

SD-WAN USE CASES

SD-WAN is an application of Software Defined Networking (SDN) technology applied to Wide Area Networks (WANs). It is an overlay service, which works with any access or 'last mile' technology to deliver a seamless, evolutionary enhancement to a legacy Virtual Private Network (VPN).

There are 4 key areas in which Vertel SD-WAN addresses the challenges and complexity of traditional WAN architectures and ICT operations, and can play a critical role in delivering enhanced network performance and reduced costs:

AGILITY: New site deployment; new application deployment; real-time policy changes; operational costs reduction

VISIBILITY: Network management simplification; network policy confirmation and site audits; fault identification and resolution

RELIABILITY: Network redundancy and uplink aggregation; application aware routing; real-time monitoring and alarms; security at the edge of the network

FLEXIBILITY: Carrier and transport agnostic; Cloud and datacentre integration; migration from legacy networks.

RELIABILITY

NETWORK REDUNDANCY AND UPLINK AGGREGATION

Challenge

Implementing redundant links or load balancing traffic across multiple links can be complicated. With more and more business applications moving from on-premises to the public or private Cloud, resilient and reliable network access is critical for any organisation. Balancing your network traffic across multiple links, mapping applications across different QoS profiles and fully utilising your available network access involves detailed network knowledge and technical skills that can be beyond the in-house capability of many organisations. With a traditional WAN, IT/NOC managers rely on network-level redundancy protocols such as Border Gateway Protocol (BGP). These solutions typically bind organisations to a single carrier with increased cost and less flexibility, which still exposes your network to a core or routing failure from your service provider.

Solution

Vertel SD WAN allows enterprises to effortlessly balance application traffic across multiple diverse links such as NBN, 4G/5G and private networks such as Dark Fibre and MPLS. Redundancy is achieved on a per application flow basis, which does not rely on a slow and complex protocols such as BGP. This allows the ICT/NOC manager to simply and easily prioritise key users and applications using the intuitive SD-WAN customer portal. Additional bandwidth can be provisioned cost-effectively by incorporating a mix of high and low quality access links.

Benefits:



Manage your network redundancy simply and easily via a single interface



Select which users and applications you want to prioritise in the event of a primary link failure and avoid dealing with messy router configurations



Augment your primary high-quality link with other diverse services and efficiently balance your applications across all the available bandwidth



Increase the overall availability of your network



Enhance end-user Quality of Experience

REAL-TIME MONITORING AND ALARMS

Challenge

Complex WANs require constant monitoring and an advanced alert system. ICT/NOC managers need to be on top of the issue before the user reports it. With a traditional WAN, this is usually implemented with Network Management Software (NMS) and graph/reporting tools. This adds a layer of cost and complexity to the WAN service being provided.

Solution

Vertel SD-WAN controls and monitors your WAN via a centralised controller, consolidating real-time data to produce standard and customised reports for stakeholders. You can access your network status from anywhere, anytime over a secure network fabric.

Benefits



Expedite network issue resolution

SECURITY AT THE EDGE OF THE NETWORK

Challenge

As enterprises adopt BYOD and Cloud Services, ubiquitous and reliable access over an untrusted public network presents significant security challenges. ICT managers can choose between on-premise security solutions, deploying specialised hardware (firewalls) or software at the edge of the network, which increases the cost of setup and maintenance, or they can consider deploying a more cost-effective Cloud-based solution.

Solution

Vertel SD-WAN's robust architecture secures both traffic and data, as it is deployed as a secure overlay to a transport/provider-independent infrastructure. With several different deployment architectures, SD-WAN accommodates the needs of even the most security sensitive business. Working with a range of security integration partners, Vertel SD-WAN can deliver SDN-based security solutions with advanced capabilities such as threat-prevention, malware detection and next-generation firewalls, all centrally provisioned, monitored and controlled via the customer portal. Additionally, Network Functions Virtualisation (NFV) functionality built into the Vertel NSG edge devices, allows on-demand deployment of specialised security software at any location that requires it.

BUILDING CONNECTIONS THAT MATTER

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Benefits



Leverage Vertel's Virtualised Security Services (VSS) for a distributed, end-to-end (Cloud, Datacentre, Branch) solution for network security, visibility and security automation



Provides proactive security options for your network and applications all provisioned and managed via a single customer portal

APPLICATION AWARE ROUTING

Challenge

Software as a Service (SaaS), BYOD devices and new applications and services are pushing ICT/NOC managers to their limit; the challenge is how to improve network and application performance without compromising network integrity and control. With a traditional WAN, a policy change can take days to be implemented and even longer if the ICT/NOC manager has to rely on their service provider to configure the routers. Tracking the changes across all of your network routers is not only time consuming, but prone to error.

Solution

Vertel SD-WAN has native application recognition (layer 4 and up) that allows you to configure and implement a new policy in a matter of minutes via the client portal. Network managers can now assign an SLA to each business application (i.e. packet loss, latency and jitter) that will dynamically direct the application traffic across the constantly monitored WAN links that meets the specified SLA. Application routing instantly adapts to faults and performance degradations of the WAN links installed at each of your network site locations.

Benefits



Move on from router configurations, their complexity and limitations



Regain control of your network



Optimise network performance for critical applications and services



Enhance user experience

FURTHER INFORMATION

Contact your Vertel Account Manager

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