



Cisco Software-Defined Access

Step up to a new era in networking

Cisco® Software-Defined Access (SD-Access), a solution within Cisco Digital Network Architecture (Cisco DNA) which is built on intent-based networking principles, provides a transformational shift in building, managing, and securing networks, making them faster and easier to operate, with improved business efficiency. By decoupling network functions from hardware, it creates a virtual overlay over the underlying physical networking infrastructure. SD-Access helps ensure policy consistency by defining and enforcing policies, preventing unauthorized access and containing breaches, enabling faster launches of new business services and significantly improving issue-resolution times while being open, extensible, and reducing operational expenses. Digital transformation is forcing enterprises to search for new ways to enable digital capabilities, deliver IT services, and manage assets. We're moving toward a very different world. We need a very different network to get us there.

Benefits

As one of the three pillars of Cisco zero-trust security framework, SD-Access straddles both networking and security operations realms and sets up the network as a security enforcer. It provides the following benefits:

- **Identify, profile, and group endpoints:** SD-Access uses AI- and ML-based advanced analytics for endpoint identification and grouping. It analyzes traffic flows between groups and define effective access policies.
- **Segment network based on defined policies:** SD-Access applies group-based access policies for effective multilevel segmentation, leading to zero-trust security.
- **Analyze endpoint behavior and verify trust:** SD-Access continuously scrutinizes endpoint behavior, scans for vulnerabilities, and verifies their trustworthiness for continued access.
- **Rapidly contain threats and prevent data breaches:** SD-Access reduces zones of trust, isolates rogue or compromised endpoints, and enhances regulatory compliance.

Cisco Services

Accelerate your journey to a digital-ready network with Cisco Software-Defined Access services.

Cisco Services provide expert guidance to help you achieve a streamlined operational model across wired and wireless environments at a lower cost. With proven experience, best practices, and innovative tools, Cisco Services work with you to easily manage, scale, and secure your Cisco SD-Access solution. By choosing from a comprehensive life cycle of services—including advisory, implementation, optimization, and technical services—you can move to a secure and automated unified network with ease and confidence.

[Learn more.](#)

Why SD-Access?

Rapid digital transformation of organizations has resulted in an increasing dependency on IT, and networks are called upon to be more agile and respond to changing business needs faster. But with the growing number of users, surging use of IoT devices, and rising adoption of clouds, traditional networks have struggled to keep up. This increasing complexity can best be addressed by defining high-level policies for network devices to follow so the devices are able to take appropriate actions without human intervention. Coherent access policies are key for the network to help secure the enterprise. SD-Access helps define such policies and enforces them through proper configuration of network devices, thereby automating secure onboarding of endpoints and scaling the network. To accomplish these tasks, SD-Access offers the following:

- **Enhanced visibility into endpoints and traffic patterns:** AI endpoint analytics uses Deep Packet Inspection (DPI), telemetry sources, and AI/ML techniques to identify, profile, and group endpoints. Group-based policy analytics examines traffic flows between groups and helps you formulate and fine-tune group-based access policies
- **Granular multilevel segmentation:** At a higher (macro) level, SD-Access, through Cisco DNA Center, creates virtual overlays over the underlying physical infrastructure and segments the network without regard to its topology. SD-Access also segments at a micro level by enforcing group-based policies through the network infrastructure. The resulting granular segmentation controls traffic flows without using complex firewalls and Access Control Lists (ACLs) that can be difficult and costly to maintain
- **Continuous verification of trust:** Unlike traditional approaches that implicitly trust everything inside the corporate network, SD-Access continuously ensures that the original tenets used to establish trust remain true throughout the duration of all endpoint connections, by detecting anomalous or malicious behavior that could arise from a compromised endpoint
- **Enterprise-wide policy consistency:** SD-Access exchanges policies with other networking domains so that access control is enforced from access to application – spanning access (SD-Access), WAN (Cisco SD-WAN), and multicloud data center (Cisco ACI®) networks using the Cisco intent-based networking multidomain architecture

How do you get started?

SD-Access makes it easy to get started. Depending on your current network, SD-Access offers a simple, gradual path to realizing all its benefits, in a manner that minimizes any disruption to your existing users or business.

For more information about SD-Access:

- Read the solution overview and white papers on [AI Endpoint Analytics](#) and [group-based policy](#)
- Visit the [SD-Access homepage](#)