

MetroEthernet

High performance 'plug and play' network connections



MetroEthernet provides reliable, high-performance network connections for your business that are as easy to use as plugging into your office LAN. Delivered directly to a standard Ethernet socket on your premises, MetroEthernet is designed to carry all of your services over the same connection (including voice, data and video) with the service performance you require.

How it works

MetroEthernet is a 'Layer 2' data service which uses Ethernet Virtual Circuits (EVC), providing fully symmetrical, low-latency connectivity between your sites.

Services can be provisioned in a Point-to-Point, Point-to-Multipoint or Multipoint-to-Multipoint configuration, allowing you to easily establish the particular connectivity relationships that you require between sites.

Multiple VLANs can be applied to any service allowing you to partition your traffic (e.g. by user group) into separate, secure data streams over the same EVC. VLAN tagging (Q-in-Q) is also supported enabling your CE-VLAN IDs to pass untouched through the MetroEthernet Network for use within your own domain.

Business Benefits

Simple

Delivered over a standard Ethernet interface with 'plug and play' simplicity.

Reliable

A fully managed service offering a target availability of 99.9%, (higher if required).

Flexible

MetroEthernet is highly configurable enabling services to be tailored to your specific needs.

Scalable

Bandwidth can be upgraded seamlessly from 1 Mbit/s to 1 Gbit/s, as required. Completely new locations can be added without impacting existing services.

Cost-effective

Standardised equipment and simplified provisioning makes MetroEthernet highly cost-effective.

Service Options

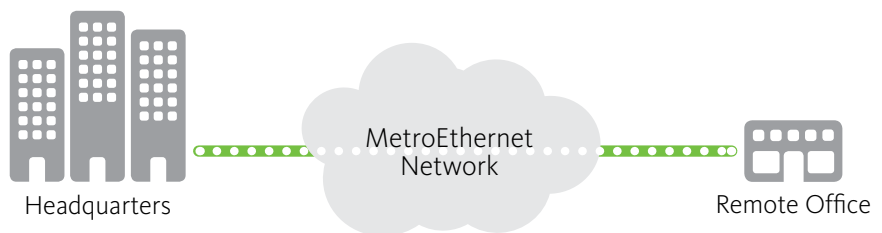


Ethernet Private Line (EPL)

- Point-to-point connectivity for applications that require guaranteed levels of bandwidth.
- 100% Committed Information Rate (CIR) connection meaning the bandwidth you specify is reserved exclusively for your own use.
- Ideal where mission critical, high-speed connectivity is required.

Use it for

- Linking local networks at two sites in Auckland or Wellington.
- Continuous high-speed connection to remote server, application host or corporate data centre.
- Real-time data mirroring with remote back-up service.
- High-speed connection to ISP.



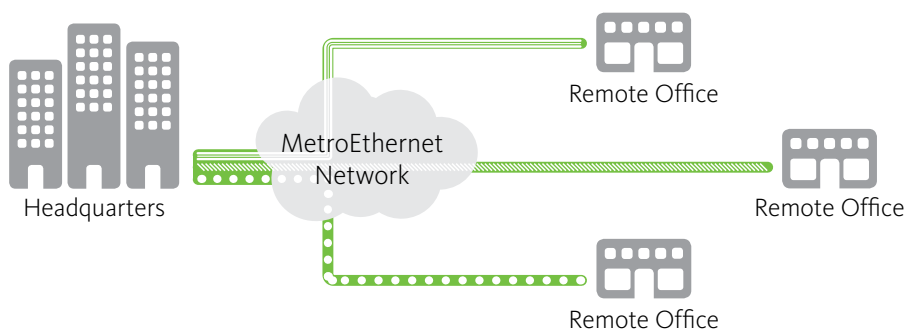


Ethernet Virtual Private Line (EVPL)

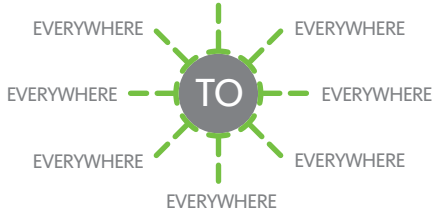
- Point-to-point or point-to-multipoint connections provided on a 'best efforts' basis (i.e. 0% CIR).
- Supports different services simultaneously over the same connection.
- Suitable for applications requiring secure, high-performance connectivity to reach customers

Use it for

- High-speed customer connections for ISPs and other service providers.
- Give key suppliers and customers secure access to your network.
- Distribution of centrally stored data or applications to any number of remote sites.
- Share data or applications securely with key suppliers or customers.
- Remote backup across multiple, mirrored servers for security and rapid disaster recovery.



FROM EVERYWHERE

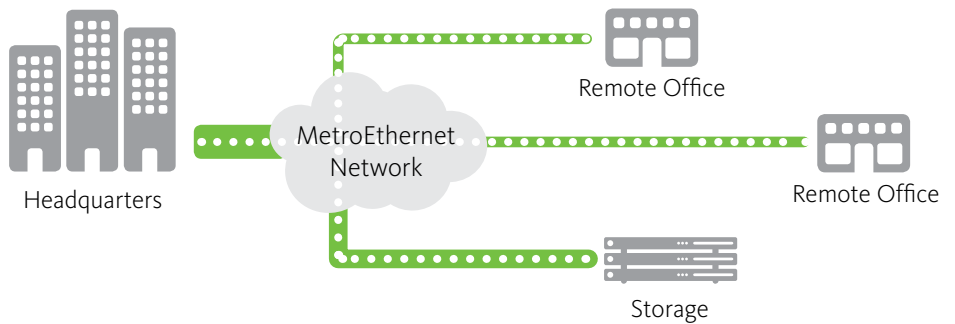


Ethernet LAN (ELAN)

- Interconnect multiple sites on a single multipoint Ethernet Virtual Circuit (EVC), to form an Ethernet private LAN (best efforts).
- Sites can be quickly and easily added to an Ethernet private LAN, without needing to disrupt services or reconfigure existing sites.
- Ideal for corporate networks where there is a requirement to seamlessly share data, applications or services across the enterprise, or with business partners.

Use it for

- Creating a wide area network for groups of organisations that often work together: architects and builders, lawyers, planners and developers, health organisations, schools, universities and libraries.
- Easily link office LANs to form a WAN for intra-company voice and data communications.



Service Specification

UNI Service Attributes	EPL	EVPL/ELAN
Physical medium	Copper (RJ45 connector) 100Base-TX (100 Mbit/s) 1000Base-T (1 Gbit/s) Fibre (SC or LC connector) 1000Base-SX/LX/ZX (1Gbit/s) 10GBase-SR (10 Gbit/s)	Copper (RJ45 connector) 100Base-TX (100 Mbit/s) 1000Base-T (1 Gbit/s) Fibre (SC or LC connector) 1000Base-SX/LX/ZX (1 Gbit/s) 10GBase-SR (10 Gbit/s)
Mode	Full duplex or half duplex	Full duplex or half duplex
MAC layer	IEEE 802.3 – 2002 (layer 2 Ethernet)	IEEE 802.3 – 2002 (layer 2 Ethernet)
MAC address limit	No limit	50
UNI MTU size	Up to 9,000 bytes (jumbo frames – requires Gigabit Ethernet ports)	1522 bytes (default), up to 9,000 bytes (jumbo frames) on request
Service multiplexing	n/a	Supported, multiple VLANs per physical address
Bundling	n/a	Supported
All to one bundling	n/a	Supported
UNI speed	10, 100, 1 Gbit/s (10 Gbit/s on request)	10, 100, 1 Gbit/s (10 Gbit/s on request)
Egress bandwidth profile per EVC	1, 2, 5, 10, 20, 50, 100, 200, 500 Mbit/s, 1 Gbit/s (10 Gbit/s on request)	1, 2, 5, 10, 20, 50, 100, 200, 500 Mbit/s, 1 Gbit/s (10 Gbit/s on request)

EVC Service Attributes		
CE-VLAN ID preservation	Yes, full transparency	Yes
CE-VLAN CoS preservation	Yes, full transparency	Yes
Frame delivery	n/a	Unicast – yes Multicast – within 3% of physical UNI speed Broadcast - within 10% of physical UNI speed

Service Performance	
Availability	99.90%*
Frame delay	< 20 ms
Frame jitter	< 10 ms
Frame loss	< 0.1%

* Best effort for EVPL and ELAN services. Higher availability levels can be delivered on EPL services using access protection. Options available on request.

Make sure your business gets the full benefit of MetroEthernet as soon as possible.
Call Vector Communications on **0800 826 436** or email contactus@vector.co.nz today.