THOUGHT LEADERSHIP

Which SD-WAN model?

While MPLS still dominates the WAN market, no organisation can afford to ignore the speed with which SD-WAN (Software-defined WAN) is gaining traction or the scale of innovation globally. With Gartner currently tracking 60 SD-WAN vendors – a six fold increase between 2017-2018 – WAN decision making is fast evolving from 'MPLS versus SD-WAN' to 'Which SD-WAN?'.

With the market on the cusp of widespread SD-WAN adoption, organisations will need to determine how and why they will deploy SD-WAN. One of the challenges facing service providers, multi-site businesses and IT departments is the ongoing role of MPLS technology, recognising that legacy WAN contracts may still be in place. The opportunity to implement a hybrid WAN solution model incorporating both MPLS and SD-WAN provides the opportunity for organisations to harness the best attributes of both technologies and begin a phased migration process from MPLS to SD-WAN now, as Nick Sacke, Head of IoT and Products, Comms365 explains.

Why SD-WAN? Improving the User Experience on diverse connectivity

In a cloud dominated user environment, the quality and reliability of the WAN to deliver application performance has become an essential component of IT infrastructure design. The current consensus is that traditional MPLS networks struggle with the volume of Internet-based cloud traffic, the diversity of routing locations (applications are delivered from multiple clouds, not a single datacentre), and ensuring application performance across both MPLS and Internet-bearing services. The impact of this is an increase in the number of customers evaluating and requesting SD-WAN solutions from their service providers. Indeed, it would be hard to find an organisation today taking the decision to go for traditional MPLS without considering the SD-WAN alternative. Given the increasing commitment to improving user experience and enhancing the management of application performance, it is the ease with which the benefits of the SD-WAN technology can be utilised – from agility and rapid change to multi-linked failover and application prioritisation – that should be an essential consideration.

And as such, the way in which organisations decide to deploy SD-WAN will be key. Right now in the UK it is the Managed SD-WAN service model that dominates the market, as experienced MSPs can rapidly deploy the solution with demonstrable high performance and multiple built-in capabilities from day one, meaning that organisations can reap the benefits almost immediately. Replicating the familiar outsourced services used by many organisations to achieve WAN connectivity, MSPs are rapidly adding SD-WAN technologies to existing managed services portfolios. The services include every aspect of the SD-WAN solution, from hardware to software, networking and connectivity, all delivered within the standard Service Level Agreement (SLA) model.

comms365

In contrast to the Managed Service where every aspect of the service and all changes to the parameters of that service are undertaken by the MSP, the alternative deployment model is SD-WAN as a Service. This approach, which has yet to become widely available in the UK, is gaining significant interest in North America. This software only model provides a multi-tenanted infrastructure set up that enables companies to rapidly connect sites while also providing the IT Manager with the tools to monitor, manage and change service parameters as required.

A Hybrid Approach to SD-WAN

SD-WAN has the potential to be a replacement for MPLS, but this is not necessarily the right option for every organisation. For a UK multi-site operation, many of the sites could still be in contract with months or years still remaining – so a replacement to SD-WAN would be commercially challenging. An alternative approach to consider is to combine MPLS and SD-WAN together as a hybrid approach in order to augment capacity, enable rapid expansion, increase control to IT managers and not having to increase the overall MPLS contract term for the addition of a few sites – without a huge financial outlay. By adopting such an approach, the case for complete replacement of MPLS can then be considered longer term without penalty.

For an IT Manager used to outsourcing WAN connectivity, the evolution from MPLS to Managed SD-WAN should be culturally straightforward: the model is the same, the difference is simply the underpinning technology and the benefits associated with the software defined model. Differentiating between MSPs will be based on issues such as access to a diversity of connectivity options and quality of service – for example, does the MSP support the need for agility and flexibility, as well as future proofing, by offering a network agnostic SD-WAN?

SLAs will be key and, over time, the managed SD-WAN services on offer will undoubtedly become ever more sophisticated as MSPs look to exploit the intelligence within the SD-WAN technology. Certainly traditional response times are no longer good enough in application centric organisations, so it is important to determine whether or not an MSP is leveraging the software only nature of SD-WANs to overhaul its own support operation. With a software defined solution, it is possible to scale support three, four, even five-fold, which should enable far faster response to business demands.

SLAs are already evolving from a response timeline to a respond and fix time. With the addition of analytics and artificial intelligence (AI), Managed SD-WANs should include increasing levels of automation, such as the use of application aware routing to enhance the performance within increasingly application centric organisations.

Maturity and Confidence

Many of these benefits can, of course, be achieved immediately in-house with the as a Service model, if organisations have the resources and confidence to manage the SD-WAN network. This option provides the chance to maximise the value of the SD-WAN technology, such as immediately reallocating application resources as required, with no need to wait for the MSP to respond

However, given the current level of market maturity, few organisations in the UK have yet to achieve the required level of confidence or technical skills. It is, however, likely to gain interest as SD-WAN maturity and confidence improves. Indeed, as organisations become ever more application centric given the huge increase in cloud based applications, IT departments are looking to dedicate ever more resource to monitoring the application performance which is so critical to business operations.

As such, these skills will be increasingly embedded within IT teams which means, looking ahead, the SD-WAN as a Service model is likely to become increasingly popular, dovetailing neatly into the next generation of application aware monitoring and management tools that will be key to improving end user experience.

Cost Consideration

In terms of service model, the cost differential between a Managed MPLS and a Managed SD-WAN service are negligible – although a number of the SD-WAN technologies being developed are significantly more expensive than MPLS alternatives. These are incredibly feature rich solutions, and companies will need to take a robust approach to assessment to determine whether any of the expensive add-ons are really required. The SD-WAN as a Service model is significantly cheaper – but it will require additional internal resource, so the operational cost comparison will depend upon the existing IT skill base and need to add heads to manage the network. Finding and recruiting the required skills internally could result in a higher cost than the managed service model.

With either approach, SD-WAN delivers cost and performance benefits. Certainly for those used to the Managed Service approach, the better speed of response and automation enabled by SD-WAN technology should enable IT Managers to reallocate internal resource previously dedicated to managing application problems. Where the slow response delivered by MPLS MSP services could take hours to determine whether application performance was caused by the WAN, LAN or device, the intelligence delivered by an SD-WAN makes such diagnosis – and repair – far quicker to achieve, reducing the resources required. SD-WAN technology also makes it far easier to manage performance: by combining traffic information with analytics organisations can spot trends and determine pinch points within the network, insight that can be used to immediately remediate and deliver an ever better quality of experience for the user.

Conclusion

As the market reaches the tipping point and SD-WAN becomes the technology of choice, there is no doubt that a Managed Service option should be the easiest approach: culturally familiar but with the added benefits of better performance and radically improved response. Plus, with the number of MSPs now offering Managed SD-WAN Services, companies have a far broader choice. For multi-site organisations, in particular, the option of a hybrid SD-WAN and MPLS approach offers flexibility for businesses to start migrating to SD-WAN now, without being constricted by lengthy MPLS contracts.

Given the increasingly application centric nature of most businesses, there is a strong case for IT teams to continue to reallocate resources towards real-time application performance monitoring and management. As such, not only will expectations of MSP responsiveness rise steeply but it will also be important to consider a potential migration to the SD-WAN as a Service model in the future.

A WAN investment today needs to be future proofed for at least ten years – so MSPs must not only support both models but also a hybrid of MPLS and SD-WAN sites so that organisations can begin to embrace the benefits that SD-WAN can offer. Furthermore, by supporting migration between the two models, even embracing a blended approach that includes opening up levels of permission and authorities to the IT Manager to provide better visibility and control over the network, will offer businesses rapid access to the world of SD-WAN.

Nick Sacke
Head of IoT and Products, Comms365 Ltd
07757 007569 | nick.sacke@comms365.com
www.comms365.com