



A fresh take on mobile printing security

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Introduction

Mobile devices, such as smartphones, tablets, and laptops, afford employees the flexibility to be productive at home, at work, and on the go. Yet as an IT administrator, you likely have many concerns around the security risks inherent to these devices. They are easily lost or stolen—and with them any of the corporate information to which they may grant access. With the variety of ever-changing mobile platforms and operating systems, how can you know whether a given mobile device is able to securely access the network?

Business users want printing to be simple and quick, whether they are printing from their home office or on the go. You, on the other hand, struggle to keep the network secure, maintain control over sensitive corporate information, and manage printing costs.

At HP, we've developed hardware, solutions, and services that meet users' needs for mobile printing without sacrificing security.

Why enable mobile printing?

But do users really need mobile printing? Isn't the ability to view documents and other content on mobile devices rather than printing them the idea of the digital revolution?

While it's true that users are willing to view some content on smartphones and tablets that only a few years ago they would have felt the need to print, many business processes still rely on printed output. A manager using a smartphone to check email while going from meeting to meeting, for example, might want to print a document, but might not have the time to return to her desk and access email on her PC. And when conducting business away from the home office, users often need to print contracts, presentations, or proposals that are most easily accessible from their mobile devices.

When users can't print securely from their mobile devices, the workarounds they employ can also expose you to risk. For example, they might email a document with sensitive information to their administrative assistant. Although the assistant was never meant to see the confidential document, the printed output can be read and the email remains saved on the assistant's computer.

IT will inevitably need to enable a secure, easy-to-use mobile printing solution that employees will adopt.

IT security concerns

Security of the network infrastructure

In response to user demand and cost pressures, many enterprises are adopting a "bring your own device" (BYOD) model. The BYOD model reflects the attachment users have to their mobile devices, as well as the opportunities the devices represent to improve business processes and productivity. At the same time, BYOD can expose the business to security issues. For example, when users can download any app they please, they risk exposing themselves to malware. If an infected device is allowed access to the company network, the network is at risk.

BYOD presents additional challenges and risks. One major concern has been that a printing device that enables wireless access for mobile devices could be used to access the enterprise's local area network (LAN). The need to secure the LAN and protect the enterprise's back-end infrastructure has led many IT administrators to avoid enabling any wireless printer connections, whether to the LAN or to other devices.

Hesitation to enable Wi-Fi connections to the LAN

Most IT administrators use wired LAN connections for printers on the network. Administrators typically prefer not to connect printers to the enterprise's LAN via Wi-Fi. This preference may easily transfer to any wireless connections a printer may offer, such as a connection between the printer and a mobile device, even if there is no access to the LAN.

Limitations of mobile device management

Whether an enterprise uses a BYOD model or supplies mobile devices to employees, IT administrators typically have mobile device management (MDM) policies, solutions, and services in place to protect the business.

It can be difficult, however, to strike an appropriate balance between management and security on the one hand, and enabling the apps, features, and capabilities that keep employees productive on the other. Users typically want to access email, Microsoft® Office applications, VPN, and company file servers, and they want to print. However, enabling these capabilities in a secure manner for every device on the market is beyond the scope of any MDM vendor. Most network printers, for example, cannot be accessed from the MDM environment.

Security of data and information

IT administrators are also concerned that printing from mobile devices could expose the business to data and information security risks. Data flowing to and from mobile devices using wireless connections could be accessed through the use of sniffers. And what happens, for example, if a user—confused as he scrolls among a list of available printing devices—prints confidential material at the wrong printer, giving someone else the chance to view or take it?

HP addresses your concerns

Enable secure, peer-to-peer, wireless mobile printing

Avoid connections to your network infrastructure

HP lets you sidestep the risks of mobile printing entirely, with peer-to-peer, wireless connections that are completely outside of your enterprise's network infrastructure.

These connections are enabled with the following two capabilities:

- **HP wireless direct print**¹ enables a high-speed, secure connection to your printer. You can easily provide wireless, mobile access to printing devices, without worrying about compromising the security of your network infrastructure.

The entirely independent, standalone network provides access only to printing resources. Though the same printer may also be connected to the enterprise network, data is never transferred between the networks. This compartmentalization of the networks has been a key feature of the HP network printing architecture for more than ten years.



Printing devices enabled with HP wireless direct appear to users as a Wi-Fi network. Although devices with HP wireless direct use 802.11b/g Wi-Fi technology to enable connections, this connection is completely separate from your enterprise's LAN and back-end infrastructure.

Access to the device can be managed through a configurable passphrase that appears prior to connection. Once that connection is made, documents are encrypted before being sent to the printer. Up to five users can connect to the printing device at the same time.

- **HP touch-to-print**² is a near field communication (NFC) technology that establishes an HP wireless direct connection when users touch their NFC print-enabled mobile devices to the printer's NFC antenna. Users open a document, touch the printer with the NFC print-enabled mobile device, and print.

With HP touch-to-print, users don't have to search among SSIDs to connect to the printer directly in front of them.

Keep your data and information safe

HP wireless direct and touch-to-print offer a peer-to-peer connection. Completely separate from the LAN, the connection enables print functions only—it is not possible to access enterprise data and information. In addition, the HP wireless direct connection features standard WPA2 security with 128-bit encryption and configurable passphrases.

Easy manageability

Using the embedded web server (EWS) to manage individual devices or HP Web Jetadmin remote management software to manage device fleets,³ IT administrators can enable or disable HP wireless direct and/or touch-to-print functionality, set passphrases, and enable print-only functionality for MFPs with scanning capabilities.

¹ For wireless direct printing, mobile device may require an app or print software. Wireless performance is dependent on physical environment and distance from the printer. Please note that while your mobile device is directly connected to the printer, access to content that requires Internet support (such as web pages or documents stored in the cloud) may not be supported while in HP wireless direct mode.

² For touch-to-print capability, the mobile device must support NFC-enabled printing.

³ HP Web Jetadmin is free and available for download at hp.com/go/webjetadmin.

Print from your mobile device

Embedded mobile printing

HP has been working closely with leading manufacturers of mobile devices to integrate printing into popular operating systems. In fact, HP currently offers the broadest support for embedded print functionality—across Apple iOS (AirPrint™), Android™, and Windows 8.⁴ This approach eliminates the need to download an application before printing and requires no setup, tools, drivers or network configurations to adjust on the mobile device, making mobile printing effortless and convenient.

For details on mobile devices with built-in print functionality, go to hp.com/go/mobileprinting.

Print from any Mopria-certified smartphone or tablet without setup, software or apps. Mopria is a mobile printing standard that enables easy mobile printing between Mopria-certified printers and mobile devices. Learn more at mopria.org.⁵

Mobile print applications and software

For devices without built-in print support, printing is just as simple. Users can download:

HP ePrint app

Enable workers to print to HP wireless direct print-enabled printers and MFPs. The app is available as a free download at Google™ Play, iTunes App Store, and Blackberry App World.

HP ePrint software

Enable workers using Windows® and Macintosh notebook computers to print to HP wireless direct print-enabled printers and MFPs. The software is available as a free download at hp.com/go/eprintsoftware.

⁴ For the latest list of devices with embedded print capability, go to hp.com/go/mobileprinting.

⁵ Mopria-certified HP printer and mobile device must be connected to the same wireless network or have a direct wireless connection.

Enable wireless direct

Several HP Enterprise class printers and MFPs, such as the HP LaserJet Enterprise flow MFP M830, the HP Color LaserJet Enterprise flow MFP M880, and the HP Officejet Enterprise Color MFP X585 devices, offer HP touch-to-print and wireless direct print functionality.⁶

HP wireless direct is available with many HP LaserJet, HP Officejet Pro, and HP Officejet Enterprise models. However, the default setting disables the functionality. As you're deploying mobile printing across your fleet, you can enable wireless direct printing for these devices through the printer menu, with the EWS, or with HP Web Jetadmin.⁷

Add mobile printing accessories

HP protects your technology investment with add-on solutions that allow you to upgrade your existing devices to include the latest mobile print technology—HP wireless direct print and touch-to-print.

For many supported HP LaserJet or HP Officejet devices,⁸ the HP 1200w Mobile Print Accessory connects using the USB port and:

- Provides WPA2-PSK security
- Supports all major mobile operating systems, including iOS, Android, and Windows 8

For most HP LaserJet Enterprise devices with FutureSmart firmware,⁹ the HP Jetdirect 2800w NFC and wireless direct accessory can be inserted into the hardware integration pocket (HIP).

It provides the same features as the HP 1200w Mobile Print Accessory, plus it can be managed remotely with HP Web Jetadmin, to provide, for example, batch NFC on/off control and passphrase settings.



HP 1200w Mobile Print Accessory



HP JetDirect 2800w

Enable additional manageability and functionality

For a variety of reasons, enterprises might want to adopt alternative solutions to HP wireless direct that offer increased manageability and functionality.

HP ePrint Enterprise is a private, cloud-based solution that enables mobile workers to remotely print to any HP or non-HP device on your network. HP ePrint Enterprise easily integrates with your existing infrastructure of devices, policies, and tools.¹⁰ And it is scalable and flexible to meet the evolving needs of your enterprise.

Enterprise-level security features allow you to define policies for device access and use by individuals or group. Print jobs sent to your networked printers never leave your secure firewall. You can manage policies and users, and integrate with PIN- (personal identification number) and pull-printing solutions for enhanced security.

You can also manage the printing environment effortlessly. HP ePrint Enterprise allows administrators to control printer availability, easily add or suspend users while synchronizing accounts with existing databases, and manage licenses across multiple deployments.

Using HP ePrint Enterprise, workers on the go can print documents at more than 30,000 Public Print Locations worldwide. Using a public cloud, document protection is assured through an authentication code that is required before a print job can be released. Locating the nearest print location is easy using the GPS on the mobile device.

⁶ In some regions and with some models, HP wireless direct and touch-to-print is not included with the HP LaserJet Enterprise flow MFP M830, the HP Color LaserJet Enterprise flow MFP M880, or the HP Officejet Enterprise Color MFP X585, and must be purchased separately.

⁷ HP Web Jetadmin is free and available for download at hp.com/go/webjetadmin.

⁸ HP 1200w Mobile Print Accessory works with HP Officejet Mobile 100/150 printers and many HP LaserJet and Officejet Enterprise printers and multifunction products (MFPs) introduced in 2008 or later that are equipped with a USB port.

⁹ The HP LaserJet Enterprise M4555 MFP series, HP Color LaserJet Enterprise CM4540 MFP series, and HP Color LaserJet Enterprise CP5550 Printer series do not support the HP Jetdirect 2800w, but do support the HP 1200w Mobile Print Accessory.

¹⁰ HP ePrint Enterprise requires HP ePrint Enterprise server software. App-based option requires Internet- and email-capable BlackBerry smartphone OS 4.5 or newer; iPhone® 3G or newer, iPad® and iPod Touch® (2nd gen) devices running iOS 4.2 or later; or Android devices running version 2.1 or newer, with separately purchased wireless Internet service and the HP ePrint service app. Email-based option requires any email-capable device and authorized email address. Solution works with PCL5/6, PCL3, and PCL3GUI printers (HP and non-HP).

Conclusion

HP has a number of innovative hardware devices and solutions to help you enable the secure, reliable, mobile printing your users demand. You can enable easy and reliable printing from any mobile platform or operating system. At the same time, you can control network access and printer output to protect confidential information and manage printing costs.

HP's portfolio of mobile printing solutions builds on a proven print strategy that focuses on optimizing the infrastructure, enhancing device management, and streamlining business processes.

Learn more at

hp.com/go/businessmobileprinting

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