Working with the DS Family Command in PowerShell

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Objectives

This lab aimed at demonstrating my understanding of the "ds" family command through different steps. It is worth noting that the commands are not case sensitive. The hands-on lab focused on creating Organizational Units (OUs), Computers, and Users Objects.

1. Commands Description

- Dsquery/dsquery: This was used to display a query for requesting information. It allowed the search on Active Directory about objects, namely, Users, Computers, groups, contacts, and OUs.
- Dsadd/dsadd: This was used to add users, computers, OUs, Contacts, and groups to the Active Directory.
- Dsget/dsget: This was used to display the properties (properties search) of the Active Directory, namely, Users, Computers, OUs, Contacts, groups, sites, subnet, servers (DC), quotas, and partitions.
- Dsmove/dsmove: This was used to rename or move an Active Directory Object
- Dsrm/drsm: This was used to remove a single object/branch (subtree) of an Active Directory.
- Dsmod/dsmod: This was used to modify the properties of an Active Directory.

2. Tasks

- Creating OU named “Sales” using the command: `dsadd ou “ou=Sales,DC=Urim,DC=org” -desc “Sales Organizational Unit”`

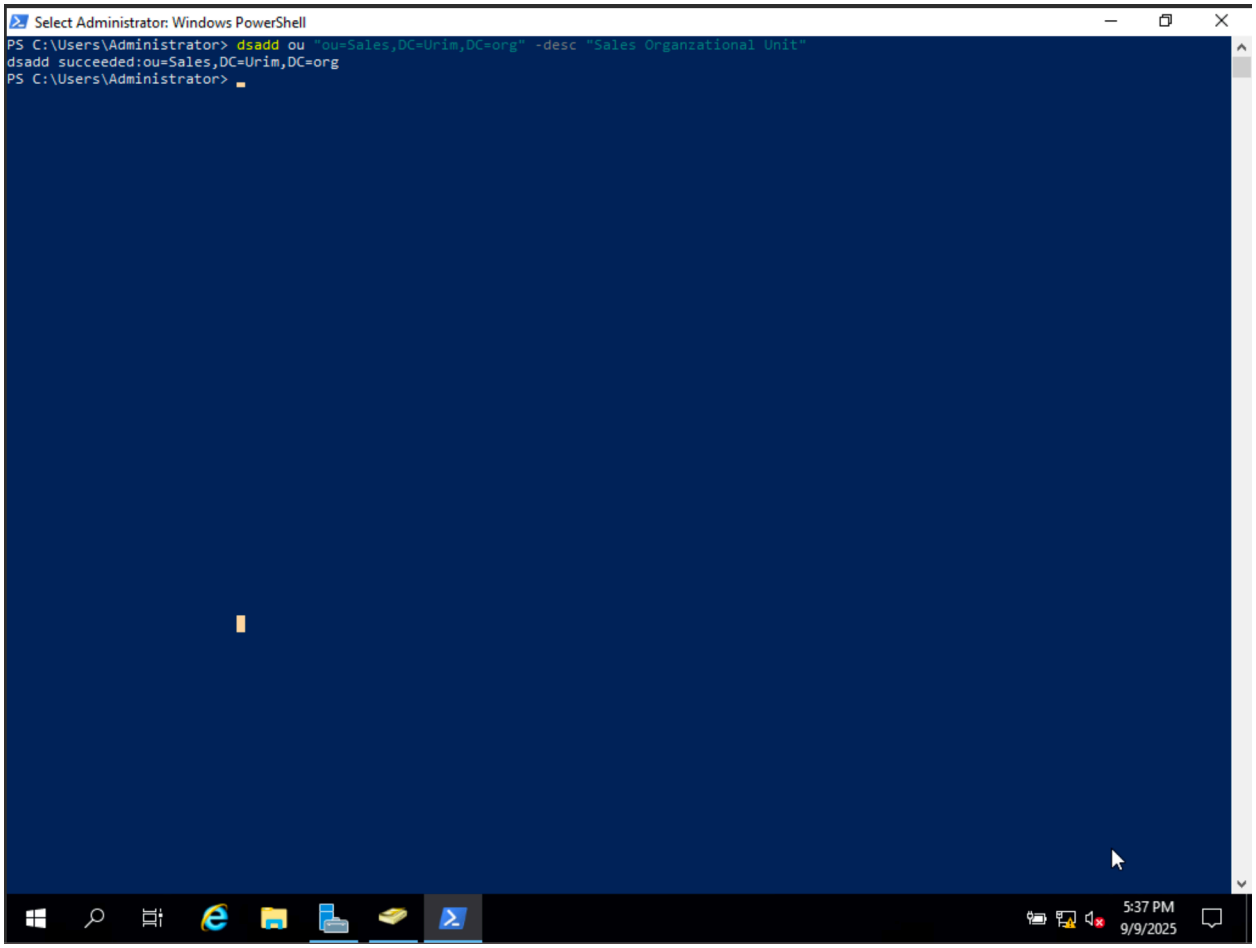

Figure 1: Sales OU (source: personal collection)

- Displaying query information: I used the command “dsquery ou” as follows:

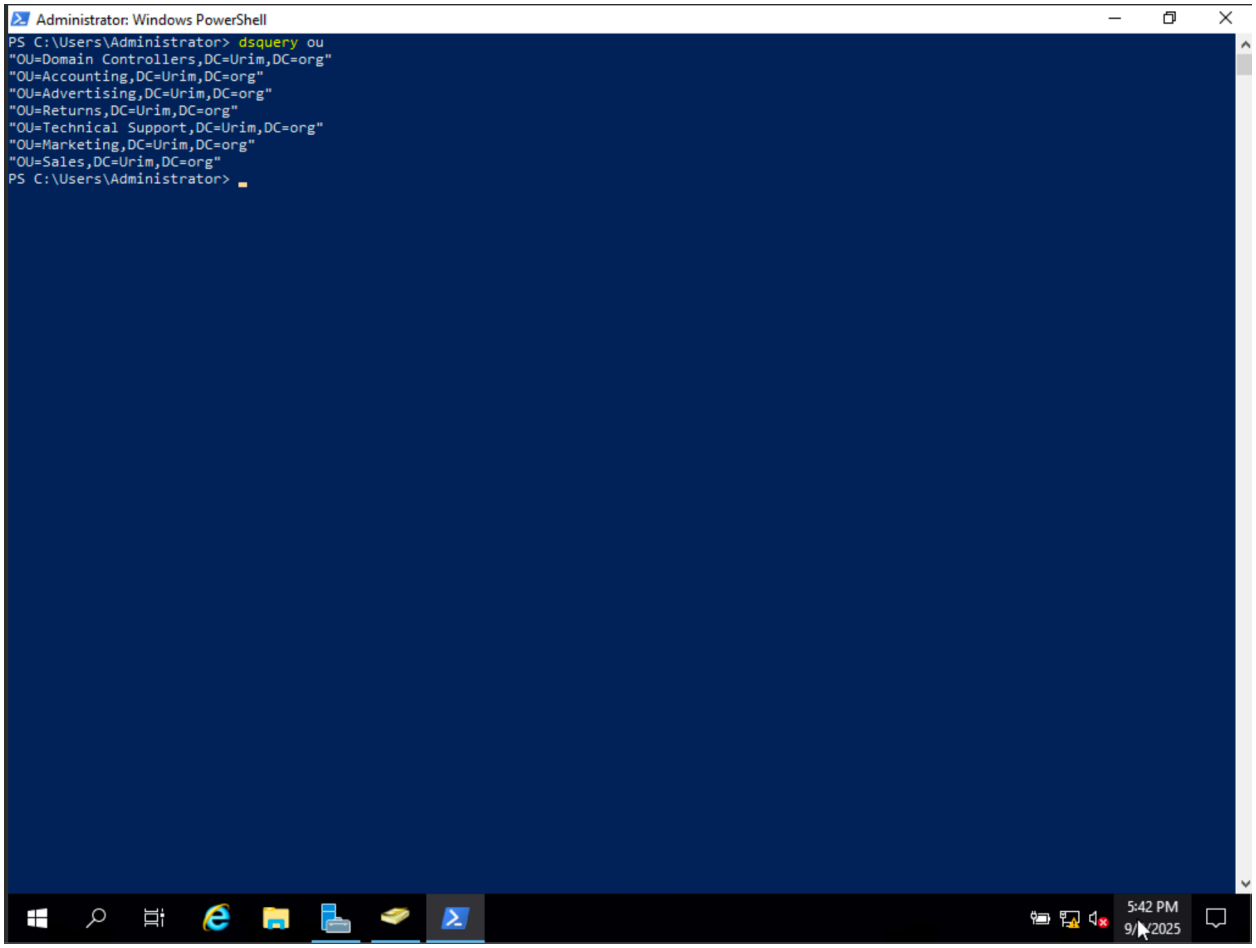

Figure 2: Dsquery in action (source: personal collection)

The query information displayed additional OUs to the one created in the previous task.

- **Creating Sub-OUs:** I focused on the Sales OU, and I added two nested OUs (Sub-OUs) using the command" `dsadd ou "ou=Nairobi Sales, ou=Sales,DC=Urim,DC=org"` and `dsadd ou "ou=Nakuru Sales,ou=Sales,DC=Urim,DC=org"` as follows:

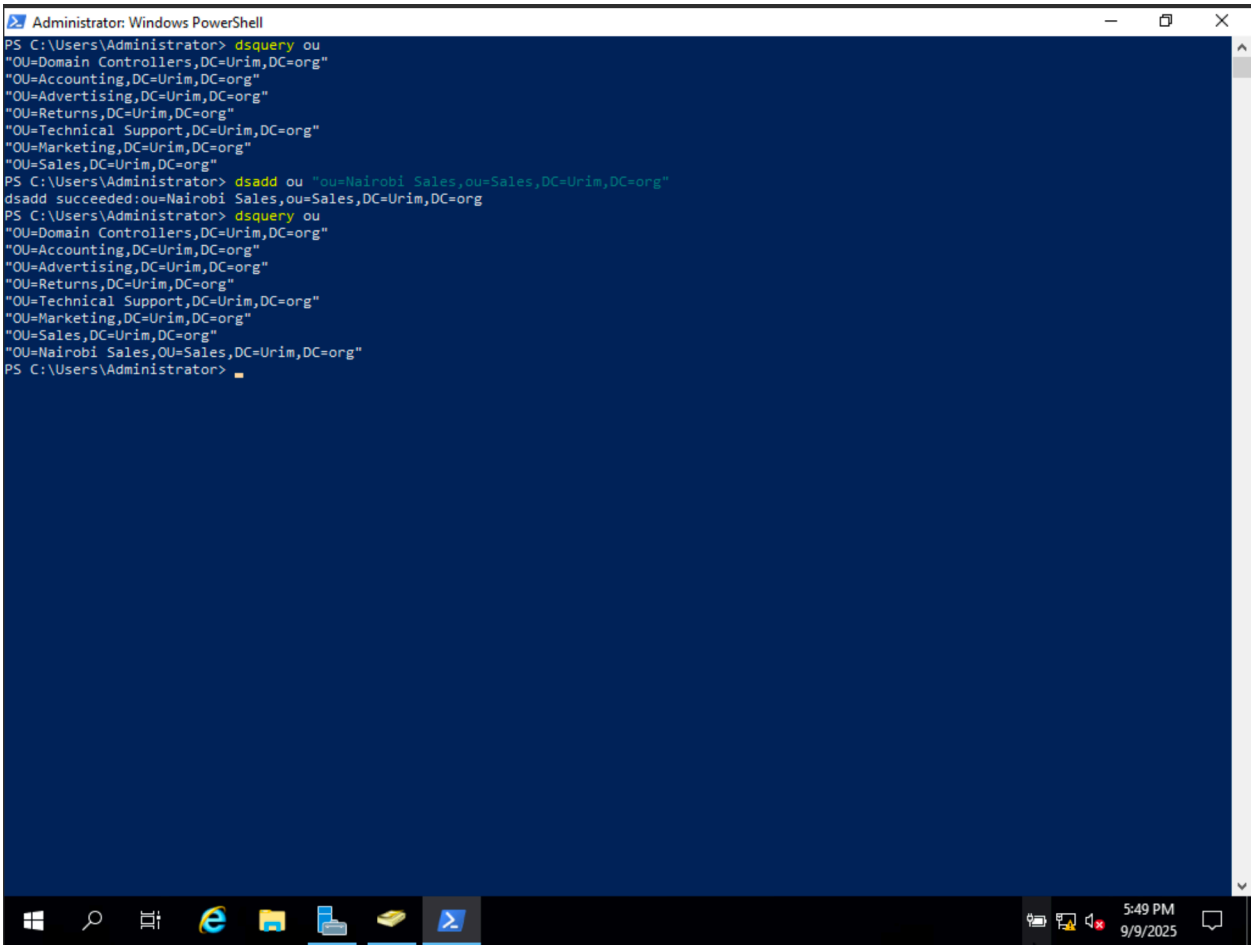

Figure 3: Nairobi Sales OU (source: personal collection)

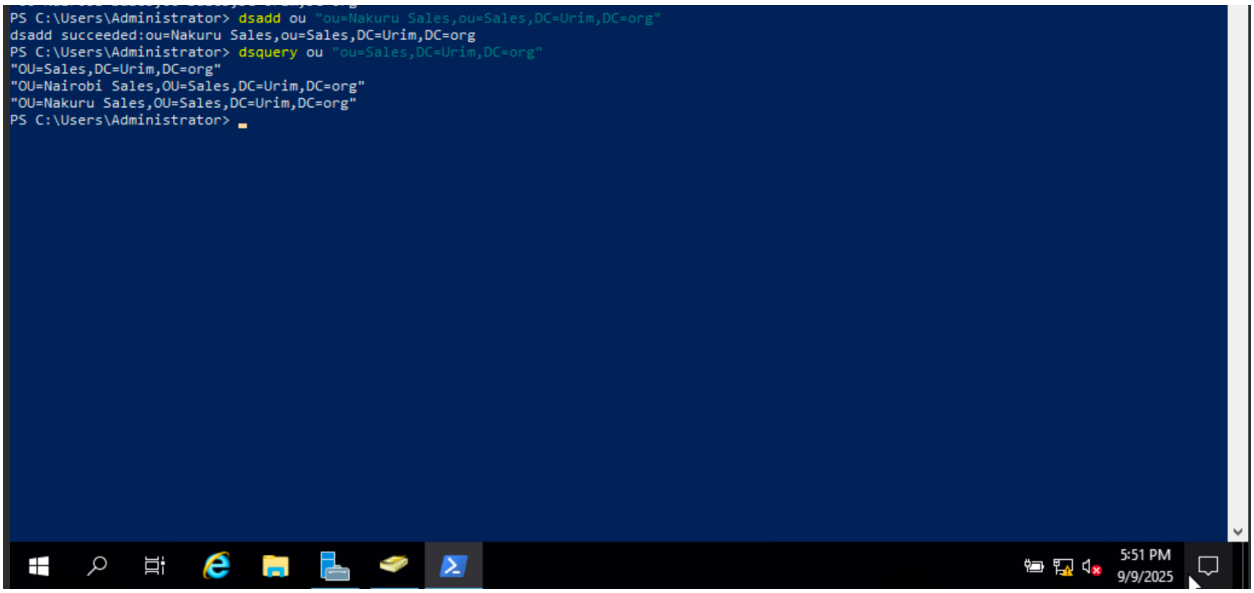

Figure 4: Nakuru Sales OU (source: personal collection)

- Deleting unwanted OU: I used the command `dsrm "ou=Stuff,DC=Urim,DC=org"` as follows:

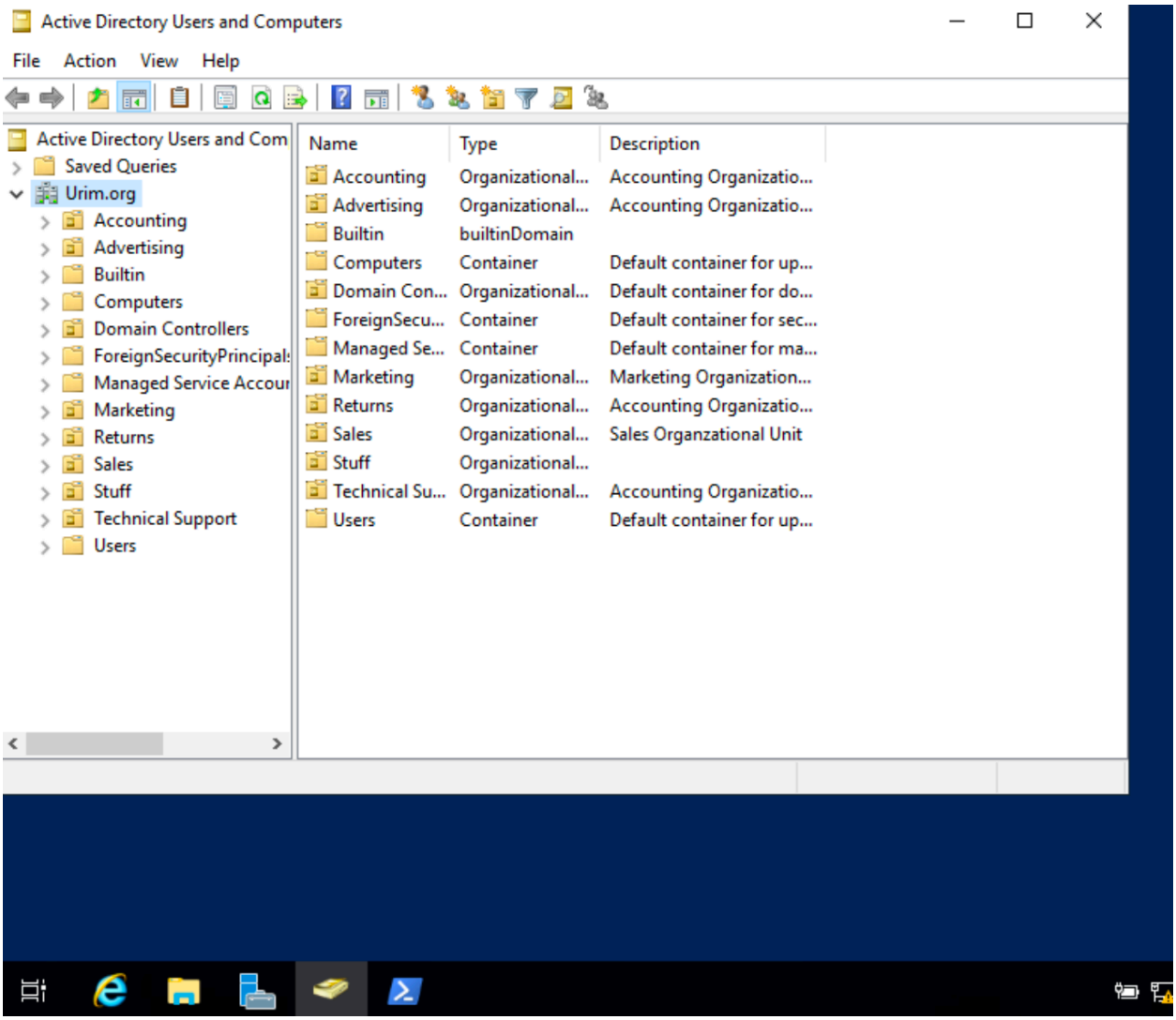

Figure 5: Stuff OU before deletion (source: personal collection)

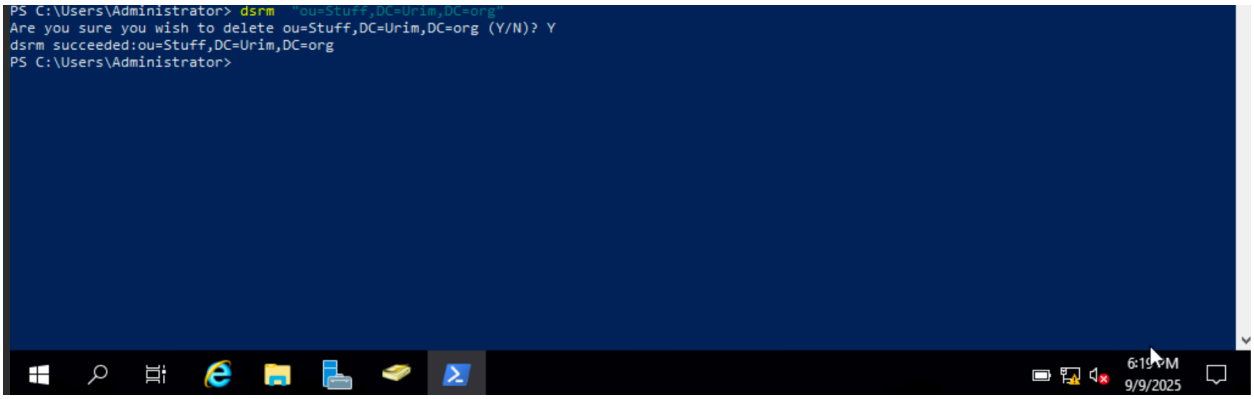

Figure 6: Removing Stuff OU (source: personal collection)

- Renaming and Moving OUs

Things to remember:

- Use dsmove to rename or move objects in Active Directory.
- Copying (cloning) objects creates a new instance in the same or a different location.
- Renaming an object keeps it in the same location and requires specifying its path (OU, DC).
- When you move an object, it changes location. You need to provide both its current path and the new path.

Tasks

1. Renaming the OU Sales to My Sales: I used the command `dsmove "ou=Sales,DC=Urim,DC=org" -newname "My Sales"` as follows:

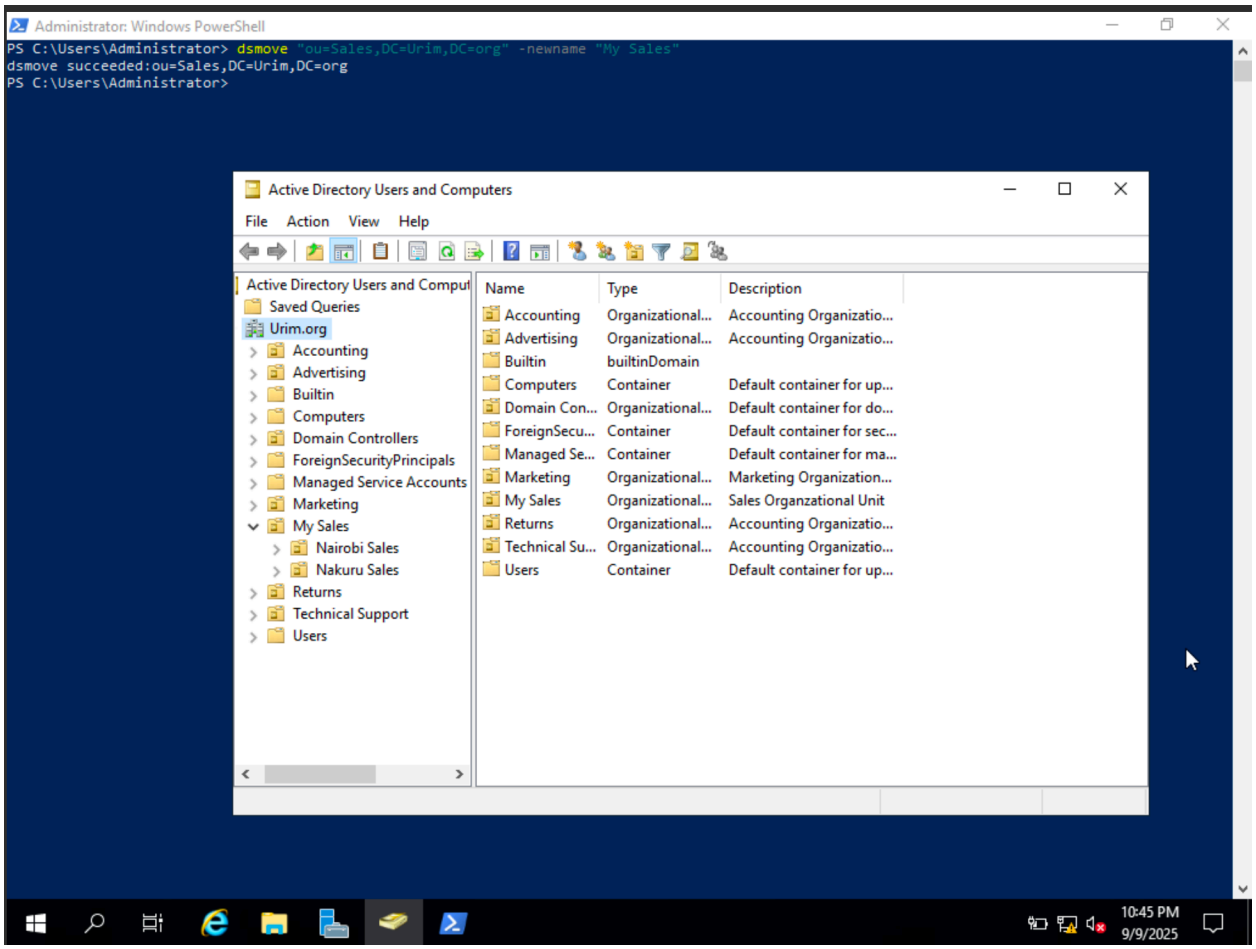

Figure 7: PowerShell and ADUC display (source: personal collection)

2. Move the Nairobi Sales OU to the Marketing OU and rename it Nairobi Marketing:
   I used the command `dsmove "ou=Nairobi Sales, ou=My Sales,DC=Urim,DC=org" -newname "Miami Marketing" -newparent "ou=Marketing,DC=Urim,DC=org"` as follows:

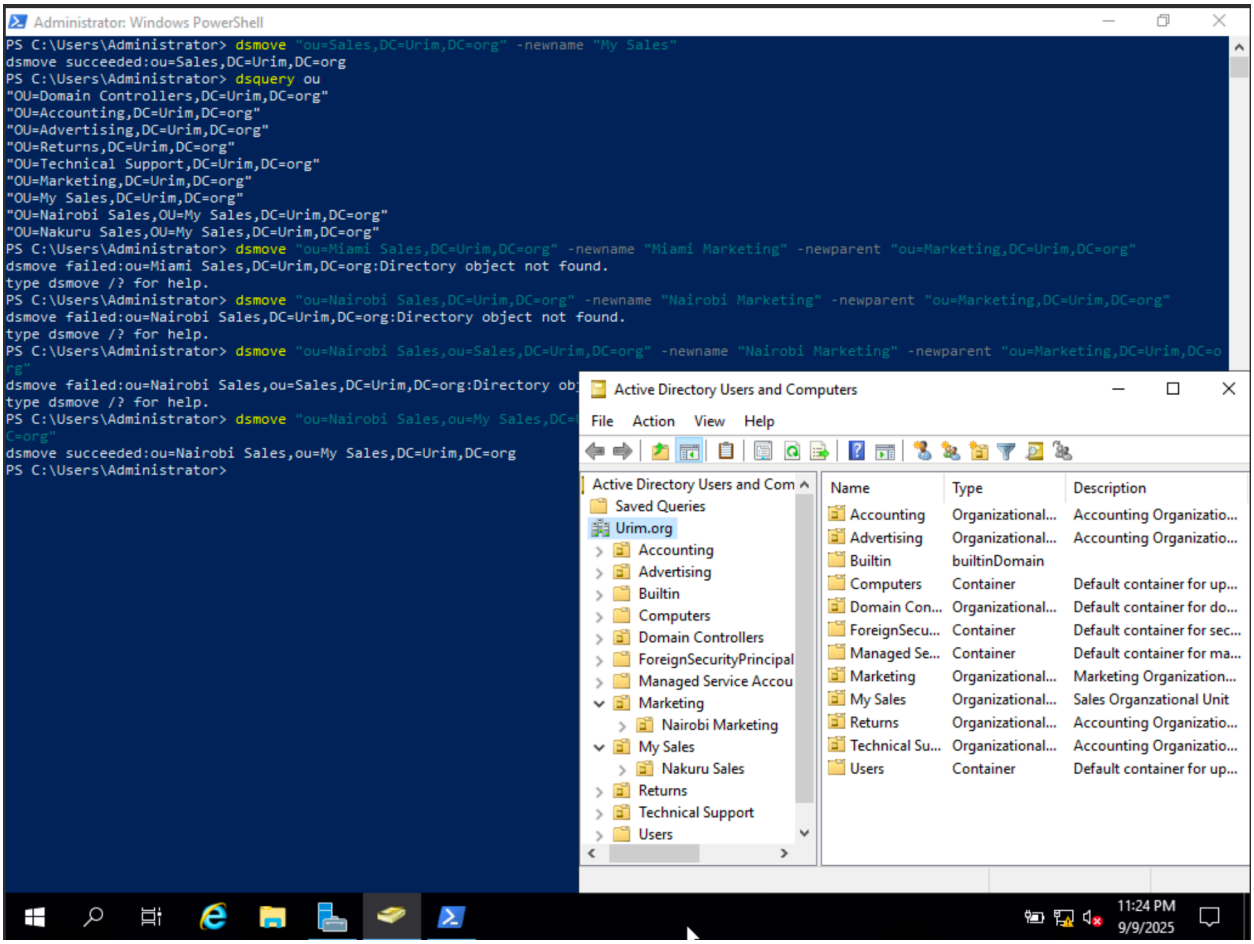

Figure 8: Moving Nairobi Sales to the Marketing OU (source: personal collection)

3. Creating Security Groups

3.1 Creating Groups

- I created security groups by using the syntax: `dsadd group "CN=name,OU=name,DC=Name,DC=domain" -secgrp yes`
- I then created a Sales Security Group in the OU as follows: `dsadd group "CN=Sales,OU=Sales,DC=Urim,DC=org" -secgrp yes`

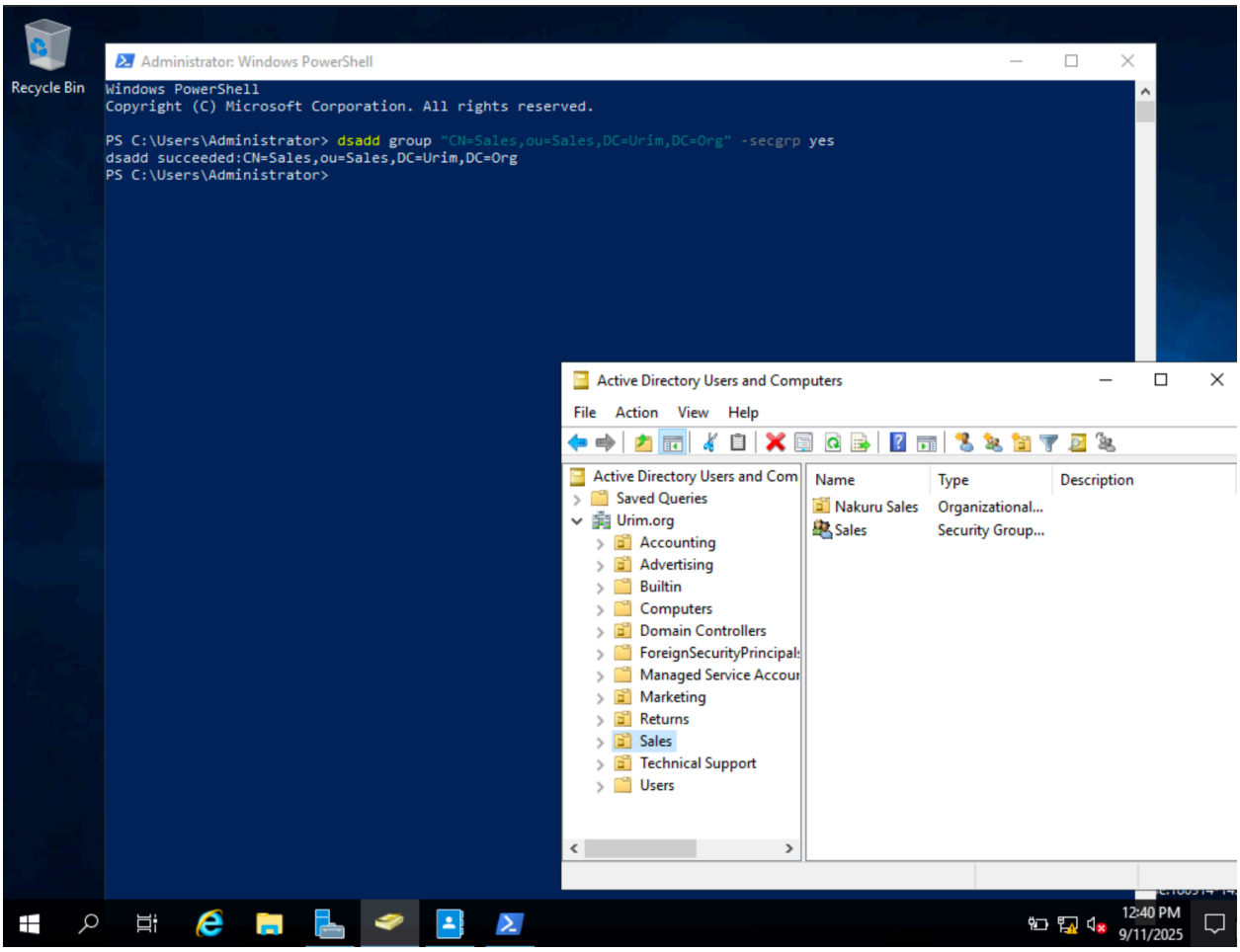

Figure 9: Sales group overview (source: personal collection)

- Next up, was the Sales Managers group created as follows: `dsadd group "CN=Sales Managers,OU=Sales,DC=Urim,DC=Org" -secgrp yes`

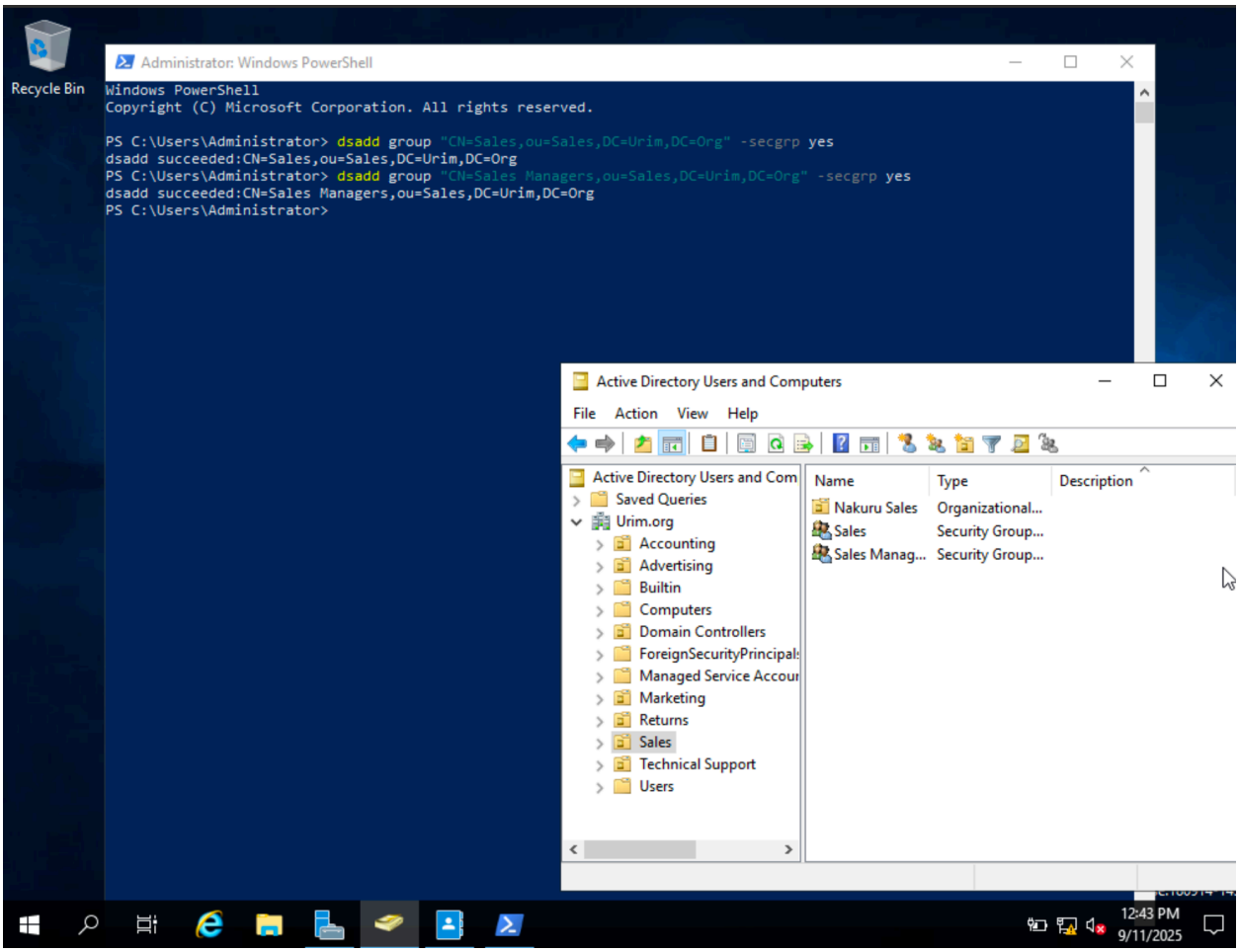

Figure 10: Sales Managers group overview (source: personal collection)

- Lastly, I created the Finance group inside the Finance OU as follows: `dsadd group "CN=Finance Group, ou=Finance,DC=Urim,DC=Org" -secgrp yes`

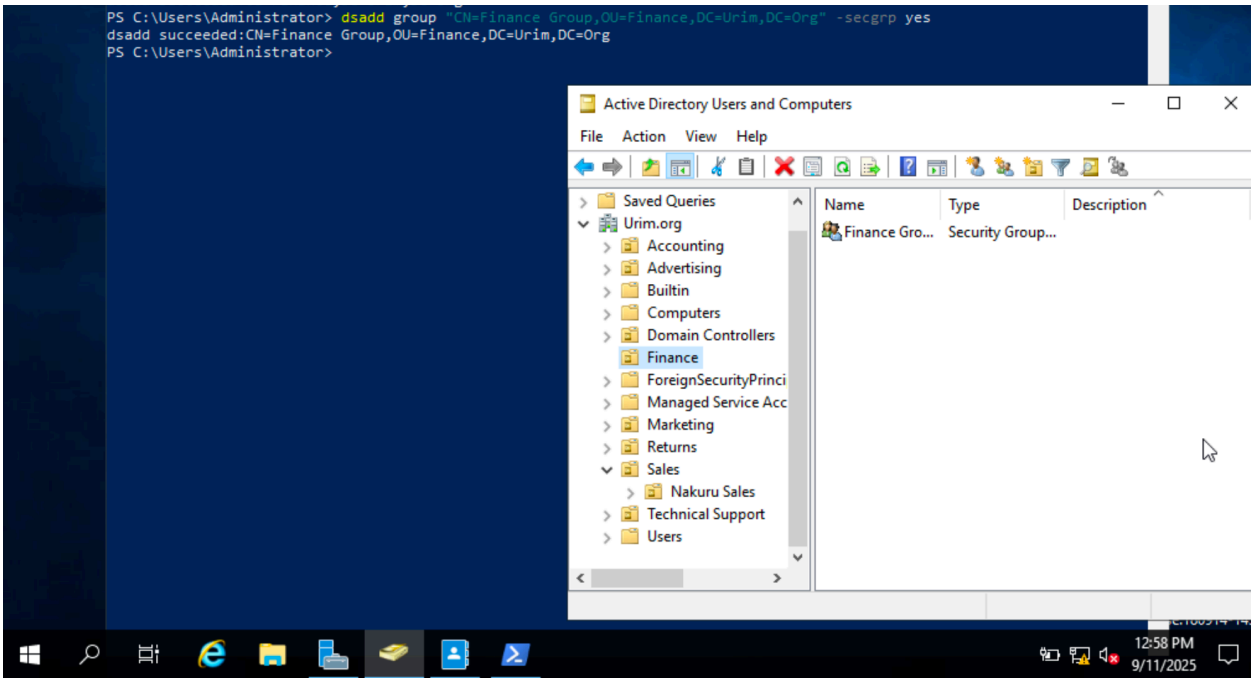

Figure 11: Finance Group (source: personal collection)

3.2 Verification

I used the syntax dsquery group “OU=Name,DC=Name,DC=Domain” as follows:

- Verifying groups created inside the Sales OU: `dsquery group “ou=Sales,DC=Urim,DC=Org”`
- Verifying groups created inside the Finance OU: `dsquery group “ou=Finance,DC=Urim,DC=Org”`
- Note: the syntax dsquery group, displays all groups in the domain.

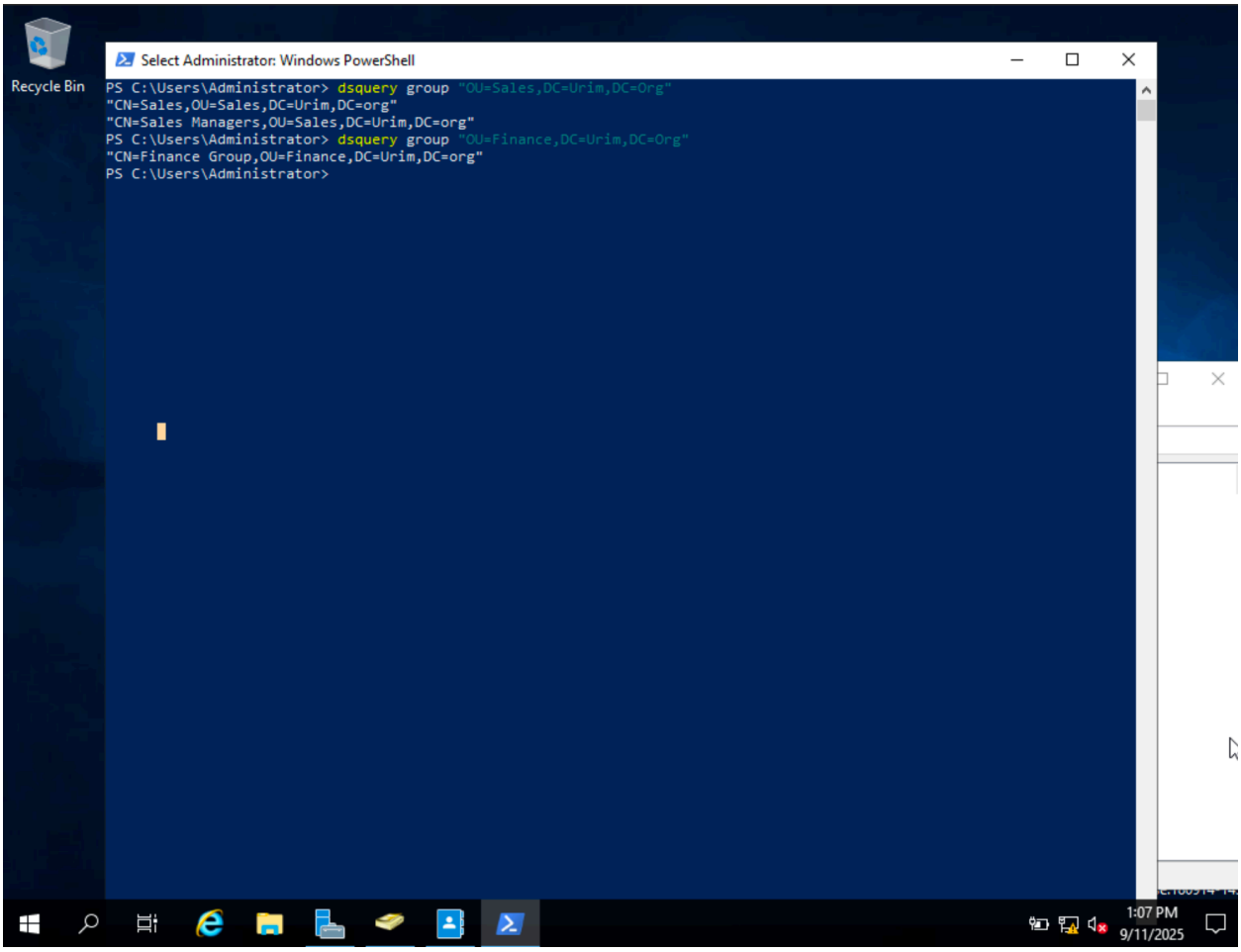

Figure 12: Query info about groups created (source: personal collection)

4 Moving and Renaming the groups created

Task 1: renaming the Finance OU to Research & Development

I used the command: `dsmove "OU=Finance,DC=Urim,DC=Org" -newname "Research & Development"` as follows:

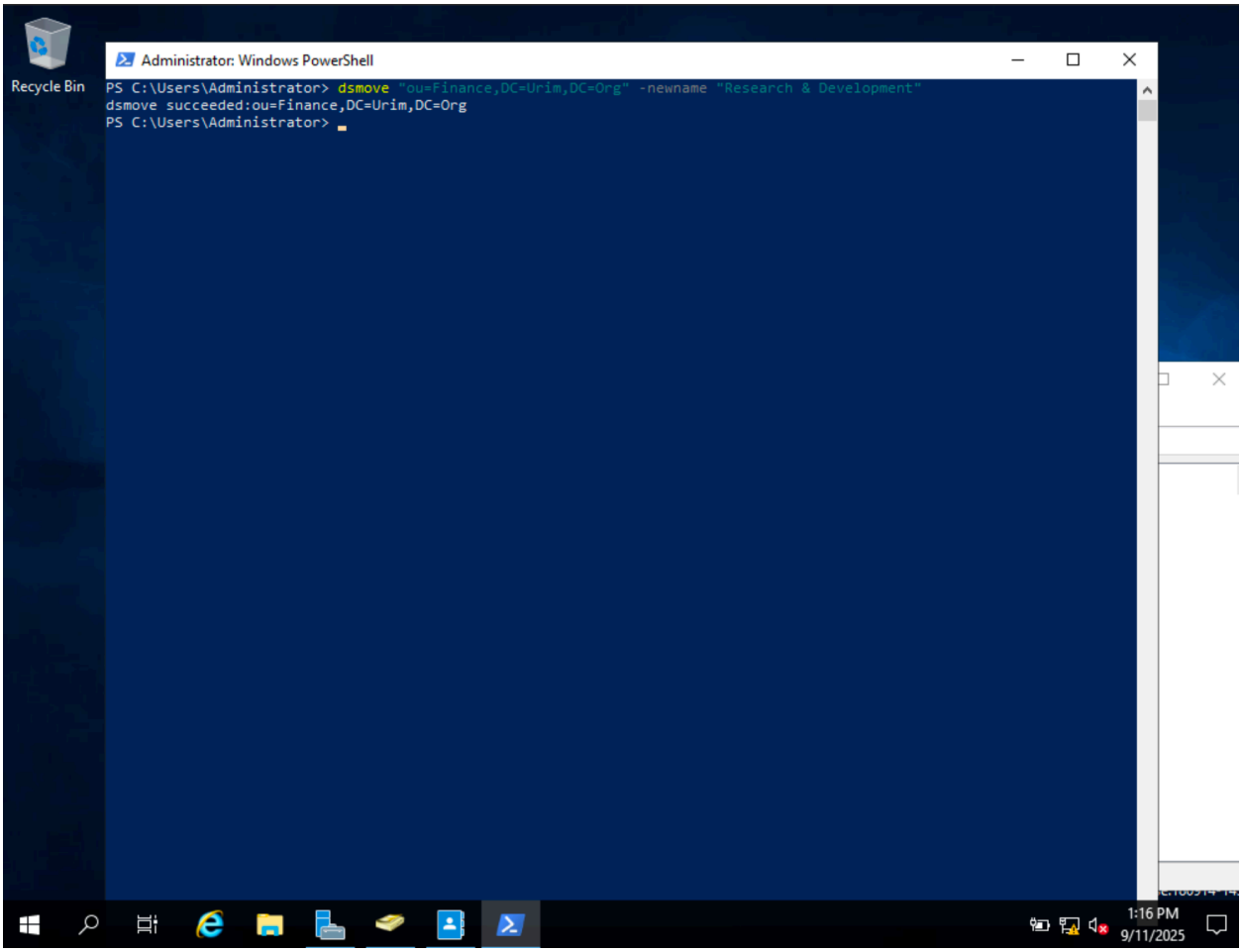

Figure 13: R&D creation (source: personal collection)

Task 2: Renaming the Finance group to R&D group

I used the command: `dsmove "CN=Finance Group,OU=Research & Development,DC=Urim,DC=Org" -newname "R&D Group"`

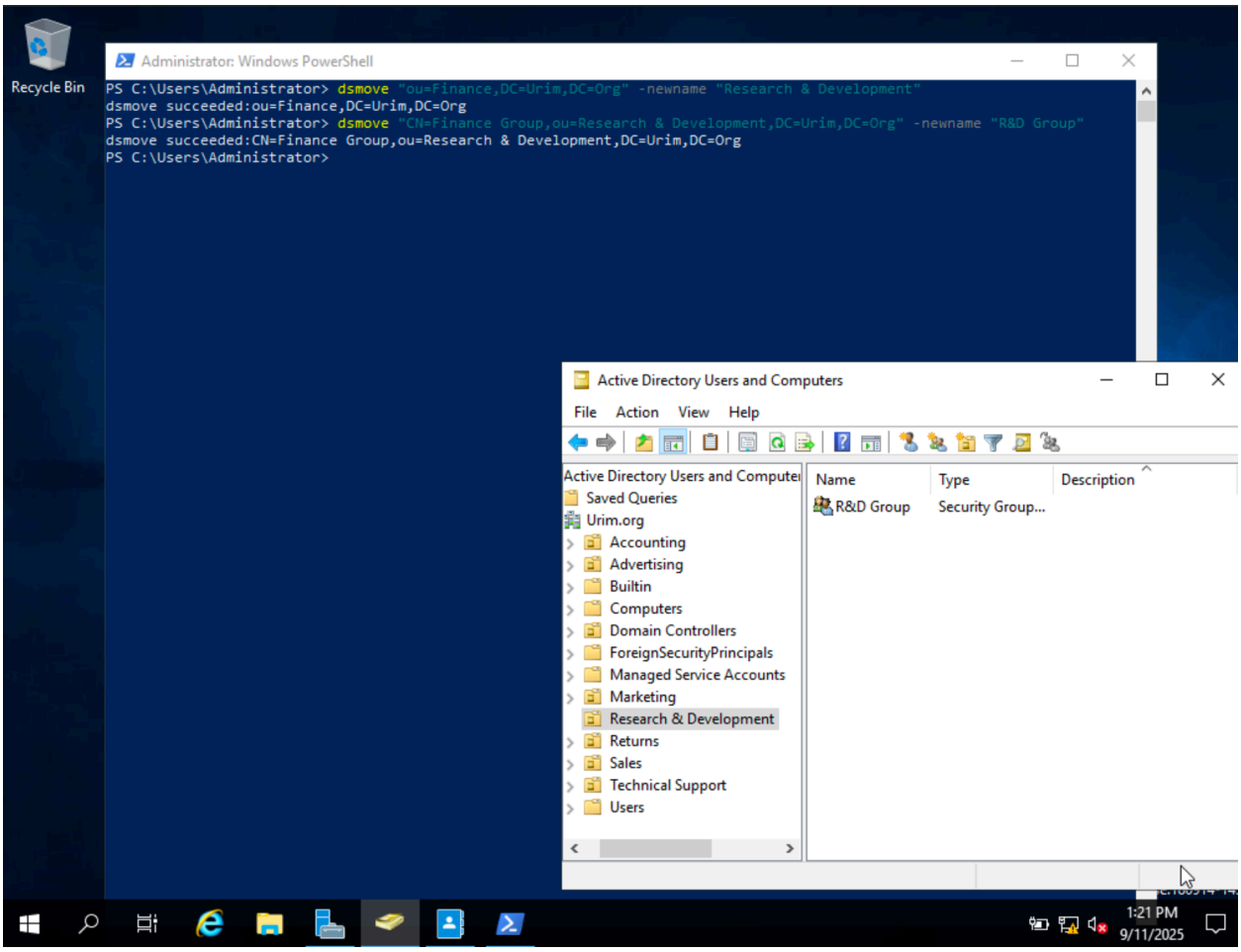

Figure 14: R&D group (source: personal collection)

Task 3: Transferring the Sales Managers Group from the Sales Organizational Unit (OU) to the Research and Development OU. Simultaneously, rename the group to Research Managers.

I used the command: `dsmove "CN=Sales Managers,ou=Sales,DC=Urim,DC=Org" -newname "Research Managers" -newparent "OU=Research and Development,DC=Urim,DC=Org"`

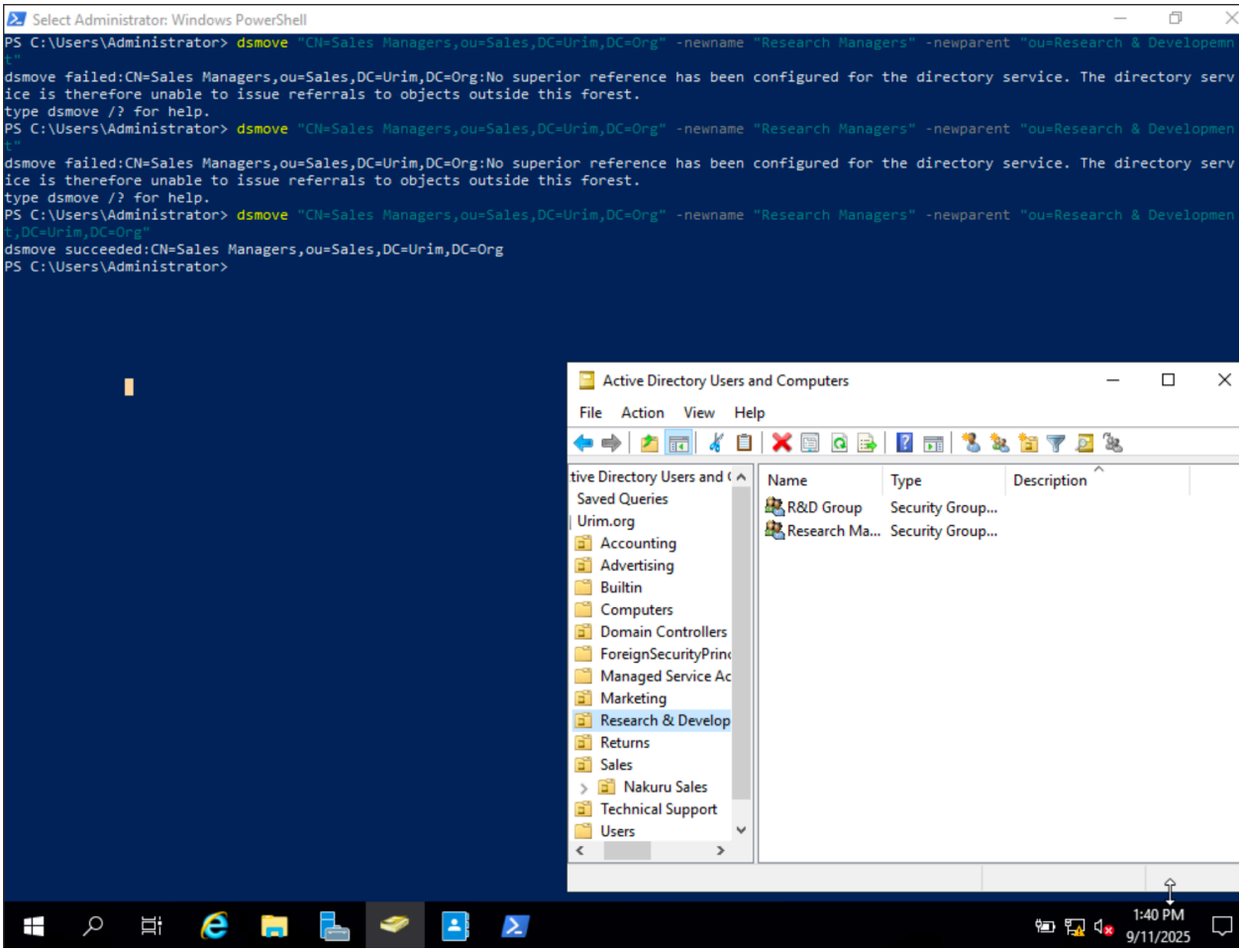

Figure 15: Research Managers group (source: personal collection)

5 Creating Computer objects

I used the syntax dsadd computer <DN> as follows:

Task 1: creating computer objects inside the Advertising OU: `dsadd computer "CN=Win11WKS21,OU=Advertising,DC=Urim,DC=Org"`

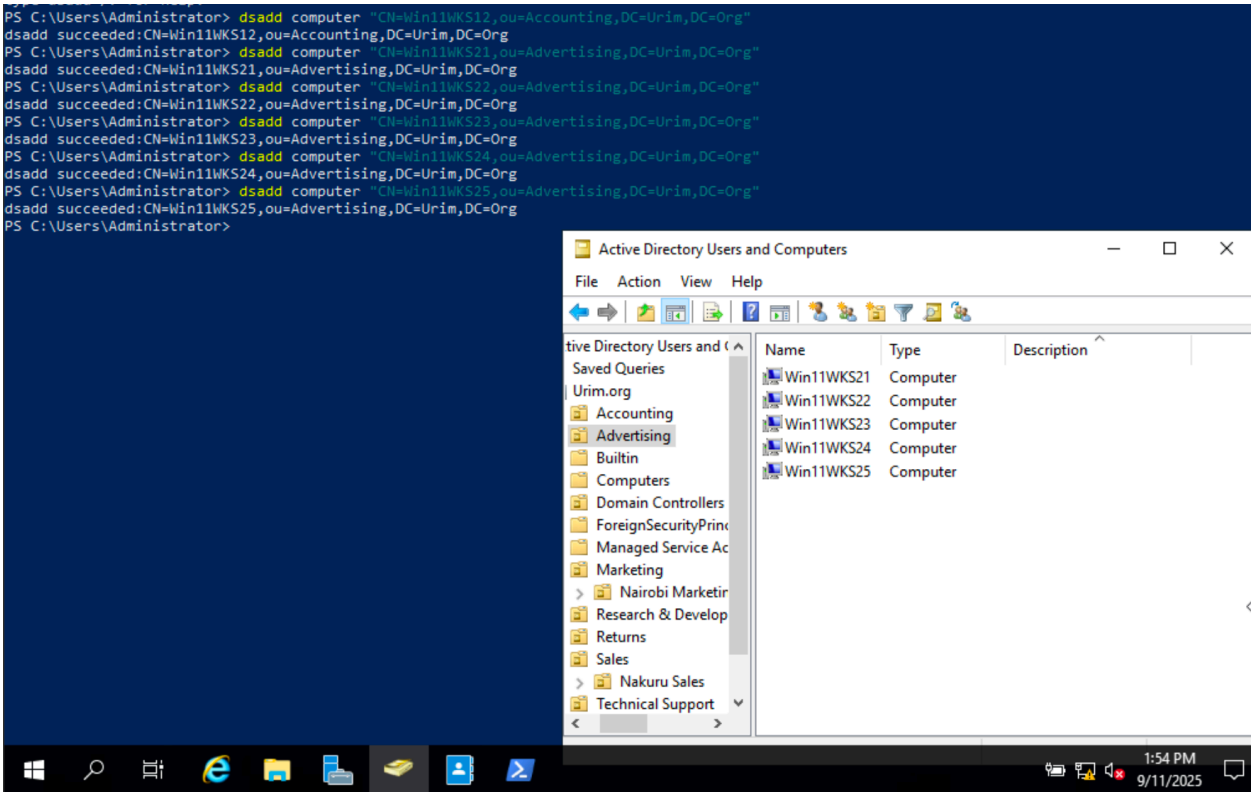

Figure 16: Advertising OU Computers (source: personal collection)

Task 2: Deleting the computer object

I used the command: `dsrm "CN=Win11WKS24,ou=Advertising,DC=Urim,DC=Org"` as follows:

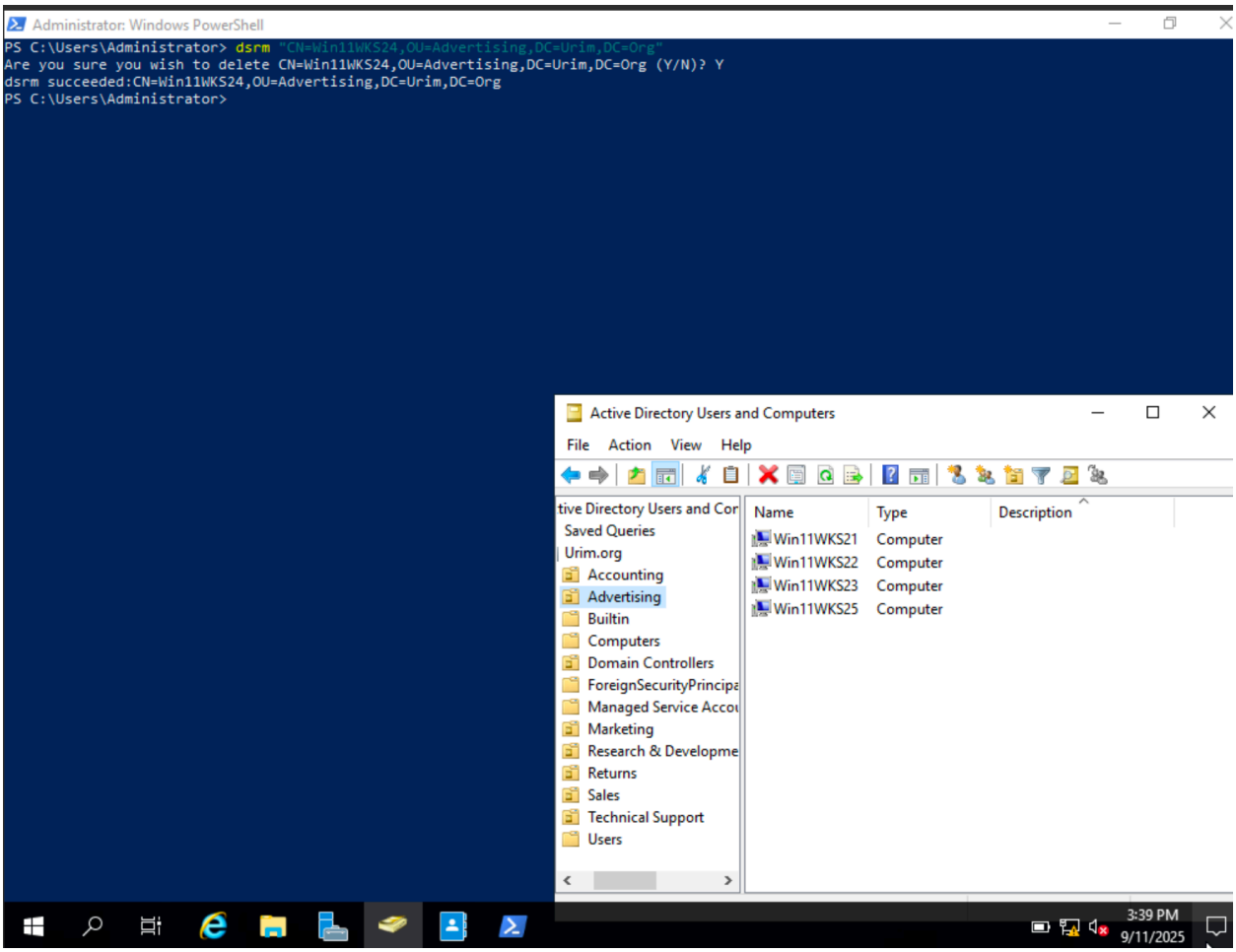

Figure 17: Removing Win11WKS24 from Advertising OU (source: personal collection)

6 Removing a Subtree (Branch of an Active Directory Structure)

I used the syntax dsrm -subtree -noprompt <DN of the object> as follows:

Task 1: Removing the Marketing subtree : I used the command `dsrm -subtree -noprompt "ou=Marketing,DC=Urim,DC=Org"`

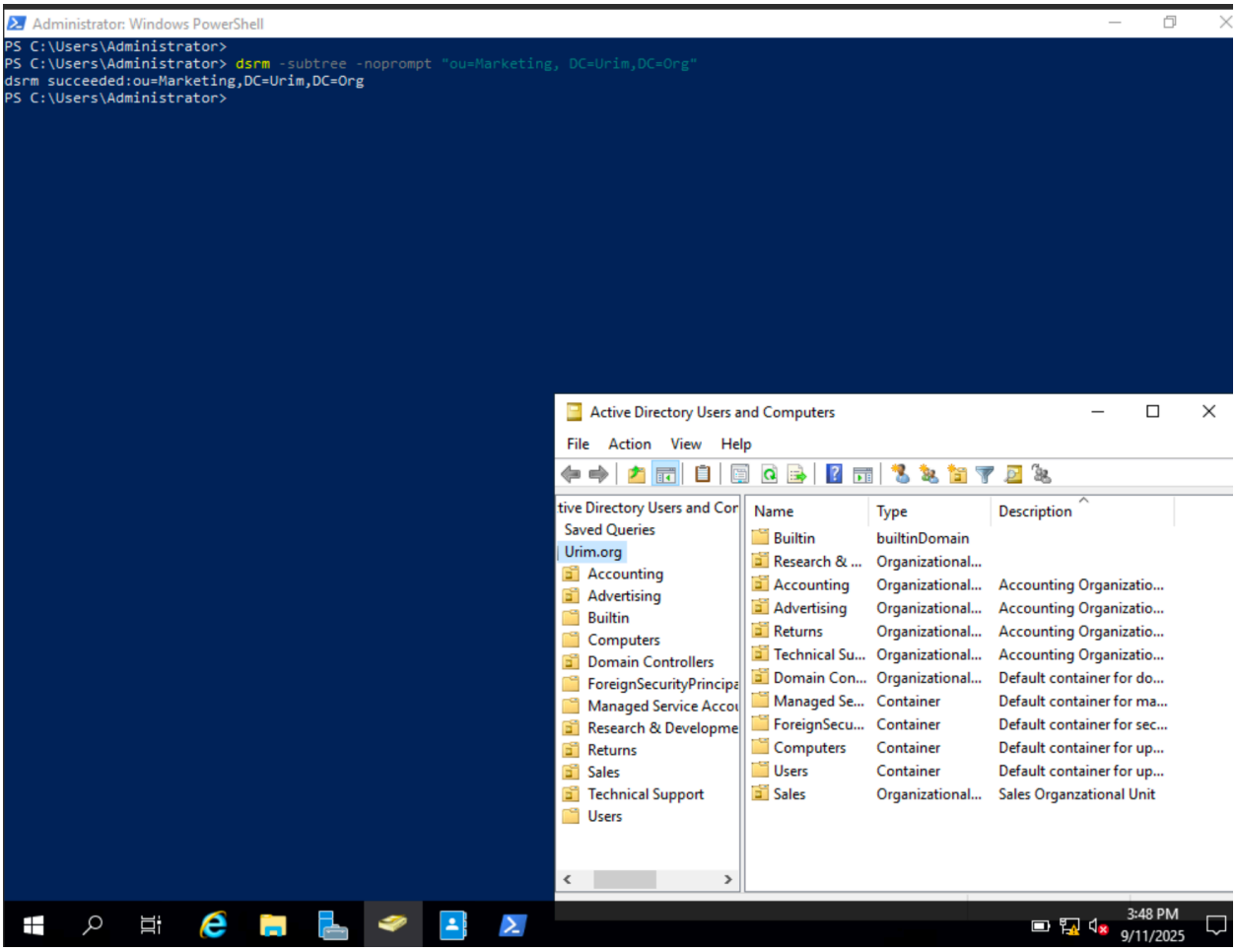

Figure 18: Marketing Subtree deletion (source: personal collection)

7 Creating User Object

Task 1: Creating a user object Peter Parker, with properties as follows:

```
Dsadd user "CN=Peter Parker,OU=Sales,DC=Urim,DC=Org" -disabled
no  -memberof "CN=Sales,ou=Sales,DC=Urim,DC=Org" -pwd Secret123
-upn pparker@Urim.org -samid pparker
```

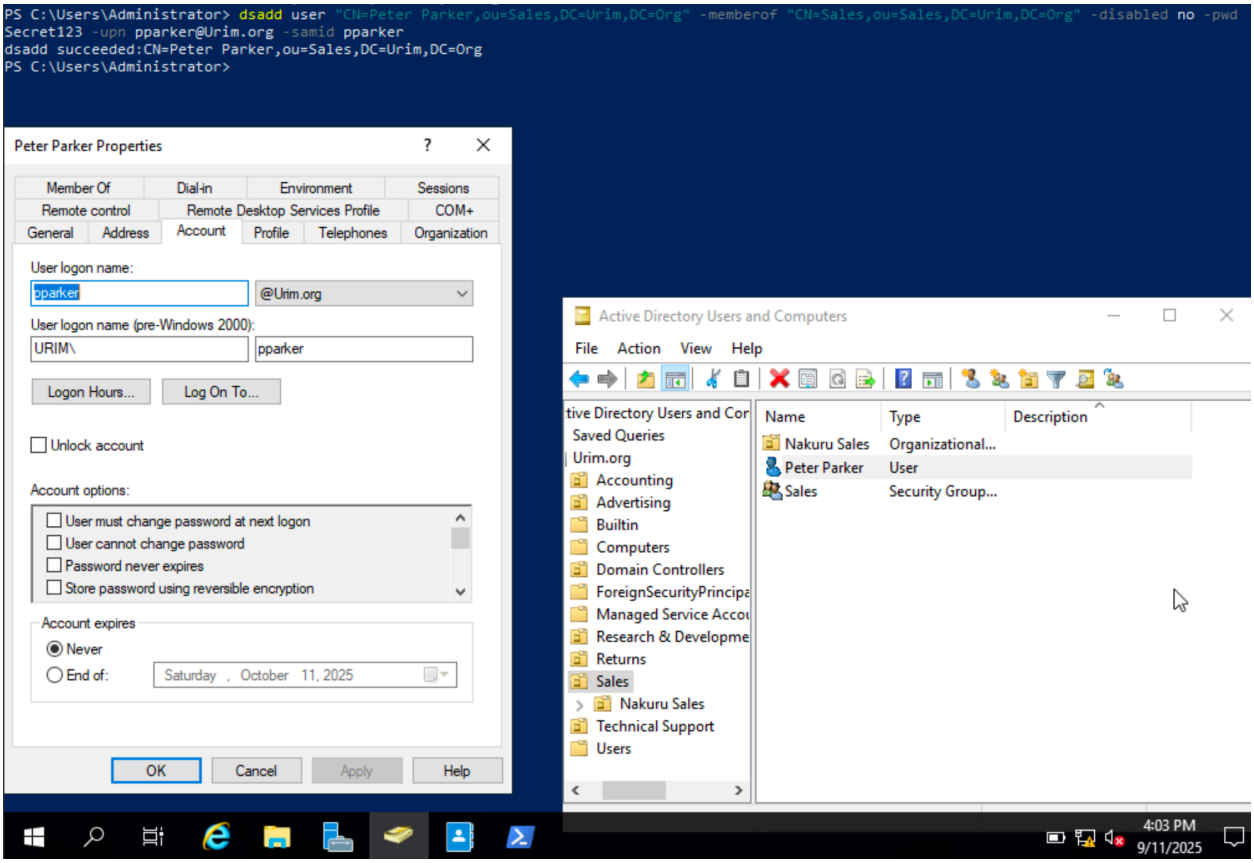

Figure 19: User object creation (source: personal collection)

Conclusion

In this lab, I showed what I learned about the 'ds' family of commands by working through several steps. I also found out that the commands work the same way whether you use uppercase or lowercase letters. During the lab, I practiced creating Organizational Units, Computers, Users, and Database Objects.

I learned the value of automation through PowerShell commands. Using those commands made work easier and faster at the same time. I am looking forward to applying this in real real-world scenario.