Windows Admin Center Performance, Management, and Security

Wesley Faxlanger

School of Cybersecurity

CYSE:608 Cyber War

Dr. Malik A. Gladden

30 August 2026

Windows Admin Center Performance, Management, and Security

Windows Admin Center is a tool that lets users manage Windows Clients, Servers, and Clusters without a cloud connection. Windows Admin Center gives users full control over their server infrastructure and is an invaluable tool for managing servers that aren't connected to the internet. Rather than relying on multiple Microsoft Management Console tools or repeated Remote Desktop sessions, administrators can perform many routine tasks from one location. Windows Admin Center communicates with managed systems through technologies such as Remote PowerShell and Windows Management Instrumentation over Windows Remote Management, allowing it to manage both local and remote Windows Server systems. “Windows Admin Center runs in a web browser and manages Windows Server 2016 and later, Windows 11, Windows 10, and more through the Windows Admin Center gateway installed on Windows Server or domain-joined Windows 10 or 11” (Microsoft, 2025).

Ultimately, Windows Admin Center improves system performance and enables effective management by providing direct access to monitoring and troubleshooting tools. Windows Admin Center provides access to tools such as Server Overview and Performance Monitor (Microsoft, 2025). These capabilities let admins push updates, identify potential threats, review logs, and manage configurations from one application. According to Microsoft, the Windows Admin Center gateway uses a .NET 8 backend, HTTP/2, and a multi-process-based architecture intended to improve responsiveness, scalability, and resiliency (Microsoft, 2025). Security remains a significant issue, as Windows Admin Center possesses powerful administrative access that could be devastating in the hands of bad actors or untrained users. For this reason, practicing least privilege is paramount to maintaining security. Microsoft provides role-based access control, a critical tool for limiting administrators to only the permissions they need rather than

granting full local administrator privileges. This is achieved by granting Windows Admin Center access to Just Enough Administration endpoints in PowerShell to limit what authorized users can manage (Microsoft, 2023). This aligns with zero trust architecture, which "assumes breaches are inevitable and works in real time to identify threats while allowing authorized users the minimum access needed to complete a task" (Microsoft, What is Zero Trust architecture?).

Finally, while there are inherent risks with the use of Windows Admin Center, it is designed in a manner so that it can be securely implemented. Windows Admin Center distinguishes between gateway users and gateway administrators, preventing ordinary gateway users from changing access permissions or authentication settings (Microsoft, 2023). Organizations using this product can also choose to utilize security measures such as temporary access and multifactor authentication, both of which provide additional security against potential threats (Microsoft, 2023). These practices are ultimately outlined in Microsoft's Zero Trust architecture model. Microsoft states that "ZTA provides each user with only the minimum level of access needed to perform their tasks" (Microsoft, What is Zero Trust architecture?). Zero Trust assumes that a system or network has already been compromised or will be compromised in the future; therefore, authentication is immediately required, hence the name "Zero Trust." Ultimately, it is up to administrators to ensure that Windows Admin Center is properly implemented and utilized. Practices such as regularly reviewing event logs and installing updates immediately upon release are key components of ensuring security. The centralized management capabilities of Windows Admin Center should be viewed as a valuable asset so long as its use is paired with Zero Trust, MFA, and regular updates.

References

Microsoft. “User Access Options with Windows Admin Center.” *Microsoft Learn*, 16 June 2023, www.learn.microsoft.com/en-us/windows-server/manage/windows-admin-center/plan/user-access-options

Microsoft. “Manage Servers with Windows Admin Center.” *Manage Servers with Windows Admin Center | Microsoft Learn*, 10 Feb. 2025, www.learn.microsoft.com/en-us/windows-server/manage/windows-admin-center/use/manage-servers.

Microsoft. “What Is Windows Admin Center.” *What Is Windows Admin Center | Microsoft Learn*, 12 Aug. 2025, www.learn.microsoft.com/en-us/windows-server/manage/windows-admin-center/understand/what-is

Microsoft. “What Is Zero Trust Architecture?: Microsoft Security.” *Microsoft*, www.microsoft.com/en-us/security/business/security-101/what-is-zero-trust-architecture. Accessed 6 Sept. 2026.