Discover the power of network simplicity

HP Converged Campus Network

Respond to changing network requirements and demands

Few if any developments have impacted enterprise networks more in the last decade than the proliferation of mobile devices and real-time applications such as voice and video over enterprise networks.

The introduction of IEEE 802.11ac access points has added more challenges, because every time one is installed, another data floodgate opens. Previous generations of access points served as an artificial buffer between wireless users and wired networks. But most wired networks simply weren't built to handle this new capacity—and because usage of wireless networks has increased exponentially—this has added much more management complexity. The result: organizations must shift their focus to enabling mobility and a new way of working by designing and deploying their network infrastructures in completely new ways.

At the same time, traditional challenges remain: improve employee productivity, free up IT resources to pursue innovation, and deliver a superior user experience that stimulates user adoption, which in turn enhances competitive differentiation and drives new sources of revenue. The new challenges include:

• Solving increased network demands because of BYOD, high-definition video, development of more and more applications, and cloud-based services

• Reinforcing security at the network edge

• Meeting user demand for a wired-like performance from wireless networks

• Increasing use of Software as a Service (SaaS) and cloud computing

• Deploying unified communications as a business productivity tool

As Lippis Consulting reports,[1] this added complexity—along with ever-increasing operational expenditures—has convinced organizations like yours of the need to unify and converge their wired and wireless systems.

Unify and simplify your network with the HP Converged Campus Network

Your customers and workers not only demand a wired-like performance from the wireless networks they access—they desire a seamless, unified connection to any application with simple and consistent onboarding, access policies, security, and performance. That's what HP Converged Campus Network delivers. Our innovative, cost-effective, open standards–based solutions:

• Reduce management and operational complexity

• Streamline your network operations to promote greater agility

• Lower TCO by up to 47 percent[2]

Future-proof your network with unified wired and wireless solutions

Managing disparate wired and wireless networks hinders the ability to innovate, limits visibility to problems, and adds complexity to troubleshooting and policy management. Forward-looking IT executives strive to ensure that there is no difference between a wired and wireless experience. They also move away from proprietary to open standards–based networks that let them evolve at their own pace. They are considering the incorporation of wireless networks that are software-defined, which can transform a traditionally static infrastructure into a dynamic one that adjusts to meet the needs of individual users and applications in real time.

[1] Lippis Report 221, August 2014
[2] IDC white paper #244053: "Enhancing Business Value with HP Wireless Networking Solutions," October 2013

HP Converged Campus Network = ease of use

• Common user experience: Wired and wireless users are treated identically

• Common management: Streamlines the management of your network policy

• Common enforcement: Dynamic policy enforcement at the network edge

They also understand that the longer they delay adapting to new and ever-changing conditions, the more they continue to strain their IT resources by spending valuable time on administrative tasks. And the user experience continues to degrade. Part of this delay may be due to the misconception that they need to rip and replace their entire infrastructures in order to prepare their networks for the future. That's an expensive, time-consuming—and unrealistic—solution.

The smart, efficient way to strengthen your network

HP Converged Campus Network is an easy-to-manage, fast, scalable, and secure campus-wide solution that meets the needs of both employees and customers, while helping you get the most out of what you already have. It offers an evolutionary approach to unifying your wired and wireless networks, answering business demands for greater agility, security, cost-effectiveness, and investment protection.

By allowing you to layer innovative, cost-effective HP components on top of your existing multivendor infrastructure, HP's comprehensive networking portfolio further supports your escalating needs through distributed security with unified, centralized, and automated network-wide control. Single-pane-of-glass management facilitates network availability and seamless collaboration with secure, unified wired/wireless access.

Plus, you're dealing with a leader in unified wired and wireless network solutions[3]. HP is a trusted partner that can help you successfully incorporate and operationalize new capabilities with your existing environment. And with products backed by industry-leading warranties and support services, you can unify and operate your network with confidence, ease, and peace of mind.

HP Converged Campus Network lets you:

• Plan, implement, and manage a solution that meets your needs today and in the future

• Continue to evolve your network at your own pace by adding devices as you need them

• Avoid bottlenecks created by the adoption of IEEE 802.11ac devices

• Speed application delivery by up to 83 percent[4] via HP Intelligent Management Center (HP IMC)

• Automatically adapt to application requirements with HP's pioneering software-defined networking (SDN) technologies—providing an even more satisfying user experience

• Enable your network administrators to monitor and manage all devices regardless of vendor

• Take advantage of comprehensive HP Networking services, consulting, and support—bringing expertise to align your network with business requirements

Inside HP Converged Campus Network

The HP Converged Campus Network is delivered via our Unified Wired & Wireless portfolio of switches, access points, WLAN controllers, security solutions, and HP IMC management software. HP's broad portfolio offers:

• Superior wireless application performance

• Optimized unified communications and collaboration technologies, especially Microsoft® Lync

• Reinforced security within the perimeter by identifying and quarantining infected devices

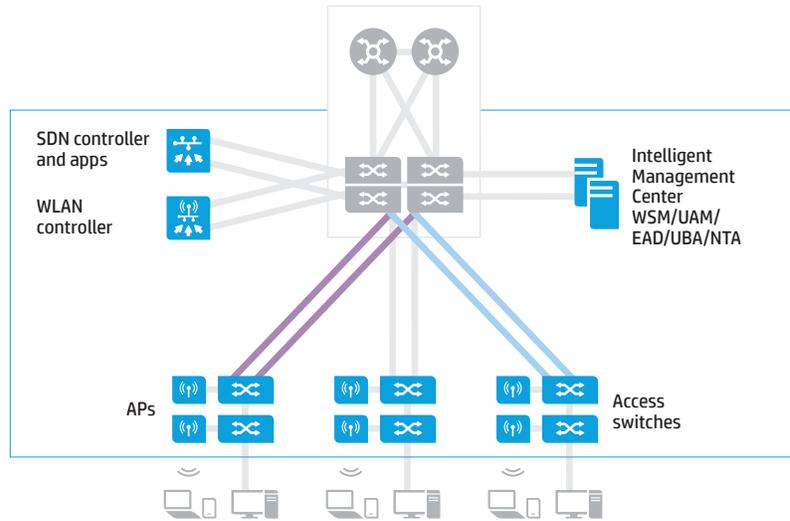• Simplified management of a multivendor environment

[3] 2014 Gartner Magic Quadrant for Wired and Wireless LAN Access Infrastructure
[4] IDC white paper #244053: "Enhancing Business Value with HP Wireless Networking Solutions," October 2013

Converged Campus Network

The power of One

One software-defined network. One management platform. One consistent user experience. One partner to help you get there. That's the power of the HP Converged Campus Network.

SDN controller and apps

WLAN controller

Intelligent Management Center WSM/UAM/ EAD/UBA/NTA

APs

Access switches

Converged Campus Edge

HP Converged Campus Network infrastructure improves performance

The HP Converged Campus Network Infrastructure is based on an advanced two-tier switching architecture that improves the performance of media-rich collaboration applications. With this solution, enterprises can eliminate or reduce the aggregation layer, which improves network performance and reduces cost. Additionally, HP Networking services promote always-available connectivity with no downtime.

Enterprises deploying an HP Converged Campus Network solution gain a secure, flexible, and agile campus infrastructure that can deliver video and other demanding applications, whether hosted in the corporate data center or the cloud, to wired or wireless users anywhere on the corporate campus.

HP Wireless LANs deliver fast, reliable connectivity for the next-generation mobile enterprise

HP WLANs enable you to improve productivity, simplify management, and reduce costs. They unify access, scale as needed, and optimize wireless performance to handle the growing number of mobile devices.

- HP 10500/7500 20G Unified Wired-WLAN Module—The HP 10500/7500 20G Unified Wired-WLAN Module delivers enterprise-scale features, capacity, and high reliability—and offers substantial wireless data processing capacity. Working together with HP access points (APs), these modules can be easily deployed on Layer 2 or Layer 3 networks without affecting existing configurations.

- HP 870 Unified Wired-WLAN Appliance—The HP 870 Unified Wired-WLAN Appliance delivers scalable performance for IEEE 802.11n and 802.11ac APs and is a resilient wireless network solution for demanding large enterprise environments. The HP 870 supports up to 1,536 APs and 30,000 users.

- HP 850 Unified Wired-WLAN Appliance Series—These controllers deliver a highly scalable and reliable solution for IEEE 802.11n and 802.11ac APs. The HP 850 supports up to 512 APs and 10,000 users, and offers sub-second failover redundancy and robust security for business continuity.

HP wireless access points handle increasing demands

HP wireless APs support increasing client densities and deliver enhanced coverage and reliability for multimedia applications.

• HP 560 802.11ac Dual Radio Access Point Series—The HP 560 802.11ac Dual Radio AP Series brings 1.3 GbE performance, faster application processing, and increased range to 802.11 clients. They're ideal for dense client environments and high-bandwidth applications.

• HP 525 802.11ac Dual Radio Access Point Series—The HP 525 802.11ac Dual Radio AP Series supports two spatial streams offering 866 Mbps capabilities along with faster application performance for medium- to high-density client environments and rich media applications.

HP switches deliver a powerful, agile converged network

HP networking switches offer high performance, scalability, and a wide range of features for core-to-edge connectivity that dramatically reduces network complexity, lowers TCO, and future-proofs your network with SDN.

• HP 10500 Switch Series—The HP 10500 Switch Series is ideal for enterprise-campus core deployments, enabling the next generation of rich-media applications with an unmatched user experience. The SDN-ready 10500 Switch Series delivers ultra-high 10GbE and 40GbE densities and 3-microsecond latency.

• HP 5400R zl2 Switch Series—Based on a powerful HP Networking ASIC, the HP 5400R zl2 Switch Series delivers enterprise-class resiliency and unprecedented flexibility, scalability, and ease of use. The SDN-ready 5400R supports demanding network features, such as hitless failover, power supply and management redundancy, QoS, and increased security with full Layer 3 features.

• HP 3800 Switch Series—The HP 3800 Switch Series brings performance, resiliency, and ease of use to the campus edge. With mesh stacking technology for modular chassis-like resiliency, the SDN-ready 3800 delivers a full Layer 3 feature set with low latency and increased packet buffering for improved network performance.

• HP 2920 Switch Series—The HP 2920 Switch Series provides security, scalability, and ease of use for the campus edge, SMBs, and branch offices. The SDN-ready 2920 delivers modular stacking, 10GbE, and PoE+ for support of your Converged Campus Network.

HP software-defined networking future-proofs your infrastructure

HP SDN provides an end-to-end solution to automate the network, enabling new opportunities to develop applications that can shape how the network functions and how it is secured. But its promise goes well beyond increased automation. The true value is its ability to free IT to focus on the quality-of-business experience rather than on network operations.

HP SDN delivers:

• A programmable network with an open standards–based infrastructure

• The ability to dynamically change how your network responds to business needs

• Rapid, automated deployment of applications

HP Network Optimizer SDN Application enhances the user experience
Considering that Microsoft Lync is deployed in nearly 75 percent of U.S. enterprises, the HP Network Optimizer SDN Application for Microsoft Lync is a valuable tool, because it enables automated provisioning of network policy and quality of service to provide an enhanced user experience.

HP Network Protector SDN Application solidifies security
The HP Network Protector SDN Application enables automated network posture assessment and real-time security across SDN-enabled network devices. Network Protector leverages the VAN SDN Controller and OpenFlow to program the network infrastructure with security intelligence from the TippingPoint RepDV Labs database. This effectively turns the entire network infrastructure into security-enforcement devices, providing unprecedented visibility and threat protection against more than a million botnets, malware, and spyware.

HP Intelligent Management Center eases administrative pain

HP Intelligent Management Center (IMC) is a comprehensive, modular, flexible, and scalable management platform that dynamically responds to network changes. Its integrated toolset covers the entire network, from the data center to the edge, even in a geographically dispersed organization. HP IMC supports the management of all HP Networking equipment as well as more than 6,000 third-party devices from a variety of vendors.

HP IMC:

- Promotes continuous uptime and availability across wired and wireless networks
- Manages proactively to ensure continuity and security
- Delivers secure unified access and policy enforcement

Supporting modules

- Wireless Service Manager—The WSM module provides unified management of your wired and wireless networks. With this module, you can add multivendor wireless network management functions to your existing wired network management system, instead of establishing a new IT management platform.
- User Access Manager—The UAM module addresses one of the most compelling challenges in networking security: the discovery, provisioning, and monitoring of endpoints and users. The module adds authentication and authorization for endpoints accessing the network edge, reducing vulnerabilities and security breaches.
- Endpoint Admission Defense—The EAD module reduces network vulnerabilities by integrating security policy management and endpoint posture assessment to identify and isolate risks right at the network edge. EAD can also provide continual monitoring of each endpoint's traffic, installed software, running processes, and registry changes.

HP Technology Services deliver peace of mind

HP Technology Services makes sure that your Converged Campus Network interoperates successfully with your current environment to satisfy your business and operational needs— at your own pace. With HP Trusted Network Transformation, you can be confident that your IT investments align with your business needs, and that the deployment of your solution won't disrupt your business operations.

Transformation Experience Workshop

This one-day workshop creates an aligned vision of your current and future states, along with an initiative roadmap of quick wins and longer-term actions. We offer these workshops for workplace and mobility as well as for the network, with a focus on SDN, IPv6, and security.

SDN Services

These services help you identify opportunities for an SDN network transformation and build a clear SDN roadmap for the network. This includes implications for applications, governance/finance, security, and infrastructure, as well as people and processes.

Support Services

These services are designed to deliver the availability required for user and business needs across the Converged Campus Network.

Aligning people, process, and technology change to enable the business

| Transformation workshop | Assessment & analysis | Strategy & architecture | Validated design | Validated integration & implementation | Data center care |

HP Trusted Network Transformation: an end-to-end approach to manage the risk of the journey

| Management of change | Program management & sponsorship | Financial options |

> "Overall, HP IMC saves us around 50 percent of the time involved in troubleshooting and fixing a problem. In most cases, we can resolve issues purely from within IMC and it helps us to keep downtime to a minimum."
>
> – Northeastern Hill University

HP Converged Campus Network worked for them, and it can work for you, too

South Washington County (St. Paul, Minnesota) Schools
South Washington County Schools is a suburban district that includes 3,000 faculty and staff and 17,600 students. The sprawling district comprises 31 sites spread across nearly 150 square miles. With exponential growth in wireless devices, South Washington County Schools needed an easier way to maintain stringent security and manage both wired and wireless networks across 31 sites. The district chose an HP SDN solution that was deployed in less than an hour using HP IMC software to nearly 400 HP SDN-capable network switches. The solution cost a fraction of hardware-based network security appliances, upfront and on an ongoing basis.

Results
- Saved hundreds of thousands of dollars upfront and ongoing
- Enabled students and faculty to use their preferred mobile devices
- Avoided restricting mobile growth
- Supports the latest learning trends: flipped classroom, 1-to-1 computing, BYOD

Istanbul Kültür University
Istanbul Kültür University has seven faculties and three vocational schools distributed among three campuses. One of the top foundation universities in Turkey—with 11,000 students and 800 staff—IKU needed to replace an aging network infrastructure to accommodate high-performance wireless solutions, including Microsoft Lync. The university selected HP Networking solutions due to cutting-edge wireless and SDN capabilities.

Results
- Established cutting-edge SDN capabilities for advanced solutions
- Easily monitored and managed unified wireless and wired network
- Dynamically adjusted quality of service for maximum performance
- Adopted new technologies to increase differentiation in competitive higher-education market

Realize the benefits of HP Converged Campus Network

HP's Converged Campus Network allows you to manage your network as a whole, providing a consistent user experience. You can realize benefits immediately while reducing costs, because HP's evolutionary approach begins with deploying the HP solution alongside your existing infrastructure, unified via multivendor management. Then you can deliver a unified experience for your users—from any device to any application—with simple and consistent onboarding, access policy, security, and performance. You'll also achieve greater productivity while preparing your network for the future of SDN and simultaneously reducing your capital and operating expenditures—without having to rip and replace your existing infrastructure.

Resources

Why Converged Campus Network
The business benefits/outcomes of a converged campus and vendor comparison

Start Planning your Converged Campus Network
Simplify, Unify Access: HP Converged Campus Network

Interoperability and Certification
Interoperability Cookbook—NetworkTest HP/Cisco Switching and Routing

HP Services
Mobility Insight: 6 myths you can't afford to ignore

Learn more at
hp.com/go/convergedcampus

Sign up for updates
hp.com/go/getupdated

Share with colleagues   Rate this document