SD-WAN comparison chart

CISCO

⭐ Most popular

Vendors/Products	⭐ Cisco	Fortinet	Versa	Velo	Aruba EdgeConnect	PAN
Networking						
Supports traditional routing and SD-WAN Investment protection	✅ Available • Comprehensive traditional routing services and smooth migration with features relevant to SD-WAN on the same platform • Unified image common across traditional routing and SD-WAN • Industry-leading traditional routing and SD-WAN within the same platform	✅ Available SD-WAN available with existing infrastructure	✅ Available • SD-WAN available with existing infrastructure	➖ Limited • No investment protection for smoother migration in relation to SD-WAN on legacy routing platforms	➖ Limited • Supports traditional routing, firewall, and SD-WAN capabilities on the same PAN OS NGFW platform	✅ Available
Purpose-built SD-WAN architecture Dedicated control, data, and management plane	✅ Available • Dedicated control, data, and management plane components for scalability and performance, offering an SDN-compliant architecture	❌ Not Available • Legacy firewall-based architecture • Integrated control plane and data plane within each firewall • Extensive peer required for setup of routing protocols and related services	✅ Available • Dedicated control, data, and management plane components	✅ Available • Segregated control, data, and management plane components, VMware edge, and VMware SD-WAN orchestrator	❌ Not Available • Legacy combined control and data plane architecture • Integrated control plane and data plane within each firewall • Extensive peer required for setup of routing protocols and related services	➖ Limited • Integrated control and data plane components limit flexibility in PAN OS SD-WAN • Integrated control plane and data plane within each firewall • Extensive peer required for setup of routing protocols and related services

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Advanced routing protocols for brownfield integrations Extends routing intelligence	✅ Available • Faster, more reliable connectivity to cloud workloads • Supported with dual stack • Supports services including performance routing, MPLS, RIP, EIGRP, LISP, OSPF, OSPFv3, PIM, BGP, per VRF routing instances, and VRF route leaking	✅ Available • Supports advanced routing protocols, including BGP and OSPF	✅ Available • Supports advanced routing protocols, including BGP and OSPF	➖ Limited • Supports advanced routing protocols, including BGP and OSPF, but OSPF is only available in a global setting and not per instance • No flexibility in creating multi-segment topologies like full mesh, regional mesh, hub and spoke	➖ Limited • BGP and OSPF routing protocols are supported with limitation of a maximum of 64 OSPF neighbors and 64 BGP peers supported per appliance	✅ Available • Supports advanced routing protocols, including BGP and OSPF
Dynamic path selection Application-aware routing	✅ Available • Automatically steers critical applications to the best path, making decisions around network problems/metrics like latency, jitter, and loss	✅ Available • SD-WAN rules used to control path selection by dynamically sending specific traffic to a specific link	✅ Available • Ability to traffic-engineer based on application-aware policy	✅ Available • Offers dynamic multi-path optimization (DMPO) steering and application-aware per-packet steering	➖ Limited • Policies created and reused from business intent perspective • Limitations within microsegmentation and multi-domain policy enforcement	✅ Available • Intelligent path selection based on metrics like latency, loss and jitter, and dynamic application steering based on routing attributes, security policy, and application policy
Multi-region fabric Sub-region support for scalability	✅ Available Supports sub-regions in multi-fabric region solution, providing: • Ability to share BR • Ability to make BR as backup for a sub-region Helps scale the WAN with hierarchical regions improving performance and reliability	❌ Not Available • Sub-region not supported in multi-region fabric	❌ Not Available • Sub-region not supported in multi-region fabric	❌ Not Available • Sub-region not supported in multi-region fabric	❌ Not Available • Sub-region not supported in multi-region fabric	❌ Not Available • Sub-region not supported in multi-region fabric

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Multiple-IDPs integration Additional authentication layer for security	✅ Available • Supports multiple identity providers for checking user identities to access digital and cloud-hosted applications • Three IDPs supported in case of single tenant; three IdPs supported per tenant in case of multi-tenant	❌ Not Available • Integration with multiple IDPs not supported	❌ Not Available • Integration with multiple IDPs not supported	✅ Available • Supports integration with multiple IDPs	❌ Not Available • Integration with multiple IDPs not supported	✅ Available • Supports integration with multiple IDPs
SD-WAN and ISE integration In-house NAC engine for identity and access management	✅ Available • Supports the configuration of security posture policies in the SD-WAN fabric, context extension, and periodic reassessment of device posture	✅ Available • Supports identity and access management system	⬤ Limited • Needs third-party integration with ClearPass	❌ Not Available • Relies on third-party integration	✅ Available • ClearPass integration	❌ Not Available • Relies on third-party integration

Security

Complete SD-WAN/ SASE integration Single vendor SASE	✅ Available • Automated registration and creation • IPsec tunnels to Umbrella Secure Internet Gateway (SIG) • Guided workflows on Catalyst SD-WAN Manager • Complete integration with Cisco AnyConnect and Cisco Duo	✅ Available • Support integrations with FortiSASE and native SIG • Workflows for third-party SIG integration	✅ Available • Support for complete SASE integration and native security services built into a native SSE service	⬤ Limited • Offers an integrated single-vendor SASE solution which is not a proven/mature security offering.	❌ Not Available • No support for auto-registration or creation of IPsec tunnels for SASE • Relies on third-party integrations	⬤ Limited • Guided Workflows available for SIG integration with Prisma Access; involves multiple steps and support intervention

Comparison Chart

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Vendors/Products	⭐ Cisco	Fortinet	Versa	Velo	Aruba EdgeConnect	PAN
Remote office, branch office, on-premises security services End-to-end consistent security	✅ Available • Catalyst SD-WAN Manager includes enterprise firewall with application-awareness, snort IPS, URL filtering, AMP file analysis, threat grid sandboxing, Cisco Umbrella DNS security, SSL and Talos threat intelligence	✅ Available • Integrated NGFW features with IPS/IDS, application control, and AMP capabilities	✅ Available • Integrated NGFW features with IPS/IDS, application control, and AMP capabilities	⊖ Limited • NSX firewall now available with performance impact unknown	⊖ Limited • Lacks security integrations in the SD-WAN console • Only IDS/IPS is natively supported; must rely on third-party integration for the rest of the advanced security functions	✅ Available • Integrated NGFW features with IPS/IDS, application control/AMP/URL filtering/DNS Security capabilities in PAN OS NGFW; requires additional licensing • Only basic zone-based firewall capabilities in Prisma SD-WAN
Custom silicon In-house chipset	✅ Available • x86 architecture with QFP3.0 for hardware-accelerated service, dynamic core allocation, data plane development kit (DPDK), and quick assist technology (QAT) to boost performance and faster encryption processes	✅ Available • Custom ASIC available to boost firewall performance and faster encryption processes	❌ Not Available • No custom silicon with dynamic core allocation techniques	❌ Not Available • No custom silicon with dynamic core allocation techniques	❌ Not Available • No custom silicon with dynamic core allocation techniques	❌ Not Available • No custom silicon with dynamic core allocation techniques
Segmentation End-to-end VRF-style segmentation	✅ Available • Proven, scalable MPLS/VRF-like end-to-end segmentation • Support for multi-segment topologies and services • Many MPLS services are supported in autonomous mode, including MPLS and layer 2/layer 3 VPN services	⊖ Limited • SD-WAN, VPN, and BGP configurations support layer 3 VPN segmentation over a single overlay • Complex VDOM configurations • No dynamic and flexible multi-segment topologies creation	✅ Available • Proven, scalable MPLS/VRF-like segmentation from layer 2 to layer 7	⊖ Limited • VRF-based segmentation supported with no dynamic and flexible multi-segment topologies creation	⊖ Limited • VRF-style segmentation with routing limitations in OSPF and peer priority	⊖ Limited • Scalable VRF-like segmentation by creating zones but does not offer flexible multi-segment topologies creation

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Encrypted traffic analysis Traffic inspection	✅ Available • Detects malware by matching encrypted SHA patterns without decryption	✅ Available • Provides TLS/SSL traffic encryption	✅ Available • Provides TLS/SSL traffic encryption	❌ Not Available • Cannot detect encrypted malware	❌ Not Available • Cannot detect encrypted malware	✅ Available • PAN OS SD-WAN supports ETA by decrypting, inspecting, and controlling inbound and outbound SSL and SSH connections • No support for ETA in Prisma SD-WAN
IPv6 support for ZBFW IPv6 address support	✅ Available • Ability to send IPv6 encapsulated flows and apply ZBFW rules based on IPv6 address as source or destination filters	❌ Not Available • IPv6 not supported for ZBFW	❌ Not Available • IPv6 not supported for ZBFW	❌ Not Available • IPv6 not supported for ZBFW	❌ Not Available • IPv6 not supported for ZBFW	❌ Not Available • IPv6 not supported for ZBFW
Threat intelligence Globally recognized	✅ Available • Globally recognized threat intelligence (TALOS) • Ability to deploy incident response services	✅ Available • Provides threat intelligence capabilities	✅ Available • Provides threat intelligence and monitoring	❌ Not Available • No threat intelligence	❌ Not Available • No threat intelligence	✅ Available • PAN OS SD-WAN supports threat intelligence • No support for threat intelligence in Prisma SD-WAN
Security Service Edge Third-party SSE integrations	✅ Available • Zscaler, Palo Alto Networks, Netskope, Cloudflare, Skyhigh	✅ Available • Zscaler, Netskope, and Cloudflare	➖ Limited • IPSEC and GRE tunnels	✅ Available • Zscaler, Netskope, and Cloudflare	✅ Available • Zscaler, Netskope, and Atmos	➖ Limited • Not available in PAN OS SD-WAN • Basic integration through cloudblades with Zscaler and Netskope in Prisma SD-WAN

Comparison Chart

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⭐ Most popular

Vendors/Products	⭐ Cisco	Fortinet	Versa	Velo	Aruba EdgeConnect	PAN
Security insights Centralized dashboard for security monitoring	✅ Available • Better visibility and control through security insights • Provides heat maps, security events logging, and a security-centric dashboard	✅ Available • Provides security insights with event logging on a security-centric dashboard	✅ Available • Dashboard display for applications analytics, URL filtering, stateful firewall, NGFW firewall, and unified threat analytics	⊖ Limited • Basic monitoring insights with no security monitoring dashboard	⊖ Limited • Limited security insights with no security monitoring dashboard	✅ Available • Provides security insights with event logging in Strata Cloud Manager
Cloud						
SaaS connectivity Cloud OnRamp for SaaS	✅ Available • Transport independence providing an intelligent path selection to leading SaaS applications based on performance metrics and best path selection	⊖ Limited • Basic SaaS optimization with manual SLA creation for every application	⊖ Limited • Basic SaaS optimization with manual SLA creation for every application	⊖ Limited • SaaS optimization based on manual application rule creation through DIA broadband paths to colocations	✅ Available • Transport independence providing intelligent path selection to leading SaaS applications based on performance metrics and best path selection	✅ Available • SaaS optimization with intelligent path selection based on metrics and dynamic application steering
Colocation-cloud gateways Cloud OnRamp for colocation	✅ Available • Simplified network management with traffic aggregation through colocation hubs to cloud workloads • Guided workflows for automated deployment	⊖ Limited • Limited colocated aggregation	⊖ Limited • Limited colocated aggregation	⊖ Limited • Limited colocated aggregation	⊖ Limited • Limited colocated aggregation	⊖ Limited • Limited colocated aggregation
Multicloud connectivity Cloud OnRamp for IaaS	✅ Available • Guided workflows for automated deployment across various cloud service providers (CSPs), such as Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP)	⊖ Limited • Limited workflows for multicloud connectivity	⊖ Limited • Manual deployment across various CSPs	⊖ Limited • Partnership with Microsoft Azure Virtual WAN	⊖ Limited • Manual deployment across various CSPs	⊖ Limited • Manual deployment across various CSPs

Comparison Chart

SD-WAN comparison chart

Vendors/Products	⭐ Cisco	Fortinet	Versa	Velo	Aruba EdgeConnect	PAN
Multiple VHUBs per Azure region Azure integration	✅ Available • Cloud OnRamp deployment support of cloud gateways into multiple virtual hubs within the same region • Cloud gateways (C8000v) can advertise VNETs connected to the VHUBs • Traffic directed using centralized policies • Supports up to eight VHUBs per region	❌ Not Available • Not supported	❌ Not Available • Not supported	❌ Not Available • Not supported	❌ Not Available • Not supported	❌ Not Available • Not supported
Google Service Directory integration Google Service Directory mapping	✅ Available • Detection and recognition of custom cloud applications • Seamless mapping of service directory traffic profile to SD-WAN policy manager • Unified visibility for all services across all environments • Easy creation of traffic profiles in service directory	❌ Not Available • Not supported	❌ Not Available • Not supported	❌ Not Available • Not supported	❌ Not Available • Not supported	❌ Not Available • Not supported
Edge						
Storage VNF hosting capabilities	✅ Available • Provides IoT/OT automation with integrated branch storage and compute • Supported by Cisco Catalyst 8200 Series Edge Platform	❌ Not Available • No edge VNF hosting capabilities	✅ Available • VNFs available on Versa SD-WAN edge appliances	✅ Available • VNFs available on VMware SD-WAN edge appliances	❌ Not Available • No edge VNF hosting capabilities	❌ Not Available • No edge VNF hosting capabilities

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Vendors/Products	★ Cisco	Fortinet	Versa	Velo	Aruba EdgeConnect	PAN
Active-active dual router SD-WAN topology Higher throughput and greater reliability	✅ Available • Capability to horizontally scale with easy-to-use features	❌ Not Available • Additional WAN switch required	✅ Available • Supports active-active connections	❌ Not Available • Does not support active-active connections	✅ Available • Allows for active-active networking	➖ Limited • Only active-passive available on PAN OS SD-WAN and Prisma SD-WAN
Voice integration Voice services	✅ Available • Rich voice services available in Cisco Catalyst 8000V Edge Software platforms • Cisco is the only SD-WAN vendor to natively integrate analog/digital IP directly into a single CPE	❌ Not Available • No native voice integration	❌ Not Available • No native voice integration	❌ Not Available • No edge application-hosting capabilities • VNFs only available on VMware SD-WAN edge appliances	❌ Not Available • No native voice integration	❌ Not Available • No native voice integration
Advanced LTE solutions Cellular services	✅ Available • Advanced cellular capabilities as a transport link • Supported with the deployment flexibility of a built-in module, card, or external gateway on Cisco Catalyst 8000 Series Routers	➖ Limited • Cellular capabilities as a transport link	✅ Available • Cellular supported	➖ Limited • Cellular capabilities as a transport link	➖ Limited • No significant cellular support	✅ Available • Supports cellular capabilities on PAN OS SD-WAN and Prisma SD-WAN
Industrial SD-WAN Ruggedized hardware	✅ Available • Ruggedized SD-WAN options for adverse and industrial environments	✅ Available • Ruggedized SD-WAN options	➖ Limited • No native ruggedized option available; supported via third-party white box appliance	❌ Not Available • No ruggedized SD-WAN options	❌ Not Available • No ruggedized SD-WAN options	✅ Available • Ruggedized SD-WAN options in PAN OS SD-WAN
Wi-Fi/5G-ready Wireless technology support	✅ Available • Uses advanced wireless frequency and protocol technology	✅ Available • Uses advanced wireless frequency and protocol technology	✅ Available • Uses advanced wireless frequency and protocol technology	✅ Available • Uses advanced wireless frequency and protocol technology	❌ Not Available • No advanced wireless capabilities	❌ Not Available • No Wi-Fi capabilities; dependence on third parties to enable features

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Vendors/Products	⭐ Cisco	Fortinet	Versa	Velo	Aruba EdgeConnect	PAN
Data center integration Common policies across domains	✅ Available • Cross-domain integrations and common QoS policies between Cisco ACI and SD-WAN • Extend TrustSec security group tags (SGTs)/ metadata from WAN to campus to data center	❌ Not Available • No data center integration	❌ Not Available • No data center integration	✅ Available • Unifies data center policies with edge needs	❌ Not Available • No data center integration	❌ Not Available • No cross-domain integration

AIOps

	⭐ Cisco	Fortinet	Versa	Velo	Aruba EdgeConnect	PAN
End-to-end observability Intelligent path recommendation	✅ Available • Predictive path recommendations (PPR) powered by ThousandEyes WAN Insights	✅ Available • FortiMonitor used for providing end-to-end visibility	❌ Not Available • No support	➖ Limited • Supported with Edge Network Intelligence	❌ Not Available • No support	➖ Limited • No support for ADEM in PAN OS SD-WAN
Analytics and visibility Network and app performance visibility/ experience	✅ Available • Advanced visibility and analytics into network and app performance • Interactive global topology to monitor the WAN • Alarm correlation for faster root-cause analysis • Guided workflows for tasks such as site configurations, software upgrades, etc.	➖ Limited • Visibility and analytics into network and app performance	➖ Limited • Visibility and analytics into network and app performance	➖ Limited • Basic visibility and analytics into network and app performance	➖ Limited • Basic SD-WAN visibility with Aruba Unity Orchestrator	➖ Limited • Basic SD-WAN visibility into network and app performance in Panorama-managed PAN OS SD-WAN • Predictive analytics in Prisma SD-WAN for site and link capacity prediction only; requires add-on license

Updated in March 2024 based on public information.

SD-WAN comparison chart

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International
BV Amsterdam,
The Netherlands
Netherlands

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