

# 3 Ways

## Virtualized Printing Complements a Cloud Strategy





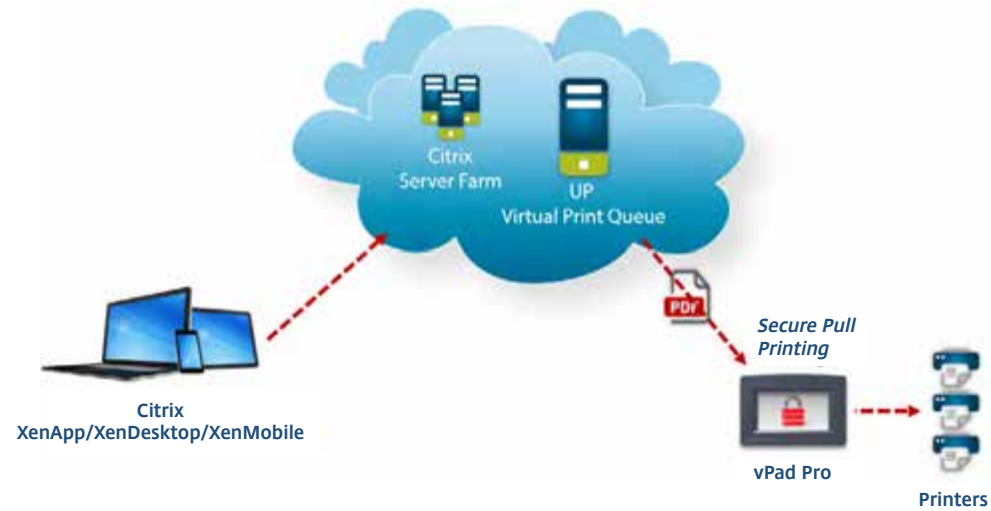
Virtualization saves time and money, frees up IT resources, and improves productivity. But there's a problem: you can move everything to the cloud *except* printers. Workers will always need physical papers in hand.

This eBook discusses how printers can directly connect to the cloud securely, without using too much bandwidth.

It also explains how virtualized printing complements a broader Citrix cloud strategy so you can assess a solution that will work for you.



## A Cloud-Filled Future



Many companies have moved IT operations to the cloud. In fact, Gartner predicts that by 2020, “no-cloud” companies will be as rare as “no-internet” companies are today.<sup>1</sup>

The reason behind the mass move to the cloud is clear. Cloud computing offers unique cost-cutting opportunities and efficiencies. Citrix cloud-based services — notably XenDesktop and XenApp — have been at the forefront of the cloud revolution.

This shift has changed many long-entrenched business processes. But one thing has not and will not change: the need for printing.

The ability to print documents on demand is essential in every organization. But the move to the cloud has impacted printing ease and security.

Companies can use virtualized printing to reduce cloud printing problems. Specifically, virtualization can complement a cloud strategy in three key ways:

<sup>1</sup><http://www.gartner.com/newsroom/id/3354117>

#1

## Print Management

Managing the print process is complicated in a cloud environment, particularly in terms of connectivity, mobility and bandwidth use.

**Connectivity** between the cloud and the printer is necessary once a data center has been moved to the cloud. This task is difficult for companies with offices all over the world.

A network tunneling device or software agent can reduce the complexity of this connection. A virtualized printing solution improves workflow by connecting printers and the data center through the firewall.

**Mobility** also poses considerable challenges for printing. Once a data center has been moved to the cloud, the typical system cannot track the location of print users.

A virtual **cloud printing solution** connects the cloud data center to office printers and provides secure network-based pull printing. The solution should provide on-demand printing so users can print anytime, anywhere, from any device.

**Bandwidth** use is an issue because most printers are not optimized for the cloud. They are not designed to handle networks going in and out of service. And network printers consume huge amounts of bandwidth.

A virtual printing solution should provide PDF compression to reduce bandwidth use. UniPrint's **Universal Printer Driver**, for example, can shrink bandwidth more than 90 percent.<sup>2</sup>

<sup>2</sup> <https://www.uniprint.net/eng/page/citrix-terminal-printing>



## #2

## Security

It can be risky to connect devices to remote printers through the cloud. Maintaining printer security in a cloud environment revolves around three core concerns:

- **Compliance:** Sectors like insurance, finance and healthcare must conform to rigid compliance requirements. Failure to do so can result in severe fines, in addition to loss of public goodwill. A virtual printing solution enhances security with [user-authenticated pull printing](#). This gives IT admins visibility into document ownership. It also keeps sensitive data from falling into the wrong hands and helps organizations stay in compliance.
- **Encryption:** Though sensitive data may be behind a firewall, internet printing often enables illicit access to data. The code may be incompatible with internet communication protocols and require additional encryption. A virtual printing solution can directly connect devices with printers through the firewall so print information remains secure all the way to the printer.
- **Location Awareness:** Printing to the nearest printer reduces the likelihood that someone will pick up restricted information. A virtual print queue can assign a print job to the most suitable printer, regardless of the user's location, IP address, workstation, user ID or closeness of signal.

## #3

## Cost Savings

Printing represents a substantial cost. The average company spends between one and three percent of its annual revenue on printing.<sup>3</sup>

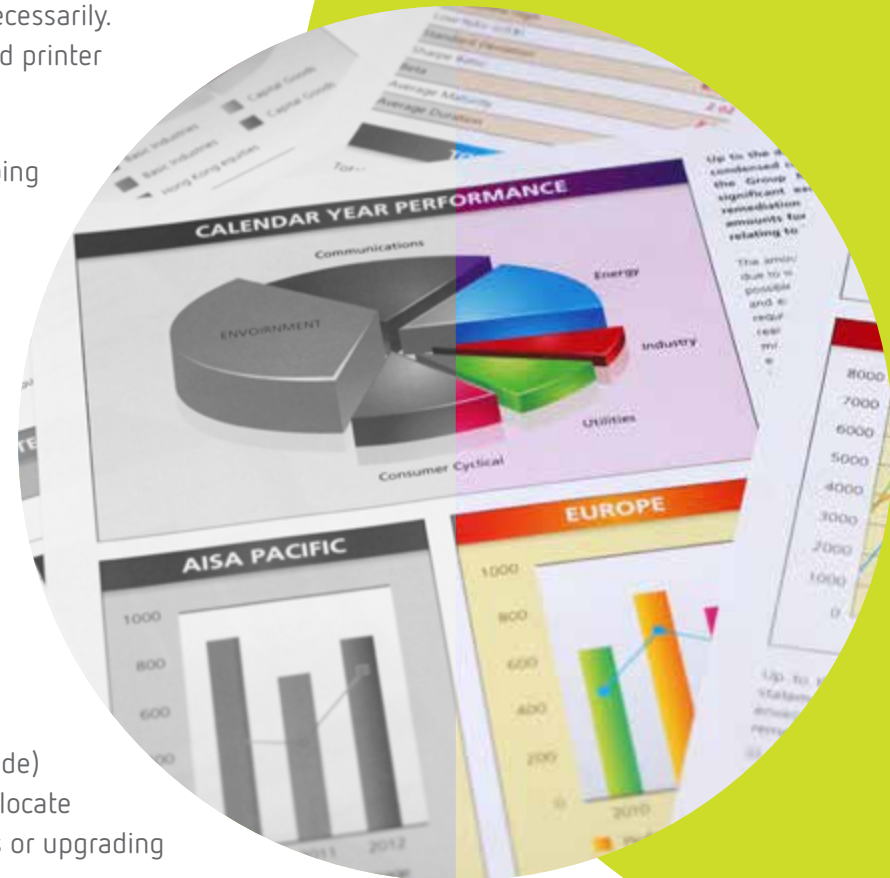
It is likely that much of that money is wasted. The company pays dearly every time when a user leaves a job on a tray or prints full color unnecessarily. A virtual print solution can trim printing costs through enhanced printer management, reduced waste and more robust administration.

**Printer management** — adding and removing printers, remapping users to new devices, etc. — is a major ongoing cost for IT. With a virtual print solution, users can print to any device connected to the data center, removing much of the management burden from IT. A user who moves to a different desk or relocates to a new city can print with no new setup.

**Printing waste** is a major problem. Much of the waste comes from printing to the wrong printer and re-printing on a more convenient printer. A virtual printing solution will hold jobs if users are not in the right location or if they select the wrong printer.

A virtual printing solution enhances administrators' control. With **compulsory printer profiles and printer redeployment**, admins can enforce black and white printing (with a user override) and duplexing to save ink and paper. Administrators can also allocate device costs more efficiently by redeploying underused printers or upgrading the most used devices.

<sup>3</sup><https://www.news.xerox.com/news/USDA-awards-Xerox-10-year-contract-for-managed-print-services>





## Delivering the Benefits of Virtualized Printing

Flexibility, speed and security are essential in any business. Citrix XenDesktop and XenApp can provide security and speed, while UniPrint Infinity adds flexibility with error-free, on-demand virtualized printing.

UniPrint Infinity optimizes virtual printing and it empowers IT administrators to manage services rather than servers. Users enjoy more convenient and reliable printing, and they experience far fewer printing problems. To learn more, contact [Citrix](#) and [UniPrint.net](#) today.

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XenDesktop

**CITRIX®**  
XenApp



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