Over the past week, I've been looking to shore up my experience and

knowledge in an IT Support or helpdesk context in order to get better

grasp on how I may actually operate in the position. There is only so

much reading and "book-smarts" that one can build before the need for

hands-on application and experience become crucial. I've seen this in

my time spent studying with UMBC. In my opinion, this not only applies

to mainly technical fields, but even the more intangible ones such as

sociology or psychology. The practical application of learned knowledge

enhances our fundamental understanding of the subject, but often

provides even more valuable growth opportunities. For example, I know

about Active Directory and the various Windows Administrative tools, but

never really had a reason to delve deeper. Now ask me how to do specific

tasks according to specific problems? There may be a bit of an issue

there. That is why I found the virtual/simulated lab portions of me

studies to be extremely rewarding.

Previously I've used a professional license of VMware provided by

various courses. However, I have moved to VirtualBox due to it being free,

but still extremely capable. I already had a Windows 2022 Server and

Windows 10 Pro VM created and ready to go. However, there were a few

things I did to tune it for the purposes of learning more about a

helpdesk role.

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| Lab Setup Part 1 | |
| Task/Process | Knowledge Gained |
| Active Directory Setup | Understanding of AD Domain Services, creating domains, user/group management, and permissions. |
| Networking Configuration | |  | | --- | |  |   Knowledge of IP configuration, static IPs, and troubleshooting connectivity issues between devices. |
| RSAT Tools Installation | Experience installing and using remote server management tools on client machines for domain management. |
| Firewall Management | Skills in configuring firewall rules and managing security without compromising connectivity. |
| Virtual Machine Networking | Practical experience with virtualized environments, managing virtual networks, and IP settings. |

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| Lab Setup Part 2 | |
| Task/Process | Knowledge Gained |
| Creating a Second Virtual Machine | Gained experience in creating and configuring a second VM (Desktop2) to simulate a user workstation in a network. |
| Configuring Organizational Units (OUs) | Learned to create and organize OUs within Active Directory and move users into appropriate units based on roles. |
| Using the Attribute Editor | Acquired skills in using the Attribute Editor to manage and view detailed information about AD objects (e.g., users, OUs). |
| Managing Group Policies | Gained knowledge in accessing and editing group policies and enforcing domain-wide security settings and restrictions. |
| Adding Desktop2 to Network/Domain | Learned how to configure a static IP, ensure network connectivity, and join a machine to the domain for integration into a network environment. |

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| Active Directory & Shared Drive Permissions | |
| Task/Process | Knowledge Gained |
| Useful Commands | Gained practical knowledge in useful commands like **ping**, **gpresult**, and **gpupdate** for network troubleshooting and Group Policy management. |
| Account Lockout & Disabled Accounts | Learned to manage locked, disabled, and expired accounts in Active Directory, ensuring users regain access. |
| Rejoining Computer to Domain | Gained hands-on experience troubleshooting and rejoining computers that have fallen off the domain. |
| Creating Shared Drives & Configuring Permissions | Developed skills in creating shared drives, setting up security groups, and applying granular access controls to shared resources. |
| Mapping Network Drives | Acquired experience in mapping network drives for user-specific access to shared folders, ensuring proper access controls. |
| Configuring Personal Folder Mapping | Learned to configure individualized network drives for users, linking to their dedicated folders for personalized access. |