The Cisco DNA-Ready Infrastructure

Is your network built for intent-based networking?

Today's organizations are becoming more innovative and dynamic by adopting mobility, IoT, analytics and cloud technologies. With this, come growing demands for network scale, agility and threat protection which call for an intent-based network.

The Cisco® Digital Network Architecture (Cisco DNA) gives you comprehensive intent-based networking across your campus, branch and WAN with robust wired, wireless, and routing solutions.

With its software-delivered approach, you have network-wide control and visibility. Now you can create and apply policies over the entire network with a few clicks.

You can rapidly isolate and troubleshoot current and past issues. You can roll out new applications across your multicloud environment without compromising security or performance.

With Cisco's DNA-ready infrastructure you have a state of the art switching, wireless, and routing foundation that gives you access to Cisco's ongoing innovation for today and the future.

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 access points:
- Cisco Catalyst 9100 Access Points
- 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 1840 Access Points
- Cisco Aironet 1830 Series Access Points
- Cisco Aironet 1815 Series Access Points

Cisco DNA-ready wireless controllers
- Cisco Catalyst 9800 Series Wireless Controllers
- Cisco 8540 Wireless Controller
- Cisco 5520 Wireless Controller
- Cisco 3504 Wireless Controller

Pillar	Cisco DNA-Ready top wireless features	Benefits
Security and compliance	Encrypted Traffic Analytics	Identify malware communications in encrypted traffic through passive monitoring, extraction of data elements and supervised machine learning.
	Segmentation	Reduce OpEx and risk while creating an agile infrastructure the delivers consistent policies and services over the entire network.
	Rogue AP detection	Proactively locate security threats; minimizes RF interferences.
Intelligence	Intelligent capture	Probe the network for anomalies and instantaneously provides the Cisco DNA Center with deep analysis. With this data, admins can make more informed decisions on their wireless networks.
	Device analytics	iOS or Samsung analytics optimize mobile experiences for users through analytics on devices that are on your network. Optimize procedures for network management.
	Wireless assurance	Get the visibility and insights to pinpoint and troubleshoot wireless issues on the network through Cisco DNA Center, the centralized network management system.
Always-on	Flexible radio assignment	Automatically deliver Wi-Fi coverage and capacity to meet service-level demands.
	Multi-site upgrade	Multi-site upgrades can be done in states and APs can upgrade intelligently without restarting the entire network.
	Hot and cold patching	Allow for a patch or bug fix that will not bring down the entire network and without requalifying the entire image.

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 9600 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

Pillar	Cisco DNA-Ready top switching features	Benefits
Security and compliance	Segmentation	Reduce security hacks with policy-based segmentation across the entire network fabric.
	MACSec encryption	Deploy high-performance encryption to reduce man-in-the-middle threats.
	Encrypted traffic analytics	Reduce attacks hidden within encrypted traffic directly at the switch.
Intelligence	Automation	Reduce operational expenses by reducing the touch time required to provision and maintain network through a single pane of management called Cisco DNA Center.
	Assurance	Reduce troubleshooting time, shift in staffing savings by proactively monitoring the network and addressing issues through a single pane of management called Cisco DNA Center.
High availability	Hot and cold patching	Update code on individual devices without bringing down the network.
	Field Replaceable Unit (FRU) fans and power supplies	Repair hardware issues without bringing down the network.

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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)

Pillar	Cisco DNA-Ready top routing features	Benefits
Security and compliance	Enterprise firewall	Application Aware firewall that has the visibility to identify over 1,400 applications and block them as needed.
	Cloud delivered enterprise security	With cloud-based Cisco Umbrella, prevent branch users, guests, and mobile users from accessing malware, botnets, phishing, and targeted online attacks using Direct Internet Access.
	Threat detection and protection	With Cisco Stealthwatch Enterprise you gain branch network visibility and device-level incident response with packet capture and machine learning.
Insights and application performance	WAN optimization	Cisco WAN Optimization improves application performance with layer 4 through 7 optimization and intelligent caching.
	IaaS and SaaS cloud connectivity	Increased reliability and performance for SaaS and IaaS applications and workloads. By monitoring all available paths Cisco SD-WAN OnRamp increases availability for users as it will find alternative paths if a failure occurs.
	Application Visibility and Control	Gain visibility into 1000+ applications for capacity planning and prioritization with Cisco Application Visibility and Control.
Automation and assurance	On-premises network management automation	Cisco DNA Center is a single pane of management to automate provisioning, enable policy, and assure network services with full visibility of user and device identity, operating systems, and applications across the entire network fabric.

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Cisco DNA Software

Unlock intent-based networking capabilities on your switches, routers, and wireless hardware through Cisco DNA software.

- 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.

Three tiers of software licensing for each technology give you the flexibility to start now with access to ongoing Cisco DNA innovation: Cisco DNA Essentials, Cisco DNA Advantage, and Cisco DNA Premier.

Pillar	Cisco DNA-Ready top routing features	Benefits
Automation and assurance	Cloud management user interface	With Cisco SD-WAN powered by Viptela, vManage provides a single cloud-based console to manage your network and SD-WAN security for faster deployments with automated provisioning, analytics and app assurance.
	Network functions virtualization	Automate software-based network services in minutes on any platform, anywhere in the network for a Software-Defined Branch (SD-Branch) with Cisco Enterprise Network Functions Virtualization.

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

Services

Accelerate your intent-based networking journey with Cisco Services. From initial planning to implementation, network optimization and training services, we offer end-to-end expert guidance and award-winning support. We'll help you securely transform your network with solutions based on the Cisco Digital Network Architecture so you can innovate faster, stay competitive and extract more value for faster ROI.