



WHITE PAPER

Ending the VPN nightmare

evolving.net.uk

Ending the VPN nightmare

SD-WAN as a Service: zero-hassle wide area connectivity

1 Introduction

For many organisations, VPNs have become the go-to tool for secure wide area connectivity, despite the fact that they are far from popular with those that use and manage them.

Complex to configure and plagued by unpredictable, difficult to diagnose faults, they sit high on most IT teams' lists of reviled technologies, yet are seen as the only real option for wide area networking without the complexity and much higher cost of leased lines and MPLS.

Their popularity is scarcely better with users, who suffer unreliable connections and mysteriously vanishing resources, impacting collaboration, teamwork and productivity.

This white paper explores how organisations can now replace their VPNs with SD-WAN as a Service, a robust, flexible, scalable, self-configuring, easy to implement and manage WAN solution that actually works, all day, every day, making connecting to geographically distant resources and colleagues as simple as accessing a local hard drive.

Complex to configure and plagued by unpredictable, difficult to diagnose faults, they sit high on most IT teams' lists of reviled technologies

2 The corporate VPN: everyone's favourite nightmare

Corporate VPNs are found everywhere, delivering secure wide-area connectivity for organisations around the world, in every sector.

VPNs are used in various ways to allow staff and applications in one location to access resources in another, supporting remote file access, multi-site collaboration, inter-site VoIP calls, remote printing and the use of remotely hosted applications. The majority fall into one of three categories.

Home worker

VPNs allow individuals working from home to access resources at one or more company sites.

Mobile worker

VPNs provide similar functionality for mobile workers, whose location is neither fixed nor necessarily predictable.

Branch office

VPNs are used by organisations with several offices, each with a significant number of people, to allow staff in each location to access resources and communicate with individuals in others.

Beyond these three principal use cases, VPNs are also employed in various other ways, including connecting to major cloud services or datacentres, especially where organisations have relocated applications and servers there from company offices.



VPNs are often deployed when organisations grow to the point at which they need to simply and reliably connect multiple sites together, but cannot yet afford the cost nor manage the complexity of MPLS running over Leased Lines. However, while MPLS is seen as a “badge of honour” for multi-site businesses, VPN technology does not enjoy the same status, probably because it lacks the same reputation for reliability and dependability.

As organisations increasingly outsource critical business systems, one remaining system – connectivity – becomes ever more critical, with every outsourced system relying on it. It is clearly a key business essential that connectivity always stays fit for purpose, flexible and reliable.

VPNs rarely stack up well against these three standards. They are often unreliable and difficult to configure. Once set up it is common for them to work for a while and then fail without warning. Diagnosing the reason for such failures can be difficult. Everyone, it seems, hates their VPN, wishing they could “upgrade” to MPLS, yet relies absolutely on the connectivity it delivers.

At Evolving Networks we believe that business grade connectivity shouldn't be like this. It should work. All day. All night. Every day of the year. Whatever the circumstances, whatever the demands. And it shouldn't take a small army of IT specialists to keep it running. Your VPN will never make the grade. MPLS is punitively expensive, inflexible and hard to scale. Neither is fit for purpose in today's businesses. So let's look at SD-WAN as a Service, which actually delivers.

Business grade connectivity shouldn't be like this. It should work. All day. All night. Every day of the year

3 SD-WAN as a service: secure, wide area connectivity that actually works

SD-WAN as a Service from Evolving Networks addresses the various challenges typically thrown up by VPNs – every type of VPN, in every use case.

At the heart of the Evolving Networks SD-WAN as a Service solution is the powerful Intelligent Network Fabric (INF) network virtualisation software, delivered via EVX appliances installed at customer sites and the Evolving Networks datacentres with which they communicate.

At customer sites, EVXs aggregate the bandwidth of multiple circuits of diverse types. Applying QoS, they intelligently route data across those multiple circuits, to several Evolving Networks datacentres. At each datacentre, the data stream is recombined and routed on as appropriate, perhaps to the Internet, or a third party datacentre or cloud provider.

Evolving Networks has developed this infrastructure from the ground up, since 2008 – the technology is mature, and widely proven in diverse environments and more than 1,000 customer installations.

As well as routing data on to the Internet, other datacentres or cloud providers, Evolving Networks datacentres can route it directly to another of the customer's sites, also equipped with EVX devices. This creates secure, high quality SD-WAN connections between multiple customer sites, over which local LANs can be extended, providing the same functionality as a VPN, without any of the management or user headaches.

The intelligence built into the INF makes the implementation, configuration and ongoing management of such an SD-WAN exceedingly straightforward by any standards, and little short of a revelation by comparison to the average VPN. Plugging in an EVX appliance, even using existing circuits, results in the EVX auto-configuring itself. Any

Providing the same functionality as a VPN, without any of the management or user headaches

customer-specific requirements can be rapidly configured, remotely, by Evolving Networks engineers.

eView Live sits at the heart of an ecosystem of monitoring, feedback, AI and diagnostic systems, continuously monitoring each circuit in every Multipath Ethernet connection, providing a real-time view of connection status. Information available includes real-time throughput reporting, on-going health-checking, historical statistics, and performance benchmarking. eView Live also supports monitoring via smartphone and provides proactive alerts on connection issues and upgrade notifications.

Change is a fact of business life. Growth, consolidation, new functionality, new sites and site moves will happen. When they do, adapting your SD-WAN is simple, because of the concentration of the INF's intelligence in software. Because the software runs happily over a wide variety of hardware, reconfiguring it to cater for changing needs won't trigger a domino topple of necessary hardware changes. Even increasing capacity is simply a matter of adding more circuits, of any kind, to the Multipath Ethernet connection needing scaling.

This is the flexibility of SD-WAN as a Service. It offers genuine "plug in and go" convenience, extreme reliability, predictable connection quality, and intelligent routing. Faults such as bandwidth degradation or even the complete failure of individual circuits are typically routed around and rectified before the customer even realises that anything is amiss.

This means IT teams can deliver, scale and flex secure wide area connectivity and LAN extensions over large distances – even internationally – without having to rely on unpredictable, difficult to configure and expensive to manage VPN technology.

4 Your VPN – time to move on

Fiddly to configure, complex to adapt or scale, and prone to faults which often prove difficult to track down and fix, your VPN is almost certainly costing you much more than you think, in terms of lost productivity, staff and customer frustration, and IT resource drain.

Everyone hates their VPN. No one should have to put up with this sort of nonsense – so don't. Contact Evolving Networks today to find out how SD-WAN as a Service can end your VPN nightmare.

Any customer-specific requirements can be rapidly configured, remotely

CASE STUDY Care Protect



Care Protect needed additional bandwidth between its Belfast Head office and a client hospital which was served by a single FTTC connection.

Read how Evolving Networks delivered the perfect solution in the Case Study.



Evolving Networks
Nexus House
7 Commerce Road
Lynch Wood
Peterborough
PE2 6LR

+44 330 55 55 333

sales@evolving.net.uk

evolving.net.uk