line of sight to be feasible.
- It supports service multiplexing and Quality of Service(QoS) functionality to ensure real-time data prioritisation.
- The ME via MW P2MP access supports all 3 classes of service concurrently (Real Time, Business Data and General Data).
- The solution can also be ordered as an alternative to the primary terrestrial link.
- The current Openserve ME Via MW P2MP footprint is limited but will rapidly expand.

Metro Ethernet via Microwave



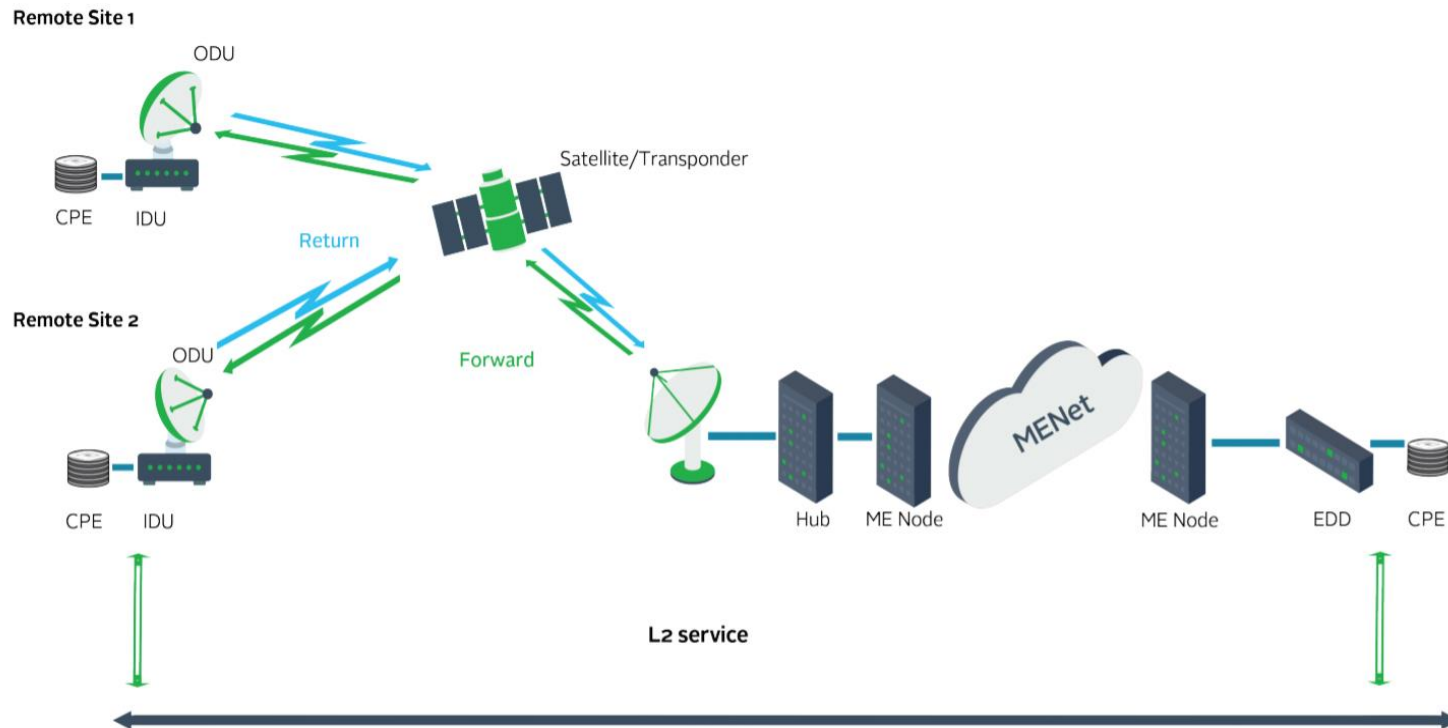
Why ME Via Microwave?

- Rapid deployment
- Simple installation and service activation
- Ideal wireless access medium for real time applications
- High speed and reliable connectivity
- Supports service multiplexing

Metro Ethernet Via Satellite

- Metro Ethernet (ME) via Satellite to enable you to reach areas faster and in a more efficient way.
- ME via Satellite is reliable and convenient connectivity in areas with no terrestrial access infrastructure.
- It offers asymmetrical service & Supports a single ME class of services (Real Time, Business Data and General Data).
- The solution to support layer 3 TCP acceleration to mitigate the impact/effect of latency.

Metro Ethernet via Satellite



Why Metro Ethernet via Satellite

- Perfect for remote business sites
- Bandwidth speed can be easily upgradable
- Simple installation and service activation