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7 SD-WAN Features Agencies Cannot Live Without

Federal agencies are turning to Software Defined Wide Area Networks (SD-WAN) to build a next-generation network that provides the security and flexibility needed to support their evolving hybrid cloud needs. They need to be able to dynamically and intelligently utilize all available transports to deliver a superior user experience regardless of location. To orchestrate this change requires fundamental core features in a SD-WAN solution provider.

The Problem

The rush to accommodate the changes required to support a hybrid cloud environment are necessary but have created an unwieldy system to manage.

Customers need a way to get back control of their enterprise, leverage assets and deliver network agnostic transport from their applications to their users wherever they are.

Enter SD-WAN:
The Best of Both Worlds

SD-WAN empowers agencies to utilize existing and modernized network capabilities to support their hybrid cloud architecture's unique needs in a secure, common and consistent way.

Not all SD-WAN solutions are created equal so let's explore some of the critical features that encompass a complete SD-WAN solution.

7 Must-Have
SD-WAN Capabilities

1. CENTRALIZED CONTROL

Utilize policy-driven rules that are synchronized via the central SD-WAN controller and Network Gateways via an out-of-band Control Plane. This dramatically reduces human error by reducing the need for manual changes as well it speeds the rollout of new policies and rollback if necessary.

2. MULTI-CONNECTION, MULTI-TRANSPORT

SD-WAN controllers must create meshed network overlays, giving each gateway multiple paths using different available transports—MPLS, Broadband Internet, LTE, etc. This allows you to leverage different transports for different traffic types and balance cost vs performance where appropriate.

3. DYNAMIC PATH SELECTION

Utilize sophisticated real time analytics to selectively route traffic onto one WAN link or another depending on network conditions or traffic characteristics.

Identify packets by application, user, source, or destination and direct them down the appropriate path based on those characteristics.

4. ENTERPRISE FEATURES SUPPORT

An Enterprise solution needs to support true Enterprise features such as:
- Enterprise Routing - Static routing, BFD, VRRP, VRF/Multi-VRF, RIP v1/2, OSPF, BGP, MP-BGP+, ECMP, Route redistribution, BGP Route-aggregation
- Multicast
- Enterprise QoS
- Dual Stack IPv4/IPv6
- Segmentation
- PPPoE
- Amazon VPCs (Virtual Private Cloud)
- Microsoft Azure vWAN (Virtual WAN)
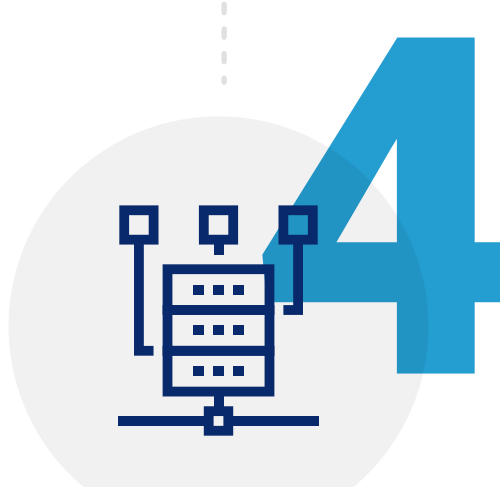
5. SERVICE CHAINING

Automate the deployment of critical network services such as WAN Optimization, Next Generation Firewalls, Anti-Virus, and Cloud Acceleration in software.

Assist in supporting the tenants of Zero Trust by deploying a completely secure network stack upon deployment based on consistent policy.
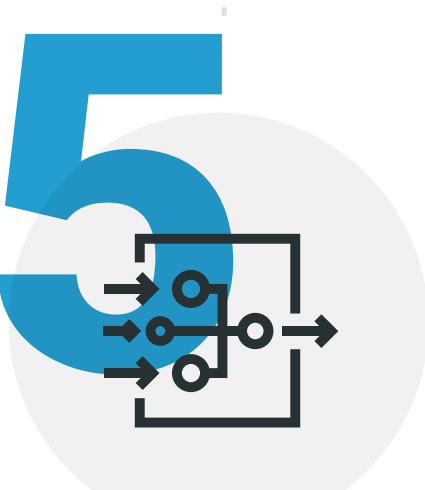
6. DEEP VISIBILITY

Constantly monitor network conditions with dedicated resources separate from controller to provide scalability and performance of monitoring system.

Leverage a single interface to **Collect**, **Analyze**, **Visualize** and **Act** on rich real time data related to Network, Security, Anomalies and Forensics for your enterprise.

Provide rich exportable reports detailing usage, performance, and threats for sites with historical contextual insights from policy driven usage analysis.

7. FLEXIBLE SECURITY

A full suite of network security features to effectively protect an agency's expanded network perimeter.

A native suite of advanced security functions and a flexible service-chaining architecture gives agencies the ability to protect their networks with security services of their choosing, such as:

- Next Gen Firewall
- Next Gen IPS
- Malware Protection
- Antivirus
- Unified Threat Management

SD-WAN In Action

Riverbed Technology and RavenTek are assisting an agency, which serves more than 40 million customers across an extensive network of approximately 100 locations, to streamline business processes and improve the customer experience for clients, employees, and public and private partners. This is the first SD-WAN deployment within a federal civilian agency.

To learn how SD-WAN can improve your agency's network performance, visit www.raventek.com.

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