

# Software-defined success



*Goldrush Group improves network management, speed, redundancy and flexibility with a Liquid Intelligent Technologies' implemented SD-WAN.*

Multiprotocol Label Switching (MPLS) has long been the go-to form of connectivity for large enterprises, due to the simple fact that it offers robust and reliable connectivity, while at the same time enabling critical business information to flow with no dropped packets. However, in an increasingly agile digital world, it's flexibility – or lack thereof – has become a challenge for businesses.

Add to this the high bandwidth cost associated with utilising MPLS, and it is easy to see that in a world where consumers increasingly seek multimedia content like videos and augmented reality (AR), the high per-megabit cost for an MPLS link quickly becomes a genuine challenge.

The way these are traditionally set up, the MPLS creates a link directly between two points, providing clear predictability to the network and ensuring that it can deliver reliable packet transport. However, it also makes it more difficult to effect changes easily, and of course the higher capacity bandwidths are increasingly costly, which creates new difficulties, as businesses require more and more of it.

Digital transformation and the move to the cloud has begun to revolutionise how businesses work. The demand for remote access and access to cloud-based applications like VoIP and Microsoft365 has grown exponentially, with the result that MPLS networks have been found wanting in terms of their flexibility.

Enter software-defined wide area networks (SD-WANs), which are designed to allow users to control the network from a central location, while at the same time granting them the ability to have both visibility and flexibility across the entire estate.



For one thing, SD-WAN has no geographic restrictions, meaning it can quite easily connect to the smaller, remote sites that would be reach- or cost-prohibitive for an MPLS connection. Moreover, being able to deliver the same service, regardless of which transport mechanism is being used provides great agility, while flexibility is also increased with SD-WAN's ability to add and remove connections at any site, as may be required.

With SD-WAN, it is also easy to improve performance, as – unlike MPLS, which offers virtually no flexibility in its settings - organisations can prioritise what traffic takes which route, as they are able to control the network more proactively.

Also, SD-WAN affords businesses the opportunity to mix and match connections, according to content priority. This not only improves both visibility and control, it also enables seamless redundancy, since connections can be instantly rerouted at the click of a button.

Another advantage is scalability, with SD-WAN enabling businesses to mix and match connections according to content priority, while it is also simpler to scale bandwidth up and down, as required.

But perhaps the single biggest advantage SD-WAN offers lies in security virtualisation, unifying secure connectivity approaches through the integration of security, policy, and orchestration. In other words, an SD-WAN architecture enables a company to benefit from end-to-end encryption across the entire network.





## A new connection

Having originally implemented an MPLS solution in 2015 to connect its SA and African operations, the Goldrush Group, a diversified gaming organisation with interests in Sports Betting, LPM Route operations and Bingo and Casinos realised it now required a better solution.

Liquid Intelligent Technologies was the provider of the MPLS, so Goldrush began discussions with the business with a view to converting the existing MPLS solution into a fully managed SD-WAN one. This was undertaken with the primary objectives of reducing overall cost, while improving network performance and increasing functionality.

Goldrush had determined that it had become restrictive to use VPN technology to run its network and connect back to head office, in order to gain access to shared applications and for the surveillance team to monitor each site. Moreover, the VPN solution was rate limited and caused latency, as well as being expensive. It did not take long for them to come to the conclusion that an SD-WAN would provide significant cost savings.

Among the challenges that an SD-WAN implementation would help solve were slow network speeds that led to packet loss, poor performance and problems during peak times, when the Goldrush retail stores were busy. Further, each site had multiple services to manage, with multiple service identities. These services ranged from VPN for branch use, and VPN for video camera surveillance, to Internet connectivity for customer WiFi. The implementation of SD-WAN meant all of these could be aggregated into a single service.

Additional issues included the fact that, as Goldrush brought new sites online as these were built, they found that the costs were different, even when contract terms were not. Additionally there was a lack of management visibility across all sites, and there was also no failover or redundancy at a site level – with an MPLS, they were always reliant on just a single link. SD-WAN was seen as the solution to solve all these difficulties.



# Switching to SD-WAN

Once the decision had been taken to shift to SD-WAN, the project timeline of 12 months was laid out. However, this was disrupted by the Covid-19 pandemic, as many of the Goldrush sites were in lockdown. Added to this was the fact that some sites – those that were using microwave or off-net - required the last mile to be changed to fibre as the first preference.

Despite the Covid delays, the project was undertaken in a phased approach that had been well-planned beforehand with the customer. Such orchestration was necessary, as the existing VPN devices needed to be swapped out for SD-WAN ones, which meant Liquid's technicians collaborating with the Goldrush IT team at each site. Once connected to the customer's network and properly configured, the connectivity and speed could be measured, thus demonstrating the success of the SD-WAN set-up.

Although there were challenges, such as requiring a change of configurations in some of the firewall and applications that Goldrush was using on site, since the SD-WAN was not compatible with certain Goldrush applications, these were relatively easily solved.

On the other hand, SD-WAN offers numerous advantages, including the fact that multiple service providers can be used, it is quick and simple to configure and provides a far higher level of visibility - right down to the individual apps running on the network - when compared to MPLS.

However, the true mark of the project's success for Goldrush was a measurable level of cost reduction, bandwidth that was both higher speed and higher capacity, and the ability to manage the service from a central portal.



## A better future

Nonetheless, additional benefits were also realised by the enterprise, including the fact that SD-WAN delivers a single pane of glass management functionality and monitoring via dashboard, which enables the user to view trends via an embedded analytics tool. This provides much deeper levels of information around the system, enabling more effective decisions to be taken by the IT team.

Then, of course, the standardisation of costs for all sites within the group has made financial control easier, while a single device to manage everything means Goldrush has full control of the system and can make changes as required, tweak firewall capabilities and ensure redundancy.

Embedded analytics, as already mentioned, enables a better understanding of the end-users, information that can then be leveraged to make better business decisions. Furthermore, there are additional services that can be considered that will help to further digitally transform the business, even as it positions Goldrush to more easily leverage the advantages of the cloud. This is because SD-WAN fosters improved interoperability, enabling the organisation to deliver more.

The significance of the impact of the SD-WAN implementation can be seen in the multitude of benefits Goldrush has received up to this point. Not only was the main goal of reducing costs, both by eliminating the rigid MPLS solution and standardising the costs for all sites and improving bandwidth – which is estimated to be around five to fifteen times faster than the older solution – achieved, but the company obtained many other advantages.

These encompass the single service identity and single device for easy management, access to a single pane of glass to allow for central management of all sites, the ability to set restrictions according to different type of users, while also having insight into what each user is browsing, and the ability to view uptime, latency, packet loss and application details.

The SD-WAN solution also enables traffic-shaping according to priorities, for certain types of traffic, delivers enhanced security and encryption with firewall capabilities that form part of the solution and the device provides a SIM card slot that can be used for APN connectivity, to cater for failover. The network has also been future-proofed with added layers of enhanced security and encryption.

The Goldrush Group could be said to understand gambling better than most, so for this enterprise to have placed its bet on SD-WAN indicates that the odds are certainly in this technology's favour. With the many improvements and benefits this has provided the company, it seems clear that they are looking to a bright and winning future.

To see how Liquid Intelligent Technologies can help your business in it's digital transformation send a mail to [sales@liquidcloud.africa](mailto:sales@liquidcloud.africa)