



Cisco Borderless Networks:

A Next-Generation Architecture That Connects Anyone, Anywhere, On Any Device—Securely, Reliably, and Seamlessly

The New IT Challenge

Today, IT organizations are being pushed and pulled in many directions. Evolving business models create complex technology challenges that IT is being asked to solve. Yet in most organizations, IT resources and headcount remain flat. Additionally, IT consumerization is empowering users, which in turn introduces new devices and risks that IT must manage and balance. But these new consumer devices are powerful tools that can deliver big productivity gains, if harnessed properly.

The Cisco® Borderless Network Architecture is designed to help IT balance demanding business challenges and changing business models promoted by the influx of consumer devices into the business world. Borderless networks help IT evolve its infrastructure to deliver seamless, secure access in a world with many new and shifting borders.

New Business Models

A new generation of hyperconnected employees is entering the workforce. This new generation is multimedia savvy and socially connected. They bring highly mobile video devices into the workplace and expect that video will be part of their interaction with employees, customers, and partners. Thus, IT must deal not only with new devices and usage models, but also with changing business practices that place huge new demands on the infrastructure.

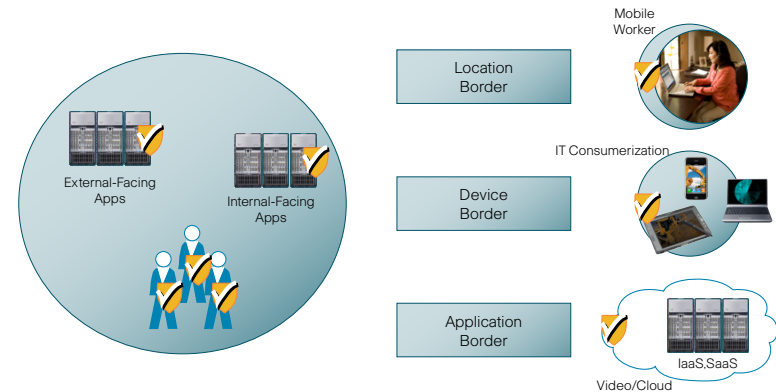
In today's workplace, it is increasingly common that primary business resources, including data centers, applications, employees, and customers, are all outside the traditional business perimeter. Extending business borders around all these people and resources taxes the IT department. IT simply cannot scale when every project is an exception to traditional IT design and management practices. IT needs a better way to scale and manage users and customers in any location, given those users may be using virtually any device to access almost any application located anywhere in the world.

Cisco's Borderless Network Architecture empowers IT to efficiently manage access from multiple locations, from multiple devices, and to applications that can be located anywhere.

Removing Location and Device Borders

The research firm IDC estimates that by 2013 more than 1.3 billion new Wi-Fi devices will be connected to the network. There is a dramatic shift occurring toward pervasive wired and wireless access, but many organizations still treat such networks as separate entities. Cisco's Borderless Network Architecture provides the framework to unify wired and wireless access, including policy, access control, and performance management across many different device types. (See Figure 1.)

Figure 1. Shifting Business Borders



Enabling Secure Access Anywhere with Any Device

The way users access information is also shifting. In the past, data and applications were housed on premises, and users were also generally on premises. Today, many organizations tap into talent pools all around the world. Workers might be full-time remote employees or contractors. Applications might be hosted off-site or even in the cloud. But traditional IT still treats these crucial resources as internal entities.

With Cisco's Borderless Network Architecture, IT can unify its approach to securely delivering applications to users in a highly distributed environment. The crucial element to scaling secure access is a policy-based architecture that allows IT to implement centralized access controls with enforcement throughout the network, from server, to infrastructure, to client.

A New Technical Architecture

At the heart of borderless networks is a technical architecture that:

- Implements the flexibility to deliver transformative, network-based experiences
- Provides control in an environment that includes partners, customers, and employees
- Links applications, users, and endpoint devices with operational processes and the network

Cisco's Borderless Network Architecture delivers two primary sets of services: network services and user/endpoint services. Network services are end-to-end services delivered by the infrastructure that encompass routing, switching, mobility, security, and WAN optimization components:

- Voice and video with [medianet](#): Extend rich media experiences to partners, customers, and employees with scale and optimization.



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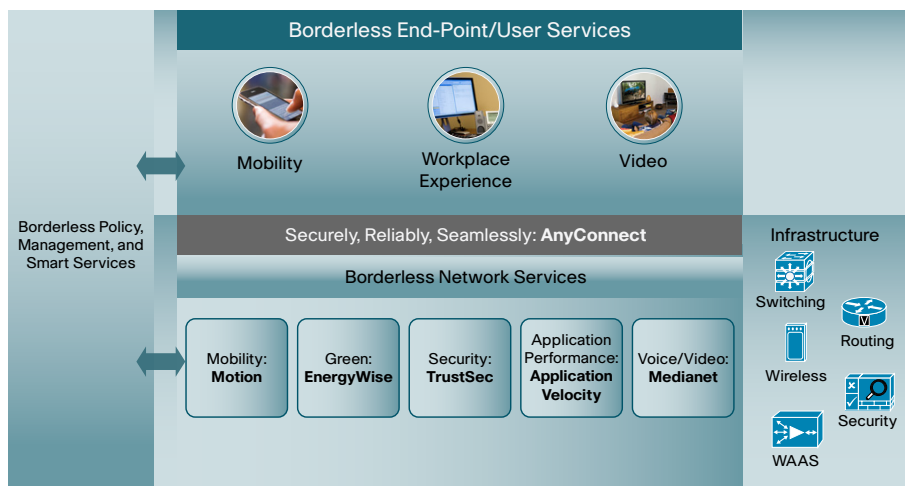
- Green with Cisco [EnergyWise](#): Measures, monitors, and controls energy usage on IT and non-IT devices from the network for agility and efficiency.
- Security with [TrustSec](#): Strengthens security across distributed networks with visibility and control to connect the right people, devices, and locations.
- Mobility with Motion: Provides anywhere, anytime access to information for wired, wireless, and remote users on any device to enhance participation.
- Application performance with Application Velocity: Enables the optimal experience of any application, at any time, and on any device, delivering the fastest application performance possible, using capabilities fully integrated into Cisco's Borderless Networks portfolio. With application awareness built into the network, IT has an effective tool for managing application performance holistically.

Endpoint/user services, even though they are the functions of the network, define the user experience and enable the attributes of secure, reliable, and seamless performance on a broad range of devices and environments. Cisco AnyConnect is an example of device software that delivers secure, persistent, policy-based access for a seamless user experience.

A Platform for Business Innovation

The Cisco Borderless Network Architecture (Figure 2) creates agility to capture new business opportunities, increases customer intimacy from personalized network-based experiences, and improves workforce productivity. Borderless Networks holistically and extensibly link together users, devices, applications, and business processes with the network.

Figure 2. Borderless Network Architecture



What Are the Benefits of a Cisco Borderless Network Architecture?

In addition to addressing primary business and IT challenges, Borderless Networks provide:

- A robust network platform capable of delivering real-time collaboration experiences to any device
- Transparent mobility with location services for anytime, anywhere communications
- Security for devices both on the local network and across cloud services
- Sustainability and reduced energy costs for efficient and cost-effective business operations
- Optimized application performance for rich-media applications
- Policy-based access control and identity-aware networking to enable access and collaboration while protecting business-critical applications
- Compliance with current and future government and industry regulatory requirements

More Reasons for Implementing a Cisco Borderless Network Architecture

In addition to the technology benefits already cited, some additional benefits of adopting a Cisco Borderless Network Architecture include:

- Relevance: Cisco works in nearly every major industry to help ensure technology solutions fit the specific needs and requirements of each business.
- Operations: Cisco delivers well-tested, thoroughly documented solutions that reduce time to deployment and help lower systems integration costs.
- Professional and support services encourage borderless network innovation by taking an architectural approach to delivering IT-based solutions. Services from Cisco and partners provide planning, design, and implementation services, as well as award-winning technical services and optimization, so that the network is robust and secure. These services also help to meet industry and regulatory compliance requirements, while also supporting collaboration, sustainability, and operational cost reduction objectives.

Additional Resources

- Cisco Borderless Network Architecture: <http://www.cisco.com/go/borderless>
- Design Zones for Smart Business Architecture: <http://www.cisco.com/go/sba>
- Cisco professional and support services: <http://www.cisco.com/go/services>