Monitor SD-WAN with IBM SevOne Network Performance Management

Drive success with the new realities
of network connectivity

Highlights
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with SevOne NPM

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and reporting

Many companies realized early on the importance of building greater flexibility and resilience into their operations, so they began digital transformation initiatives well before 2020. When the COVID-19 pandemic hit, it rapidly and profoundly changed business conditions, putting an even greater premium on operational agility. Supporting the work-from-home model became a major focus and was, in most cases, a major success.

While the permanence of this very different model remains to be seen, long-standing questions about its efficacy have been put to rest. Simply put, it works. Going forward, organizations will need to support a new hybrid model of corporate, branch office and home network connectivity. Successfully supporting this new arrangement requires more flexible and affordable connectivity.

Many teams are striving to meet these needs with a software-defined wide area network (SD-WAN). These solutions however can create new challenges, particularly with network monitoring, that must be resolved before teams can deliver the more flexible and less costly connectivity their organizations need. Traditional WAN monitoring systems fall short. What IT, engineering and operations teams need are monitoring capabilities that can keep up with fast and dynamic SD-WAN links.

IBM

As an industry-leading provider of network monitoring solutions to top enterprises, IBM knows what it takes to successfully monitor next-generation networking technologies at scale. Our experts focused on addressing the unique monitoring challenges associated with SD-WAN deployments. The result is IBM® SevOne® Network Performance Management (NPM), a highly effective solution for organizations to mitigate the transitional risk of moving from traditional WANs to SD-WANs.

Given the scope and pace of change happening in their networks, IT and NetOps teams need more nimble and cost-effective ways to provision and manage their hybrid WAN environments. SD-WAN introduces new software layers that can automate WAN configuration across multiprotocol label switching (MPLS), internet and cellular data links based on predefined policies. Whether the WAN is managed by an enterprise operations team or is outsourced to its WAN provider, these SD-WAN policies can drive significant cost savings and performance improvements. The primary way teams gain those benefits is through rapid and automated WAN configuration based on the performance and availability of primary and secondary WAN links.

The policy-driven and software-powered automation of SD-WAN can deliver significant improvements in connectivity performance, reliability and cost-effectiveness.

SD-WAN is clearly the future. For most shops, however, the hybrid model will be the reality for the near term to medium term. So, you have to make that model work. To do that, you need next-generation monitoring capabilities like those provided by IBM SevOne NPM.

Monitoring SD-WANs with IBM SevOne NPM
IBM SevOne NPM complements the management capabilities delivered with SD-WAN controllers by delivering continuous visibility into WAN infrastructure. Users now have greater insight into the network services running on them, helping their teams achieve these benefits.

– **Ease the transition to SD-WAN**. Monitor traditional MPLS WAN and new SD-WAN segments from a single unified dashboard. Automatically monitor new SD-WAN infrastructure as soon as it is deployed.
– **Visualize SD-WAN tunnels and paths**. Create visualizations to show traffic, alerts and availability, with drilldowns to tunnel and path data that helps simplify access to key performance indicators (KPIs) for troubleshooting.
– **Extend visibility across your entire network**. Expand visibility into other critical network assets, such as enterprise campus and branch office Wi-Fi, software defined data centers and public clouds.
– **Integrate with operational models**. Modify any of the solution's dashboards to create and share operational and business views, and then combine them as workflows across teams to better fit into operational models.

Tracking KPIs: The heart of the offering
Using one or more bundled data collectors for SD-WAN, SevOne NPM collects and analyzes a series of multivendor KPIs that help users:

– Learn business application usage and asset use for cost-savings analysis
– Understand the impact of SD-WAN policies on application behavior and performance
– Monitor events and identify the root causes that led to them
– Provide actionable intelligence for mitigating risks and correcting problems
– Create customized, aggregated KPIs of SD-WAN services by customer, business group, path and more

SD-WAN performance data collected
SevOne NPM collects SD-WAN performance data for popular vendors including Cisco, Versa, Fortinet and Nokia Nuage SD-WAN, helping users visualize a series of multivendor dashboards. You'll have the ability to pull interface statistics, tunnel statistics and device health into existing workflows. Monitor traditional WAN and new SD-WAN segments from a single, unified dashboard and start monitoring new SD-WAN infrastructures immediately after deployment.

Gaining powerful visualizations, mapping and reporting
SevOne NPM users can visualize network flows with SD-WAN paths and the service level agreement (SLA) class assigned by the SD-WAN controller. Users can automatically identify flows originating from specific sites and validate the SLA class and the WAN path taken by the flow using a single dashboard. Additionally, with the flow capabilities of SevOne, users can identify applications beyond standard port-based application mapping and also visualize source and destination country based on IP/ASN to Country Mapping.

Figure 1. SevOne NPM helps users quickly see
network status across large, complicated networks

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Leveraging powerful mapping, users can quickly visualize SD-WAN topology with the specific devices, ports and interfaces that make up the service. Network operations teams can view specific sites and monitor interface port assignments to validate their SD-WAN topology while viewing KPI data in the same dashboard. Users can drill into the performance of the edge router interfaces and WAN links by class of service (CoS). By viewing the trends of traffic dropped by CoS priority queues and WAN links, network planners can provision the optimal WAN link bandwidth.
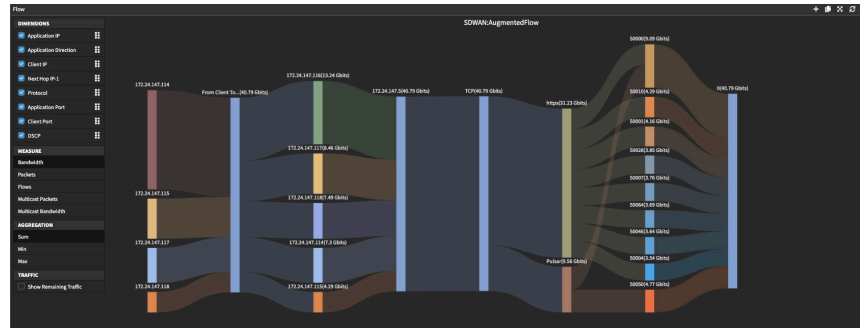
Figure 2. SevOne NPM helps users more easily visualize flow data across their networks

With highly customizable out-of-the-box reporting for SD-WAN vendors like Cisco Viptela, Versa Networks and Fortinet, users can gain value from SevOne NPM's powerful collection capability and visualize their entire SD-WAN deployment right after installation.
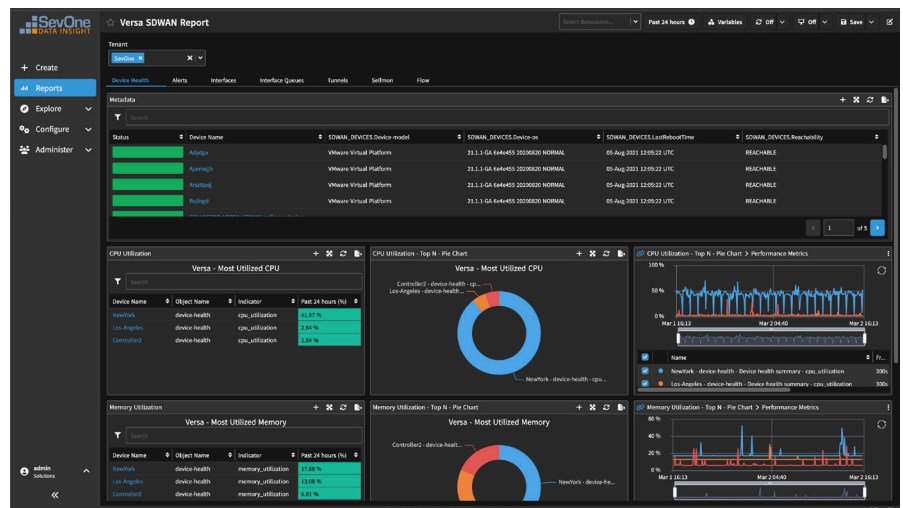

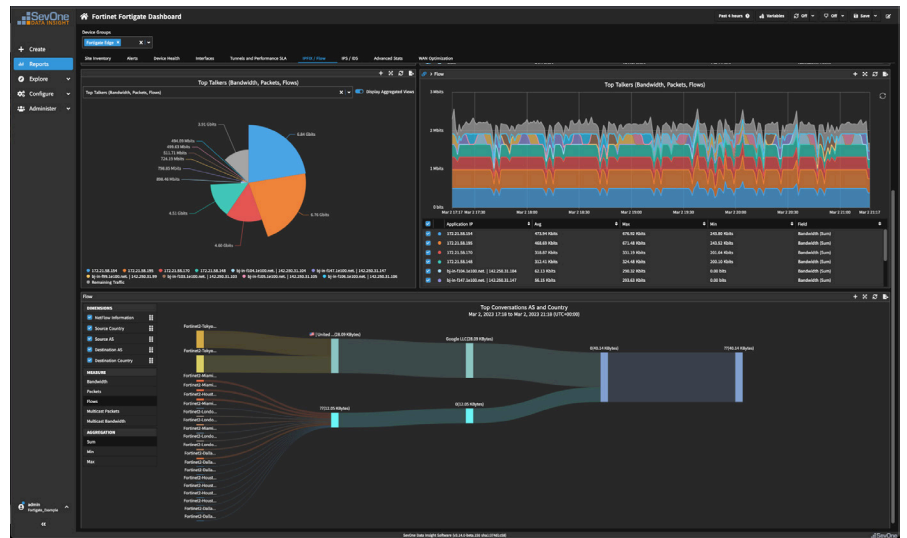Figure 3. Versa SDWAN "out of the box" report showing device health

Figure 4. Fortinet SDWAN "out of the box"
report with flow

Conclusion

Your organization's networking and connectivity needs have changed dramatically over the past couple of years and undoubtedly will continue to evolve. Transitioning to an SD-WAN-based approach can be your most viable option for meeting those needs. SevOne NPM eliminates worries about management complexity and tool proliferation. With SevOne NPM, your organization—and your team—will have the next-generation monitoring capabilities it needs to support practically any connectivity requirements now and into the future.

Why IBM?

IBM SevOne Network Performance Management provides a single source of truth to help assure network performance across multivendor, enterprise, communication and MSP networks for hybrid networks.

IBM offers a complete set of SevOne NPM consulting services designed to ensure that customers maximize the value of their investment. These service offerings include:

– Quick start program
– Post-implementation services
– Customized integrations
– Customer training

For more information

To learn more about IBM SevOne Network Performance Management, contact your IBM representative or IBM Business Partner, or visit ibm.com/products/sevone-network-performance-management/sd-wan.

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