

# IP VPN

A fully managed, private, and secure global network providing resilient connectivity for enhanced business performance and cost effectiveness.

### **Overview**

Epsilon's secure IP VPN uses MPLS technology to provide private, secure connectivity on a resilient global fabric. With built-in security features designed to protect against intrusion, label spoofing, DDOS attacks and other Internet-based threats, we ensure that your data is always secure.

Our solution comes with Quality of Service (QoS), enabling you to prioritise mission-critical applications. Business data is also routed directly in a mesh across enterprise sites, IT facilities and cloudbased applications, thereby enhancing performance and user experiences for greater productivity.

As a fully managed WAN solution, Epsilon's IP VPN is ideal for enterprises who are utilising a combination of private and Cloud hosted applications and seeking a provider to manage their network and application performance, so that the focus remains on the core business.

### Today's Enterprise Needs

The need for a low latency network to support critical applications

Increased vulnerabilities to cyber attacks driving the need for greater security

Adoption of more virtual technologies fuelling the need for an integrated, streamlined WAN network

Maximising productivity through enhanced user experiences

Business continuity with a robust and resilient network architecture

### **Features**

- Highly resilient MPLS fabric
- Selectable resilience for branch sites
- Prioritisation for business-critical traffic
- Mesh routing to reduce latency
- Cloud service available to all sites



# **Benefits**



#### Extensive, Resilient Global Connectivity

Mesh routing between business sites, data centres and the Cloud via our resilient global network fabric ensures that you will have high performing, low latency connectivity on a global scale



#### **Cost Efficiency**

The flexible nature of IP VPN allows you to choose your preferred access technology, and scale your bandwidth as required



#### **Customised Solutions**

We offer flexible solutions with a customised, collaborative network design to cater to your specific needs



#### **Simplified Management**

With Epsilon fully managing your WAN solution and providing proactive incident management, be assured that your services are monitored and managed round the clock



#### Highly Secure Quality Solution

Our private, secure connectivity ensures that your data is always secure, while achieving high quality of service for business-critical applications for maximum productivity

# Why Choose Us?

#### **Unparalleled Global Reach**

Our extended and resilient network of 300 Points of Presence ensures that you get reliable connectivity even in far-reaching places

#### Large Ecosystem of Partners

Connect to world-leading Cloud, SaaS, and Internet Exchange providers via a single interface or NNI with our large ecosystem of trusted partners

#### **Extensive Suite of Services**

As one of the few global providers offering beyond data and cloud, to voice, satellite, and colocation, we can meet all your global interconnectivity needs at scale

#### Award-winning Software-Defined Network

Automate your international connectivity and extend your global reach with ondemand provisioning powered by real-time analytics and orchestration

#### **Customer Service Excellence**

Our team of global experts provide 24/7 technical and operational support to ensure quality service that you can rely on

"Epsilon's secure IP VPN provides private, highperformance global networks to enhance productivity through the responsiveness of your business applications, speeding up transmissions, and relieving network congestion."

#### Peter Agnew

Global Product Manager Epsilon





## **Access Technologies**

The primary access connectivity will be Ethernet circuits from the customer site or data centre to Epsilon's MPLS fabric. It can be Epsilon's L2 or L3 MPLS network, or a partner's L2 Ethernet service or L3 service.

The following bandwidths are available:

- From 2M to 10M: in increments of 2M
- From 10M to 100M: in increments of 10M
- From 100M to 1G: in increments of 100M
- From 1G to 10G: in increments of 1G

### **Access Resilience Options**

The following last mile access configurations are offered:

#### Premium: Full access circuit and CPE resilience

The primary and secondary links are fully diverse from each other and can be provided by a single access provider with diverse fibre access or by different providers.



#### Enhanced: Full access circuit diversity, single CPE

The primary and secondary links will be a protected Ethernet circuit from a single service provider and connects to different PE routers. The paths are not diverse from each other.

#### Standard: Single access, single CPE

The last mile service will be an unprotected service. Access can be via Ethernet, Internet access based on Ethernet, Fibre to the Cabinet (FTTC) or Fibre to the Premise (FTTP).

#### **Secure Fixed Internet Access**

The last mile service will be an unprotected service. Access can via Ethernet, Fibre to the Cabinet (FTTC) or Fibre to the Premise (FTTP).

Access is secured by an IPsec encrypted tunnel from the CPE router terminating on a security gateway in Epsilon's Point of Presence.

### **Advanced Services**

#### Security

It is expected that the enterprise will provide their own Internet access for their LAN, which should be protected by a Next Generation Firewall (NGFW).

#### **Cloud Routing**

Cloud Routing is a Layer 3 means of connecting several sites within an Enterprise to multiple cloud providers. It enables an Enterprise to consume cloud computing privately without using the Public Internet.

The Enterprise does not need to have physical presence or equipment at the point or inter-connect to the cloud provider, as Epsilon provides and manages the connection into the enterprise's VPC/VNet.

Bandwidths available for hosted connections are; 50 Mbits/s, 100 Mbits/s, 200 Mbits/s, 300 Mbits/s, 400 Mbits/s, 500 Mbits/s, 1 Gbits/s, 2 Gbits/s, 5 Gbits/s, and 10 Gbits/s.

#### Multi-VRF

Epsilon's MPLS network supports multi-VRF (Virtual Routing and Forwarding), also known as VRF-Lite. Multi-VRF a feature that allows customers to run separate VPN networks over a common access circuit at a customer site. Rather than a multiple CE router solution, only one CPE router is needed for multiple VPNs using only one physical interface, simplifying provisioning and network management.

Multi-VRFs provide protection and isolation as data traffic travels through Epsilon's MPLS network. This can be used to separate VPNs connecting some or all customers' sites to a third-party application or data centre. Examples include:

- · Creating separate networks for different business units or departments within an organisation
- Separating and restricting Guest Wi-Fi from Corporate data traffic
- Extending a customer's central Internet firewall DMZ to any site on the network

Multi-VRF is available on Fibre Ethernet but is not supported over Network Access circuits provided over broadband connectivity (ADSL, FTTX).



### **Quality of Service (QoS)**

Epsilon's IP VPN offers 3 levels of QoS, allowing customers to prioritise traffic according to business needs for enhanced performance and user experience. The default class is the Bronze QoS.

Epsilon charges for QoS on a monthly rate based on QoS bandwidth. The following figures show the QoS classifications and the typical applications suitable for each class:

#### **QoS levels offered:**

#### Gold

Real-time and business-critical applications such as voice and video conferencing

#### Silver

Important business application sensitive to latency and jitter. E.g. SAP, SQL and Citrix

#### Bronze

Important business application sensitive to latency and jitter. E.g. Email and file download can burst into the other two classes

#### **QoS Marking**

Class Name	Typical customer IP DSCP marking	Example Use	Core Class	Percentage of bandwidth
Real-time	EF	Voice, video	Real-time	Max 30%
Voice and				
Video				
Enhanced	AF21	Prioritised	Enhanced	Max 50%
		applications (SAP,		
		CRM)		
Default	None	Default traffic	Best effort	Best efforts traffic can burst into the higher classes
		(Internet, Email)		if there is no traffic marked to that class. If there is,
				the higher classes will take precedence.

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