

Cisco DNA Ready Infrastructure



Networks are getting more and more complex, and IT has to deliver on promised outcomes. How do you do that? By pairing Cisco® Digital Network Architecture (DNA) with a robust infrastructure that is DNA-ready. Cisco DNA allows you to transform your network so your organization can move faster, more efficiently, and more securely. You can create policies over the entire network with a few clicks, and have the ability to diagnose past issues. Ensuring that Cisco DNA is running over a modern wired and wireless network makes sense, as data traffic is expected to grow exponentially. Cisco’s innovation with switching, wireless, and routing provides a robust foundation that enables DNA. With Cisco DNA, you can evolve your network architecture, empower your IT team, and respond to new opportunities at digital speed.

What happens when Cisco DNA and the most modern network infrastructure meet? DNA decouples network functions from hardware, allowing you to build and manage your entire wired and wireless network from a single user interface. That means branch offices will be up and running more quickly. New services and applications can be rolled out for the best possible experience. It also means that policy compliance will be automated on a per-user-group basis. In other words, your network becomes more agile. More adaptable. More responsive. More secure.

Wireless

An exclusive function that the Cisco Aironet® access points offer is Flexible Radio Assignment. This feature allows the access point to automatically adjust the network when client surges occur.

Cisco DNA for Mobility		
DNA Pillar	Mobility Features	Mobility Benefits
Insights and Experience	Cisco Connected Mobile Experiences (CMX)	Analyze visitor behavior, make guest Wi-Fi access easier, track assets quickly and accurately, and provide visitors with a better experience.
	Cisco Application Visibility and Control (AVC)	Gain visibility into 1000+ applications for capacity planning and prioritization.
	Future-ready modularity	Prepare for next-generation technology today.
Automation and Assurance	Cisco High Density Experience (HDX)	Automatically manage the airwaves and improve Wi-Fi performance.
	Flexible Radio Assignment	Automatically adjust the network for high client surges.
	Best practices	Easily enable advanced features through Mobility Express and WLAN Express Setup.

Cisco DNA for Mobility		
DNA Pillar	Mobility Features	Mobility Benefits
	Apple FastLane	Enable iOS devices to intelligently communicate and make a fast-track connection to the best-suited access point, quickly and efficiently, all while saving battery power.
	Cisco Application Policy Infrastructure Controller Enterprise Module (APIC-EM) Plug and Play with quality of service (QoS)	Adopt software-defined networking technologies with a controller that automates provisioning of the end-to-end infrastructure to deploy applications and services.
	Cisco Jabber® and Lync SDN API	Allow employees to access instant messaging, voice, video, voice messaging, desktop sharing, and conferencing from anywhere.
Security and Compliance	Cisco Prime® Infrastructure	Simplify the management of your wired and wireless network with a single view and point of control.
	Cisco Identity Services Engine (ISE)	Deploy a next-generation identity and access control policy platform that enforces compliance, enhances infrastructure security, and streamlines service operations.
	Cisco IOS® NetFlow	Provide a key set of services for IP applications, including network traffic accounting, usage-based network billing, network planning, security, denial-of-service monitoring capabilities, and network monitoring.
	Cisco TrustSec®	Simplify the provisioning of network access, accelerate security operations, and consistently enforce policy anywhere in the network.

Cisco DNA for Mobility		
DNA Pillar	Mobility Features	Mobility Benefits
	Cisco StealthWatch	Receive advanced network visibility, analytics, and protection by seeing everything that happens across your network and data center.
	OpenDNS	Deploy the world's largest cloud-delivered security platform, with the industry's best uptime.

Switching

The Cisco switching products offer a function called Unified Access Data Plane application-specific integrated circuit (UADP ASIC) for wired and wireless convergence. This feature enables converged wired and wireless access for operational simplicity and scale.

Cisco DNA for Switching		
DNA Pillar	Switching Features	Switching Benefits
Insights and Experience	Multigigabit uplink support	Support multigigabit access growth for wired and wireless/802.11ac through NBASE-T Cat 5e and Cat 6 speeds of 2.5 and 5 Gbps.
	Common features for wired and wireless	Gain simplicity and business agility.
	SmartOperations	Use real-time analytics to help ensure application experience and lower costs with path selection.
	UADP ASIC for wired and wireless convergence	Enable converged wired and wireless access for operational simplicity and scale.
Automation and Assurance	SD-Access	Gain zero-touch provisioning.
	Cisco ONE™ Software Suites	Deploy model-based telemetry.
	SDN/programmability	Achieve predictable OpEx, license portability, and investment protection.
	EasyQoS	Use Cisco onePK and OpenFlow application-aware dynamic QoS.

Cisco DNA for Switching		
DNA Pillar	Switching Features	Switching Benefits
Security and Compliance	Cisco APIC-EM	Automate provisioning and policy enforcement for faster SD-WAN deployments.
	Native Flexible NetFlow	Deploy industry-leading advanced threat defense.
	Cisco TrustSec and security group tags (SGT) for wired and wireless	Orchestrate role-based access to corporate resources by any user, with any device, from any location, at any time.
	Cisco Network as a Sensor	Use the network to detect and stop threats faster across all segments; high-performance encryption for secure WAN.
	Native MACsec encryption	Deploy high-performance encryption for a secure WAN.

Routing

The Cisco DNA-ready routing products combine two unique features that speed up the time it takes to deploy your branch office. With the Cisco Intelligent WAN (IWAN) app with the APIC-EM, IT can automate the provisioning of multiple branch offices and provide intelligent path selection and application control—with minimal programming and customization. These capabilities will simplify and streamline your network operations, reducing costs and saving time.

Cisco DNA for Routing		
DNA Pillar	Routing Features	Routing Benefits
Insights and Experience	Cisco Application Visibility and Control (AVC)	Gain visibility into 1000+ applications for capacity planning and prioritization.
	Intelligent Path Selection (Cisco Performance Routing [PfR] v3)	Use real-time analytics to help ensure application experience and lower costs with path selection.
	WAN Optimization (Cisco Wide Area Application Services [WAAS] and Akamai)	Improve application performance and WAN offload with Layer 4 through 7 optimization and intelligent caching.

Cisco DNA for Routing		
DNA Pillar	Routing Features	Routing Benefits
Automation and Assurance	Pay-as-you-grow performance and services	Buy what you need now and upgrade later without a complete equipment upgrade.
	Cisco ONE Software Suites	Achieve predictable OpEx, license portability, and investment protection.
	Cisco IWAN app with APIC-EM	Automate provisioning for faster SD-WAN deployments.
Security and Compliance	Cisco Firepower® Threat Defense for ISR	Deploy industry-leading advanced threat defense.
	Cisco Umbrella Branch (OpenDNS)	Protect the network from malware, botnets, phishing, and targeted online attacks using real-time threat intelligence.
	Cisco Stealthwatch Learning Network license	Gain branch network visibility and device-level incident response with packet capture and machine learning (2900 and 3900 Series ISR requires Cisco UCS® E-Series blade).
	Multicore hardware VPN acceleration	Deploy high-performance encryption for secure WAN.

As we move from the information era to the digital era, the network continues to grow in relevance. It connects all things digital and is the lifeblood of digital business. Having a robust DNA-ready infrastructure is the foundation to a digital-ready network. For your organization to stay relevant, a digital-ready network is no longer just nice to have, it's a must.

For more information on Cisco DNA-ready infrastructure and Cisco DNA, go to:

- [Cisco Digital Network Architecture](#)
- [Cisco Routers](#)
- [Cisco Switches](#)
- [Cisco Wireless](#)