Microsoft Jumps into the Cloud-Based Printing Market with Universal Print

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IDC's Quick Take
Microsoft announced the public preview of its cloud-based print platform and service called Universal Print. Universal Print runs in the Microsoft Azure cloud and is designed to provide users with a convenient and affordable cloud-based printing experience, eliminating the need for on-premises print servers. Microsoft 365 Commercial and educational subscribers will have access to the base Universal Print offer at no additional cost, while other customers can subscribe to Universal Print as a cloud-based printing service.

Product Announcement Highlights
On July 21, Microsoft announced the public preview of Universal Print, a cloud-based print solution that will be offered both as a service for organizations and as a platform for third-party integration and support. According to Microsoft, customers continue to express increased interest in moving services to the cloud, especially with the success of Microsoft 365. Designed as a fully hosted service, Universal Print provides users with a convenient and affordable cloud-based printing solution that eliminates the need for dedicated, on-premises print servers and reduces the complexities and costs associated with print management.

Universal Print runs on Microsoft Azure, which means the service can be accessed by any approved user with a Windows client and identity stored in the Azure Active Directory (Azure AD). Printers are registered with the Universal Print service and are then advertised as available to the users. Print jobs are sent from the Windows client to the cloud and then to the printer directly or held in the service until the user authenticates to release the job from any authorized printer, providing for secure pull-print functionality with partner solution integration. Users can print from anywhere when connected to the internet and authenticated to Azure AD, and Universal Print's location-based printing capabilities makes printer location and discovery an easy process. The result is a simplified and seamless cloud printing solution with the ability to eliminate print servers and no need to install printer drivers.

Microsoft also points to the security benefits of Universal Print. Customers have expressed concerns when it comes to storing potentially sensitive data in the cloud, especially content that is stored in a document not meant for public consumption. With the Universal Print solution, print data is stored in the same manner as other Microsoft Office data, in accordance with the firm's data management guidelines, all communications are protected over secured HTTPs connections. At the same time, printers authenticated to the platform are represented as Azure AD device objects backed by an X.509 certificate. In this way, Microsoft says it can help organizations keep printers and documents secure by utilizing Azure AD users and security groups.
Early Partnerships

A host of printer manufacturers, including Canon, Lexmark, Brother, and Konica Minolta, are working closely with Microsoft to provide native support for Universal Print–enabled in new printers and through updates in device firmware for relatively new printers. For those customers looking to support legacy print hardware already installed, Microsoft is offering a Universal Print proxy application, or connector, which must be installed to run on a Windows 10 PC or server. The proxy application connects directly with the Universal Print cloud service to provide for complete functionality, but in this scenario, Universal Print is not a serverless solution. Universal Print connector may be replaced by other print software providers’ connectors or equivalent solutions.

Microsoft is also working with OEMs and ISVs to develop cloud services that can be built on top of the Universal Print platform. Universal Print provides the foundation to move print management to the cloud, where third-party applications can be integrated to enable more robust capabilities around print and device management. A highlighted list of partnership activity includes:

- **Brother** is working with Microsoft to offer integration with the Universal Print service on select Brother devices.
- **Canon** will support the Universal Print solution natively with current imageRUNNER ADVANCE products beginning in 2H20. In addition, Canon is working to enable uniFLOW Online Express, a free SaaS solution running on Microsoft Azure, to provide device authentication, print/copy/scan/fax reporting, and scan to myself while using Universal Print.
- **HP Inc.** is working with Microsoft to build a cloud-to-cloud integration with Universal Print and the HP Managed Print Cloud Services platform. Through this collaboration, organizations will be able to increase security, manage devices, and limit print jobs to authorized users.
- **Kofax** is working with Microsoft to provide integrated support for Universal Print within Kofax ControlSuite print management software.
- **Konica Minolta** is partnering with Microsoft to integrate digital workplace services with Universal Print.
- **Lexmark** announced availability of firmware updates for currently marketed devices to provide native Universal Print support.
- **PaperCut** is working with Microsoft to build a native Universal Print connector for its print management software.
- **Pharos** is working with Microsoft on various Universal Print solutions.
- **Ringdale** is providing support for Universal Print within Ringdale FollowMe print management solution, for integrated compliance and end-to-end print security.
- **Y Soft** supports Universal Print natively with SAFEQ 6 and SAFEQ Cloud. In addition, Y Soft announced the availability of YSoft OMNI Bridge, a serverless edge device that instantly connects legacy printers to Universal Print, with YSoft OMNI UP365, the first of YSoft OMNI apps.

Microsoft plans to release Universal Print through all its existing Microsoft 365 Commercial and Educational subscriptions in the coming months, though the platform will also be available as a standalone version for customers that do not subscribe to Microsoft 365. The standalone version will be sold through Microsoft as well as through the firm’s indirect channel partners. Organizations are charged by consumption, based on a predetermined number of print jobs. Microsoft has not disclosed all the details yet, specifically what volume of print jobs is included in the base subscription. Microsoft
will also continue to work with partners and monetize based on Azure consumption or various API integrations and ongoing support.

IDC's Point of View

Businesses of all sizes are showing increased interest in cloud-based print and print management, not only to reduce costs but also to lessen the burden on IT and move to a more flexible, predictable billing model. While cloud migration was already well under way, the COVID-19 pandemic has had a dramatic impact on how work gets done, leading to more remote employees and the need to create stable and secure work-from-home environments. Increasingly, organizations are transitioning to the cloud to reduce IT infrastructure and gain better control over the distributed workforce. At the same time, hardcopy vendors and ISVs are working hard to push offerings to the cloud, not only to support emerging customer needs but also to drive value and broaden market opportunities.

Universal Print has broad implications, both for Microsoft and for the printing community at large. Microsoft has dabbled in the printing business for decades, but it has always had to walk a thin line between promoting and monetizing its own solution while ensuring Windows platform support for other printer manufacturers. With Universal Print, Microsoft will monetize both the cloud platform and extended print services. By making Universal Print a standard feature for Microsoft 365, the firm effectively seeds a large customer base in both enterprise and SMB and brings those users (along with a potential for other cloud services) over to the Microsoft Azure cloud, which is a big win for Microsoft.

At the same time, hardcopy OEMs and third-party ISVs are working to further their own cloud-based print management offerings. Most office equipment manufacturers have recently introduced cloud-based print solutions aimed at moving some or all of the print infrastructure to the cloud. Microsoft's entry will go a long way toward legitimizing cloud-based print and print management and perhaps help to reduce some barriers to adoption. IDC's research shows that, while end users are interested in cloud-based printing, concerns over data security and performance issues continue to slow down market penetration. The success of Microsoft 365 has proven that customers are anxious to migrate to cloud-based apps and services to drive productivity in the office and beyond, and the same should apply to print as well.

Not surprisingly, hardcopy OEMs and third-party software companies are moving quickly to piggyback on Microsoft's strategy. Microsoft has disclosed a strong stable of partnerships, and printer manufacturers are already announcing native support for Microsoft Universal Print for certain printers and MFPs. Of course, it will be difficult if not impossible to provide firmware-level support for all legacy print devices, which is why Microsoft is providing a proxy app or connector that will run on a dedicated Windows server or Windows 10 PC. The roster of partners already signed up includes most of the major players in the print/document solutions market, which speaks to the marketing pull that Microsoft brings to the table.

It is worth noting that Universal Print does not provide the same level of functionality available through a full-blown print management solution. Essentially, Universal Print provides customers with a secure and convenient cloud-based printing experience, allowing customers to easily register, discover, and print to specified devices through the cloud without the need for a dedicated print server and the complexities associated with driver management and so forth. Basically, Universal Print is a glorified secure pull-print solution, which will likely be enough for those customers just looking to simplify the printing experience and rid themselves of costly print infrastructure.
Other customers, however, will be looking for more advanced capabilities as they move print management to the cloud, such as rules-based printing, job tracking and accounting, security management, automated fleet management, scan/capture workflows, and other features associated with traditional print management solutions. For this reason, hard copy OEMs and third-party ISVs will continue to develop and market more robust print management solutions that may or may not be designed to integrate directly with Universal Print.

Finally, Microsoft's foray into cloud-based print management could also help facilitate increased adoption of MPS in the SMB space. For years, hardcopy OEMs have worked to enable channel partners with MPS programs to target smaller businesses. For the channel partner, this means a significant up-front investment in tools and infrastructure and results in a mono-brand approach to the market. Only a small percentage of office equipment dealers have managed to make the transition to MPS on a broader scale. Now, smaller dealers with limited resources can leverage Universal Print as a foundation for providing brand-agnostic MPS, with the ability to support a more diverse and distributed print fleet, including remote and home-based devices. As Microsoft's partners continue to expand offerings built around Universal Print, dealers will be able to leverage these tools to build more robust MPS programs.

As mentioned previously, Microsoft has a long history in the printing space, and it has always worked closely with printer manufacturers to ensure the best possible Windows printing experience. Now, Microsoft has introduced a universally available cloud-based print infrastructure, which puts the firm in a strong and compelling position to help foster the transition of print to the cloud. It will be interesting to see how cloud-based printing continues to evolve now that Microsoft is fully in the game.

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