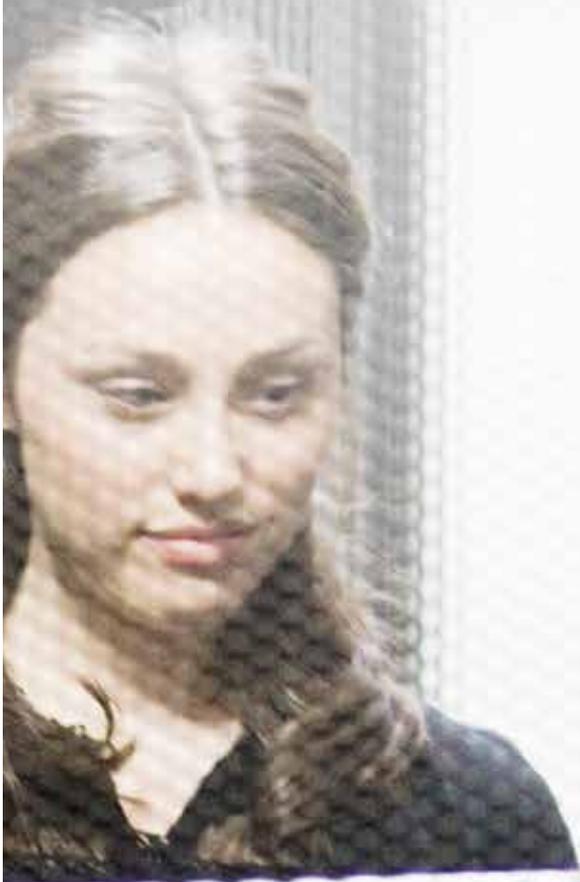# A holistic approach to your BYOD challenge
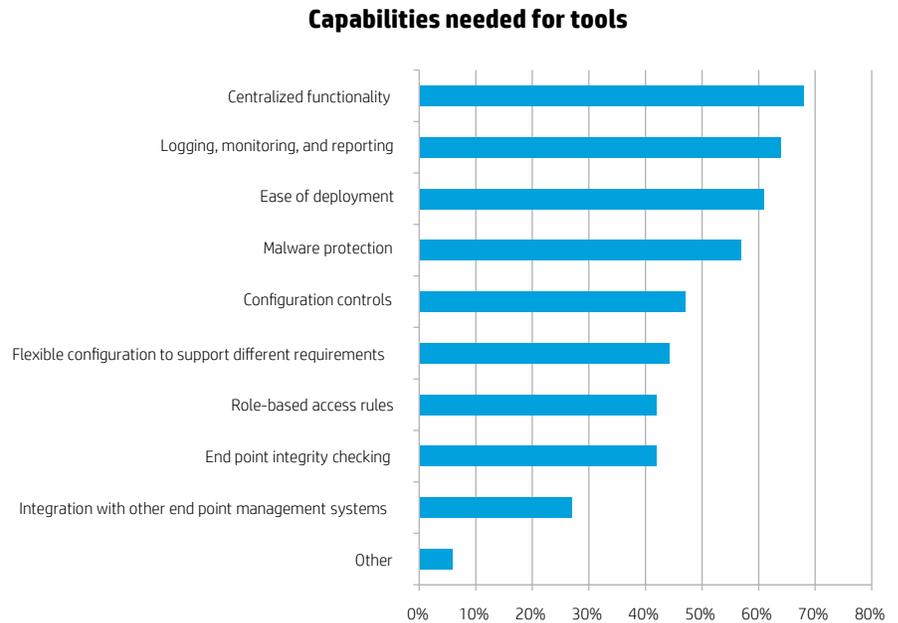
HP BYOD solution

Introduction

More and more enterprises are seeing significant benefits from allowing employees to choose the device they use to get their jobs done, and are adopting bring your own device (BYOD) initiatives. In fact, a CIO survey conducted at Gartner Summits in the United States and Europe indicated that, by 2014, 80 percent of the global workforce will be eligible to participate in a BYOD program.[1] While the BYOD trend increases flexibility and productivity, it introduces a host of new challenges for your IT administrators.

A key concern for IT is how to effectively secure and manage the network and application access for personally-owned devices. User-owned devices cannot easily be identified, and therefore managed by your IT department. Malware infected clients can compromise your network security when allowed access to the network or vital business applications and information

Security is not the only challenge. You might still rely on traditional separate wired and wireless networks and management tools that increase maintenance overhead and can't provide the flexible access policies that personally-owned devices require. Your enterprise needs to think beyond essential BYOD access and consider the critical need for unified wired and wireless visibility and management to streamline your overall network management.

[1] "Creating a Bring Your Own Device (BYOD) Policy," Michael Disabato, Gartner, April 2012.

Figure 1. Tools needed for mobile security solutions

Capabilities needed for tools

Requirements for BYOD

Based on a recent **SANS mobility/BYOD security** survey of 500 IT professionals[2] the top three priorities that organizations are looking for in a BYOD security solution (see figure 1) are:

1. Centralized functionality

2. Logging, monitoring, and reporting

3. Ease of deployment

From an IT perspective it is clear that an effective BYOD solution should simplify deployment by converging network management with the administration and enforcement of access policies based on device, user, or access method. An effective BYOD solution should also automate your user/device on-boarding process to minimize user disruption and offer real-time reporting of your BYOD traffic and security to optimize resource allocation and quickly measure, enforce, and meet compliance mandates.

Unified BYOD essentials and Beyond—A complete unified BYOD solution

The HP BYOD solution pivots around HP Intelligent Management Center (IMC), which offers you a single-pane-of-glass network and user management solution for your entire enterprise network.

HP IMC's modular design integrates traditionally separate management tools, network access services, policy management, and user and traffic monitoring that delivers to your enterprise a single-pane-of-glass application for BYOD essentials: On-boarding, Provisioning and Monitoring.

IMC goes beyond the unified BYOD essentials by delivering converged management across various networks—physical and virtual, wired and wireless, and applies the appropriate security policies to the users and devices (personal or company-owned) accessing your network.
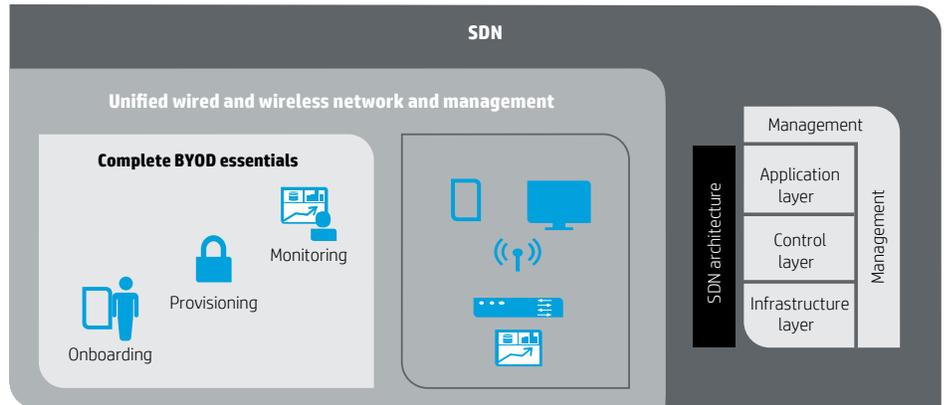
The BYOD solution provides a simple, scalable and secure network that is also ready for Software-Defined Networking (SDN).

[2] Co-sponsored by HP security products.

Figure 2. HP complete unified BYOD solution

Complete, unified bring-your-own-device (BYOD) solution
Simple, scalable, and secure

BYOD essentials

For granular network and application access, HP IMC manages user access control and identity-based policies to help your IT managers overcome the complex security challenges associated with the widespread adoption of user-owned devices. Your IT administrators can establish and enforce granular and consistent network access policies for wired and wireless users to protect your IT assets, mitigate risks, optimize network availability, and ensure regulatory compliance.

HP BYOD solution supports wired and wireless device on-boarding, provisioning, and monitoring. Deployment of the BYOD solution delivered through IMC comes with ease because of IMC's modular design. The modular design gives you the flexibility to add functionality as needed without the need to deploy separate management tools.

Mobile device on-boarding

IMC supports user authentication based on identity, device location, time, and endpoint security health. Users can be assigned automatically into the appropriate VLAN based on their identity, device type, device posture, time of day, application type, or other factors. Access to the network can be granted based on a device's IP or media access control (MAC) address, which is particularly useful for printers, IP phones, and barcode scanners.

Because IMC centralizes network access and policy enforcement with network management capabilities, your IT administrators can integrate, correlate, and collaborate user and network device management from a single platform. By providing authentication and authorization for devices accessing your network, IMC helps you reduce vulnerabilities and security breaches.

IMC fully supports the IEEE 802.1X network access control standard and leverages HP advanced fingerprinting technologies for Apple iOS and Android devices and comes with a self-registration portal for guests and personally-owned device to automate the on-boarding process and reduce the administrative burden so that you can support your organizations' BYOD initiatives quickly and easily.

Provisioning

You can further minimize security risks through HP IMC-integrated security policy management and endpoint posture assessment. This allows your administrators to control endpoint admission based on the device's identity and posture. If an endpoint is not compliant with the established policies, access to the network can be isolated for remediation or blocked to protect your network assets.

IMC security policy component further provides non-intrusive actions to secure your network edge proactively, including end point monitoring and notification. This component also supports security evaluation, security threat location, and security event awareness. To ensure continued security HP IMC policy component continually monitors each endpoint's traffic, installed software running processes, and registry changes. These functions enable all endpoints connected to your network to be secure.

Monitoring

With HP IMC, administrators will have full visibility into what users are accessing from personal and company issued devices. Since IMC can provide information regarding what users have accessed from their device, you will be able to differentiate between business oriented access versus recreational access.

Integration with network resource usage data such as network address translation (NAT), flow records provide you with full visibility of BYOD traffic and compliance reporting. Based on this data, you can set the appropriate network access policies, and manage network resources and capacity more effectively across wired and wireless networks.

Unified high-performance wired and wireless with single pane-of-glass management

HP BYOD solution goes beyond the essentials to deliver unified wired and wireless management and a converged network infrastructure that is optimized for wired and wireless connectivity.

Figure 3. Unified Wired-WLAN Solution Deployment
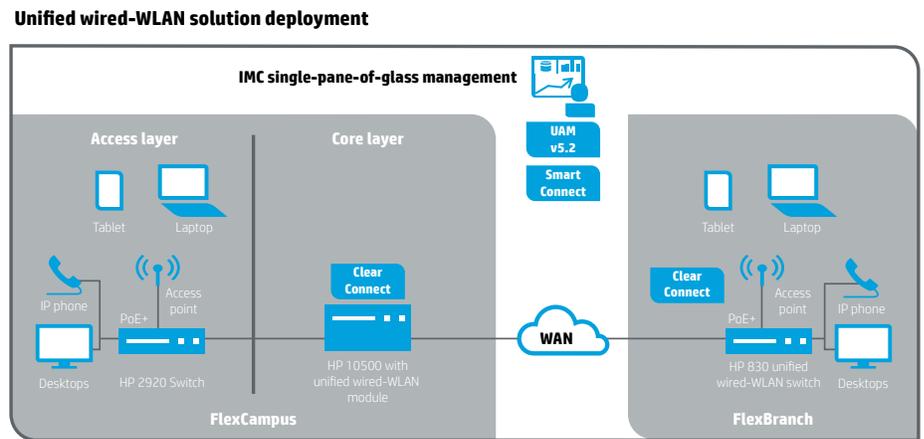
"It is no longer acceptable to have two different network management applications or differing guest access applications. Unifying network service applications reduces complexity by providing a single display and reduces costs associated with redundant solutions."

Source: "A unified access layer forces changes to infrastructure thinking at the edge of the network," Gartner (analysts: Tim Zimmerman and Mark Fabbi), March 2012.

Figure 4. HP 830 Unified Wired—WLAN Switch

Figure 5. HP 10500/7500 Unified—WLAN Module

HP unified wired and wireless network delivers the industry leading scalability, reliability and performance needed to support your mobile workers, who rely heavily on smartphones, tablets, and laptops. Our mobility solutions include HP 830 Unified Wired-WLAN Switches for branch offices and highly scalable unified wired-WLAN modules for HP 10500/7500 Modular Switches allowing you to deliver core to edge unified access, security and QoS with single pane-of-glass management.

HP 830 branch office and HP 10500/7500 campus solution unify wired and wireless connectivity and offer a non-blocking WLAN architecture which combines centralized management with flexible forwarding options, and intelligent access points at the edge of the network to deliver unparalleled scalability (up to 220,000 clients) and application performance to your mobile users.

HP Wi-Fi Clear Connect software further improves the coverage and performance of your wireless network by automatically adjusting to changing radio frequency (RF) conditions. You get a better performing, more reliable Wi-Fi network at a lower cost.

Wi-Fi Clear Connect also helps you improve your users' Wi-Fi experience by dynamically balancing the client load across access points.

We offer a portfolio of high-performance dual-radio three spatial stream 802.11n access points that provide you near gigabit client access and support nearly twice the number of users compared to two spatial stream access points.

You can leverage HP RF optimization features such as beam forming and band steering to optimize client performance and move 5 GHz-capable clients to the less congested 5 GHz spectrum.

HP offers a variety of switches which provide connectivity, performance, scalability, security, and energy efficiency, and they all can be managed through single-pane-of-glass management software with HP IMC. An example of a new switch family is the HP 2920 Switch Series which is cost-effective, high-performance, standards-based, and OpenFlow-enabled.

OpenFlow-enabled switches deliver an SDN-ready infrastructure and investment protection.

Figure 6. New HP 2920 Series Switches with OpenFlow
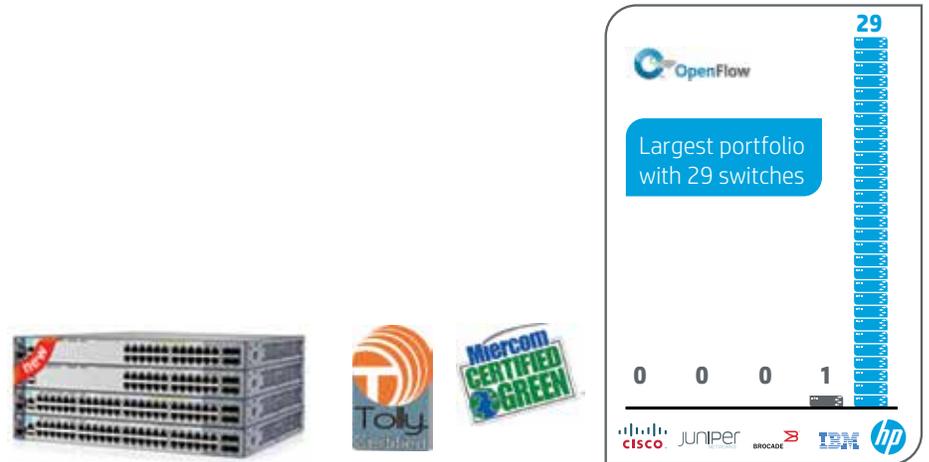
SDN

HP is delivering is a complete, end-to-end framework for SDN solutions to enable businesses to create a scalable, agile, and secure network that empowers you to streamline business operations. With this framework, your network will be ready for SDN and applications like Sentinel Security which provides dynamic threat protection to mitigate increased security risks attributed to BYOD.

Figure 7. HP Sentinel SDN Application
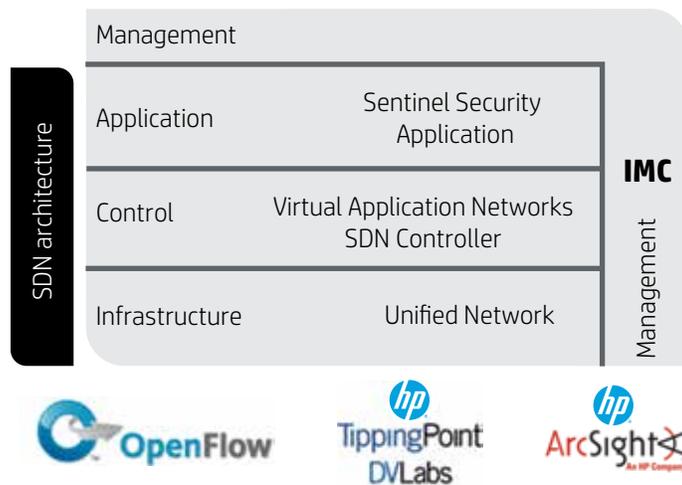
Conclusion

With HP BYOD solution, you can move beyond BYOD access to efficiently manage your entire unified network infrastructure, secure personally-owned devices, and monitor BYOD traffic. You can enjoy ease of deployment, low operational costs, and strong and consistent security. Simplified network access allows you to easily and securely support employees', partners', and guests' tablets, notebooks, smartphones, and other mobile devices on your campus network while holding the line on operational expenses. With HP, BYOD is secure, scalable, simple to deploy and easy to manage.

HP Networking warranties, support, and services

Warranties
HP has a broad, customer-focused portfolio backed by equally robust warranties, from lifetime warranties through competitive one-year warranties. Details of the HP Hardware Limited Warranty Statement and product coverage are available at hp.com/networking/warranty.

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To ease implementation, use and maintenance, HP products are also supported by self-help tools, including electronic case submission and software updates. These are available 24x7 on the Web, via telephone, and by email. Details can be found at hp.com/networking/support.

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Product and solution services from HP and HP Authorized Channel Partners help you manage your office environment as it evolves, decrease operational costs, and protect data while reducing risk. Services include HP Care Pack Services, a portfolio of packaged, affordable, proven services that scale to meet your needs and offer complete technology lifecycle support—and expert advice—all at an affordable price. More information is available online at hp.com/go/carepack.

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HP Financial Services provide innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. Further information on these services can be obtained from an HP representative or online at hp.com/go/hpfinancialservices.

Learn more

Think BYOD and beyond. Enable unified access and management of your wired and wireless network. Visit hp.com/networking/byod.

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