

## Assignment 1:

### Windows Servers Edition History Comparison

Version	Release	Key Features	Security Features	Management Tools & Virtualization (VM)	Cloud Integration	Support Lifecycle
<u>Windows NT Advanced Server 3.1</u>	1993	<ul style="list-style-type: none"> <li>- 32-bit OS</li> <li>- File and print sharing</li> <li>- Client-server model</li> </ul>	<ul style="list-style-type: none"> <li>- Basic user authentication</li> <li>- NTFS file system with permissions</li> </ul>	<ul style="list-style-type: none"> <li>- Basic GUI for admin</li> <li>- Command-line tools</li> <li>- <b>VM?</b> None</li> </ul>	None	Ended 2001
<u>WS 2000</u>	Feb 2000	<ul style="list-style-type: none"> <li>- Active Directory (AD)</li> <li>- XML support</li> <li>- ASP for web apps</li> <li>- Standard, Advanced, Datacenter editions</li> </ul>	<ul style="list-style-type: none"> <li>- AD-based authentication</li> <li>- Kerberos support</li> </ul>	<ul style="list-style-type: none"> <li>- Microsoft Management Console (MMC)</li> <li>- Event Viewer</li> <li>- <b>VM?</b> Limited VM support</li> </ul>	None	Ended 2010
<u>WS 2003</u>	April 2003	<ul style="list-style-type: none"> <li>- Reduced reboot needs</li> <li>- Server roles (e.g., DNS)</li> <li>- 64-bit support</li> <li>- Web Edition introduced</li> </ul>	<ul style="list-style-type: none"> <li>- Enhanced AD security</li> <li>- Improved firewall</li> </ul>	<ul style="list-style-type: none"> <li>- Server Manager</li> <li>- Group Policy enhancements</li> <li>- <b>VM?</b> - Virtual Server 2005 (separate)</li> </ul>	None	Ended 2015
<u>WS 2003 R2</u>	Dec 2005	<ul style="list-style-type: none"> <li>- Free upgrade</li> <li>- Active Directory Federation Services (ADFS)</li> <li>- Branch office features</li> </ul>	<ul style="list-style-type: none"> <li>- Stronger user authentication</li> <li>- Security patches</li> </ul>	<ul style="list-style-type: none"> <li>- Updated MMC</li> <li>- Simplified admin tools</li> <li>- <b>VM?</b> Improved virtual server support</li> </ul>	None	Ended 2015
<u>WS 2008</u>	Feb 2008	<ul style="list-style-type: none"> <li>- Hyper-V virtualization</li> <li>- Server Core option</li> <li>- PowerShell 1.0</li> </ul>	<ul style="list-style-type: none"> <li>- Network Access Protection</li> <li>- BitLocker encryption</li> </ul>	<ul style="list-style-type: none"> <li>- Server Manager</li> <li>- Event Viewer enhancements</li> <li>- <b>VM?</b> Hyper-V for VMs</li> </ul>	None	Ended 2020
<u>WS 2008 R2</u>	Oct 2009	<ul style="list-style-type: none"> <li>- PowerShell 2.0</li> <li>- Remote Desktop Services</li> <li>- 64-bit only</li> </ul>	<ul style="list-style-type: none"> <li>- DirectAccess</li> <li>- Enhanced BitLocker</li> </ul>	<ul style="list-style-type: none"> <li>- Improved Server Manager</li> <li>- Remote management</li> <li>- <b>VM?</b> Hyper-V improvements</li> </ul>	- Basic Azure integration	Ended 2020
<u>WS 2012</u>	Sep 2012	<ul style="list-style-type: none"> <li>- Hyper-V 3.0</li> <li>- Storage Spaces</li> <li>- ReFS file system</li> </ul>	<ul style="list-style-type: none"> <li>- Dynamic Access Control</li> <li>- IP Address Management</li> </ul>	<ul style="list-style-type: none"> <li>- Server Manager GUI</li> <li>- PowerShell 3.0</li> <li>- <b>VM?</b> Enhanced Hyper-V</li> <li>- Live migration</li> </ul>	- Early Azure integration	Ended 2023

<u>Version</u>	<u>Release</u>	<u>Key Features</u>	<u>Security Features</u>	<u>Management Tools &amp; Virtualization (VM)</u>	<u>Cloud Integration</u>	<u>Support Lifecycle</u>
<u>WS 2012 R2</u>	Oct 2013	- Work Folders - Desired State Configuration - PowerShell 4.0	- Workplace Join - Multi-factor authentication	- Improved Server Manager - Azure Backup support - <b>VM?</b> Hyper-V replica enhancements	- Azure Backup - Hybrid cloud support	Ended 2023
<u>WS 2016</u>	Oct 2016	- Nano Server - Containers (Docker support) - PowerShell 5.0	- Shielded VMs - Windows Defender - Credential Guard	- Windows Admin Center (Project Honolulu) - System Insights - <b>VM?</b> Hyper-V improvements - Container support	- Azure Site Recovery - Hybrid cloud	-Mainstream 2022 -Extended 2027
<u>WS 2019</u>	Oct 2018	- Windows Admin Center - System Insights with ML - Kubernetes support	- Windows Defender ATP - Encrypted networks - Secured-core features	- Enhanced Windows Admin Center - PowerShell 5.1 - <b>VM?</b> Improved container support - Hyper-V shielded VMs	- Azure hybrid capabilities - Storage Migration Service	-Mainstream 2024 -Extended 2029
<u>WS 2022</u>	Aug 2021	- Secured-core server - HTTP/3 and QUIC - ASP.NET Core 6	- Hardware root-of-trust - TLS 1.3 - VBS for malware protection	- Windows Admin Center updates - PowerShell 7 support - <b>VM?</b> Nested virtualization - Kubernetes IPv6 support	- Azure Arc integration - Hotpatching (Azure Edition)	-Mainstream 2026 -Extended 2031
<u>WS 2025</u>	Nov 2024	- NUMA support for AD - Hotpatching (Standard/Datacenter) - Accelerated Networking	- Enhanced AD security - 32k-page database - Object repair tools	- Advanced performance counters - PowerShell enhancements - <b>VM?</b> Dynamic processor compatibility - SR-IOV for VMs	- Azure Arc-enabled management - Deep Azure integration	-Mainstream 2029 -Extended 2034

## References

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