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Windows Server Features and Applications

CYSE 280

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Introduction

Microsoft Server 2019 is the second latest version of the Microsoft Server series. It is one of the most popular server operating systems used in the world of computing. The system was first introduced almost 30 years ago on July 27th, 1993 and brought many new features to the table. Features like active directory, group policy and DNS server management. Microsoft changed the game when it came to managing and upkeeping server systems. The 2019 version is one of the most advanced and brought many new features to the table. We will be discussing some of these features and new features that were brought to the operating system and explain their uses and when to use them. We will also be seeing if it can make a professional's job easier using systems tied to Windows Server.

System Requirements

The system requirements of this operating system are actually not that demanding when you're just first starting out. A 1.4 GHz processor is needed that can support the needed features that come with the software. 512MB of Error Correcting Code RAM which doesn't sound like all that much but it can run a beginner system. 32GB of storage is required in order to download the operating system. A network adapter on PCI -E that can withstand 1GB/s is required for the system to function. After getting these requirements you are able to create your first server platform and try to test and play around with some of the features.

Many of the larger platforms are run with much more powerful configurations that can cost millions of dollars. Upkeep of these systems can take full teams of professionals. Servers also offer many different services whether it's storage, web or database. It's a very complicated service to maintain but it is worth it when you have such a large array of services that need to be maintained and looked over in an organization. Being that these systems are so sophisticated and complex, there are many great features that are available to help with streamlining the user experience so that services can stay well maintained.

Feature #1: Window Admin Center

The first feature that will be talked about is the Windows Admin Center. It was originally brought out when the 2019 Edition was released. It can also be used for newer and previous models of the software dating back to Server 2012. The feature is a very useful tool when it comes to managing the server's infrastructure from a web centered perspective. It can be accessed from basic internet browsers such as Google Chrome and Edge. This basically means that it can be accessed anywhere that has a stable internet connection. This was considered a game changer as many older systems were not as accessible like this before this was released.

The Use cases for this program is if you quickly need to make a tweak in your system but you may be out of the datacenter. After connecting to an internet connection you can quickly install the program onto a Windows computer and gain access to your server's main administrative settings. It streamlines the process of changing settings and management protocol. It has features such as security, failsafe, storage, networking and many more. It also helps

manage either physical systems on site or the cloud system that needs to be managed. Being able to access this on the fly is a great innovation when it comes to server management. It is a powerful tool that shouldn't be looked over as it is one of the most useful things to ever be made and still being continued to be developed. In conclusion the access to this service makes the availability of settings easier than ever before.

Feature #2: Active Directory

Active Directory is probably the most important system when it comes to an operating system. The Active Directory is used to store information about devices and other information on the network. It is basically a centralized storage place for networking needs for admins and staff to get their work done. Basically things like Logins, permissions and many other things are used in the Active Directory. Not being able to connect to this may cause problems for the client. Not being able to log on is one of the worst problems when not being able to use it. User information is stored within this feature so it going down can really derail a whole organization. It also has many security features that can enhance the user experience while still keeping the network safe.

The features of this system are basic authentication and authorization. It is essentially a database that is used to make groups of user information and to keep track of who is logging in and who's credentials are being used for certain tasks. Being able to keep track of this information keeps accountability and integrity within a network system. It also can be used as a host for Single Sign On which has become a popular feature in the security industry. With this

feature it enables you to log in onto one account and share that information with other applications on your system so that you wouldn't be required to log into other systems.

Learning how to deploy and manage an Active Directory can be quite challenging for your first time.With how important the system is, it is bound to be quite extensive and difficult to maintain. First you have to create a domain for your system that must be created so that it is easily manageable for the admins using that system. A domain is the group of users and systems that are authorized to use that network. After this you must create units that separate different departments from others. This may be able to structure what people are able to access depending on their unit their information is deployed to. After that you have to make your schema. Then you have to develop a naming scheme for the system. In conclusion Active Directory keeps all user information sealed in that system giving a centralized way of admins to access anything related to logging in

Feature #3: Remote Desktop

Remote Desktop Services is one of the main features that can be paired with the Microsoft Server Platform. It is a feature that allows another user to access your computer whether it's for maintenance or just technical support. It is a very useful tool when it comes to needing access to a platform that isn't technically accessible physically. Virtual machines are also accessible on this platform. Depending on how the network is configured, you can technically access the feature anywhere to be able to give assistance to anyone or any system in

need. There are many different versions of remote desktop but this is one of the only ones that can be tied to an actual operating system.

In order to use this feature a license must be obtained along with your operating system. All servers that are needed to be accessed with this feature must be enrolled in the Server Manager. After that step you can add the installation software to the servers needed. After that would be to add the License server then activating the license server to install the wizard. Then add the certificate names and install a gateway. Then configure the deployment properties and create a session collection. After this you can test your systems to see if it needs any tweaks. Once it is ready to go you can manage whatever you need without having to physically be at the system. This tool can save a lot of time and streamline more of your services that need to be done. In conclusion the use of Remote Desktop gives professionals the ability to not travel to physical workstations which eases resources used to travel.

Feature #4: Hyper-V

Hyper-V is a system that has been used by professionals in the technology industry for years. It was made to host and manage virtual machines that are deployed onto the system. A virtual machine is basically a computer inside of another computer by using software instead of another physical machine. Being able to host virtual machines on the platform created a way for people to multitask between multiple operating systems from one physical machine. It can be

used for using an application that may not be accessible on a certain operating system so you create a virtual machine to replicate what is needed to run this software.

When Hyper-V runs a virtual machine it isolates it which makes it basically its own independent computer. It can save space by having a lower quantity of powerful computers but each one of them can run multiple Virtual Machines. This streamlines inventory, office space and setup. It can also help expand the use of virtual machines as authorizing people to use this program is rather simple. It is also rather easy to install as it is accessible through Server Manager. You can also create virtual switches within the software quite easily as long as you have a network adaptor ready to work. Creating a virtual machine is also rather easy as all you have to do is open the manager, click on a new virtual machine, select the appropriate setup like RAM size and then you're able to deploy your virtual machine. This is a very great system to have to help aid with using compatible software or to emulate things in an independent environment. In conclusion Hyper-V gives professionals many ways to emulate a service without having to spend money on another computer which also saves space for the organization.

Conclusion

In conclusion Microsoft has given professionals great tools to use when maintaining very complicated machines like servers. Active directory keeps all user information readily available and secure. Without it we wouldn't be able to keep track of login or be able to have a database of users and permissions. Remote Desktop eases the use of being physically near a system in order

to do maintenance on it as you can remote into the device. This saves time and resources in order to access that device that may be far away from the professional.

Admin center gives the professionals a great tool to access the settings of a server to help with changing settings of the server wherever you are. Being able to change the settings from a 60MB application that can be downloaded onto any windows machine is a game changer. Hyper-V simplifying the use of virtualization is also a great innovation to the Microsoft suite. Being able to store this feature in your servers systems makes it a great integration into your organization.

After gathering this Information it's very evident that almost anything can be operated on this server platform. This makes the professionals jobs easier when it comes to keeping everything maintained either physically or virtually.

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