CYSE 280 - Windows Systems Management and Security

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Server Versions	Differences
NT Advanced Server 3.1	- Released in 1993. - This was the first version produced since there is no version 1.0. (Originally split from a specialist server version from the standard NT version) - It was a 32-bit system. - The product originally had 2 different versions, one for terminals and one for servers.
Windows NT Server 3.5	- Released in 1994. - Allowed interconnectivity with Unix systems and Novell Netware - This change was made due to the rise in Unix and Novell servers in the market. (They had to make this change to survive in the market)
Windows NT Server 3.51	- Released in 1995. - Microsoft Improved its PC Windows interface with Windows 95. - The version had the goal of running computers that use Windows 95. - The server system gained the capability to manage software licenses for clients. - The system also was able to install and update Windows 95 and the operating system over the network

Windows NT server 4.0	- Released in 1996
	- Gotten a fresh interface with its release
	- With the new version, it came with (IIS) Internet Information Server
	- Added service packs and the creation of Windows NT Server Enterprise in 1997
	  - Included the integration of public key encryptions and operating system management
	  - There were also the additions of the transaction server & Message queue server
	- Came with Windows NT Server 4.0 Terminal Server Edition in 1998
	  - This improved connectivity to non-Windows systems and created a bridge from 16-bit DOS applications so they could interact with 32-bit desktop environments

Windows Server 2000	- Microsoft dropped the NT brand during the 2000s now they just follow the years - Added support for XML

	- Led the creation of Active Server Pages (ASP) and the use of user authentication - Introduced the concept of tailored versions as well as standard, advanced, and Datacenter Servers
Windows Server 2003	- Aimed to reduce the events that would require a system reboot - Made it possible to install patches and software updates on the fly without having to restart the system. - Enhanced security features of the operating system - The first time the .NET environment was included with the Windows Server Operating System. - Included the concept of server roles, enabling the operating system to be tailored to specific specialized tasks, such as a DNS server. - Produced an update that converted the system to a 64-bit program environment.

Windows Server 2003 R2	- It came out in 2005
	- Free to whoever bought the previous edition
	- Improvements to the security issues.
	- Added user authentication based on active directory.
	- Added the Active Directory Federation Services.
	  - This enabled external services to be included in the single sign-on permission.
	- Another active directory upgrade called “Active Directory Application Mode”
	  - Created an arms-length relationship with third-party applications.
	  - This allowed services to verify users without including the authentication into the software
	- This version enabled setting security policies for a group of machines.
	- This version also included better data compression for files and transfer and replication procedures for multi-site WANs

Windows Server 2008	- Upgraded the Active Directory and made fundamental changes to how networking services interact with the software support features - Including Microsoft’s Hyper-V to enhance company competitiveness. - Added Event Viewer and Server Manager - Added Server Core - 4 editions Standard, Enterprise, Datacenter, Web
Windows Server 2008 R2	- First made in 2009 - More technical advancements to the underlying support system - Switched from Windows Vista to a Windows 7 heart. - Included Remote desktop Services (RDS), Branchcache, and DirectAccess.

Windows Server 2012	- Added Cloud OS - Focused on integrating Hyper-V into shape to make cloud resources easy to integrate - The storage system was mediated by Hyper-V as well - Hyper-V virtual switch and Hyper-V replica were included in the release - Four Versions: Essentials, Foundation, Standard, Datacenter.
Windows Server 2012 R2	- Released in 2013 - Extended the use of Powershell - Provided the capability to integrate cloud services - Rewrote security systems and network services - Virtualization and storage systems were also overhauled and Web services were enhanced. - Added ability to serve mobile devices with software - Storage features were enhanced in the upgrade
Windows Server 2016	- A new server system called the nano server - Added an encryption system for Hyper-V - Containers were introduced
Windows Server 2016 Datacenter Edition	- Different scale load - More capacity - Able to interact with any containerization system

Windows Server 2019	- Released in 2018
	- A new feature called Windows Admin Center (Formerly Project Honolulu)
	  - Allows the console to cover multiple servers
	- Hyper Converged Infrastructure (HCI)
	  - Capable of supporting software-defined data centers
	  - Offers the ability to adjust virtualized services without downing the servers
	  - Supporting VMs can be executed automatically
	- Further pushing Linux compatibility using a system called “Native Shielded VMs for Linux
	- Updates to security
	  - Comes with Windows Defender Advanced Threat Protection (ATP)
	- Leaner server cores
	- New GUI controls
	  - Full front-end Admin tools in a GUI interface

Source: Cooper, S. (2018, December 3). *Ultimate Guide to Windows Server Including Versions & Dev History*. Comparitech.com; Comparitech. https://www.comparitech.com/net-admin/guide-windows-server/#:~:text=So%2C%20to%20date%20there%20has%20been%3A%201%20Windows,2018%29%203%20Windows%20Server%2C%20version%201809%20%28September%202018%29

Other Windows Server Versions include: version 1709 (September 2017), version 1803 (March 2018), and version 1809 (September 2018). These are Semi-Annual channels.