

# HP ProCurve Networking Access Control Security Solution

## White Paper



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## Introduction

In today's complex and constantly changing business world, employees, partners, customers, vendors and contractors all require different levels of access to different areas of the Local Area Network (LAN) at different times for different business purposes. As a result, enterprises must have business security solutions that provide detection and enforcement at every point of network access. To that end, corporations need a comprehensive, strategic approach to access control. It sounds simple enough: who gets in and who doesn't. But the issues involved can be complex, and the threats are real and growing.

Consider this: more than 90 percent of the 530 companies polled in one survey<sup>1</sup> admitted to security breaches. Not surprisingly, 82 percent of the companies identified external threats like hackers as a likely source of those breaches, but 77 percent of the companies also identified disgruntled employees as another likely source.<sup>2</sup> That's why smart corporations are not only focused on preventing unauthorized access but also detecting and enforcing policies at every point of access for all authorized users.

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"The No. 1 issue is a general complacency that somehow a security breach, if it happens, will have a small impact on the organization. So many companies, even the larger, better-established organizations, do not put enough resources into preventive strategy, and they spend an inordinate amount of resources when a disaster or problem hits."<sup>3</sup>

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However, a substantial number of corporate networks still have vulnerabilities, including unprotected LAN ports that are easy prey for viruses, hackers and malicious users. The 2003 FBI/Computer Science Institute Computer Crime and Security Survey states that many companies "simply do not know what's going on within their networks."<sup>4</sup> Those companies face substantial risk and have little chance of constructing an audit trail to find out how or why an incident occurred.

But there is a better way.

HP developed the HP ProCurve Networking Adaptive EDGE Architecture™ specifically to address this issue. Within the architecture, the HP ProCurve Access Control Security solution enables Chief Information Officers to retain central command of their LANs but push access control to the LAN edge. An infrastructure built on the Adaptive EDGE Architecture provides a secure, robust LAN for current network traffic. It also provides a better way for corporate LANs to integrate future applications and traffic.

The network edge is the place where users and applications connect, where traffic enters and exits the network, and where the network must determine how that traffic should be handled. The edge is where security policies can be enforced most effectively, where the user gains access after being authenticated by a central command resource.

The HP ProCurve Access Control Security solution offers a comprehensive approach to access control. The Adaptive EDGE Architecture provides control and functionality without adding unreasonable network complexity, overextending budgets or compromising future flexibility. The HP ProCurve solution provides comprehensive security that includes pre-set rules for end users governed by a central Information

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<sup>1</sup> 2003 FBI/Computer Security Institute annual "Computer Crime and Security Survey"

<sup>2</sup> *ibid*

<sup>3</sup> Larry Ponemon, Wall Street Journal Q&A, Feb. 24, 2003

<sup>4</sup> *ibid*

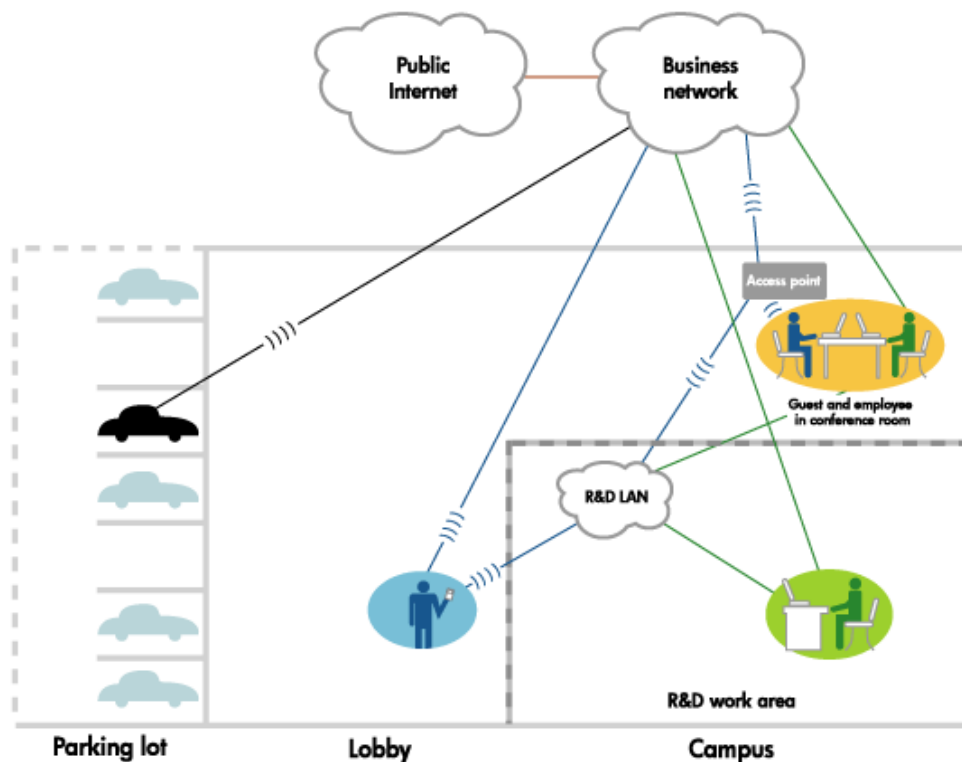
Technology command structure, control of individual user access at the edge of the network LAN and a clear audit trail so the company can track and monitor network activity.

This paper explores how this comprehensive approach simplifies network access management, creates a secure, intelligent wired and wireless environment and provides affordable network security that detects all users and enforces all corporate policies at every access point.

## Why Access Control?

When it comes to controlling access to their LANs, many corporations leave their virtual doors open and their virtual windows unlocked, providing unrestricted access to a variety of end users. That lack of infrastructure presents little challenge to any malicious users and is one reason that 80 percent of corporations surveyed in the 2003 FBI/Computer Science Institute Computer Crime and Security Survey reported internal security incidents.

Figure 1: Common Access Control Infrastructure



The lack of access control measures also presents a huge liability for the corporations. For example, in Figure 1 there are virtually no access control measures in place. A guest can access a LAN containing sensitive research and development information right from the company's lobby or parking lot. The lack of access control measures can easily mean the loss of a company's hard-won intellectual property or competitive advantage.

## Business Benefits

Any comprehensive access control solution must identify individual users, establish the types of services they are authorized to use and set their access levels accordingly. The HP ProCurve Networking Access Control Security solution offers several benefits to CIOs and end users.

- **Centralized command:** It enables corporations to construct an intelligent access control solution that offers central command over the network.
- **Access control at the LAN edge:** It efficiently delegates access, authentication and tracking capabilities to switches and software that sit at the very edge of network LANs. Pushing access control to the LAN edge enables decisions to be made immediately rather than deferring them to the core. It also prevents potentially malicious traffic from gaining access to the LAN.
- **Secure and easy to use:** It provides a computing environment that's more secure yet easy to use, because every time end users log in it's customized to recognize who they are and what they need to do.

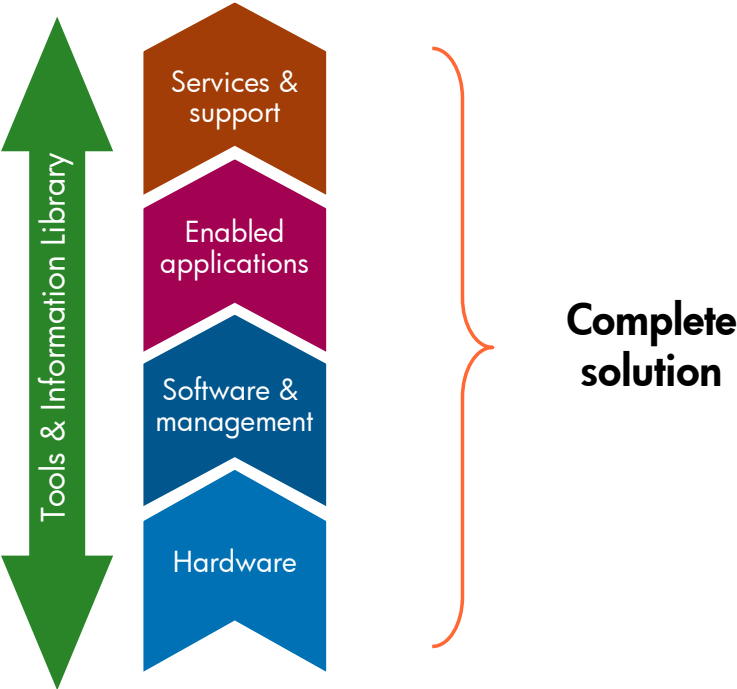
This is a fundamentally different approach than that of many current corporate access control systems, and migrating toward it requires a clear evolutionary path. This is especially important as end users tend to willingly adopt new procedures only if they are easy, simple and build on their existing infrastructures.

HP ProCurve provides an affordable solution that can grow with a company's needs or work with its existing computer infrastructure. A smart architecture and a clear migration path are essential ingredients for building an intelligent network that can keep corporations truly secure.

# HP ProCurve Access Control Security Solution Overview

Network access control resembles an airport – there are different levels of access for different employees, people come and go at all hours and they have to swipe an access card or provide ID to enter certain areas. This helps secure the various areas – and keeps the employees and guests safer. HP ProCurve solutions monitor all areas of a LAN to keep intruders out and track workers who are inside.

Figure 2. HP ProCurve Access Control Security solution framework



The HP ProCurve Access Control Security solution offers a complete solution (Figure 2) from hardware, software, and management services to applications, services, and support. Hardware alone can't provide total access control, but the combination of hardware and software, services from HP and its partners, plus a comprehensive tool set provides the basis for a comprehensive access control security solution.

As part of a command/control strategy for an overall network architecture, corporations should at least consider moving to a two-point access control system that ties end users to specific computers and specific networks. This two-point authentication essentially locks the user and the computer together, ensuring a one-to-one relationship. This alone can substantially increase security on existing networks. Effective access control is a critical ingredient for corporations attempting to maximize the security of corporate and customer information.

## Why HP ProCurve?

In the future, well-constructed intelligent networks will have access control systems that prevent 95 percent of attacks and drastically cut the risk from internal issues by providing a clear audit trail and authorization process that provides users with rapid access and authentication.

Traditional networks enforce security at a central point, which gives malicious traffic an opportunity to infiltrate the network core. That's why it's critical to stop unauthorized traffic at the network edge and to track authorized users throughout the network. HP ProCurve solutions have several layers of built-in security that take advantage of the latest standards-based security features. For example, standard 802.1X port-based access control is available on all HP ProCurve enterprise class managed products.

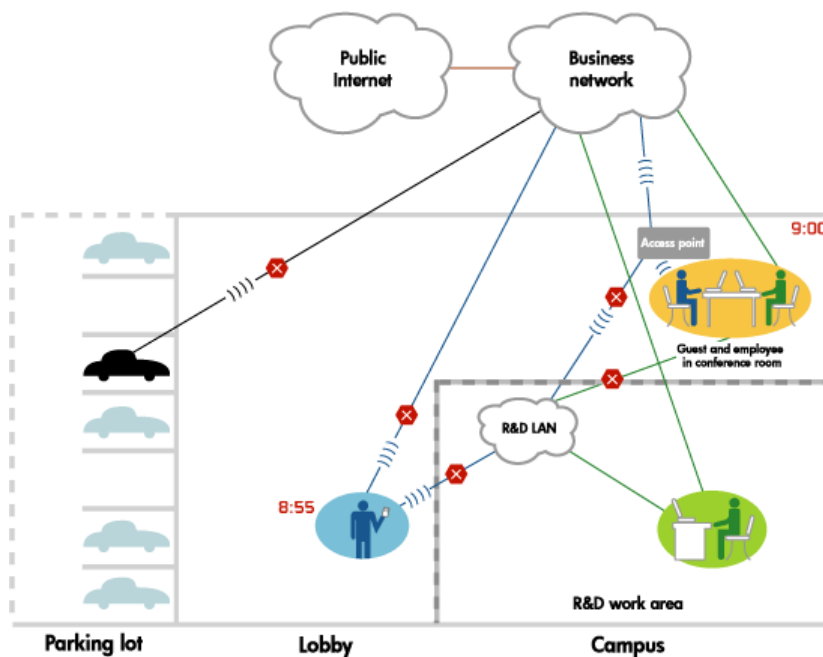
The HP ProCurve Access Control Security solution is a result of 25 years of experience and investment in networking products and technology. HP ProCurve solutions are part of an architectural approach designed to push intelligence to the edge of corporate networks but retain command at a central location. HP ProCurve offers a complete solution, including a comprehensive strategy for handling critical network security issues with a full range of enterprise-level service and support. Benefits include:

- High performance, reliable technology at an affordable price
- Reduced complexity that leads to operational efficiencies
- Security solutions that support industry standards
- The ability to handle multiple types of users, applications and services
- The ability to unify network access for wired and wireless networks in large corporate environments
- The ability to provide guest access without compromising internal security
- The ability to integrate future technologies with existing investments
- The ability to blend hardware, software, support and services into a complete solution

# HP ProCurve Access Control Security Solution Deployment Scenario

The HP ProCurve Access Control Security solution segregates networks. For example, in figure 3, the LAN has been divided into a series of access zones. If an employee works some of the time in a secure area, like a research and development (R&D) laboratory, he has access to both the private R&D LAN and the public Internet. But if he leaves the secure area his access can be limited to just the public Internet so that sensitive information isn't accidentally seen by unauthorized people. This can be accomplished without requiring the employee to take any action. The network simply adjusts based on his location. Also, if a guest visits the company's lobby before 9 a.m., she can't access the public Internet or the company's LAN. At 9 a.m., the guest can access the public Internet but she still cannot access the company's LAN.

Figure 3: HP ProCurve Authorization and Access Rights Boundaries



In this scenario, HP ProCurve allows the company's network administrator to authenticate its LAN users based on a variety of factors, including membership in a particular group, individual identity, time of day, physical location and job roles or responsibilities. The bottom line - more productive end users and a more secure network.

## HP ProCurve Access Control Solution Services

Because robust network security is such a high priority to you, HP recommends that you have an HP ProCurve Elite Partner assess, deploy, and maintain the HP ProCurve Access Control Security solution to fit your needs. HP ProCurve Elite Partners, trained in HP ProCurve Access Control Security solutions, offer services designed to integrate your new Access Control Security solution into your existing network.

HP ProCurve Elite Partners have a comprehensive understanding of networking and offer a broad suite of product and application services, including systems integration and network design, installation, configuration, optimization as well as network lifecycle support. HP ProCurve Elite Partners are required to have achieved the highest level of certification in network solutions planning and design as recognized by Hewlett-Packard. HP ProCurve Elite partners are the partners of choice for our most demanding customers.

With a HP ProCurve Elite Partner, you are assured of having a partner and advisor that you can depend on and trust to deliver a best in class solutions that will effectively address your IT requirements and ultimately, your business needs. HP ProCurve Elite Partners are committed to excellence, quality and integrity.

## Summary

There's a curious dissonance when 90 percent of companies report security breaches but many of them don't have any idea what's going on within their networks. It's time to face facts: the need for comprehensive access control solutions has never been more urgent. The good news is that access control is a solvable problem for corporations.

To solve this problem and protect their LANs, corporations must essentially build a series of electronic "doors" that lead authorized users into appropriate "zones" of information and services – and nowhere else. Those doors and zones will prevent unauthorized use and enforce corporate policies at all times and in all locations.

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"The new model for controlling access to a network calls for protecting data wherever it is and trusting no one completely wherever they are." <sup>5</sup>

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Comprehensive access control systems architected this way can build on existing infrastructures and ultimately provide the most secure access control possible to corporate LANs.

So how do corporations get there from here?

With more than 25 years of experience in network infrastructure, HP understands what corporations need to develop intelligent networks that can help manage the risks associated with access control. Controlling access to networks is a huge task – and will remain so as the trends of the Internet, mobile computing and convergence continue to change how corporations work.

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<sup>5</sup> Suzanne Gaspar, "The New Security Battle Plan" Network World, Sept. 30, 2002

## For more information

To learn more about HP ProCurve Networking solutions, contact your local HP sales representative or visit our website at: [www.hp.com/go/hpprocurve](http://www.hp.com/go/hpprocurve).

For a list of HP ProCurve Elite Resellers that can provide HP ProCurve Access Control Security solutions near you, go to [www.hp.com/go/hpprocurve](http://www.hp.com/go/hpprocurve).

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