



PRIFYSGOL CYMRU  
**Y Drindod Dewi Sant**  
UNIVERSITY OF WALES  
**Trinity Saint David**  
SWANSEA - ABERTAWE

Network Operating Systems and Services

ACCA5023

Dr Nitheesh Kaliyamurthy



---

# NETWORK OPERATING SYSTEMS AND SERVICES

---



## Task 2: Implementation

Setting up the network involves configuring various components such as routers, switches, servers, and services to ensure connectivity and functionality. Here's a step-by-step guide to set up the Swansea and London Networks according to the provided requirements:

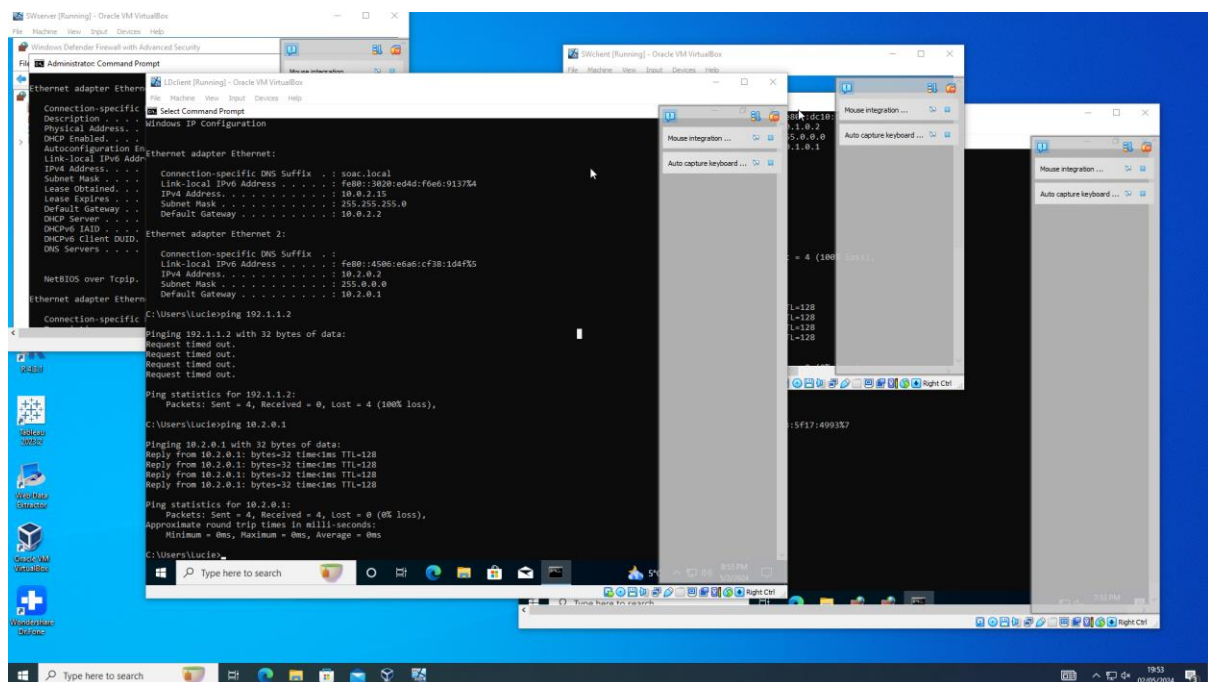
### Swansea Network:

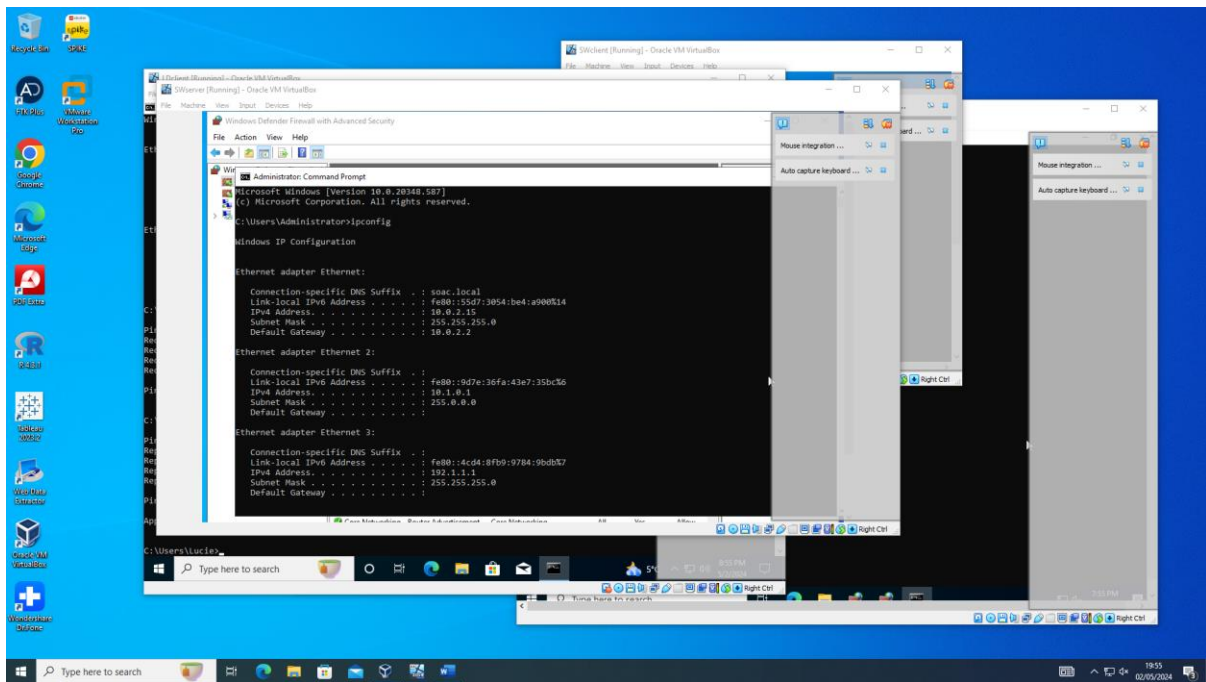
Install Routing and Remote Access Service (RRAS):

On the designated server, open Server Manager.

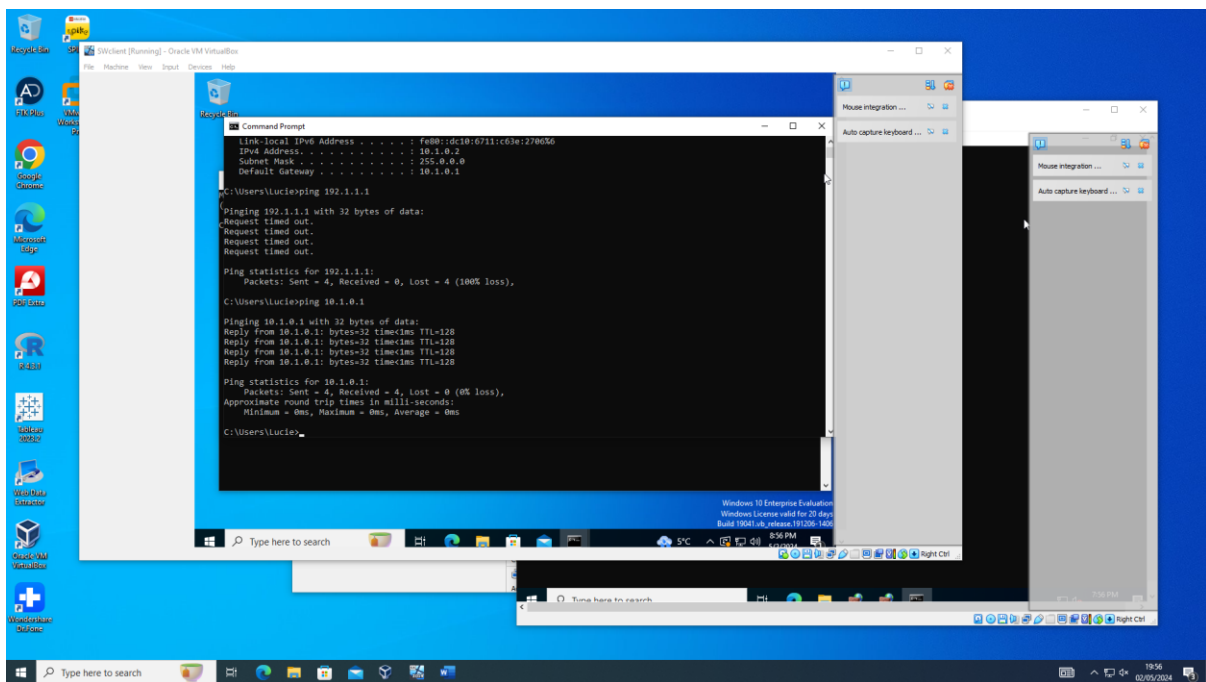
Select "Add Roles and Features" and install RRAS.

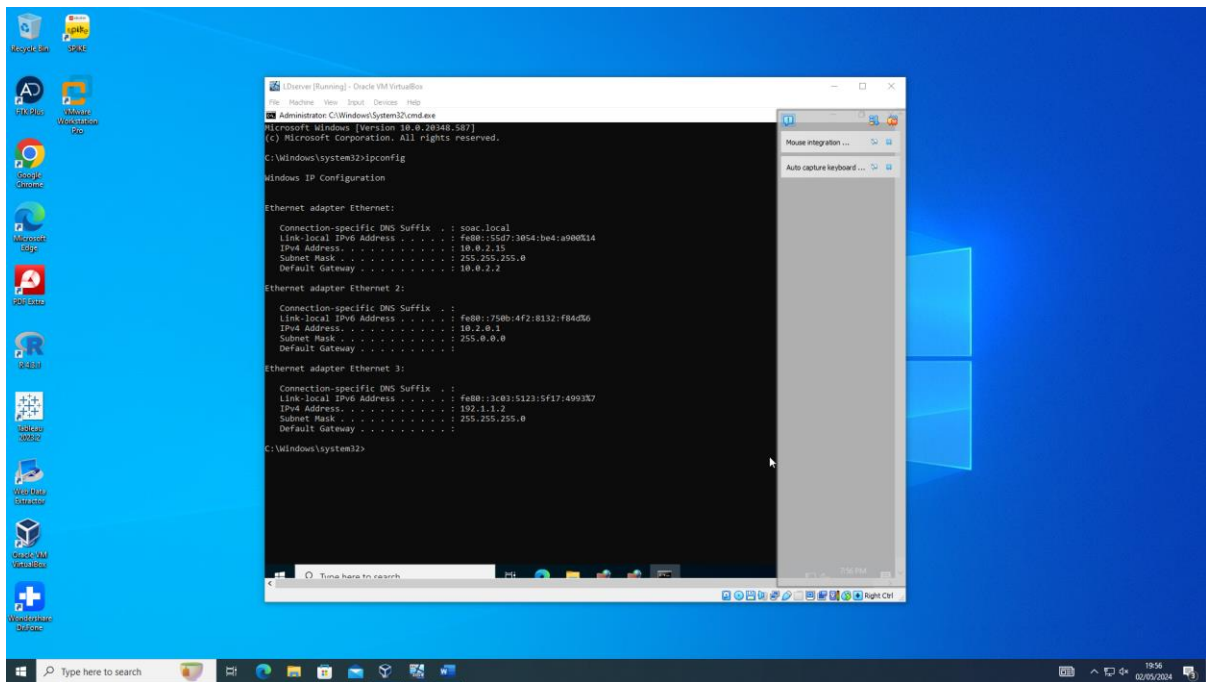
Follow the wizard to set up RRAS with VPN access.





I opened the “cmd” command to check and ping my virtual boxes. It is working correctly.





I verified for Swansea Server / Swansea client and London server and London client.

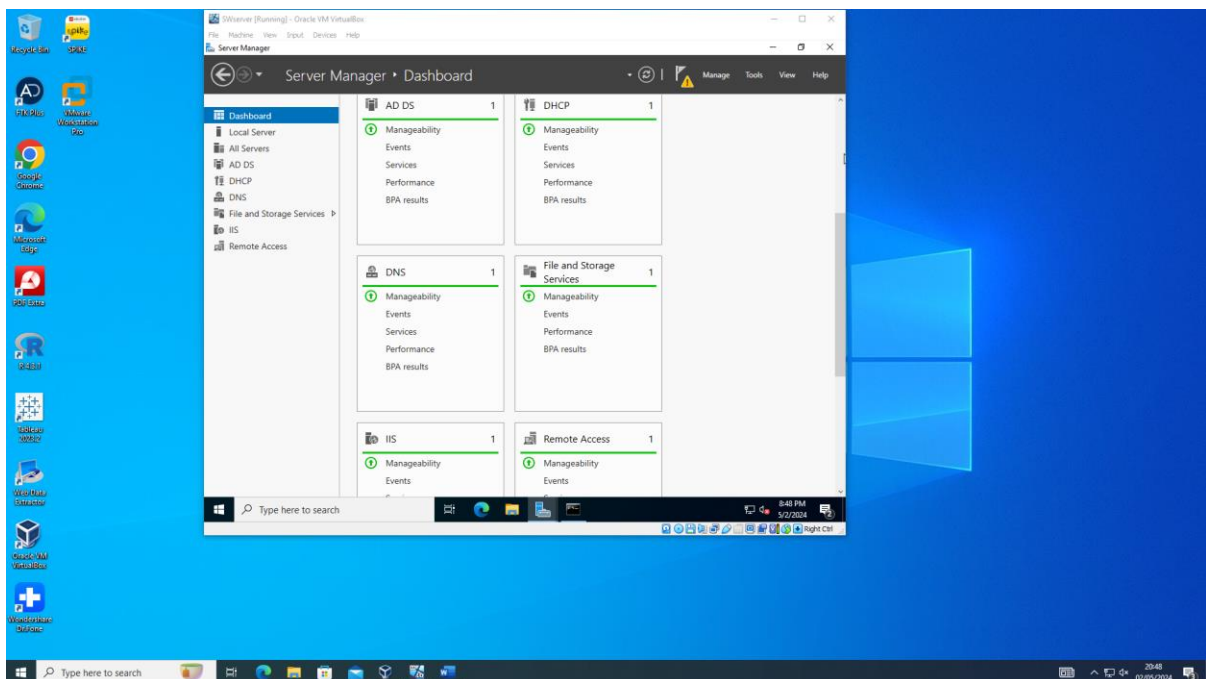
### Modify Firewall Rules:

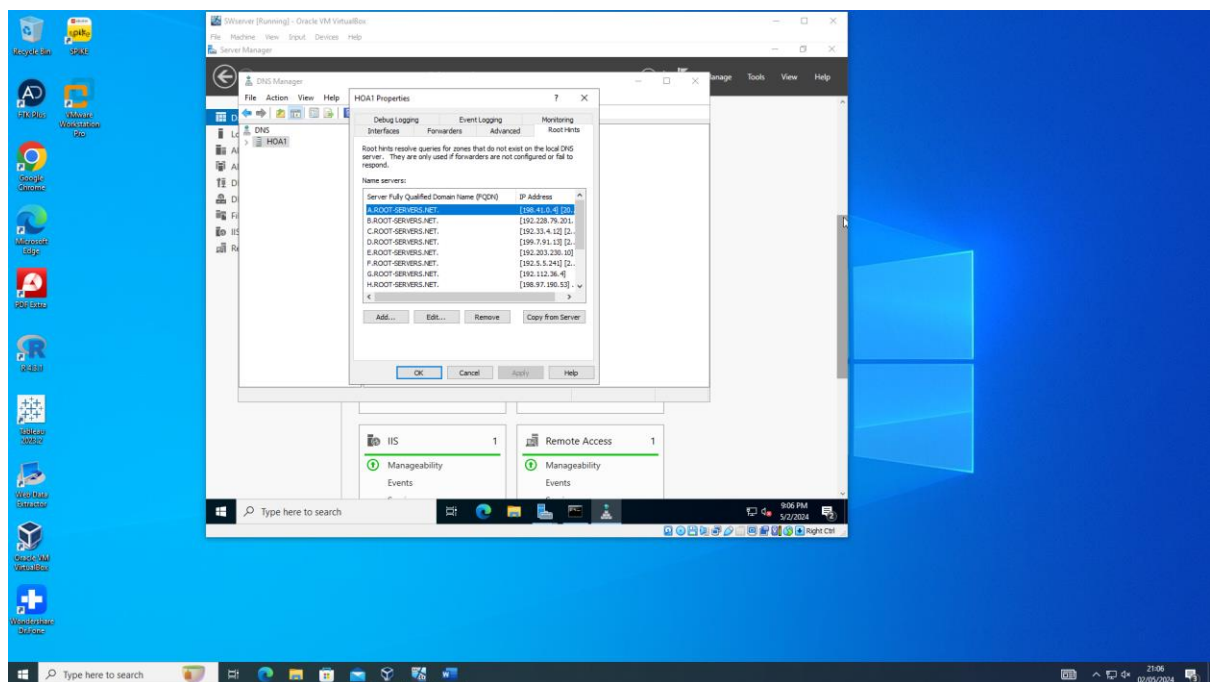
Open Windows Firewall with Advanced Security.

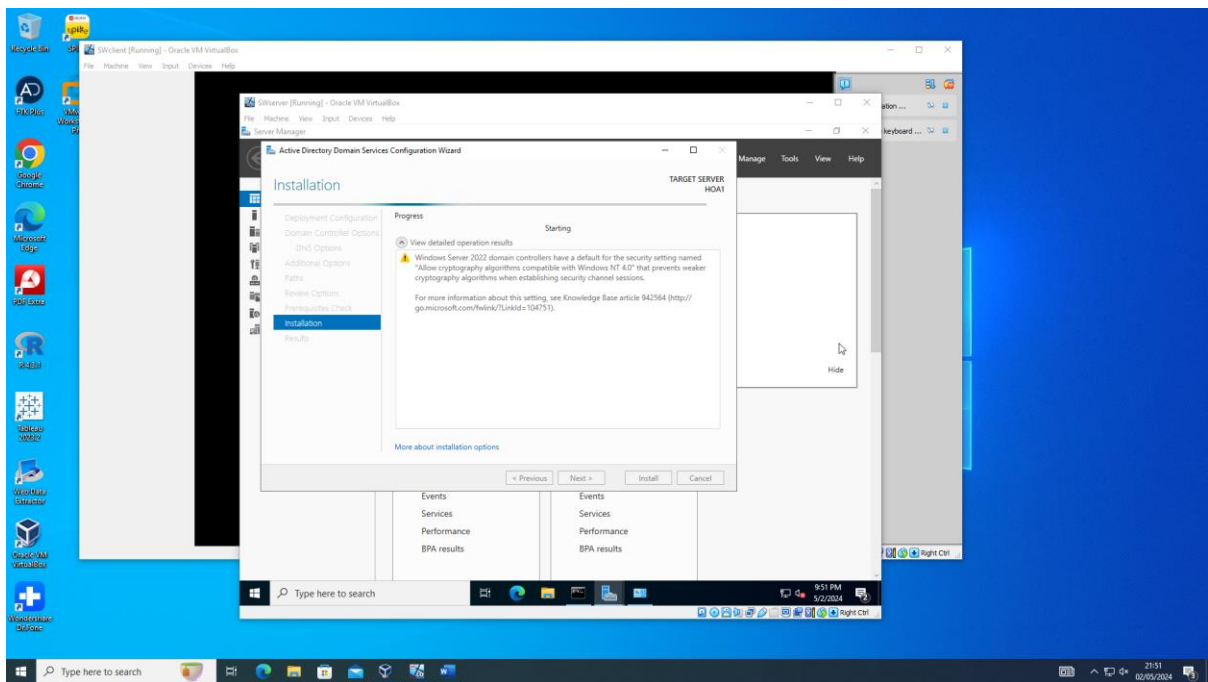
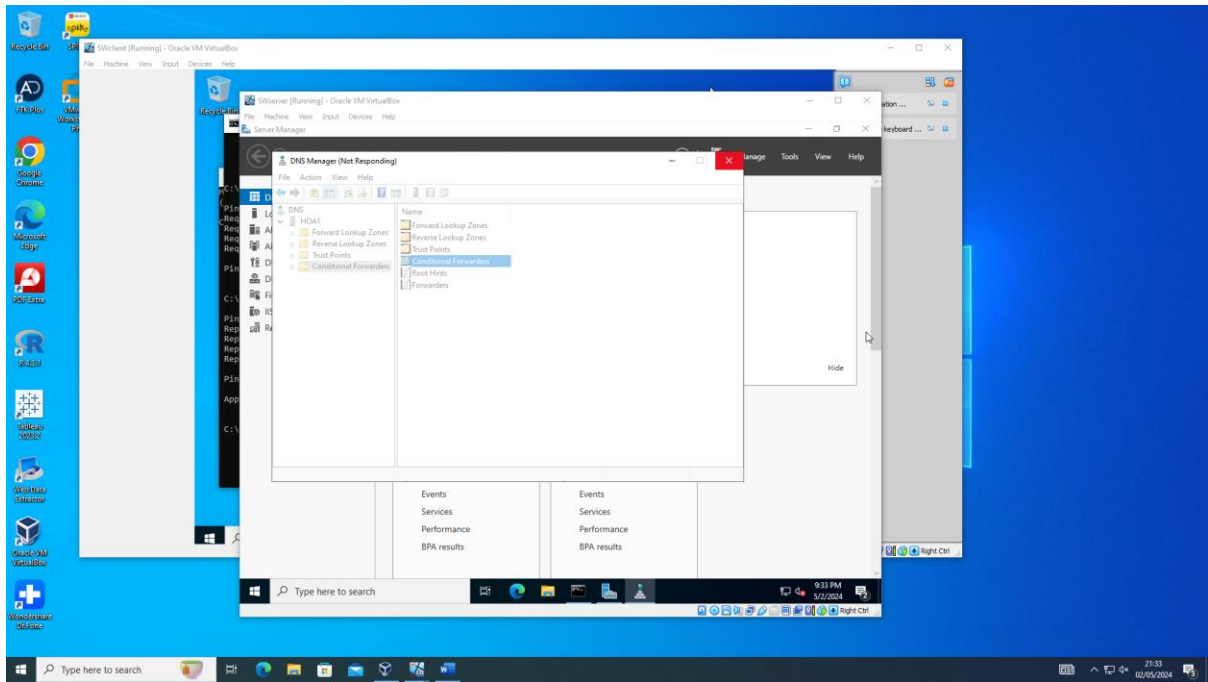
Create a new inbound rule to allow ICMP traffic (Ping).

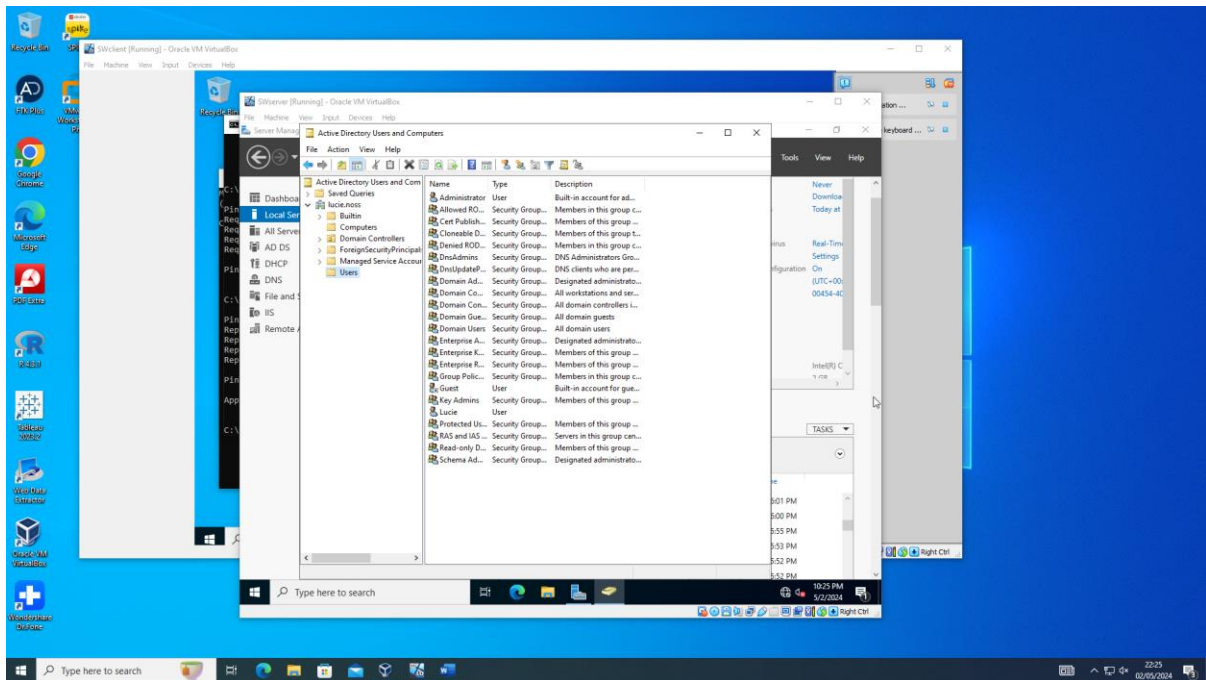
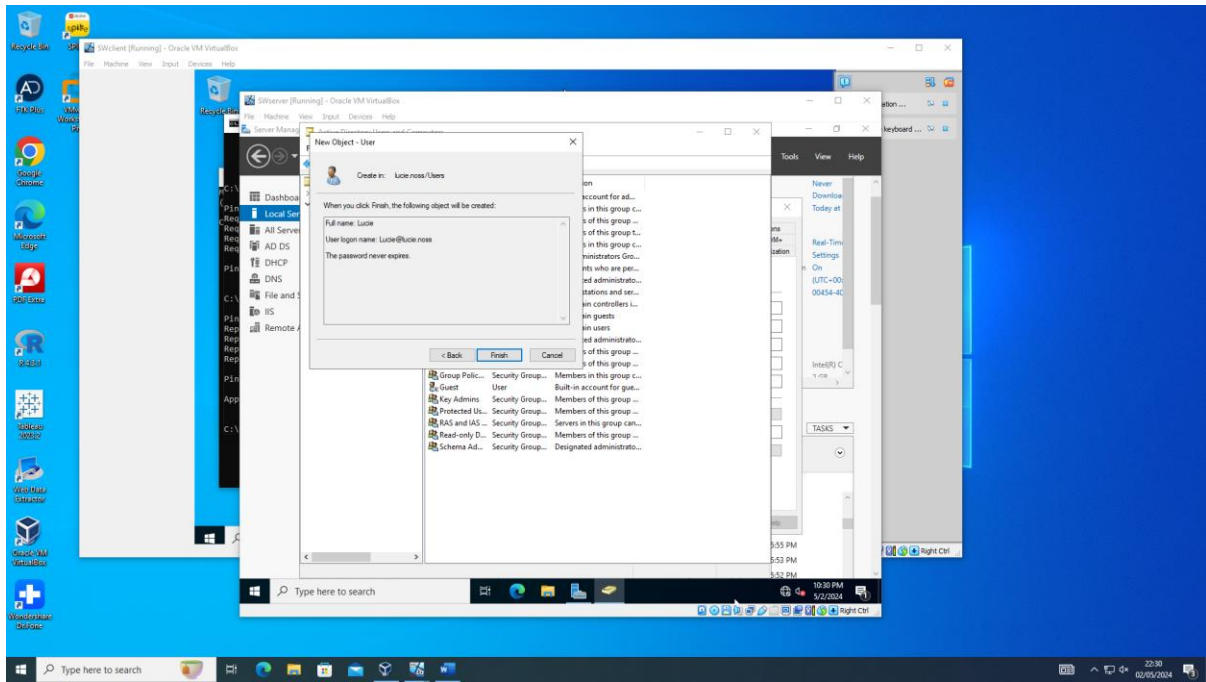
Configure Site-to-Site VPN to London Network:

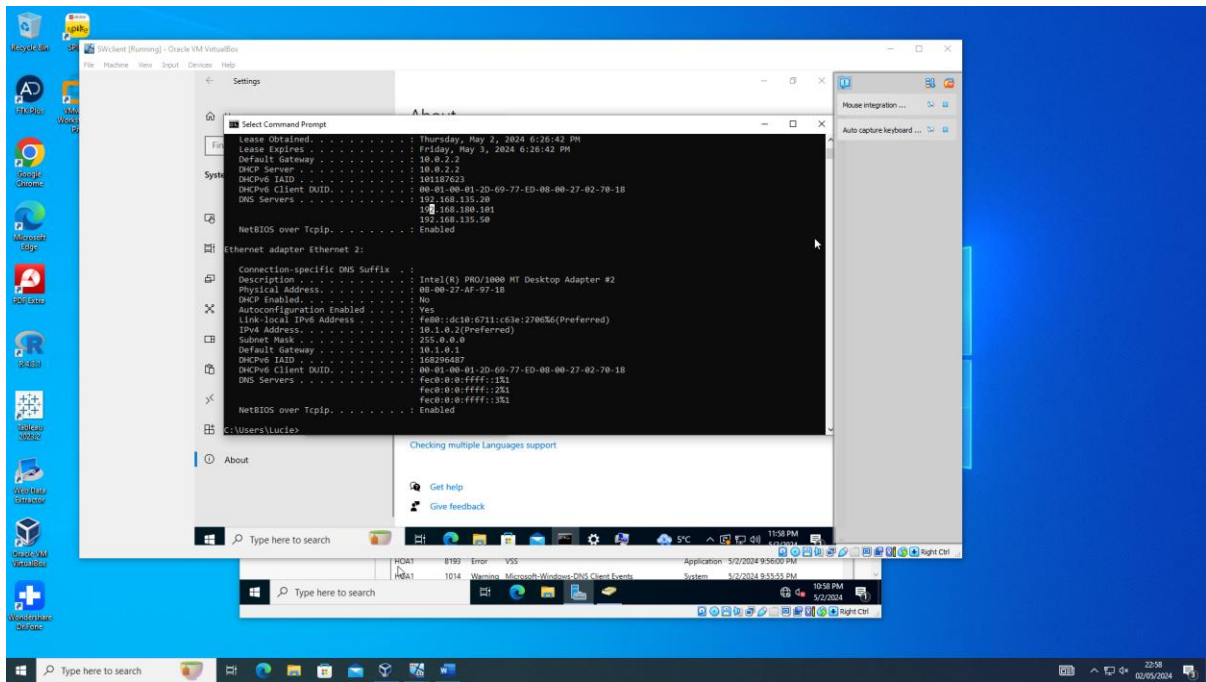
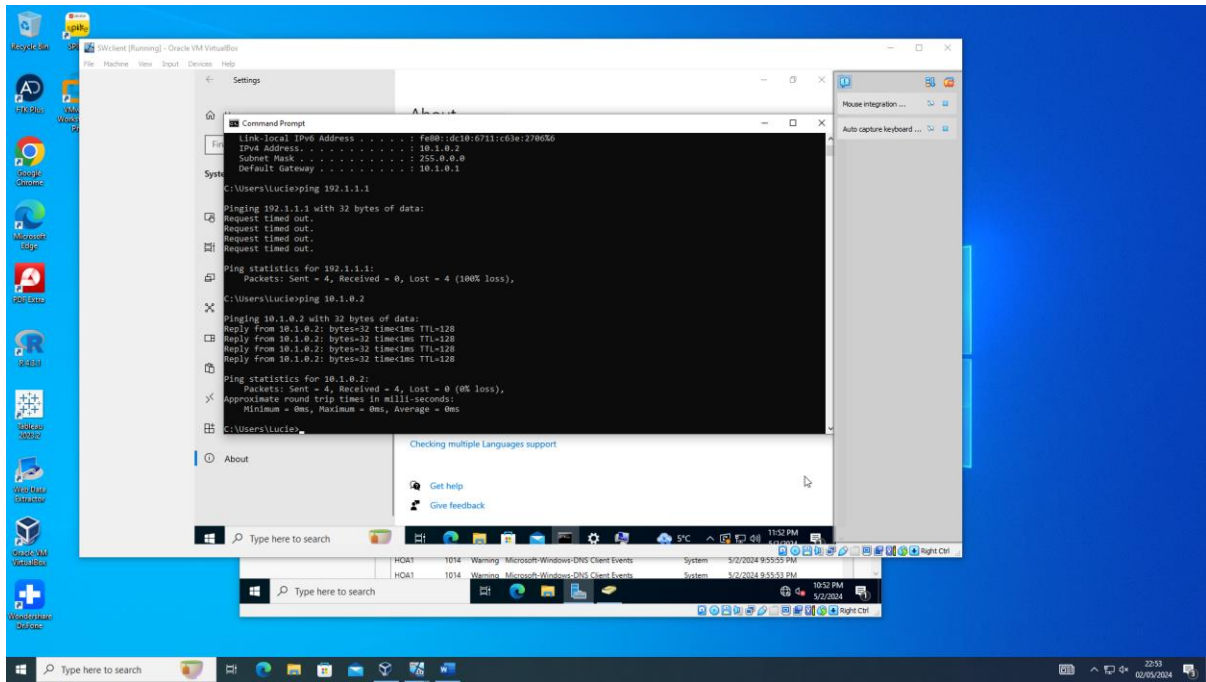
In RRAS console, configure a Site-to-Site VPN connection to the London Network with a persistent connection type.

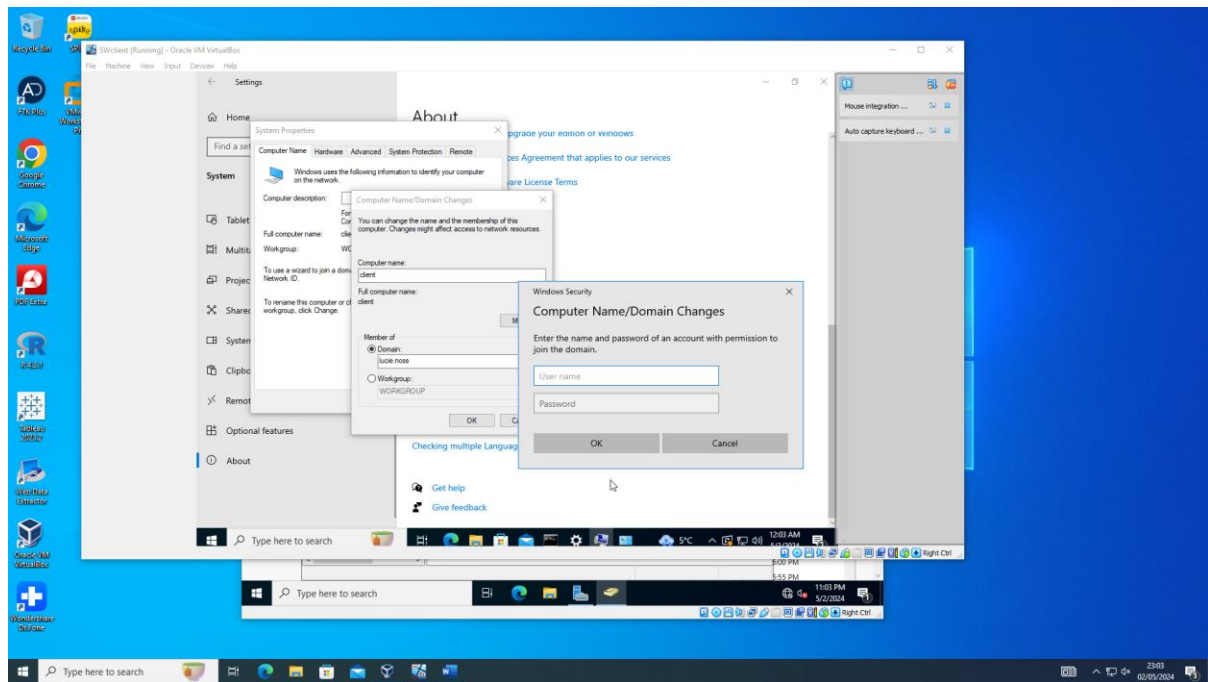




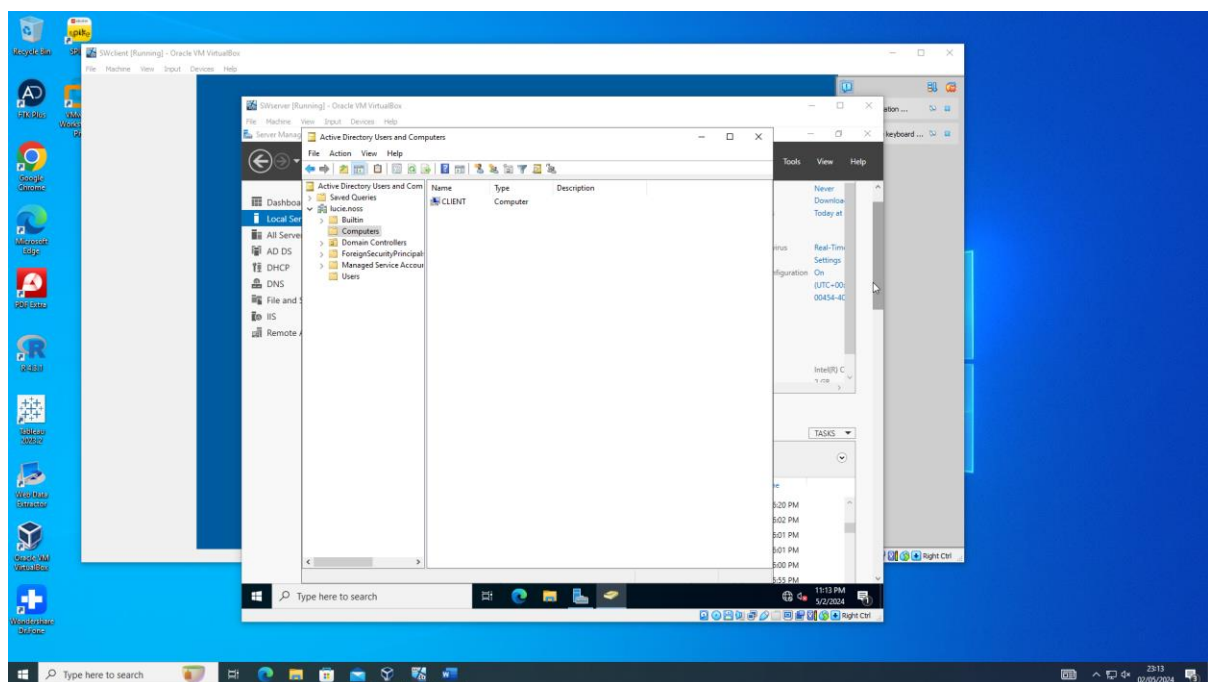








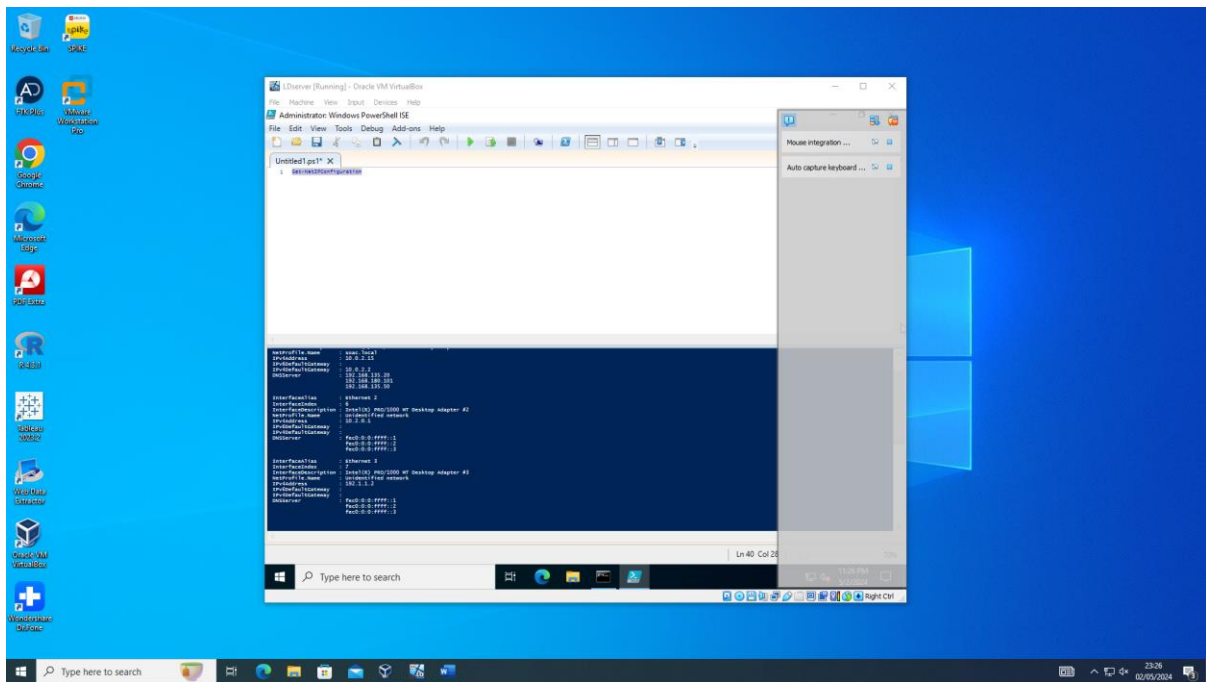
I created a forest name lucie.noss.



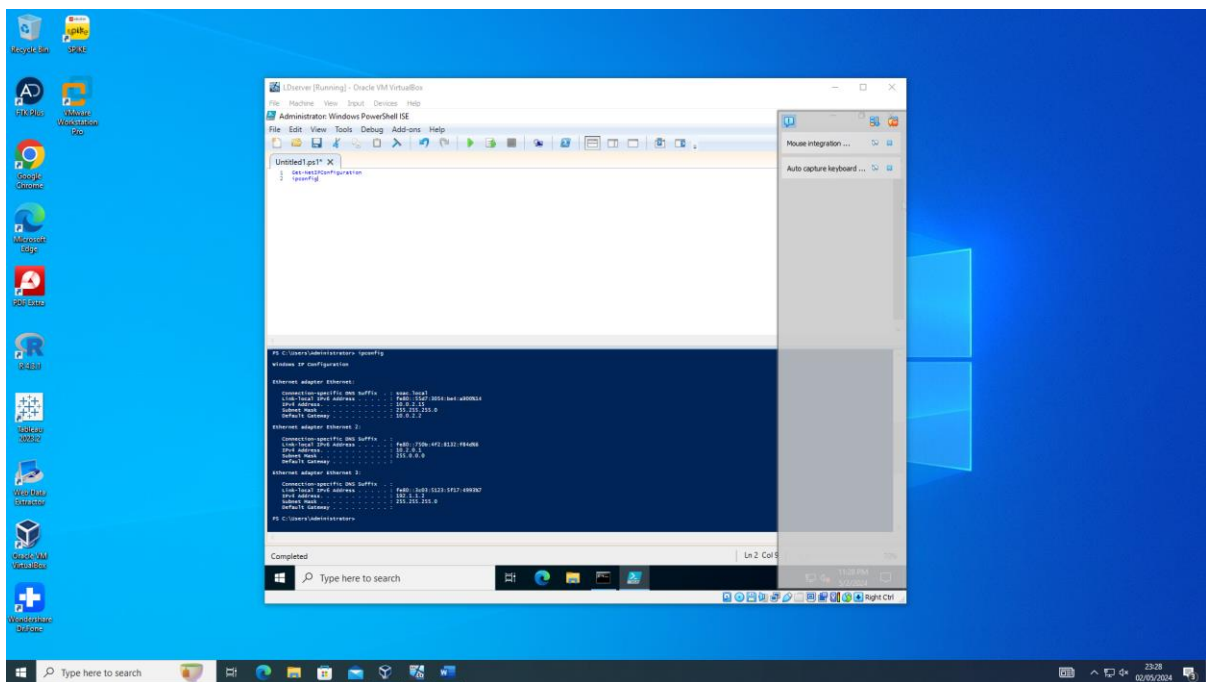
## Create Active Directory Forest:

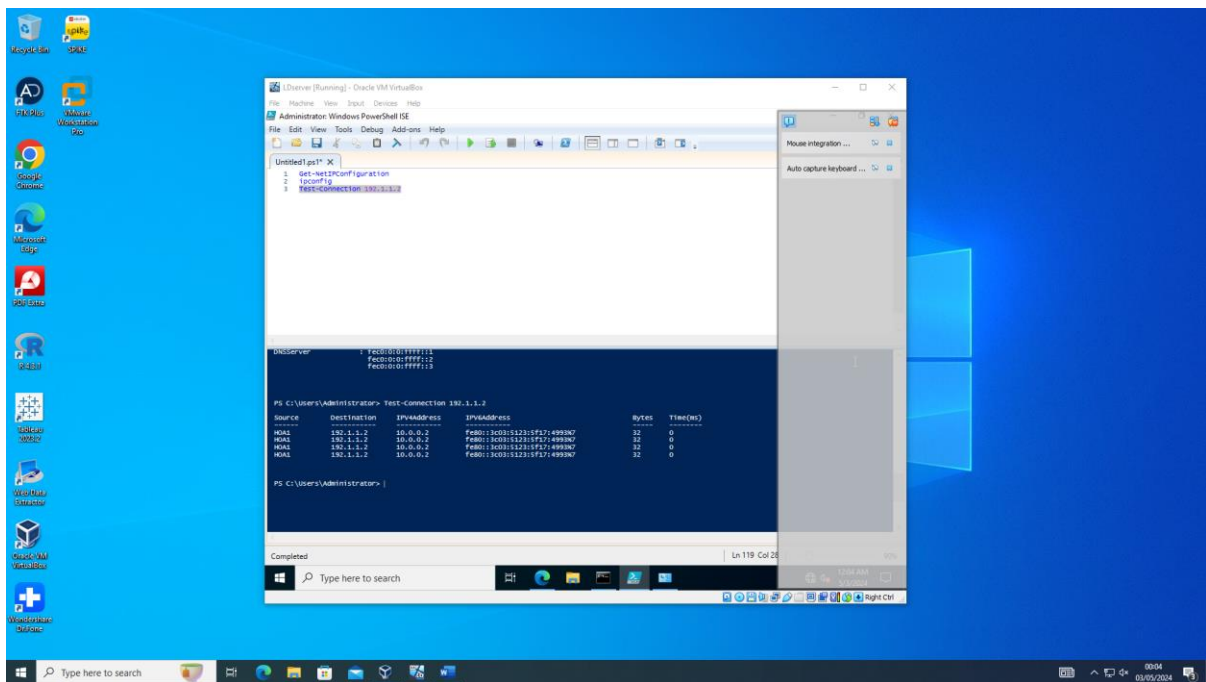
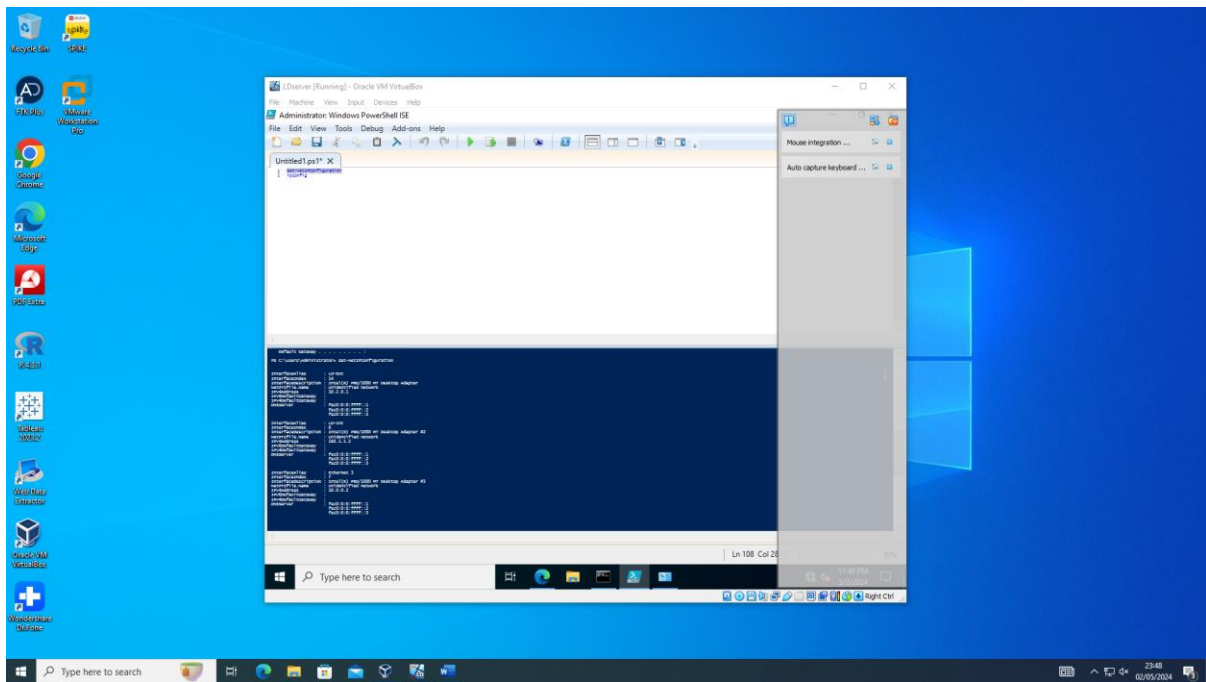
Open PowerShell as an Administrator.

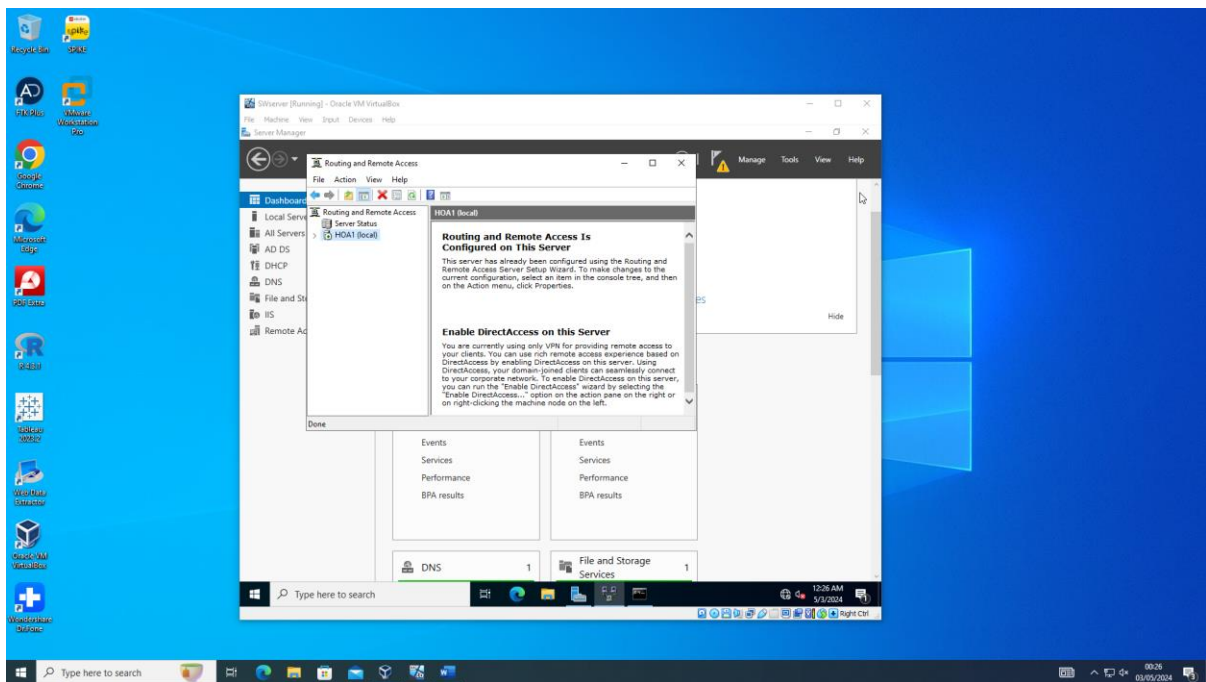
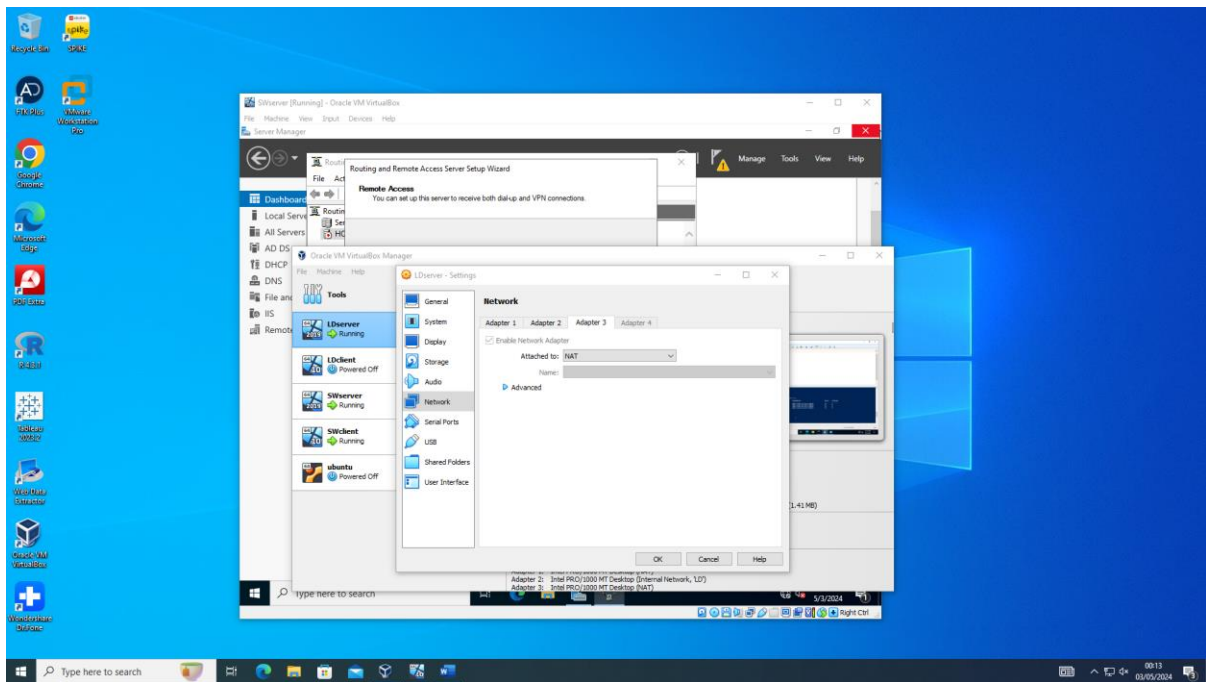
Run the command `Install-ADDSForest -DomainName yourname.noss.`



I used PowerShell to verify the connections.







**London Network:**

Install Routing and Remote Access Service (RRAS):

Follow the same steps as in the Swansea Network to install RRAS.

**Modify Firewall Rules:**

Configure Windows Firewall to allow ICMP traffic.

Configure Site-to-Site VPN to Swansea Network:

Configure a Site-to-Site VPN connection to the Swansea Network with a persistent connection type.

**Create Child Domain:**

Use PowerShell to create a child domain named ld.yourname.noss within the yourname.noss tree.

Create User Accounts:

Utilize the provided users\_list.xlsx document to create user accounts for the ld.yourname.noss domain following the specified naming convention.

**Mount Second Disk Drive:**

In Disk Management, initialize and format the second disk drive as D:\LondonFiles.

**Configure DHCP Services:**

Open DHCP Management console.

Set up a DHCP scope with the specified range 10.2.0.10 – 10.2.0.20 and configure other DHCP options as per the infrastructure requirements.

**Test Network Connectivity:**

Ensure connectivity between servers and devices in both networks.

Test the VPN connection between Swansea and London Networks.

Verify DNS resolution and DHCP lease allocation.