

HOW IT WORKS

MetroEthernet Flex is a Layer 2 data service that uses Ethernet Virtual Connection (EVC) with a committed bandwidth profile that supports Class of Service (CoS). It provides fully symmetrical, low-latency connectivity between your sites. Any traffic within the contracted bandwidth rate is prioritised and carried over the VectorFibre network according to your CoS marking. This ensures that your critical applications perform consistently.

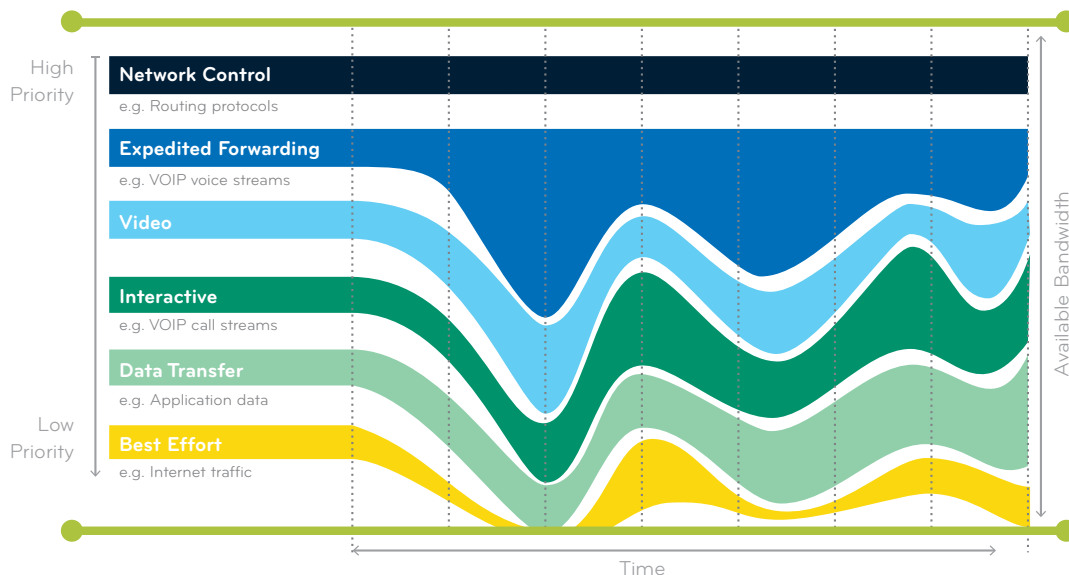
Your services can be provisioned in a point-to-point or multipoint-to-multipoint configuration, allowing you to easily establish the particular connectivity relationships that you require between sites.



This service is internationally certified for performance and reliability by the Metro Ethernet Forum.

TECHNOLOGY OVERVIEW

MetroEthernet Flex service honours different classes of service marked on your traffic. Six classes of services are available for mapping your traffic for prioritisation. Each class of service is carried over a separate traffic queue within the VectorFibre network to ensure the performance of each traffic type. A Committed Information Rate (CIR) bandwidth profile ensures that delivery of your data within the contracted bandwidth will be ensured. All the traffic markings given are maintained so that you can use them elsewhere in your network.



Additional Options: With MetroEthernet Flex, you can choose the specific bandwidth and availability levels you want. You can also decide on the particular service configuration and VLAN tagging for your network. To find out more about these options, visit www.vectorfibre.co.nz

SERVICE SPECIFICATIONS

EVC Attributes	EPL	EVPL	EP-LAN	EVP-LAN
Bandwidth Profile Type	Committed Information Rate(CIR)			
Bandwidth Profile	10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900 Mbit/s 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Gbit/s per EVC			
Rate Enforcement	Ingress rate policing at Layer 1 with Excess Burst Size of 1500ms			
EVC Maximum Transmission Unit (MTU) size	9000 bytes			
CE-VLAN ID Preservation	Yes			
CE-VLAN CoS Preservation	Yes			
Unicast Frame Delivery	Deliver Unconditionally			
Multicast Frame Delivery	Deliver Unconditionally			
Broadcast Frame Delivery	Deliver Unconditionally			
Layer 2 Control Protocol	Tunnel IEEE 802.3x MAC Control Frames		Discard IEEE 802.3x MAC Control Frames	
	Tunnel IEEE 802.1x Port Authentication		Discard IEEE 802.1x MAC Port Authentication	
	Tunnel Generic Attribute Registration Protocol (GARP)		Discard Generic Attribute Registration Protocol (GARP)	
	Tunnel Spanning Tree Protocol (STP)		Discard Spanning Tree (STP)	
	Tunnel a protocol multicasted to all bridges in a bridged LAN		Discard a protocol multicasted to all bridges in a bridged LAN	
	Tunnel Link OAM		Discard Link OAM	
	Tunnel STP (Cisco BDPU)		Discard STP (Cisco BDPU)	
	Tunnel CDP		Discard CDP	
	Tunnel VTP		Discard VTP	
	Tunnel* or Peer Link Aggregation Control Protocol (LACP)		Discard * or Peer Link Aggregation Control Protocol (LACP)	

Class of Service		
6 Classes of service	Best Effort Data Transfer Interactive Video Expedited Forwarding Network Control	
Traffic Classification	Class of Service	CoS Marking
	Best Effort (E.g. Internet traffic) Data Transfer (E.g. Application traffic) Interactive (E.g. VoIP call control) Video Expedited Forwarding (E.g. VoIP UDP voice streams) Network Control (E.g. Routing protocols)	Dot1p 0 &1 Dot1p 2 Dot1p 3 Dot1p 4 Dot1p 5 Dot1p 6 & 7
Customer CoS Marking	Required Unmarked traffic is classified as Best Effort traffic type by default	

UNI Attributes*	EPL	EVPL	EP-LAN	EVP-LAN
UNI Speed	100 Mbit/s, 1 Gbit/s, 10 Gbit/s			
Physical Medium	100 Mbit/s – IEEE 802.3u 100Base – T* (Copper) 1 Gbit/s – IEEE 802.3ab 1000Base – T* (Copper) 1 Gbit/s – IEEE 802.3z 1000Base – LX 1 Gbit/s – IEEE 802.3z 1000Base – BX-U/D 1 Gbit/s – IEEE 802.3z 1000Base – EX 1 Gbit/s – IEEE 802.3z 1000Base – ZX 10 Gbit/s – IEEE 802.3ae 10GBase – LR 10 Gbit/s – IEEE 802.3ae 10GBase – ER			
Mode*	Full Duplex* or Auto			
MAC Layer	IEEE 802.3 - 2005			
Service Frame Format	Untagged, single tag (802.1Q), double tag (802.1AD)**			
MAC Address Limit	500 Higher limit may be available on request	500	500	500
UNI MTU Size	2000 bytes for UNI speed of 100 Mbit/s, 9000 bytes for UNI speed of 1 Gbit/s and above			
Service Multiplexing	No	Supported	No	Supported
Bundling	No	Yes or No	No	Yes or No
All-to-one Bundling	Yes	No	Yes	No

* Default values

** Applicable only for Service Multiplexed UNI with minimum of 1 Gbit/s UNI speed

SERVICE PERFORMANCE

Availability	99.9%
Frame delay	$\leq 5\text{ms}^1$
Frame jitter	$\leq 2\text{ms}^1$
Frame loss	< 0.1%

¹ Within the same Metro area.

All service performance values applicable for 99.9% of the frames within a measurement interval of five minutes.



To get the full benefit of certified MetroEthernet Flex for your business call
Vector Communications on 0800 826 436 or email contactus@vector.co.nz today.