SD-WAN - A Cloud-focused WAN routing technique

Author	Date	Revision
Samuel Knoppe	04/23/2024	1.4

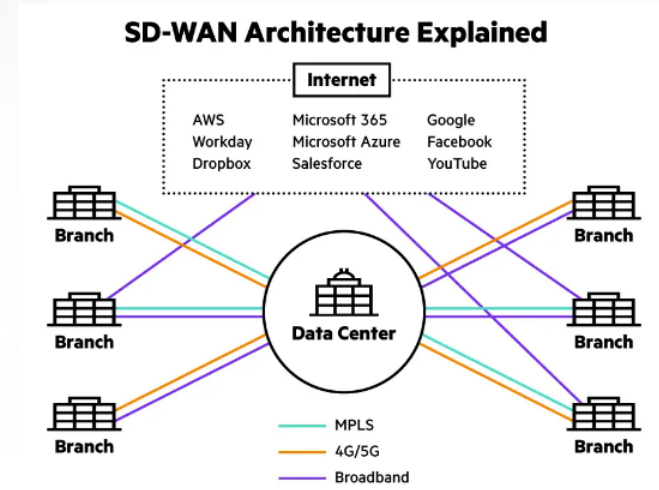
Related product (if any):	N/A
Description:	Describes SD-WAN and what it's used for.
Notes:	Knowledge of dynamic routing protocols, MPLS and WAN concepts, and the OSI Model will prove useful.
Files Needed:	N/A

Information:

What is SD-WAN?
Software-Defined Wide Area Networking (SD-WAN) architecture uses a centralized control function to steer traffic securely and intelligently across the WAN and directly to trusted SaaS and IaaS providers. This provides a more seamless experience and reduces costs for maintaining a more traditional WAN infrastructure, but the primary benefit is the enabled use of SaaS and IaaS services across the WAN. This is something like a traditional MPLS infrastructure cannot do natively with causing extra configuration and overhead.

Traditional WANs based on conventional routers weren't designed with the cloud in mind, and typically backhauled all traffic, including cloud-destined traffic, from branch offices to a hub or data center where advanced security inspection services can be applied. This delay caused by backhaul impairs application performance, resulting in poor user experience.

The SD-WAN model seeks to designed an architecture which fully supports applications hosted in on-premises data centers, public or private clouds, and SaaS services like Microsoft 365, Workday, Dropbox, and more. It supports these by providing the highest levels of performance.



How does SD-WAN work?
Traditional conventional router-centric models for WAN distributes control functions across all devices in the network and simply routes traffic based on TCP/IP addresses and ACLs. This traditional model is rigid, complex, inefficient, and not cloud-friendly resulting in a suboptimal user experience.

SD-WAN is intended to deliver a superior application quality of experience (QoEx) for users. By identifying applications, an SD-WAN provides intelligent application-aware routing across the

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