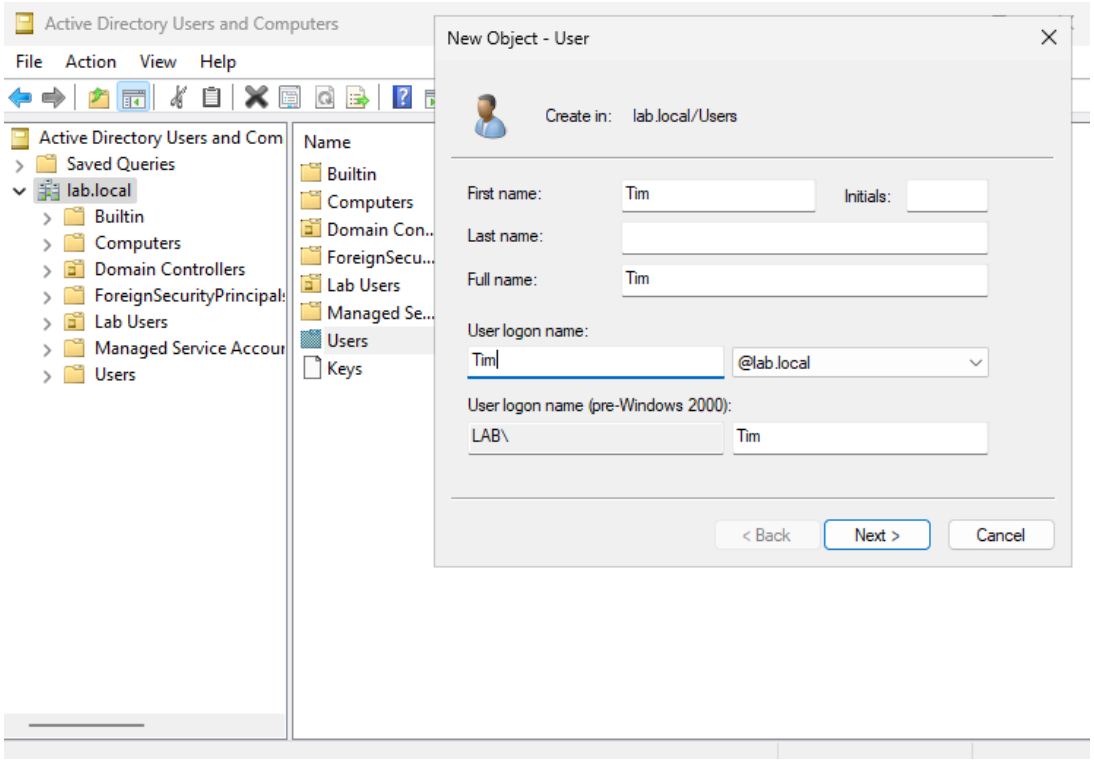
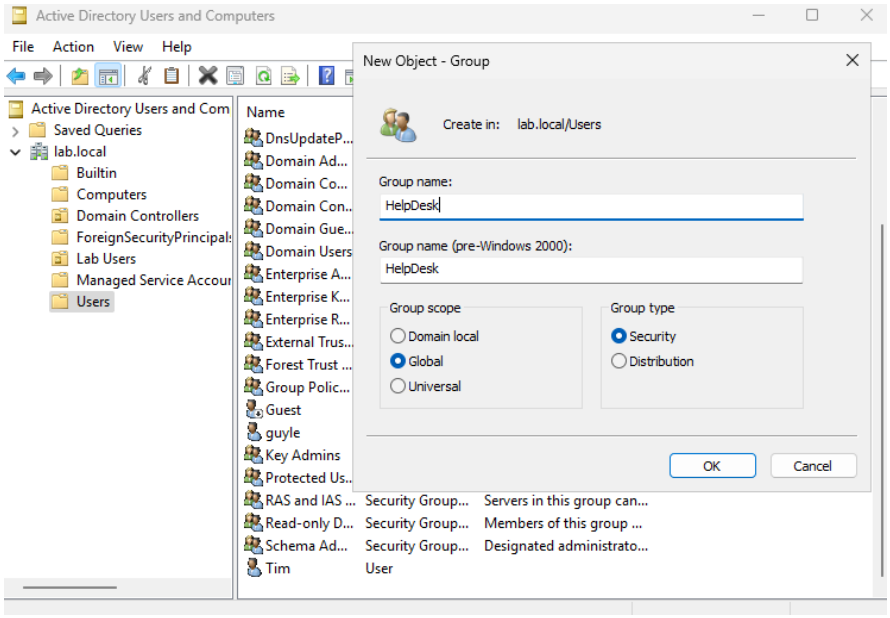
Lab 4 – Active Directory Lifecycle (Users, Groups, Logins)

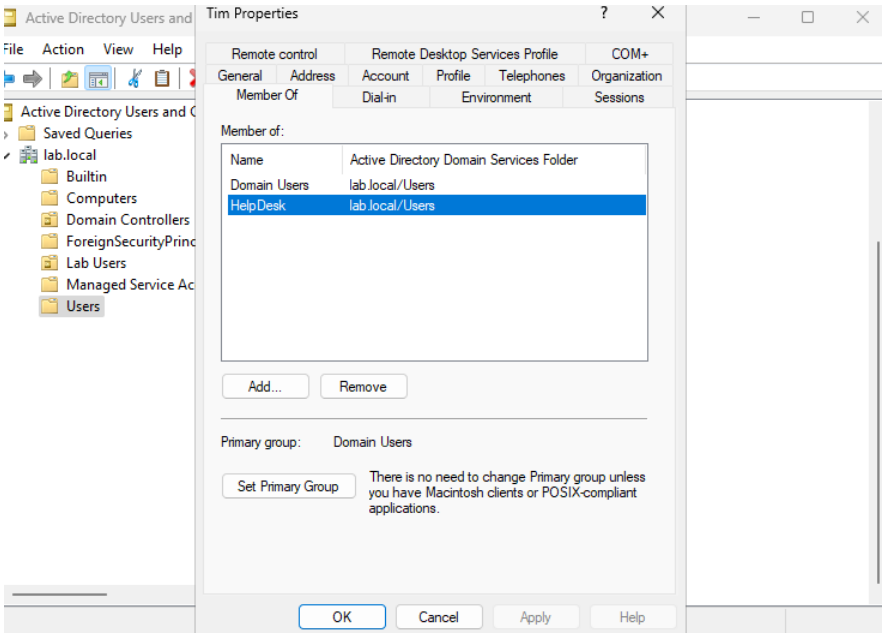
Lab 4 – In this lab, I practiced the Active Directory lifecycle by creating new users, forming groups RBAC, GBAC, assigning users to groups, and resetting passwords. I then tested logins to confirm that the accounts worked in the lab.local domain. These steps demonstrated how administrators manage user access and handle common helpdesk tasks in a centralized way.



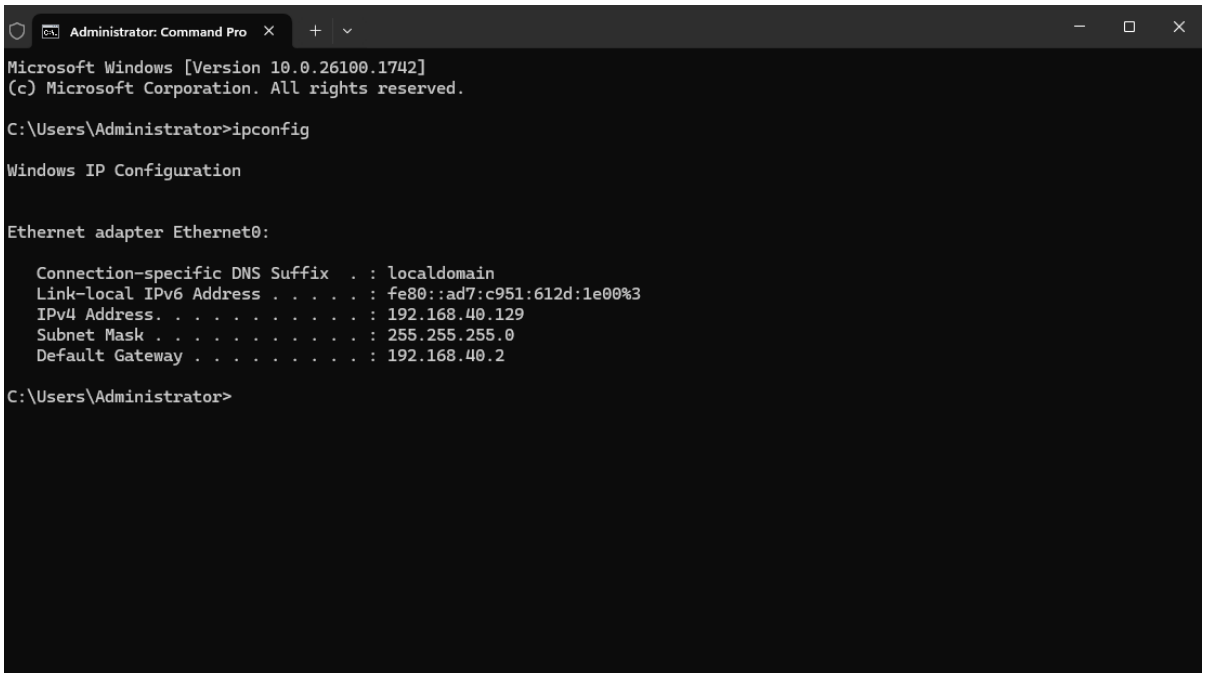
Notes: I opened Active Directory Users and Computers (ADUC) and created a new user account named Tim in the lab.local domain. This simulates adding a new employee to the organization, ensuring that they can log in to any domain-joined computer with a single set of credentials.



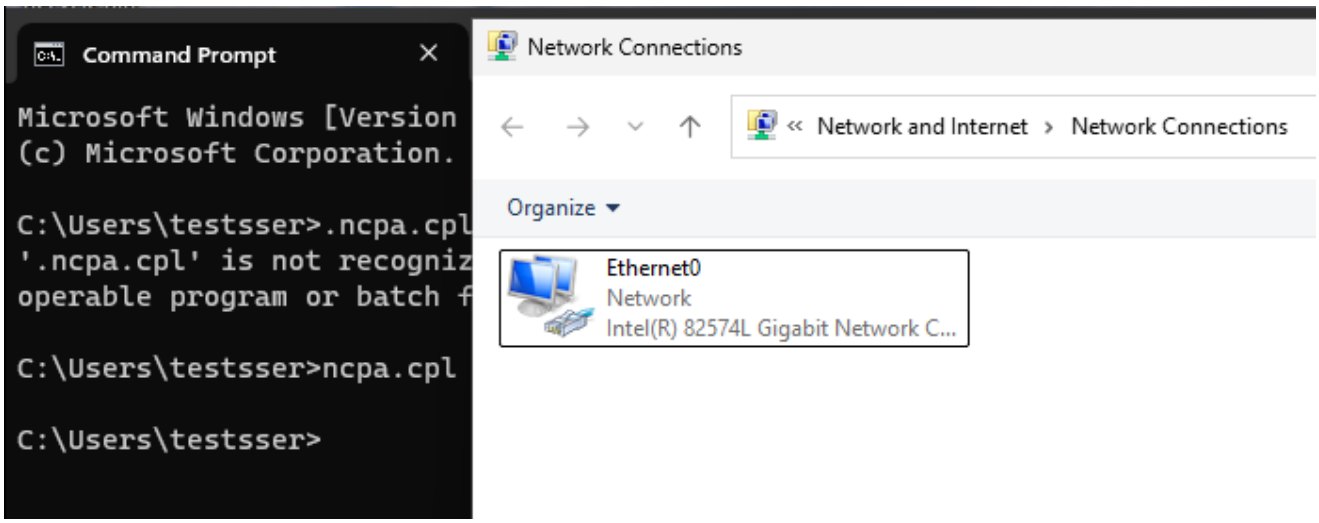
Notes: I created a new security group called HelpDesk. Security groups simplify administration by allowing permissions and policies to be applied to a group of users instead of managing access individually demonstrating RBAC.



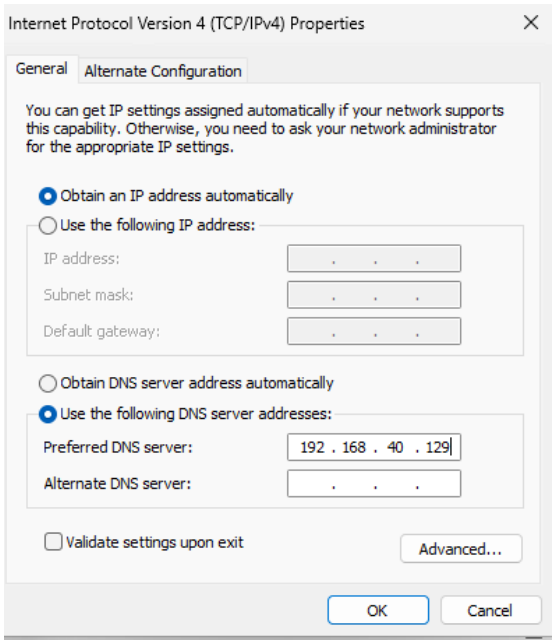
Notes: I added the user Tim to the HelpDesk group, demonstrating group-based access control.



Notes: This screenshot shows me running ipconfig on the Domain Controller to find its IPv4 address, which was 192.168.40.129. This was necessary because the client VM would need to use the Domain Controller as its DNS server in order to resolve the lab.local domain. Without this step, the client machine would not be able to find the domain.



Notes: This screenshot shows me opening the network settings on the client VM using ncpa.cpl so I could configure the Ethernet adapter. By default, the client was set to obtain DNS automatically, which would not point to the Domain Controller. Preparing this screen allowed me to set the correct DNS manually.



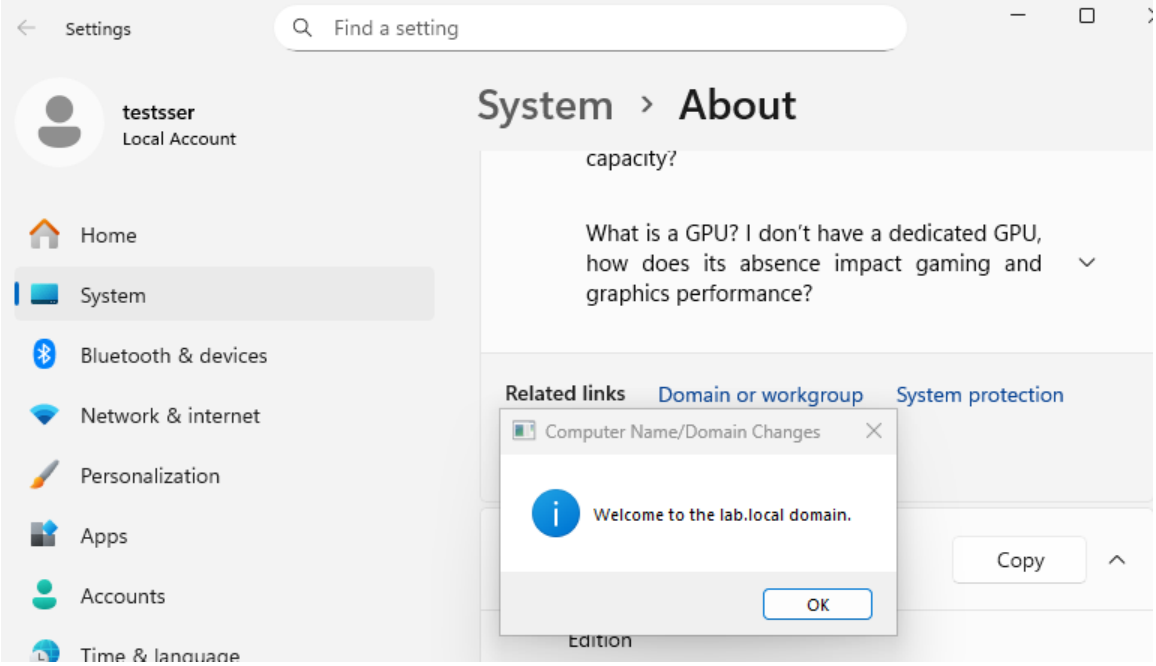
Notes: This screenshot shows me configuring the IPv4 properties on the client VM and setting the preferred DNS server to 192.168.40.129. This ensured the client machine would always query the Domain Controller for name resolution when attempting to join the domain.

```
DNS Servers . . . . . . . . . . . . : 192.168.40.129
```

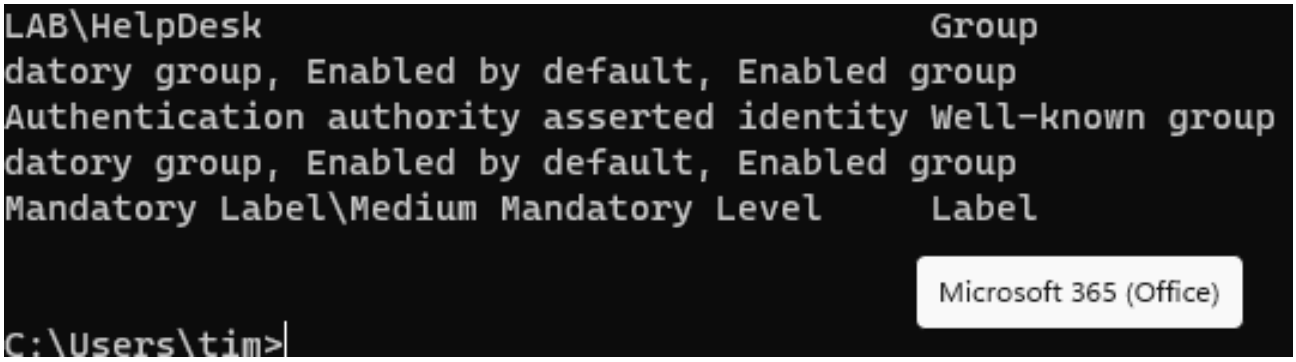
Notes: This screenshot shows me verifying the DNS configuration on the client VM by running ipconfig /all. The output confirmed that the DNS server was set to 192.168.40.129, proving that the client was correctly configured to use the Domain Controller for DNS lookups.

```
C:\Users\testsser>ping 192.168.40.2

Pinging 192.168.40.2 with 32 bytes of data:
Reply from 192.168.40.2: bytes=32 time<1ms TTL=128
Reply from 192.168.40.2: bytes=32 time<1ms TTL=128
Reply from 192.168.40.2: bytes=32 time<1ms TTL=128
Reply from 192.168.40.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.40.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\testsser>
```

Notes: This screenshot shows me running a ping command from the client VM to test connectivity on the network. The replies confirmed that the client VM was able to communicate successfully, with four packets sent and four received, proving there was no packet loss between the client and the Domain Controller.



Notes: This screenshot shows the success message *"Welcome to the lab.local domain"* after I joined the client VM to the lab.local domain using administrator credentials. This confirmed that the DNS settings were correct and that the client had successfully joined Active Directory.



Notes: This screenshot shows me running whoami /groups after logging into the client VM as lab\tim. The output confirmed that Tim was both a member of the default Domain Users group and the custom HelpDesk group that I had previously created. This verified that group memberships were applied correctly through Active Directory.

Lab 4 – Summary

Summary, in this lab, I demonstrated the Active Directory lifecycle by creating domain users, assigning them to security groups, and testing logins from a client machine. I began by configuring a new Windows client VM in VMware and setting its DNS server to point to the Domain Controller at 192.168.40.129. Connectivity was verified using ipconfig, ping, and nslookup to confirm that the client could communicate with and resolve the lab.local domain.

Once connectivity was established, I successfully joined the client VM to lab.local domain. I then logged in with the newly created user account, lab\tim, and verified that group memberships applied correctly. The whoami /groups command confirmed that Tim was part of both the default Domain Users group and the custom HelpDesk group created earlier.

This lab highlighted the importance of DNS in Active Directory environments, showed the process of joining client machines to a domain, and demonstrated how to confirm group membership and domain authentication. Together, these steps represent core skills for managing user accounts, groups, and workstation logins in an enterprise network environment.