

# 4 Ways Printing Virtualization Augments Healthcare VDI



**Medical professionals must function in a hectic, fast-paced environment often colored by unexpected situations. Time is always a critical and precious resource. A few seconds squandered here or a moment wasted there can change lives forever.**

**It's an environment that's quite unforgiving of printing problems. Yet all too often, healthcare professionals don't know where the nearest printer is, or they may forget to map their device to the appropriate printer.**

In an effort to increase efficiencies and conserve time, many hospitals/healthcare organizations now deploy virtual desktop infrastructure (VDI). Clinicians can speed-access their applications and information by eliminating application launch times with Citrix desktop roaming and application prelaunch features.

But VDI deployment in a healthcare setting raises unique issues. Printing to a wrong or distant printer may leave confidential patient information lying around for anyone to grab. Long printing queues may keep doctors waiting (and nurses feeling the brunt of impatient doctors). This eBook will discuss why printing virtualization is important and offer four ways it can complement VDI in a healthcare setting.

Printing challenges in a healthcare setting:



## VDI Crucial to Healthcare Environment

Why has virtual desktop infrastructure in healthcare institutions increased at an exponential rate in recent years? The answer is simple: VDI offers a range of benefits that are commonly and crucially needed by healthcare institutions. It could be argued, in fact, that no industry benefits more than healthcare from the unique advantages offered by VDI.

In practical terms, VDI offers a unique level of convenience and flexibility highly prized by healthcare professionals. In hospitals, for example, doctors commonly log into one location at the start of a shift, then move to other floors and workstations throughout the day. Eliminating the need to boot up, log in, save work and resume work sessions with each transition lowers caregivers' frustration and enables them to spend more time on patient care.

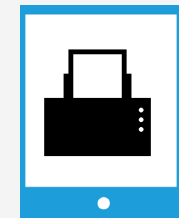
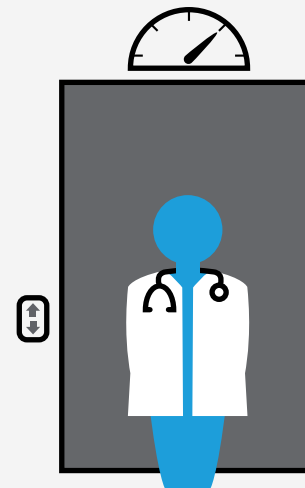
## Problematic Printing

In spite of the ability of VDI to streamline clinical workflow and increase caregiver efficiencies, printing remains problematic. Hospitals need to print sensitive data in the form of patient records, prescriptions, labels with file codes, patient consent forms, and others. The unique printing needs of

healthcare organizations typically result in numerous task-specific printers deployed in multiple locations. Hospitals need an efficient print system that can support error-free, location-based, secure printing.

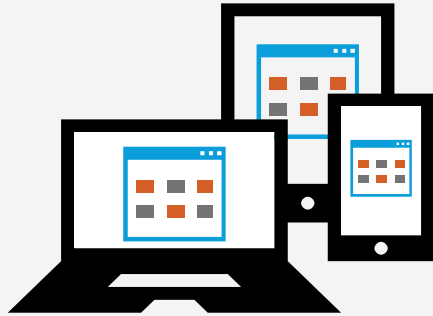
Printing virtualization can fulfill that need. The virtualized printing process decouples a print task from a specific piece of printer hardware. It introduces a revolutionary layer of functionality, mobility and convenience to the printing process.

VDI eliminates the need to log in and save work at different workstations throughout the day



The virtualized printing decouples a print task from a specific piece of printer hardware

## Citrix XenDesktop



- Offers a persistent Windows virtual desktop that can be fully customized for users
- Meets the highest security standards: FIPS 140-2 compliant and Commons Criteria certified



Printing virtualization offers four major benefits that are crucially important to the healthcare industry:

### 1. Accuracy & Speed

Doctors and nurses are busy people. At hospitals, doctors and nurses attend from patient to patient — or from emergency to emergency — at a frenetic pace. In a profession where every second counts, it's ludicrous to think of a doctor idling away precious time waiting — or searching — for a printer. But that's exactly what still happens at most hospitals.

Compounding the problem is that caregivers often log in and out of various machines at different locations throughout a shift. The deployment of VDI can streamline the process by enabling a single sign-on for desktops regardless of the number and location of workstations used. Citrix XenDesktop offers a persistent Windows virtual desktop that can be fully customized to satisfy any use case — that means VDI desktops can meet the needs of your most demanding users anywhere, on any device. XenDesktop is also FIPS 140-2 compliant and Common Criteria certified to meet the highest security standards for your industry.

But one problem remains: determining which printer is right for a given print task, locating that printer, and accessing it to retrieve the printed document.

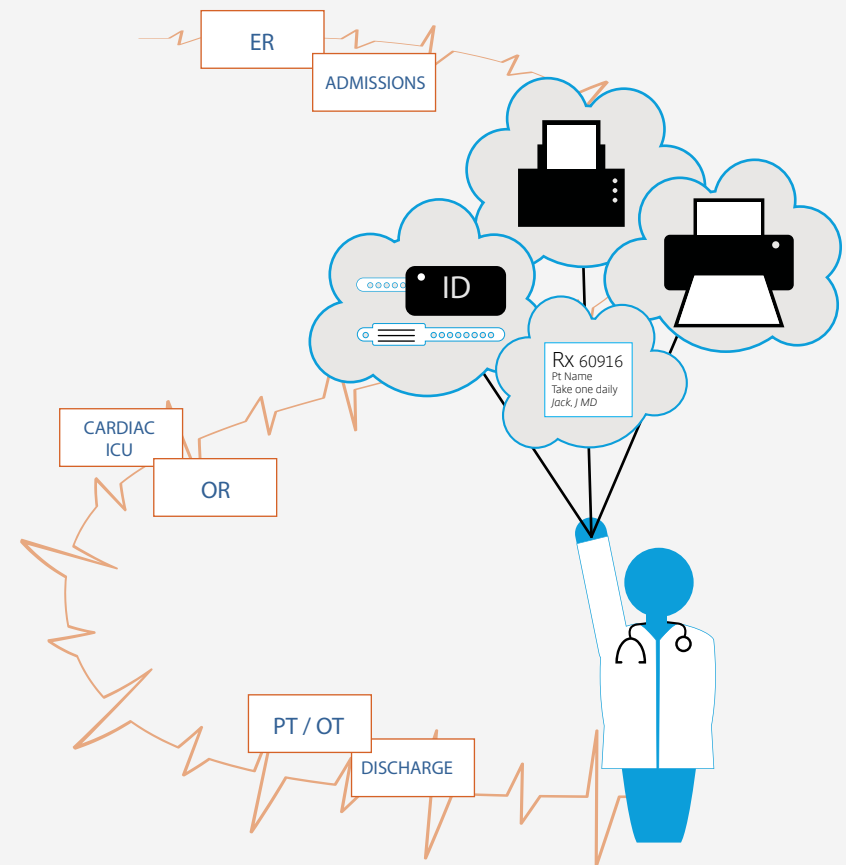
Printing virtualization eliminates the problems that commonly cause inaccuracies and delays for healthcare printing. [UniPrint Infinity's Smart Route Printing Module](#), for example, enables printers to follow users regardless of the type of document or the purpose of the print job (e.g. patient records, prescriptions, patient ID labels, and other print documents requiring specialty printers).

A virtual print queue enables location awareness, giving users the ability to select a particular print job to print to the closest or most convenient printer. The virtualized personal print queue enables the selection of the most appropriate printer based on location, IP address, workstation used, user ID and/or proximity of signal.

Printing virtualization also facilitates central management, allowing an IT administrator to manage the organization's print system from a single console. Administrators are able to perform all printer-related management tasks remotely, including the shutdown, disablement and assignment of printers.

## UniPrint Infinity's Smart Route Printing Module

Printers follow users regardless of the type of document or the purpose of the print job

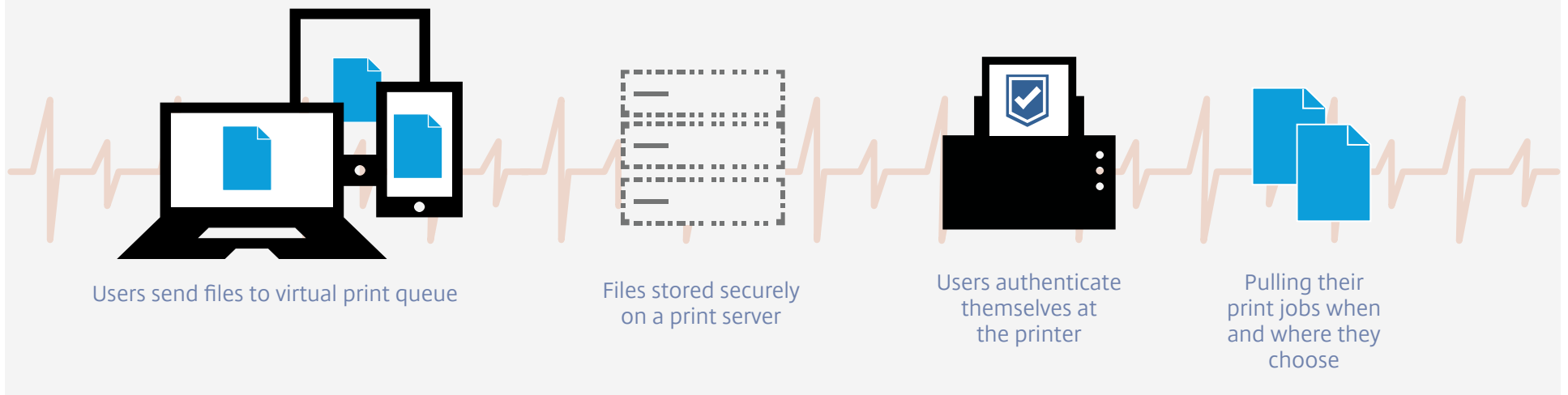


## 2. Security

The security of data is of great concern at every healthcare organization. Maintaining the confidentiality of patient data is paramount. But mobility has made that task considerably more difficult, while also increasing concerns among authorities about the prospect of data breaches. While the combination of IP address and patient ID was once adequate in detecting location, this is no longer the case.

Printing virtualization makes it possible to tighten security while simultaneously making life easier for caregivers. In a virtual system, users enjoy the flexibility of authenticating themselves on or at the printer, or from their mobile device, using pull printing. Pull printing protects data confidentiality by allowing users to choose when to release and where to retrieve a print job.

### Pull Printing protects data confidentiality

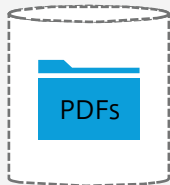


Printing virtualization helps ensure HIPAA compliance and enhances efficiency



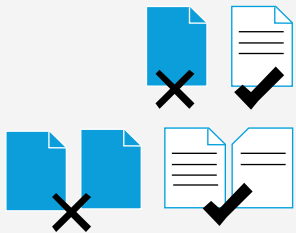
**Tracking every print job**

- Who, when, what, how many pages?
- Records of deleted jobs



**Audit ready**

- Archived digitally in PDF



**Cut costs with default**

- Black and white printing saves ink
- Duplexing saves paper



**Secure**

- Pull Printing
- By user authentication

**3. Compliance & Efficiency**

Ensuring HIPAA compliance and enhancing efficiency are two major priorities for healthcare organizations. Printing virtualization helps with these mandates in four key ways:

- 1. Tracking every print job:** Organizations can gain insights into who, when, what, how, and how many pages are printed with every job, as well as maintain records of deleted jobs.
- 2. Maintaining audit trails:** All jobs are archived digitally in PDF to maintain compliance.
- 3. Enforced savings with customized printer profiles:** Organizations can cut costs by enforcing printing in only black and white (with user override option) and duplexing, generating significant operational savings in both ink and paper costs.
- 4. Secure authentication:** High-end multi-function printers permit an open API with a “connector.” This enables as-needed pull printing via the virtual print queue by allowing printers to “speak” to the system to authenticate users. Alternatively, organizations can deploy a vPad print appliance to enable pull printing.



#### 4. Flexibility

Combining VDI with printing virtualization offers previously unattainable levels of flexibility.

Consider a typical hospital: Specialty printers are maintained for specific tasks such as printing prescription labels, wristbands, etc. But the UniPrint Infinity Healthcare Printing Suite can manage any combination of printers through a virtualized printing platform. With just one vPad device, users can direct a job to any printer or to all printers.

Virtualization even enhances flexibility by providing multiple means of authentication: mobile devices, touch screens, RFID/HID cards, QR codes, iBeacon and NFC.

While healthcare organizations have several desktop and app virtualization vendors to select from, Citrix has long been the industry's preferred choice. Citrix is a trusted solution provider to more than 90 percent of the largest healthcare organizations and all the US News & World Report top hospitals.



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#### A Capable Team for a Virtual Age

Accuracy, speed and security are vitally important to both healthcare professionals and patients. Citrix VDI can provide desktop security and speed, and UniPrint Infinity augments it with flexibility and error-free, on-demand, location-based secure printing. The combo works with all major MFP manufacturers, providing a universal solution without the need for extensive hook-ups or complicated set-ups.

To learn more, contact [Citrix](#) and [UniPrint.net](#) today.

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