



# The Cisco DNA-Ready Infrastructure

## Is your network built for intent-based networking?

Today's organizations need to be innovative, dynamic, and scalable to keep up with the demands from mobility, IoT, cloud, and security threats. This calls for an intent-based network, built on Cisco® Digital Network Architecture (Cisco DNA™).

The Cisco DNA infrastructure gives you robust wired, wireless, and routing solutions. With it, you can create and apply policies over the entire network with a few clicks and gain the ability to diagnose past issues.

As data traffic is expected to grow exponentially, Cisco's innovation with switching, wireless, and routing provides a solid foundation that enables Cisco DNA.

Roll out new services and applications on any cloud. Access any applications without compromising security. Set policy-based automation by user and devices. All with Cisco DNA and its robust infrastructure across your campus, branch, and WAN.



Today's technologies demand an intelligent network that helps you work faster, more efficiently, and more securely. Get started on your intent-based networking journey today with Cisco DNA.

## Wireless

Go beyond the current Wi-Fi Standard and address your high-density access needs with Cisco Innovation applied to the world's most versatile and reliable wireless network.

Cisco DNA-ready wireless products:

- Cisco [Aironet 4800 Access Points](#)
- Cisco [Aironet 3800 Series Access Points](#)
- Cisco [Aironet 2800 Series Access Points](#)
- Cisco [Aironet 1850 Series Access Points](#)
- Cisco [Aironet 1830 Series Access Points](#)
- Cisco [Aironet 1815 Series Access Points](#)
- Cisco [Catalyst 9800 Series Wireless Controllers](#)
- Cisco [8540 Wireless Controller](#)
- Cisco [5520 Wireless Controller](#)
- Cisco [3504 Wireless Controller](#)
- Cisco [Meraki® MR](#)

### Cisco DNA for Mobility

Pillar	Mobility Features	Mobility Benefits
<b>Insights and Experience</b>	Cisco Connected Mobile Experiences (CMX) with hyperlocation technology	Deliver better analytics and engagements through precise location accuracy of 1 to 3 meters on average. Analyze visitor behavior, make guest Wi-Fi access easier, track assets quickly and accurately, and provide visitors with a better experience.
	Cisco Wi-Fi data points	Cisco provides the most granular employee, customer, device, and application data to gain extensive value from your network via a solution ecosystem with programmability and open APIs.
	Cisco access points deliver modular architecture	Plan for emerging use cases and support the digital ceiling through Wi-Fi and the Internet of Things (IoT).
	Open and programmable	The controllers are built on Cisco IOS XE operating system which offers a rich set of open standards based programmable APIs and model driven telemetry that provide an easy way to automate day 0-N network operations.
	Deployment flexibility	The Cisco Catalyst 9800 Series Wireless Controller is cloud agnostic and allows you the choice to deploy your network in an either a public or private cloud. It can also be embedded on the Catalyst switches.
<b>Automation and Assurance</b>	Cisco High Density Experience (HDX)	Automatically manage the airwaves and improve Wi-Fi performance.
	Cisco Flexible Radio Assignment	Deliver Wi-Fi coverage and capacity to meet service-level demands.
	Cisco DNA Center	Use a single pane of management to design, provision, enable policy, and assure network services with full visibility of user and device identity, operating systems, and applications across the entire network fabric. Automate provisioning of the end-to-end infrastructure to deploy applications and services.

Wireless continued

Cisco DNA for Mobility		
Pillar	Mobility Features	Mobility Benefits
<b>Automation and Assurance (continued)</b>	Intelligent Capture	Intelligent Capture probes the network and provides the DNA Center with deep analysis. The software can track 240+ anomalies and instantaneously review all packets on demand, emulating the onsite network administrator. With this data, admins can make more informed decisions on their wireless networks. The software basically 'senses' all packets instantaneously and sends all that information back to DNA Center for deep analysis.
	Hot and Cold patching	Hot and cold patching allows for a patch in the bug fix without bringing down the entire network and saving you the hassle of requalifying the entire image.
	Seamless multi-site upgrade	The Cisco Catalyst 9800 Series Wireless Controller is cloud agnostic and allows you the choice to deploy your network in either a public or private cloud.
<b>Security and Compliance</b>	Apple Fast lane	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 SD-Access	Software-Defined Access (SD-Access) gives you a single network fabric, from the edge to the cloud providing policy-based automation for users, devices, and things.  Provide access to any application, without compromising on security. And with automatic segmentation of users, devices, and applications, you can deploy and secure services faster.
	Cisco Identity Services Engine (ISE)	Protect access by preventing unauthorized connections and limit the impact of incidents. Deploy a next-generation identity and access control policy platform that enforces compliance, enhances infrastructure security, and streamlines service operations.

## Wireless continued

### Cisco DNA for Mobility

Pillar	Mobility Features	Mobility Benefits
<b>Security and Compliance (continued)</b>	Cisco's innovative purpose-built access points	Protect the airwaves from rogue devices, wireless attacks, and interference. 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, all while maintaining the client experience. Secure your network with the next generation of wireless controllers that are always on and can be deployed anywhere.
	Cisco TrustSec®	Simplify the provisioning of network access, accelerate security operations, and consistently enforce policy anywhere in the network.
	Cisco Stealthwatch® and Cisco Umbrella™ enable end-to-end embedded security	Protect assets by logically segmenting the network with granular policies. Receive advanced network visibility, analytics, and protection by seeing everything that happens across your network and data center.

## Switching

Cisco switching products offer a function called the 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-ready switching products:

- Cisco [Catalyst® 9000 Family](#)
  - Cisco [Catalyst 9200 Series Switches](#)
  - Cisco [Catalyst 9300 Series Switches](#)
  - Cisco [Catalyst 9400 Series Switches](#)
  - Cisco [Catalyst 9500 Series Switches](#)
- Cisco [Catalyst 3650 and 3850 Series Switches](#)
- Cisco [Catalyst 4500E Series Switches](#) + Supervisor Engine 8E
- Cisco [Catalyst 6500 Series Switches](#) + Supervisor Engine 6T
- Cisco [Catalyst 6800 Series Switches](#)
- Cisco [Industrial Ethernet 5000 Series Switches](#)
- Cisco [Industrial Ethernet 4000 Series Switches](#)
- Cisco [Nexus® 7700+M3 Card](#)
- Cisco [Meraki MS](#)

### Cisco DNA for Switching

Pillar	Switching Features	Switching Benefits
<b>Insights and Experience</b>	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.
	Cisco Catalyst® SmartOperations	Use real-time analytics to help ensure application experience and lower costs with path selection.
	Common features for wired and wireless Integrated Wireless LAN Controller UADP ASIC for wired and wireless convergence Application visibility across wired and wireless	Enable converged wired and wireless access for operational simplicity and scale. Enable converged wired and wireless access for operational simplicity and scale. Enable converged wired and wireless access for operational simplicity and scale. Enable converged wired and wireless access for operational simplicity and scale.
<b>Automation and Assurance</b>	DNA Center/SD-Access programmability	Use a single pane of management to design, provision, enable policy, and assure network services with full visibility of user and device identity, operating systems, and applications across the entire network fabric.
	EasyQoS	Use OpenFlow application-aware dynamic QoS.
<b>Security and Compliance</b>	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.
	Native MACsec encryption	Deploy high-performance encryption.
	Encrypted Traffic Analytics	Stop threats hidden in encrypted traffic without decryption directly at the switch.

## Routing

The Cisco DNA-ready routing products combine two unique features that speed up the time it takes to deploy your branch office. IT can automate the provisioning of multiple branch offices with minimal programming and customization. Software-Defined WAN (SD-WAN) delivers a secure, consistent user experience over any connection, regardless of underlying connectivity. These capabilities will simplify and streamline your WAN operations, reducing costs, saving time, and lowering risk.

Cisco DNA-ready routing and SD-WAN products:

- Cisco [4000 Series Integrated Services Routers](#)
- Cisco [1000 Series Integrated Services Routers](#)
- Cisco [ASR 1000 Series Aggregation Services Routers](#)
- Cisco [Cloud Services Router 1000V](#) and Cisco [Integrated Services Virtual Router](#)
- Cisco [5000 Enterprise Network Compute System \(ENCS\)](#)
- Cisco [Meraki MX](#)

### Cisco DNA for Routing and SD-WAN

Pillar	Routing and SD-WAN features	Benefits
<b>Insights and experience</b>	Cisco WAN Optimization	Improve application performance with layer 4 through 7 optimization and intelligent caching.
	Cisco SD-WAN onRamp	Improve the user experience at remote locations for SaaS and IaaS applications and workloads.
	Cisco Application Visibility and Control	Gain visibility into 1000+ applications for capacity planning and prioritization.
<b>Automation and assurance</b>	Cisco SD-WAN powered by Viptela®	Automate provisioning for faster SD-WAN deployments and manage both your network and SD-WAN security from a single cloud-based dashboard, Cisco vManage, and ensure users have a great experience over any connection.
	Cisco DNA Center	On-premises management delivers a single pane of management to design, provision, enable policy, and assure network services with full visibility of user and device identity, operating systems, and applications across the entire network fabric.
<b>Security and compliance</b>	Cisco SD-WAN powered by Meraki	Automate provisioning for faster SD-WAN deployments for midsize organizations with lean IT.
	Cisco Firepower® Threat Defense for ISR	Deploy industry-leading, advanced threat defense in your branch office without needing a separate appliance.
	Cisco Umbrella	Cloud-based DNA security protects branch offices and guest users from malware, botnets, phishing, and targeted online attacks using real-time threat intelligence.
	Cisco Stealthwatch Enterprise	Gain branch network visibility and device-level incident response with packet capture and machine learning.
	Multicore hardware VPN acceleration	Deploy high-performance encryption for a secure WAN.
	Encrypted Traffic Analytics	Stop threats hidden in encrypted traffic without decryption directly at the router.

## Services

Accelerate your journey to the new network and realize greater value with [Cisco Services](#). From planning to migration to award-winning support, we offer end-to-end guidance and expertise to speed your transition.

## Software licensing

The latest innovations in the Cisco Digital Network Architecture (Cisco DNA) include new software capabilities that deliver greater intelligence and security through Cisco DNA subscription licensing for switching, wireless, and routing.

- Switching subscription: Be equipped to scale your network for expansion, segment your network for security and compliance, and centralize network access policy management.
- Wireless subscription: Get exceptional wireless performance, personalize services through location-based solutions, and secure your network by protecting your devices, your data, and your business.
- Routing subscription: Deploy SD-WAN across your entire routing portfolio and improve application experience, reduce operational complexity, and have advanced threat protection.

Unlock intent-based networking capabilities on your switches, routers, and wireless hardware with DNA software. Three tiers of software licensing for each technology give you the flexibility to start now with access to ongoing DNA innovation: DNA Essentials, DNA Advantage, and DNA Premier.

## Summary

The world never stops evolving. You need a network that evolves with you. An intent-based network. Built on a robust Cisco DNA-ready infrastructure.

Learn how we can help you stay ahead:

- [Cisco Digital Network Architecture](#)
- [Cisco Routers](#)
- [Cisco Switches](#)
- [Cisco Wireless](#)
- [View 3D DNA-Ready Product Catalog](#)