



Drive Digital Transformation with a Unified Wired and Wireless Network

Benefits

- Support the latest devices on new standards such as 802.11ac Wave 2
- Improve application performance across wireless and wired networks
- Protect the business with increased network security
- Simplify operations and make sure of policy compliance
- Quickly detect, connect, and engage with network users

Cisco Unified Access Improves Network Connectivity and Performance with Increased Security and Automation

Your business is becoming digital and the network is the foundation of this digital transformation. According to the [Cisco® Visual Networking Index](#), there will be 10 times more growth in mobile data traffic by 2019. Thus, IT is being asked to support new standards, more devices, and the bandwidth-intensive applications they use. The unprecedented

increase in mobility traffic drives not only the objective of securely scaling the network for growth, but also the need to enable new applications to add business value.

Cisco Unified Access™ helps you drive digital transformation through better connectivity, higher security, automation, and deep insight.

Deliver Smart Mobile Connectivity with a Simple, Unified Network that Deploys Security Everywhere and Helps Grow with Your Business

With the proliferation in mobile data, the wireless network now drives the need for higher performance on the wired network. You need to make sure that the wired network is not a bottleneck as higher volumes of traffic are delivered from the wireless network. It takes optimizing both the wireless and wired networks for IT to increase business agility and add value (Figure 1).

Figure 1. Cisco Unified Access Increases Business Agility



How It Works

Cisco Unified Access solutions bring wired and wireless networks together in a simple, smart, and secure way to drive digital transformation.

A converged wired and wireless network gives you one physical infrastructure for greater operational simplicity and efficiency. The Cisco Catalyst® 3850, 3650, 4500E, and 6800 Series Switches provide this convergence with integrated wireless controller functionality and are the foundation of the unified wired and wireless network. Wireless access points can be terminated directly on these switches, which means termination of the control and provisioning of wireless access points (CAPWAP) data and management tunnels, to natively convert wireless data traffic (802.11) to wired traffic (802.3) or vice versa (Figure 2).

Cisco Unified Access is smart, with built-in intelligence and fast wired and wireless connections to help you improve digital business experiences. Our 802.11ac Wave 2 access points prepare you to deliver the best performance possible with a big performance increase over the previous standard, 802.11n. Cisco Catalyst Multigigabit Switching lets you support 802.11ac Wave 2 with speeds beyond 1 Gbps on existing Category 5e cables, providing cost savings when migrating to Wave 2. This technology also supports Power over Ethernet (PoE), PoE+, and Cisco Universal PoE (UPOE), so you don't need to install new electrical circuits to power your access points.

Cisco Unified Access is highly secure, to help protect your digital business. Your network holds the key to defending your organization. Cisco Unified Access solutions can complement and empower your security systems. The solution centralizes and unifies network access policy management to provide consistent, secure access to end users with Cisco Identity Service Engine (ISE). Cisco ISE helps create and enforce security and access policies for endpoint devices connected to your organization's routers and switches. Also part of Cisco Unified Access solution is Cisco TrustSec® technology which uses software-defined segmentation to simplify the provisioning of network access, accelerate security operations, and consistently enforce policy anywhere in the network.

Figure 2. Cisco Unified Access Converges Wired and Wireless



Today's leading businesses are using the latest technologies to constantly reinvent themselves to disrupt the market. To keep pace with this speed-of-change, you need new capabilities that drive business innovation through IT simplicity and insights through network data analytics.

Cisco Unified Access drives digital transformation to improve productivity and elevate the customer experience through a simple, smart, and highly secure network from device to Cloud.

- Unified Access is part of our unique open and automated networking approach to increase simplicity. As part of this approach, policy-driven software-defined infrastructure is used across the entire network.
- Cisco leads in smart networking innovations, providing technology advancements to accelerate user-focused IT functions. These advancements allow network-aware applications to deliver business services based on location, policy, device, user preferences, and other key metrics.
- Unified Access provides optimized threat protection by combining threat protection and automation enabled by Cisco Firepower™ integration, Cisco ISE, and Cisco TrustSec.

Primary Capabilities

- Support the latest standards and devices with multigigabit across a unified wired-wireless network
- Improve application performance with deep visibility and control
- Protect the business and use the network itself as a security sensor and enforcer
- Simplify operations with a single policy and unified management
- Use location data to quickly detect, connect, and engage users

Solution Features

Simple	<p>Cisco Application Visibility and Control provides unparalleled understanding of the applications, users, and devices on the network to help you prioritize activities and make better decisions.</p> <p>Cisco IOS® Flexible NetFlow makes it easy to see a full background check on each data packet.</p> <p>Cisco Application Policy Infrastructure Controller Enterprise Module (Cisco APIC-EM) provides centralized automation of policy-based application profiles across the network to improve user experience and speed service delivery. It delivers a single management interface so you troubleshoot the wired and wireless access network at the same time.</p>
Smart	<p>Cisco High-Density Experience (HDX) helps improve TCO with, and is ideal for high-client density networks. It provides performance tuning, RF interference mitigation, spectrum monitoring, and roaming optimization for improved Wi-Fi performance.</p> <p>Whereas other solutions get within five to seven meters of accuracy, the Cisco Hyperlocation solution can pinpoint locations within one meter, providing you with accurate and valuable location data.</p> <p>Cisco Energy Management Suite helps measure and manage the energy use of all the connected devices across a distributed office and data center environment, further improving TCO.</p>
Highly Secure	<p>Cisco Unified Access components enable the network to serve as a security sensor and enforcer.</p> <p>As a sensor, the network gives a deep visibility into unknown devices, unusual traffic patterns, and unexpected behavior.</p> <p>As an enforcer, the network can contain an attack with Cisco TrustSec by enforcing segmentation and user access control. So even when attackers get in, their access is limited to only one segment of the network.</p>

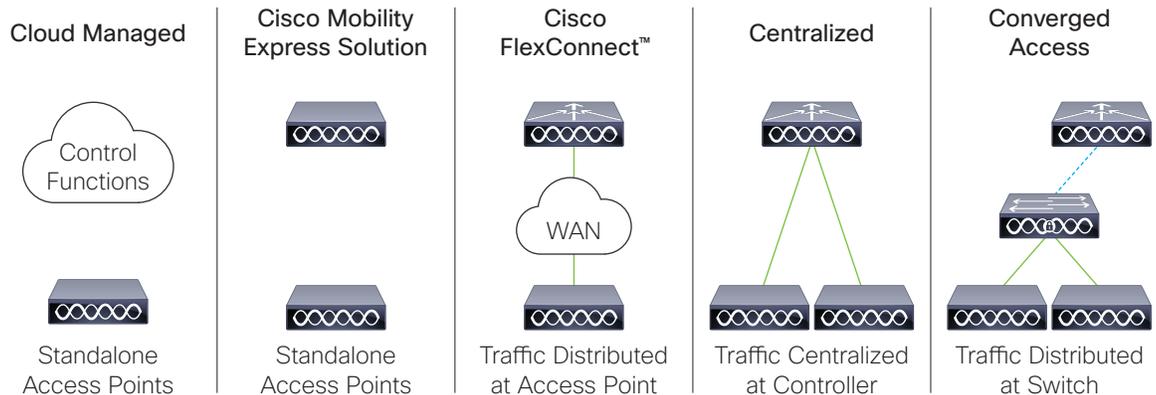
Cisco Unified Access Use Cases

<p>BYOD/CYOD and guest access</p>	<p>Cisco Unified Access provides a comprehensive approach to effectively design, manage, and support bring-your-own-device (BYOD), choose-your-own-device (CYOD), and guest access initiatives.</p> <p>Cisco Unified Access empowers you to establish contextual policy and deploy high-performance infrastructure. Networking innovation specific to BYOD and guest programs enable you to simplify on-boarding with enterprise mobility management (EMM) integration. The network becomes the security sensor and the security enforcer. We provide the tools for you to easily enforce policy across wired and wireless networks, while still offering flexibility to your employees and guests.</p>
<p>Application and device performance</p>	<p>Cisco Unified Access allows you to deploy a multigigabit wired and wireless network that supports today's bandwidth-intensive applications. We help you optimize the wireless environment and align applications to business priorities with deep insight into applications and devices. To optimize security, Cisco allows you to link policy to management data to better resolve client and application issues.</p>
<p>Analytics and user engagement</p>	<p>With Cisco Unified Access you can gain end-to-end insights based on one holistic view across your Wi-Fi network. Cisco Connected Analytics for Mobility provides network, operations, and business insights for governance of Cisco mobility solutions. Real-time data provides information accuracy in the moment.</p> <p>Cisco Unified Access enables you to:</p> <ul style="list-style-type: none"> • Quickly scale wireless environments to capture employee and customer insight • Improve location data accuracy and display reports to make better business decisions and help add value to the business • Identify rogue access points and interferers with up to one meter accuracy <p>You can also adapt to demand and gain flexibility with our self-service portal, one-time reporting, and data integration options.</p>
<p>Power lighting and other devices</p>	<p>Cisco Unified Access provides you with a high-availability wired and wireless infrastructure to use for PoE initiatives such as connected lighting.</p> <p>Connected lighting solutions can create a powerful light-sensory network (LSN). These ultra-capable, standards-based systems can gather a wide variety of data from the environment, including levels of humidity, CO2 and O2, UVA and UVB light, particulate matter, motion and seismic activity, video, sound, and more.</p> <p>Lighting is just one example. Your network can become an intelligent power source for other devices such as cameras. This enables you to:</p> <ul style="list-style-type: none"> • Drastically lower costs by saving on wiring and rewiring • Use available switch ports to create a more inviting environment and reduce cost • Detect new IP devices when they come online for compliance
<p>Network as a sensor and enforcer</p>	<p>Cisco helps you use the most valuable security tool you have: the network itself. To easily manage security, Cisco offers a security policy management platform that automates and enforces context-aware security access to network resources.</p> <p>Cisco helps your network serve as a sensor and enforcer so you can:</p> <ul style="list-style-type: none"> • Validate traffic against security policy from access to WAN • Identify anomalies and trends and segment potential malicious traffic • Quickly identify, mitigate, and correct the effects of malicious activity

Flexible Deployment Models

Cisco delivers unified access solutions for any size organization, from a single-campus deployment to widely deployed multi-campus networks. We can align to any operational model with our flexible deployment models, which can be managed locally, on premises, or from the cloud with our Cisco Meraki® product line (Figure 3).

Figure 3. Deployment Models



Why Cisco

Today's leading organizations are taking advantage of using the latest technology to continually reinvent and disrupt the market. To keep pace with this speed of change, you need new capabilities that drive innovation through IT simplicity and insights through network data analytics.

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Cisco Capital

Financing to Help You Achieve Your Objectives

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Next Steps

Talk to your Cisco representative about setting up a network discussion and assessment.

To learn more, visit www.cisco.com/go/unifiedaccess.



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