Why Visibility in a SD-WAN and Cloud World

You have heard, of course, that SD-WAN reduces complexity as you overlay software-defined networks on the traditional client-server WAN architecture often characterized by slow network operations, outages, routers, and error-prone CLI coding. Unfortunately, not all software-defined networking solutions and the overlays they create make networking simple.

While a move to SD-WAN may improve many IT challenges, such as provisioning remote offices, orchestrating services in real time, and connectivity to cloud service providers, how the solution does networking and how it fixes problems still matters. You don't want issues that negatively affect application performance and business agility—that is, you need the ability to respond to changes in the business environment "on the fly" as your requirements change. That is why visibility is still important in a SD-WAN world. Without visibility, you really can't respond quickly and accurately.

What is Focused Visibility?

From new applications being introduced into the customer network, to new sites being implemented, end-to-end visibility provides the means to:

- Assess the current situation
- Plan and implement policies to incorporate the change
- Validate the change to ensure things are working as expected
- Tune the policies to keep the environment running smoothly over time

Your visibility approach, however, cannot be based on the legacy architectures of the past. In today's Cloud-First world, you are no longer dealing with the same things. The very nature of the network traffic has changed with more data encryption, more bandwidth consuming video, and greater use of low-cost broadband—with many applications using the public and less secure Internet for transport.

The right SD-WAN solution requires a new cloud paradigm where the design, deployment and management of the software-defined overlays is centralized and policy-based, and where integrated, end-to-end visibility is expressed in the language of a SD-WAN in the Cloud era.

So, what should you look for in terms of visibility in a SD-WAN solution?

Focus on defined outcomes. End-to-end visibility should be able to deliver at least three outcomes.

Validate Policies Are Working as Expected

Business intent-based policies should be easy to set up with a SD-WAN solution. That's why you need centralized management with policy choices that are pre-built but also capable of being customized for your situation. Once you have set up your policies, you need to know if they are working. The solution should be able to visually provide usage and availability details about your overall organization, links, specific sites, servers, applications, and users — sort of a global view of your entire organization that allows you to drill down. Once you target a problematic site, you'll want to look at overlay and underlay views, quality of service, and top users and site interactions. For example, is the traffic flowing out of the site in line with your security policies?

Troubleshoot Problems Quickly

Once you spot a problem, you will want more specific information so your troubleshooting and resolution can be targeted. So, you'll need to understand activity by groups of users or application category. For example, certain groups at your remote site are experiencing problems with reporting back to corporate using a common application at close of day in their region. Based on a newly created policy, you can send less critical traffic from that site over the Internet to speed up that business-critical reporting over your MPLS and avoid capacity spikes and slowdowns on the MPLS network.

Finally, you may need to become more granular at the user level. Which app is giving the user trouble and under what circumstances? Is the user running backups during peak daytime traffic when your policy stipulates

otherwise? You then can inform that user of the policy and automate a policy rule to restrict backups to better times for the business.

Plan for Changes

Usage and availability insights can ensure faster, more successful SD-WAN deployments and can create smarter decisions and better policies. End-to-end visibility guides and reduces the risks of SD WAN technology adoption. As with anything new, IT needs the visibility to have confidence in on-going deployments.

Network usage and availability information also can help you plot the lifecycle of your business. Then you can take advantage of what is working and when it needs to work well to handle business needs, as well as anticipate the kinds of changes that will keep performance optimal.

Looking Forward

SD-WAN with integrated visibility and insights can be used not only for deployment and troubleshooting but also for setting policies and automating services, improving operations and maintenance, as well as planning and future-proofing. Unified end-to-end performance visibility should involve comprehensive end-to-end data capture, monitoring, and analysis and forensics reporting in a single dashboard where the intelligence is customized based on your specific need and role.

As you start your cloud migration, SaaS adoption, unified communications or digital, data center, or network transformation, look for a solution that provides the visibility that will help make your project a success.

Let Riverbed help you use end-to-end Visibility to "Rethink the Network" and better serve globally

distributed branches and workers with Riverbed SD-WAN for the Cloud Era. Riverbed SteelConnect is a complete SD-WAN solution for securely connecting users and business to the applications they need, wherever they reside—on a remote LAN, in a data center, or in the cloud.

For a solution brief on Riverbed® SteelConnect™ Visibility, please click here.

If you would like to test drive SteelConnect SD-WAN with integrated end-to-end visibility, please click here.

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