



Freeing your network infrastructure

Experience innovation with end-to-end unified solutions



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Gartner

Freeing your network infrastructure

Advances in technology allow businesses to spur growth, cut costs and stay ahead of competitors. Yet these same improvements have spun a complex web of networking technologies that can stunt further progress. Despite the enormous boost in business productivity enabled by the mid-1990s generation of networking equipment, many companies now find themselves hobbled by legacy infrastructure that is difficult to expand, lacks interoperability and costs too much.

The course of change

The rapid increase in mobile users is one of the primary drivers for changing legacy networks. Booming demand for mobile and fixed access to multiple applications and services, the evolution of wired and wireless technology and the proliferation of WLAN devices and applications have simply outpaced businesses' ability to scale their networks efficiently, much less manage and secure them. In fact, Gartner's "The Convergent Policies of Wires and Wireless LANs" report by Tim Zimmerman predicts that "70% of new enterprise users by 2013 will be wireless by default and wired by exception."

Cohesive networking

The solution lies in a converged infrastructure where IT silos are brought together into pools of virtualized asset, shared by many applications and services. The foundation of this, connecting systems and applications over a critical IT infrastructure is the network.

HP Networking provides advanced solutions based on this approach, enabling businesses to drive more value out of their networking investment. Delivering end-to-end unified networking solution for wired and wireless users, HP provides consistent management, security, network visibility, and business continuity to help organizations reduce complexity, enhance business agility and manage costs.

Simplify the network

Business applications must multiply rapidly as technology evolves. This brings extensive complexity that in turn makes maintaining and managing the network more challenging. Rather than managing separate, disparate infrastructures,

HP Networking simplifies the network with a unified approach – including wired and wireless hardware, software, management and security. With this integrated solution, businesses can reduce the time and complexity of planning, deploying and operating wired and wireless LANs.

Converged management simplifies network administration and operations. This enables security policies that can be centrally defined and dynamically applied to each user at the point of access regardless of the device within the network. This eliminates the need to maintain multiple management stations, access rights, and different device and configuration policies so companies can focus more on their business and worry less about the network.

Enable agility

Businesses need flexible networks that can adapt with changing business needs. HP Networking empowers businesses with scalable, standards-based networking solutions that provide instant policy-based provisioning of new applications and services, high speed PoE+ capabilities to support bandwidth intensive applications and a choice of leading solutions. Harnessing industry-wide innovation from leading vendors like Microsoft, Avaya, and Riverbed, HP ProCurve's Open Network Ecosystem (ONE) offers customers complementary, best-in-class solutions for the HP Network infrastructure and the freedom to ensure they meet business needs.

Manage costs

Controlling network expenses in the face of relentlessly evolving technology is a challenge most businesses face. While most organizations retain networking equipment over 7 years on average, they need a cost effective network they can trust. With HP's legendary quality and industry leading life time warranty* businesses can enable better cost management over the life of the investment that is supported by industry experts.

HP Networking helps businesses reduce the cost of acquisition, maintenance, support and operations with highly integrated networking solutions. Offering expansive network capabilities with advanced Layer 2 and Layer 3 switches,

built-in security, common software, a consistent management interface and advanced technology such as HP ProVision ASICs and SFP+ connectivity, HP helps reduce costs and optimize productivity.

Experience HP Networking

With technology forging ahead, organizations need solutions that optimize business rather than hinder it. HP ProCurve Networking has been positioned in the Leaders Quadrant in the [Gartner Magic Quadrant for Enterprise LAN \(Global\) 2009](#)¹ and recently positioned in the Challenger Quadrant in the [Gartner Magic Quadrant for Wireless LAN Infrastructure \(Global\) 2010](#)². As a leading networking vendor, HP Networking delivers innovative technology to liberate complex and incongruent networks with end-to-end unified networking solutions. Enable the agility and business continuity needed to free the network and expand business today.

» To learn more about HP Networking visit hp.com

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¹Mark Fabbi, Tim Zimmerman, "Magic Quadrant for Enterprise LAN (Global)," Gartner, 30 April 2009.

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²Mike King, Tim Zimmerman, "Magic Quadrant for Wireless LAN Infrastructure (Global)" Gartner, 12 February 2010

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^{*}For as long as you own the product, with next-business-day advance replacement (available in most countries). The following hardware products have a five-year hardware warranty for the disk drive and lifetime hardware warranty (for as long as you own the product) for the rest of the module: HP ProCurve ONE Services zL Module, HP ProCurve Threat Management Services zL Module, and HP ProCurve MSM765zL Mobility Controller. The following hardware products and their related series modules have a one-year hardware warranty with extensions available: HP ProCurve Routing Switch 9300m series, HP ProCurve Switch 8100fl series, HP ProCurve Network Access Controller 800, and HP ProCurve DCM Controller. The following hardware products have a one-year hardware warranty with extensions available: HP ProCurve M111 Client Bridge, HP ProCurve MSM3xx-R Access Points, HP ProCurve MSM7xx Mobility and Access Controllers, HP ProCurve RF Manager IDS/IPS Systems, HP ProCurve MSM Power Supplies, HP ProCurve 1 Port Power Injector, HP ProCurve CNMS Appliances, and HP ProCurve MSM317 Access Device. Standalone software, upgrades, or licenses may have a different warranty duration. For details, refer to the ProCurve Software License, Warranty, and Support booklet at www.hp.com/go/procurve/warranty.

The Convergent Policies of Wired and Wireless LANs

Wired and wireless infrastructure solutions are only differentiated by the communication technology at the edge of the network. As the access layer technologies continue to become confluent, enterprises only need one set of policies and tools for security, access and management regardless of the physical infrastructure.

Key Findings

- Enterprises view wired and WLAN communication infrastructures as separate entities, even though more than 80% of the components used to implement wired and wireless solutions are the same.
- Enterprises have separate policies, applications and tools for wired as well as wireless security, guest access and network management.

Recommendations

- During the next three years, enterprises should develop common policies and tools for security, guest access and network management for wired as well as wireless network infrastructures.
- Enterprises purchasing wired or wireless solutions should choose vendors according to their abilities to secure and manage the entire infrastructure access layer. While “best of breed” components may be able to provide superiority in one aspect of the evaluation process, and in many cases be the best selection, enterprises need to look at the bigger picture when securing, managing and accessing the entire infrastructure.

ANALYSIS

Advances in wired as well as wireless LAN technology have provided improvements in performance, and the bulk of business applications can now be performed using either a wired or wireless infrastructure access layer. Gartner predicts that 70% of new enterprise users by 2013 will be wireless by default and wired by exception. Whether it is 10/100/1000 Ethernet or 802.11n wireless, the communication infrastructure continues to move ahead to address the growing needs of data, voice and video business applications. As the physical layers

become confluent, disparate applications and tools are still being used to enforce separate security policies or manage only a portion of the network components. Enterprises need to review security, guest access and network management policies, and standardize when applicable to consolidate operations and avoid or eliminate redundant applications or tools.

Authenticating to the Network

Enterprises must require a uniform mechanism that ensures network credentials remain secure over network connections and guarantees that the users are who they claim to be. Enterprises need to establish a policy under which all clients are required — regardless of their physical layer connectivity — to authenticate when attempting to gain access to network resources. When the components of a Wi-Fi Protected Access 2 (WPA2) solution have been implemented because of an existing WLAN, the recommended authentication policy for all clients is 802.1X because it is the most secure. In a recent Gartner security survey, greater than 50% of enterprises reported they were looking to move to 802.1X for their wired clients from their current solutions by 2011.

Holistic Approach to Guest Access

Now that we have separated the users that are supposed to be on the enterprise from those that aren't supposed to have access, “guests” are people who are asking permission to use the enterprise resources. Historically, wired architectures had a tendency for a guest to be automatically pushed to a virtual LAN (VLAN) where their only access is externally to the Internet. The implementation of a captive portal solution, which minimally may require an e-mail address and an administratively provided password for tracking and provide Internet access to the guest, can be used for wired as well as wireless clients. As campus LAN vendors recognize the momentum of wireless at the access layer, guest access solutions from Cisco and HP already have the capability to address wired and wireless clients from a single console. Security-conscious enterprises have defined different types of guests or have a need to track and control access to enterprise resources with more granularity. Guests' identity/role-based provisioning functionality can limit the time of connection and network

bandwidth allowed for the user, or the location that they can access, whether it is a specific wired port or access point. Uniform implementation may require upgrading the applications or coordination between wired and wireless vendors. Enterprises with identity/role-based provisioning needs should consider vendors that provide wired and WLAN components, or a strategic relationship with a WLAN vendor that ensures the ability to control their access point communications.

Network Management

Network management tools provide a system-level view of the infrastructure. The details of the enterprise policy determine where the edge of the network is defined, but typically stop at the switch in the wiring closet. For enterprises that have implemented WLAN, the edge has been extended to include the access points and sometimes even the mobile clients. As WLANs continue to become the access layer of choice for end users, we recommend that enterprises update or develop a cohesive network management policy for their wired and wireless access layer components. While separate vendors' products continue to exist for managing wired and wireless networks, there is a change in the winds as networking vendors such as Cisco, HP and Foundry Networks have taken the lead by integrating management of their wireless components, whether internally manufactured or OEM components, into the same tool that manages their wired components. A combined solution can save an enterprise from \$2,000 to \$20,000 for a single tool instead of two separate tools that manage half the solution. With a goal to simplify a multiple-console situation, an enterprise needs to recognize that it may be faced with a situation where neither of the current wired or wireless network management tools can provide unification. A different tool — as well as the associated expense — may be needed to implement the policy or minimally reduce the total number of tools needed to manage the network components. For example, enterprises with WLAN access points from multiple vendors (as part of the enterprise infrastructure that has different facilities that are centrally managed) should consider Aruba's AirWave to manage these disparate WLAN components while maintaining the ability to communicate upstream to a single system management console that defines an integrated one-view implementation

The confluence of wired and wireless access layers is necessitating the convergence of separate enterprise security and guest access policies into a uniform policy that is independent but accommodates different physical layers. Although the intent of a universal policy is to simplify the infrastructure services and tools, it may require multiple steps and, in many cases, may eliminate separate applications that are governing only a portion of the infrastructure. It also may require upgrading applications or providing additional capacity to achieve a uniform implementation of an enterprise policy. To eliminate disjointed policies and provide continuity, enterprises need to revise or develop security, access and management policies that address convergent wired and WLAN access layer technologies.

Gartner RAS Core Research Note G00162765, Tim Zimmerman,
10 December 2008

About HP

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