

WHITE PAPER

Simplifying Azure Virtual Desktop Printing

Introduction

What Is Azure Virtual Desktop?

[Azure Virtual Desktop \(AVD\)](#) is a Microsoft desktop and app virtualization service hosted on Azure. It allows organizations to deliver virtual Windows 10/11 desktops to their workforce, regardless of where they're working. With an internet connection, users can access a secure virtual desktop from a wide variety of supported endpoints such as Windows, Mac, iOS, Android, and HTML5. Organizations can provide a secure and customizable Windows end user experience, or limit access to specific apps.

Market Significance

AVD competes with virtualization providers like VMware and Citrix as well as a number of smaller cloud-based competitors. It's expected to have a significant market impact because it's a Microsoft service that integrates with other Microsoft solutions. The company offers customers favorable pricing and bundle deals on Azure, Windows, and Office 365 licenses to accelerate adoption of the new virtualization platform.

Azure Virtual Desktop Benefits

Enhanced Data Security

Storing sensitive information in a trusted and secure cloud environment is less risky than distributing that data across user endpoints.

Support for a Wide Range of Endpoints

Endpoint support includes thin-clients and mobile devices and provides maximum workforce flexibility and mobility.

Virtualized Office 365 ProPlus, Optimized for Multi-user Sessions

A cost effective solution for many Microsoft customers with ties to Office 365.

Windows 10/11 Enterprise Multi-session

A comparably easy and cost-effective way for larger organizations to migrate to a Windows 10/11 desktop experience.

Unified Management for All OS and App Software

IT teams can manage Windows 10 and 11 desktops and virtualized applications in one place.

How PrinterLogic Improves the Azure Virtual Desktop Printing Experience



Challenges of AVD Printing and Redirected Printers

AVD faces the same basic printing challenges as other VDI solutions: The user is interacting with a virtual computing environment, but network printers are connected to a local network that's separate from the virtual workspace.

Microsoft's answer to this challenge is the *redirected printers* functionality built into AVD or use of Microsoft Universal Print (UP). Both approaches require organizations to make compromises. UP greatly limits the functionality of copiers and MFDs to all but the most basic functions. It is also only available to Azure Active Directory (AD) users, making it unapproachable for any hybrid-AD/Azure AD environments.

PrinterLogic SaaS enhances this core capability by integrating with AVD, eliminating print servers, and streamlining printer and driver deployments, all while maintaining full copier MFD functionality. PrinterLogic's direct IP architecture keeps print jobs local, which ensures the security of an organization's confidential data.

Benefits of Managing AVD Printing With PrinterLogic

PrinterLogic is listed in the [Azure Marketplace](#), which enables enterprises to align their software budgets with their cloud budgets to burn down their committed spend, and deploy business software faster to achieve a positive ROI much sooner.

Adopting a Zero Trust Network Architecture

In a [Zero Trust](#) environment, all devices are assumed to be at risk within the network, so all users must authenticate their identity at every login. PrinterLogic offers security features like Off-Network Printing, role-based access control (RBAC), and more—supporting remote work, and shrinking your network to fewer attack surfaces.

Integrating with popular IdPs

PrinterLogic supports major IdPs, like Azure AD, to provide enhanced security to your whole print environment. Admins can more easily manage and allow network access to the necessary users with IdPs.

Protecting documents with Secure Release Printing

PrinterLogic can be configured to hold print jobs on the endpoint until the user walks over and releases their job(s) at the printer. This [provides additional security](#) for sensitive files so documents can't be accidentally seen by others, or left abandoned on the output tray.

Keeping print traffic local

No print data is transferred to/from third-party cloud services in order to complete a print job. A job originating in an AVD session goes from Azure to the endpoint over a secure RDS channel and is then handed off to the local printer driver. It's then processed and printed locally, behind the organization's firewall.

Promoting sustainability

Consolidate infrastructure and applications with PrinterLogic by switching to a cloud-native solution and create more sustainable print practices for your organization.

How It Works

The following section details the printing process in an Azure Virtual Desktop environment using PrinterLogic.

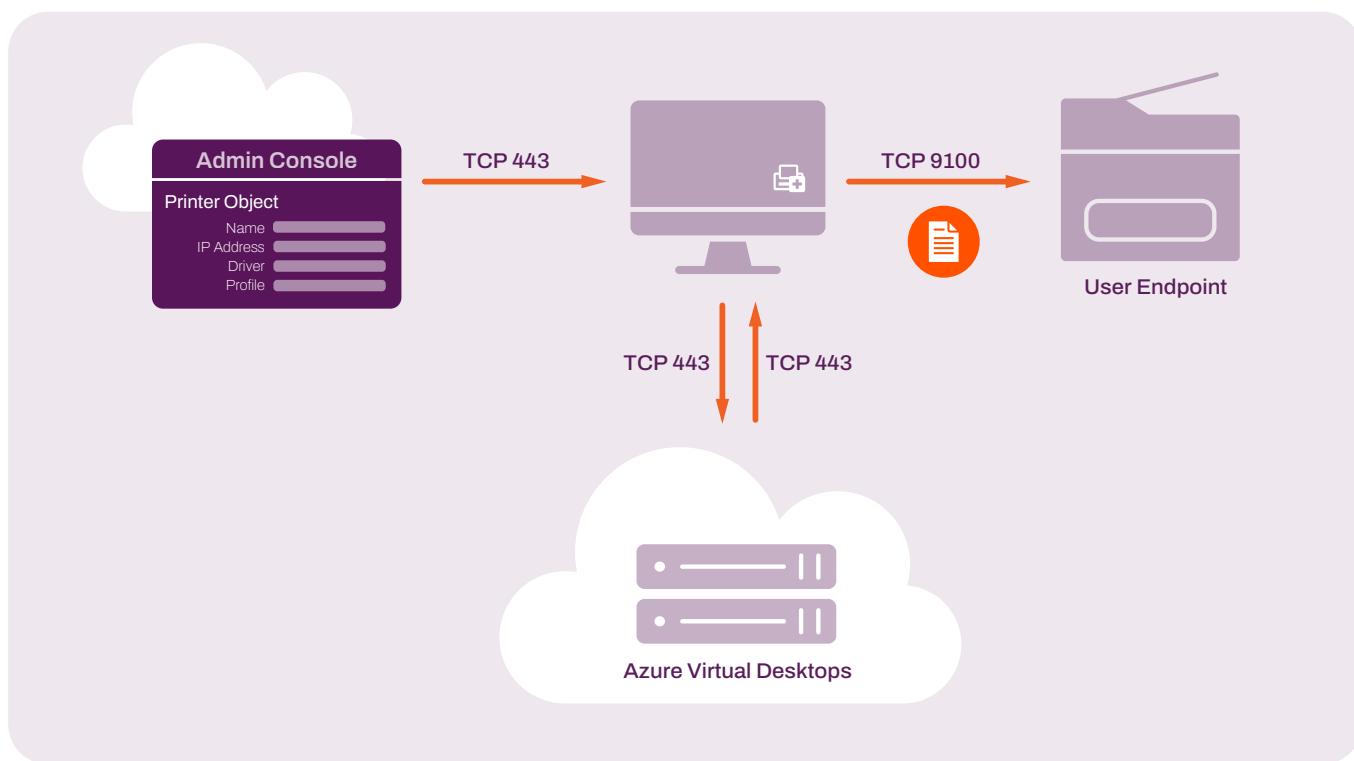


Figure 1. PrinterLogic's integration with AVD and the redirected printer workflow.

- **Installing a PrinterLogic Client:** On the PrinterLogic side, the SysAdmin pushes out the PrinterLogic client to the organization's workstations or thin-clients on endpoint OSes like Windows, Mac, Linux, and Chrome. Using the PrinterLogic Admin Console, IT can [deploy and manage printers](#) and drivers on those endpoints, and print via direct IP without the need for print servers, scripting, or GPOs. The client checks in to the PrinterLogic SaaS instance using a TLS connection.

- **Initiating an Azure Virtual Desktop Session:** The user logs in using Microsoft's Remote Desktop Client (RDC), which resides on their local device. This connects their endpoint to a virtual Windows session in Azure. The RDC handles all necessary credentials and authentication, and connects to AVD-published applications or to a Windows 10 or 11 virtual desktop session.
- **Printing in an AVD session:** Printers installed by PrinterLogic on the endpoint will appear as redirected printers in the AVD session. The Microsoft client (RDC) serves as the go-between and queries the endpoint's OS to discover which printers are installed. The RDC then directs AVD to show those printers in the virtual session as redirected printers and gives them the same name with a "redirected" tag. The user picks an available redirected printer and initiates the print job. The Microsoft client then goes to work and compresses the file data, packages it in EMF format, and sends it via secure Microsoft Remote Desktop Services (RDS) protocol to the user's endpoint.

Once it reaches the local workstation, the print job is uncompressed and handed off to the printer driver managed by PrinterLogic, which then processes it as it would any print job. The printer driver renders the file, which is then spooled and sent via direct IP to the designated printer, and the job is printed.

Printing With Web Browser Connections

AVD sessions using Microsoft's RDC deliver the most functional and intuitive printing experience. However, some organizations have endpoint devices that use an [HTML-5 browser](#) to spin up a virtual desktop session or app. In this scenario, printing is limited to a virtual PDF printer that's provided by Microsoft in the session. The file is sent down to the endpoint using the same secure (RDS) channel, where it can be saved and printed.

PrinterLogic SaaS offers [Mobile Printing](#) at no additional cost to facilitate printing a PDF document for iOS, Android, and Chrome OS devices.

Why Use PrinterLogic?

PrinterLogic eliminates all print servers from your network environment, replacing them with simple, secure, and efficient centrally managed direct IP printing. Single points of failure are removed, resulting in high availability where printing stays local, and continues even when the internet is down. Printer and driver deployments are managed centrally using a web-based Admin Console, eliminating the need for troublesome scripting and GPOs.

There are two versions of PrinterLogic. One is a **true SaaS implementation** that eliminates the need for traditional print server infrastructure, hardware resources, licensing, or maintenance. No VPN is required, and customers receive security and uptime service-level agreements. The other is an easily updated **Virtual Appliance print management platform** that is quickly deployable in any private cloud environment, including in IL4/IL5 and GCC Moderate/High within AWS or Azure Cloud. Read more about this topic in our PrinterLogic Virtual Appliance [white paper](#).

The PrinterLogic platform also features location-based printing based on IP address range. If an employee changes locations, printers that are no longer relevant are dropped from the user's printer menu and new ones that are close by appear automatically. As a true SaaS and VA platform, PrinterLogic's solution helps users adopt Zero Trust into their print environment that a conventional print management software cannot deliver.

Conclusion

Microsoft's Azure Virtual Desktop is a significant opportunity for organizations migrating to a virtualized, cloud-based desktop strategy. It is secure, supports a wide array of endpoints, and is especially well suited to the increasingly remote and mobile workforce. PrinterLogic SaaS and VA integrates with AVD in a powerful way, ensuring that users always have the redirected printers that they need in their virtual sessions. PrinterLogic helps IT teams eliminate all print servers and deliver a highly available direct IP printing infrastructure.

If you're interested in exploring PrinterLogic SaaS or VA for your organization, schedule a demo [here](#).