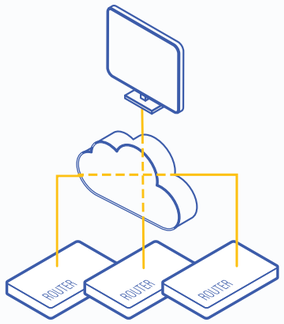
AEROHIVE® NETWORKS

SD-WAN

Reference Guide

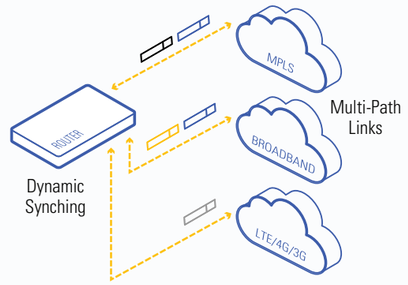
Centralized Orchestration

An orchestrator provides management of numerous routing nodes via out-of-band software. A centralized cloud solution is a popular incarnation of this, capable of administering a globally distributed SD-WAN with a singular view. When compared to legacy solutions, this approach improves overall WAN efficiency and visibility while reducing complexity and cost.



Link-State Monitoring & Dynamic Path Selection

With link-state monitoring, multiple paths are simultaneously monitored for connectivity and performance. Combined with dynamic path selection, packets can be distributed across multiple connections in real-time, based on current link metrics including RTT, jitter and link utilization. More than simply providing link redundancy, it ensures traffic is passed over the most optimal path at all times. This provides a platform for dramatic cost savings where dedicated MPLS links can be swapped in favor of more affordable broadband lines.



SD-WAN Overview

Summary

SD-WAN is a software approach to managing wide-area networks, simplifying the management and operation of a WAN. A solution should be capable of understanding user identity and application flows with dynamic routing adjustment based on real-time network conditions. Centralized network management and VPN provisioning are also key components of SD-WAN. Ultimately, an SD-WAN increases performance and uptime while reducing costs and complexity.

Gartner Definition

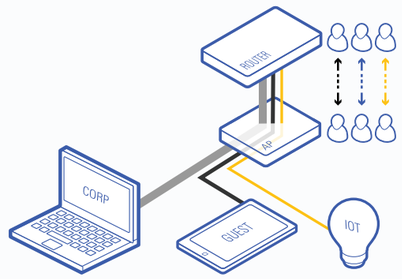
"SD-WAN solutions provide a replacement for traditional WAN routers and are agnostic to WAN transport technologies. SD-WAN provides dynamic, policy-based, application path selection across multiple WAN connections and supports service chaining for additional services such as WAN optimization and firewalls."

gartner.com/it-glossary/software-defined-wan-sd-wan

Policy Unification

Using a centralized management platform, all routers can be governed with a single policy. This policy can later be updated, while keeping configuration synchronized across the entire WAN. More advanced solutions combine SD-WAN and SD-LAN under a single, unified policy for network-wide enforcement. Combining the two also helps provide a consistent user experience regardless of access method (Wi-Fi, Ethernet or VPN).

Application & Identity-Driven Policies

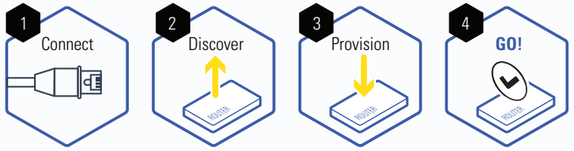


SD-WAN routers understand stateful traffic flows. An administrator can selectively block, restrict, rate-limit or prioritize applications and services for individuals or groups. Additionally, these entities can be dynamically routed across multiple links based on link-state information. Some vendors provide SD-LAN-to-SD-WAN mapping for unification of security and traffic policies.

Glossary

SD – Software-Defined
WAN – Wide Area Network
LAN – Local Area Network
VPN – Virtual Private Network
MPLS – Multi-Protocol Label Switching
LTE – Long-Term Evolution
IPsec – Internet Protocol security
RTT – Round-Trip Time

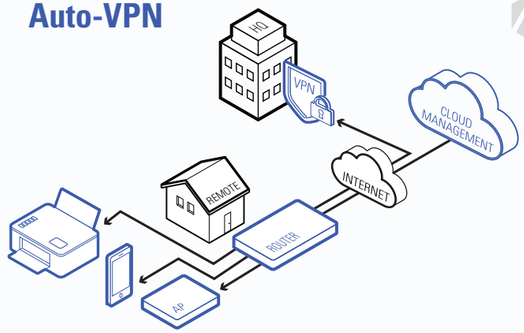
Zero-Touch Provisioning



With zero-touch provisioning, routers automatically discover their management platform and download up-to-date software & configuration policy. This approach enables new branches to be brought online quickly without costly on-site installation.

Auto-VPN

Securely connect remote sites together without the need for a dedicated and expensive private network. Auto-VPN establishes secure tunnels (typically IPsec) between remote sites and a VPN gateway without administrative or user intervention. This dynamic hub-and-spoke functionality enables flexible, effortless and cost-effective VPN deployment and management.



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