

# Bigger Pipe? Or Smarter Pipe?

## It Takes More Than Bandwidth.



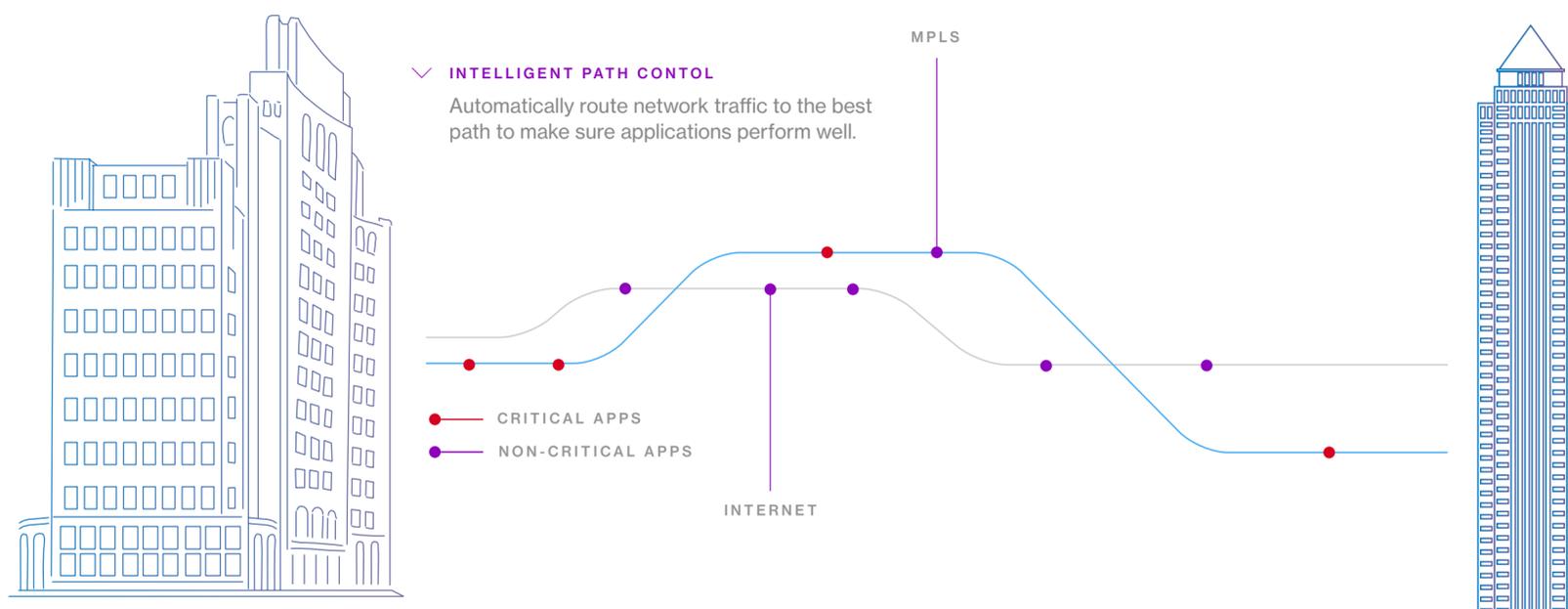
*Designed. Delivered. Optimized. Together.*



## Managed Software Defined WAN from Verizon and Cisco

How do businesses stay competitive today? With all the traffic from cloud and mobile computing, and real-time apps demanding greater performance, they need supercharged WANs. And to help support these monster bandwidth requirements without breaking the bank, they're combining private, high-quality multiprotocol label switching (MPLS) connections with high-speed, lower-cost public internet connections.

Does it work, though? Can you really rely on hybrid networks to deliver the performance and security you'll need? Yes – but only if your hybrid WAN can do much more with these multiple links than connect them. Managed Software Defined WAN (SD WAN) from Verizon, leveraging Cisco's Intelligent WAN (IWAN) platform, takes your increased bandwidth to the next level, helping improve traffic flow by adjusting to changing network conditions on the fly. Software defined policies help you dynamically direct applications and services along paths that support their unique performance and security requirements.



## HYBRID NETWORKS: THE GOOD, THE BAD AND THE MISSING INGREDIENT

In the last decade, a major breakthrough in MPLS gave businesses the ability to reserve bandwidth for different priority levels – and assign applications a corresponding class of service. Labeling and protecting critical applications improved app performance and helped reduce concerns about internet-based attacks. Businesses could merge voice, video and other critical and lower-priority applications onto a single WAN backbone.

## Managed SD WAN from Verizon and Cisco can relieve the pressure that cloud and mobile services place on your network

Fast forward to now, however, and businesses are delivering more services over the public internet, and more applications providing rich media experiences. And that means it's getting harder to keep up with the soaring costs of backhauling traffic across the MPLS network.

In response, network planners have been moving lower-priority applications to less-expensive broadband links. But there's still an ingredient missing in this recipe. With a hybrid network, you can choose the best single pathway for your applications, but you can't react to changing network conditions as they happen. That means you can't take full advantage of the combined capacity of the WAN. And while those low-priority applications may not be critical, they still need to be secure and reliable.

## MANAGED SD WAN COMPLETES THE RECIPE

With Managed SD WAN from Verizon and Cisco, you can automatically and dynamically route and re-route application traffic based on the current state of your network. Once rules are set for how certain traffic should be treated, the solution takes care of the rest. Managed SD WAN supports growing cloud workloads and unpredictable user demand by measuring delay, jitter and loss and moving traffic along a path that meets its requirements.



**Managed SD WAN automatically routes traffic in real time, finding the best pathway based on current conditions.**

**TAKE A QUICK LOOK AT ALL THE BENEFITS MANAGED SD WAN CAN OFFER**

- Improve performance – Automatically re-route application data to the best route as network conditions change.
- Increase awareness and control – Get detailed visibility into your network performance with advanced near real-time monitoring solutions.
- Control costs – Use the best connections when needed and lower-cost routes when possible, to help manage your total cost of ownership.
- Plan your network better – Analyze traffic patterns, network use and performance to better understand your specific infrastructure needs for future planning and investment.

**LET'S TAKE A CLOSER LOOK.**

The internet can be your primary transport for many applications. But when performance breaks down, you can redirect traffic through an interconnect service, like Verizon Secure Cloud Interconnect. Simply, securely and reliably connect to a variety of leading cloud providers for your cloud-based applications.

You can also add a third or even fourth connection to your hybrid network. For example, you can use the internet to back up your MPLS network, and 4G LTE to back up your internet connection.

You can help control spend on MPLS and get more aggressive with your lower-cost internet connection, using backup links for non-critical applications like video conferencing. And because you're isolating traffic over all network connections with automated path selection, you get the performance you seek. If the primary link fails, your backup link becomes the primary, takes over your mission-critical needs, and even continues to deliver your non-critical traffic if bandwidth is available. Otherwise, it drops the traffic that won't seriously impact your business until the primary connection is restored.

## SO, HOW DO YOU GET STARTED?

When you're ready to make the move to a hybrid network that can get the job done, you'll want to look at the conflicts and security challenges in your existing network design. Your infrastructure teams should carefully assess your enterprise applications and how they're used. Then they should set performance thresholds and routing rules for those apps. This will allow your apps to move freely between MPLS and the internet, helping you make better use of your overall network and provide the top-notch application performance your customers expect.

## ALSO, KEEP THE FOLLOWING IN MIND AS YOU PLAN YOUR MIGRATION:

- Some applications, especially "as-a-service" communications apps, may require split tunneling and/or centralized provisioning. Increasing internet use at branches may change security requirements.
- Centralized policy orchestration requires a unified, global quality- of-service (QoS) standard.
- Be sure to follow always-on transport requirements and wireless network design parameters.

**Managed SD WAN from Verizon and Cisco redirects traffic through private interconnect services if public access fails.**

## VERIZON NETWORK PROFESSIONAL SERVICES CAN HELP.

Our network professional services can help your infrastructure teams successfully create and implement the Managed SD WAN plan that best fits your needs now and in the future. Our consulting services include network strategy workshops, discovery and assessment, and design and implementation – as well as a variety of technology-specific design, implementation and strategy solutions.

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