In this lesson we're going to talk about Windows Pro Edition. Now, the Windows Pro Edition comes in both Windows 10 and Windows 11 varieties. When you're dealing with Windows Pro, this is a Windows operating system that focuses on business use. This takes all the features that you find inside of Windows Home Edition and adds things like remote desktop servers, Windows Information Protection, BitLocker, and a suite of other tools that are designed to make your life easier if you're connecting this system to a business network. One of the main differences between Windows Home and Windows Pro is the fact that Windows Pro can be used in a domain environment. So, if you're working in a large organization that has an Active Directory server, and you want people to be able to log in and authenticate using that Active Directory server, this would be a good reason to move into the Windows Pro Edition, instead of using Windows Home, because Windows Home cannot connect to a domain-based environment. Now, let's take a look at some of the key features that make Windows Pro different than Windows Home. First, we have BitLocker. Now, BitLocker is a full disk drive encryption schema that is provided inside of Windows Pro and Windows Enterprise additions. When it comes to BitLocker, this allows you to be able to encrypt your hard disk or your solid-state device using the keys that are held within the TPM, also known as the Trusted Platform Module within your CPU. Now, when it comes to BitLocker, this is going to use AES or the Advanced Encryption Standard level of encryption for all the files on that device. BitLocker is considered a full disk file encryption system, which means that all the contents on that drive are going to be protected and encrypted whenever you shut down the computer. So, you're now going to have good data address protection for everything that's being stored on a particular storage device, whether that's a hard drive or solid-state device, as long as you're using BitLocker to protect it. Another key feature you're going to find in the Windows Pro version is what's known as a Group Policy Editor. Now, the Group Policy Editor is a tool that's used to create and apply operating system and software application settings across all the users within a particular group. The Group Policy Editor can be open from the command line by using the Command gpedit.msc, and this will bring up the Microsoft console known as the Group Policy Editor. From here you can configure each of these group policies on each individual machine, or if you're connected to a domain environment, you can do this from within Active Directory from the domain controller, and that way all of the client machines, when they first connect to that domain controller, will receive that group policy and will set up their settings, desktop styles, and all of their configurations using a uniform set of policies that were created on that domain controller using the Group Policy Editor. Now, it's important to note the Group Policy Editor does not exist and is not available within the Home Edition, only on the higher levels, such as Windows Pro and Windows Enterprise editions. Now, another key feature that you're going to gain within Windows Pro is the ability to run a Remote Desktop Protocol server known as an RDP server. Now, when you're using the Windows Home Edition, you have the ability to connect to an RDP server using the RDP client installed within the Windows Home Edition, but you can't run your own remote desktop server. Now, once you move to The pro level or the Enterprise level though, there is the ability to turn on a Remote Desktop Protocol server on either of those additions of Windows. This allows you to be able to remotely connect to your Windows Pro machine from anywhere in the world using an RDP client, and to be able to remotely access your computer and all of its features from wherever you are in the world. RDP or the Remote Desktop Protocol is a great way to be able to take control of the system remotely and be able to access everything as if you were sitting right in front of it. When you use an RDP client and connect to an RDP server, you now have access to the entire operating system, and you'll even have access to the graphical user interface. So, it's just like you're sitting in front of that Windows Pro machine, but you're doing it remotely. Another interesting feature that's included with Windows Pro is what's known as the Windows Information Protection or WIP. Now, the Windows Information Protection was formally called the Enterprise Data Protection or EDP, and this is used to help identify and protect against potential data leakage or data exfiltration by your employees and other authorized users. By using the Windows Information Protection, you're able to better protect the data that's being stored and processed on your corporate network when being accessed from a Windows Pro Edition machine. Now, in order to run Windows Pro you have to meet the same basic requirements you would for Windows Home. This includes having one gigabyte of memory available if you're running the 32-bit version of Windows 10 Pro, or two gigabytes if you're running the 64-bit version of Windows 10 Pro. If you're running Windows 11 Pro, you need to have at least four gigabytes of memory. When it comes to hard disk space, you need at least 20 gigabytes of hard disk space available to run the Windows 10 Pro Edition, and you need at least 64 gigabytes of space if you're running the Windows 11 Pro Edition. Because of the additional features that are included inside of the Windows Pro Edition, it does cost a little bit more than Windows Home. Whereas Windows Home sells for around $139, Windows Pro sells for about $199 in the United States. When you go to purchase an addition of Windows Pro, you have three different licensing options. These include OEM, Retail, and Volume Licensing. Now, OEM is the Original Equipment Manufacturer license, and this only applies if you're building computers to sell to other people. For example, if you work for Dell or HP or ASUS, you can buy an OEM license and install it on those computers, and that way it's resold to your end consumer who's going to be using that machine. On the other hand, if you're building your own computer, you're going to be using what's known as a retail license. A retail license allows you to buy one license and use it on one particular piece of hardware, whether that's a laptop or desktop, using the Windows Pro Edition. The third type of licensing we have is known as volume licensing. Now remember, the Windows Pro Edition is designed to be used by small and medium-sized businesses. A medium-sized business in the United States is any company up to about 500 employees. So, if I have 200 employees and I need to have licensing for all of them, I don't want to have to go to the store and buy 200 individual copies of Windows Pro. Instead, I can contact Microsoft directly or one of their resellers and buy a volume license. They would ask me how many computers am I going to install it on, and I would say, "200," and they would give me a single code that will be good for 200 uses across my entire network. This is the way volume licensing works, and usually you'll get a discounted rate because you're buying 10 or more copies of that license for that particular edition. Now, the last thing we need to talk about in this lesson on Windows Pro is another version that's known as Windows Pro for Workstations. And you may be wondering what is the difference between Windows Pro and Windows Pro for Workstations? So, it's important to understand that there is a difference here. When you're dealing with Windows Pro, this is designed to be used on an end user's client workstation, whether that's a desktop or a laptop. But Windows Pro for Workstations is actually an improved version of the Pro Edition, and it supports additional features that are going to be used in a more powerful computer known as a workstation. Now, Windows Pro for Workstation has all the same features we talked about for Windows Pro, but it supports additional hardware. For example, you can support more memory using Windows Pro for Workstations than you can using just Windows Pro. Windows Pro can only support memory up to two terabytes in size, but Windows Pro for Workstations can support up to six terabytes of memory. In addition to this, Windows Pro can only support two-way multiprocessing for up to 128 cores. But Windows Pro for Workstation can actually support up to four-way multiprocessing and up to 256 cores inside a single processor. So, as you can probably guess, most people who are using an end client workstation inside of a business are going to only need something like Windows Pro and not Windows Pro for Workstations, because most of us don't have over two terabytes of memory or more than two processors inside of our motherboard. And because of this, most of us can get away with using Windows Pro, instead of having to upgrade to the Windows Pro for Workstations level, which provides additional hardware support at those really high levels in terms of memory and additional processors. Top of Form

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