

# FINAL PROJECT

Active Directory and Domain Services Environment

## ABSTRACT

This is my documentation for a fully built and configured Active Directory & Domain Services Environment, making use of Windows Server 2022 and built within VMware Workstation as the virtualization platform.

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# Original Planning Document

- Project Theme: Jujutsu Kaisen
- Domain Name: KyotoGoodwill.net
- Domain Password: Password01
- OS: Windows Server Datacenter

## Servers Information

- Server #1 name: TokyoHighF25JP
- Roles: ADDS, DNS
- IP Address: 198.5.0.1
- Subnet Mask: 255.255.255.192
- NO Gateway
- DNS (same as Server #1's IP): 198.5.0.1
  
- Server #2 name: KyotoHighF25JP
- Roles: ADDS, DNS
- IP Address: 198.5.0.1
- Subnet Mask: 255.255.255.192
- NO Gateway
- DNS: 198.5.0.1
  
- Server #3 name: DisasterSpiritsF25JP
- Roles: FSRM
- IP Address: 198.5.0.3
- Subnet Mask: 255.255.255.192
- NO Gateway
- DNS: 198.5.0.1

## Objects Information

Note: User Information is filled out in the format of Full name/Username. All object names include "25F" e.g. John Matthews / jmatthews25F, Objects are OUs, Groups, Usernames, and Client PC Names.

- OU #1 name: 1stYearStudents25F
- Group Name: G\_1stYearStudents25F

- User #1: Yuji Itadori / yitadori25F
- User #2: Megumi Fushiguro / mfushiguro25F
- User #3: Nobara Kugisaki / nkugisaki25F

- OU #2 name: 3rdYearStudents25F
- Group Name: G\_3rdYearStudents25F
- User #1: Aoi Todo / atodo25F
- User #2: Noritoshi Kamo / nkamo25F
- User #3: Momo Nishimiya / mnishimiya25F

- OU #3 name: DisasterSpirits25F
- Group Name: G\_DisasterSpirits25F
- User #1: Mahito / mahito25F
- User #2: Jogo / jogo25F
- User #3: Hanami / hanami25F

### **Client Information**

- Name: Gojo25F
- OS: Windows 10 or 11
- IP Address: DHCP

### **DHCP Scope**

- Name: InfiniteVoid25F
- IP Address Range: 198.5.0.4 - 198.5.0.62

### **Network Shares: Public, Home, OU Shares.**

- Share#1: 1stYearStudents
- Share#2: 3rdYearStudents
- Share#3: DisasterSpirits

### **Network equipment**

2 switches & 1 Router

## Network Diagram

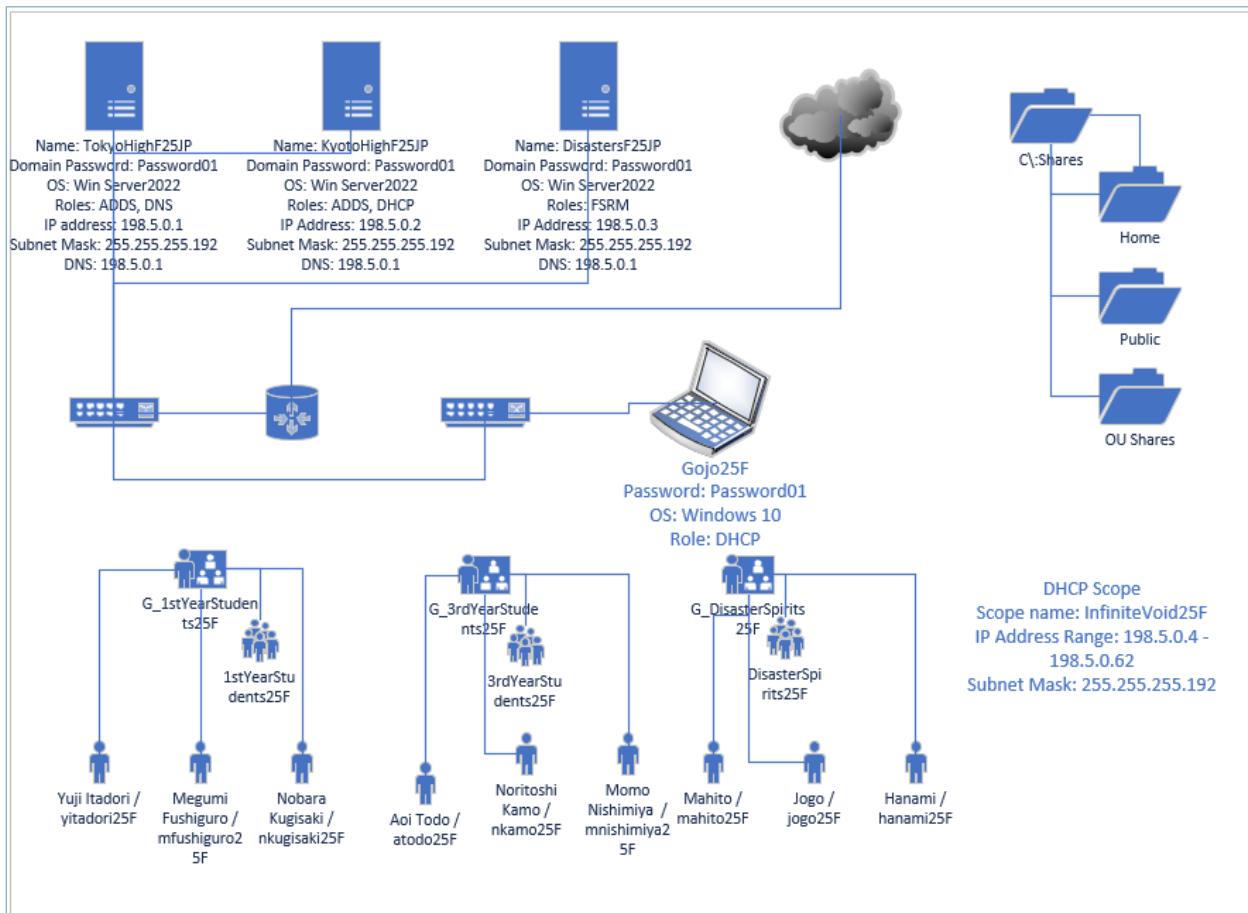


Figure 1 - Network Diagram

## ADDS Diagram

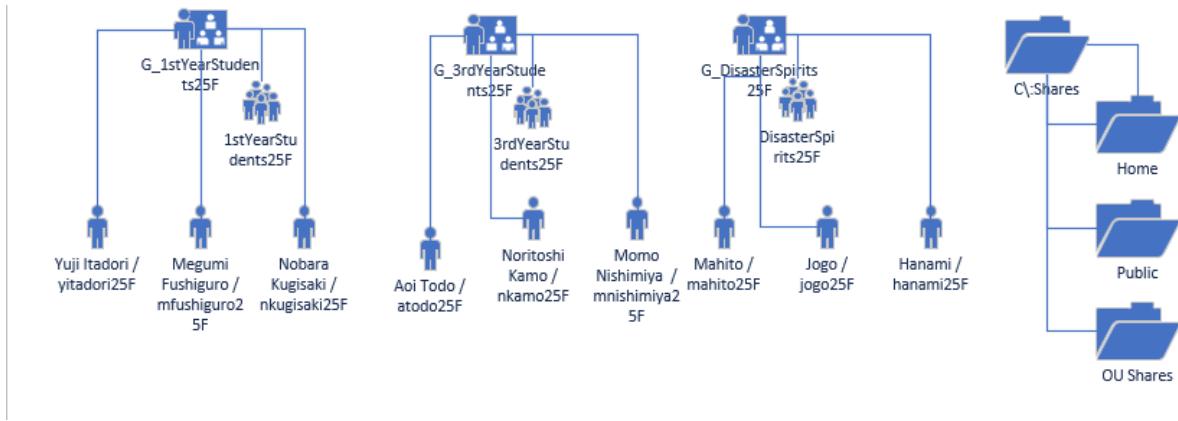


Figure 2 ADDS Diagram

## Server #1 Screenshots

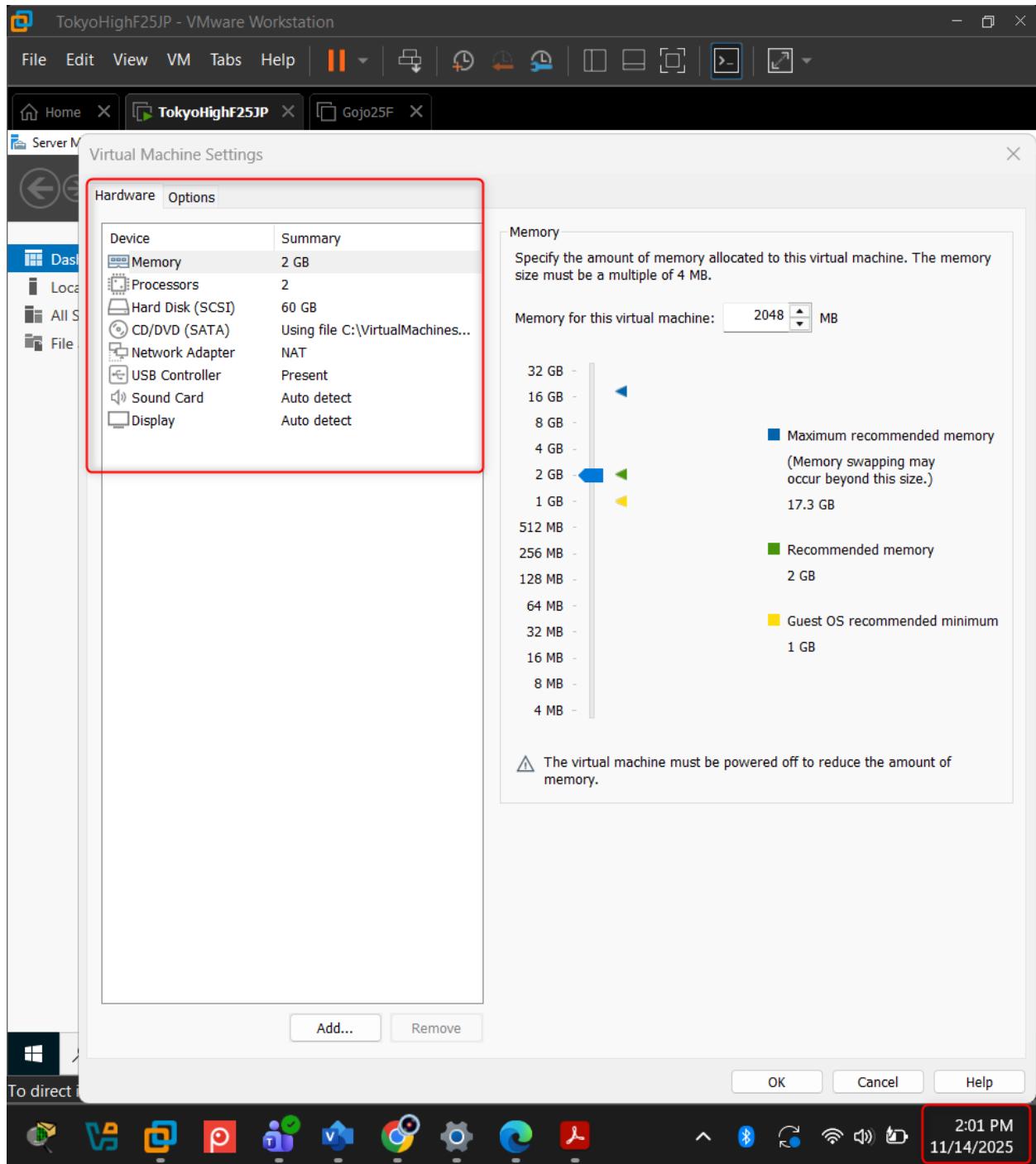


Figure 3 - Server 1 Hardware - Settings and Timestamps Included

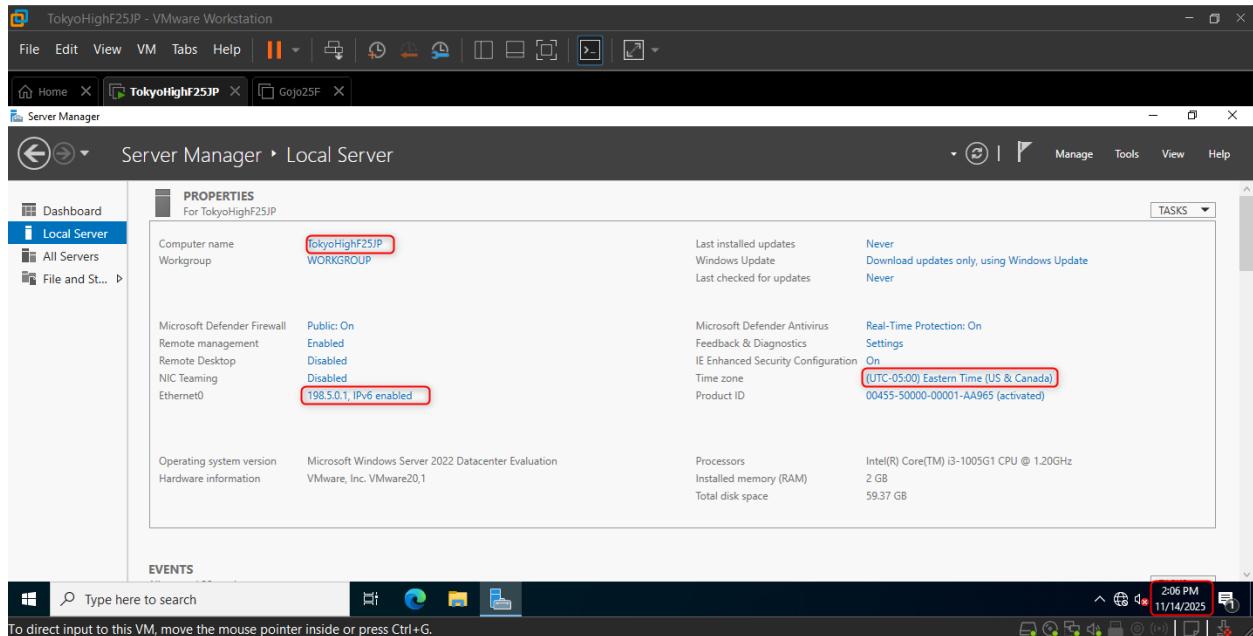


Figure 4 - Server 1 Configuration

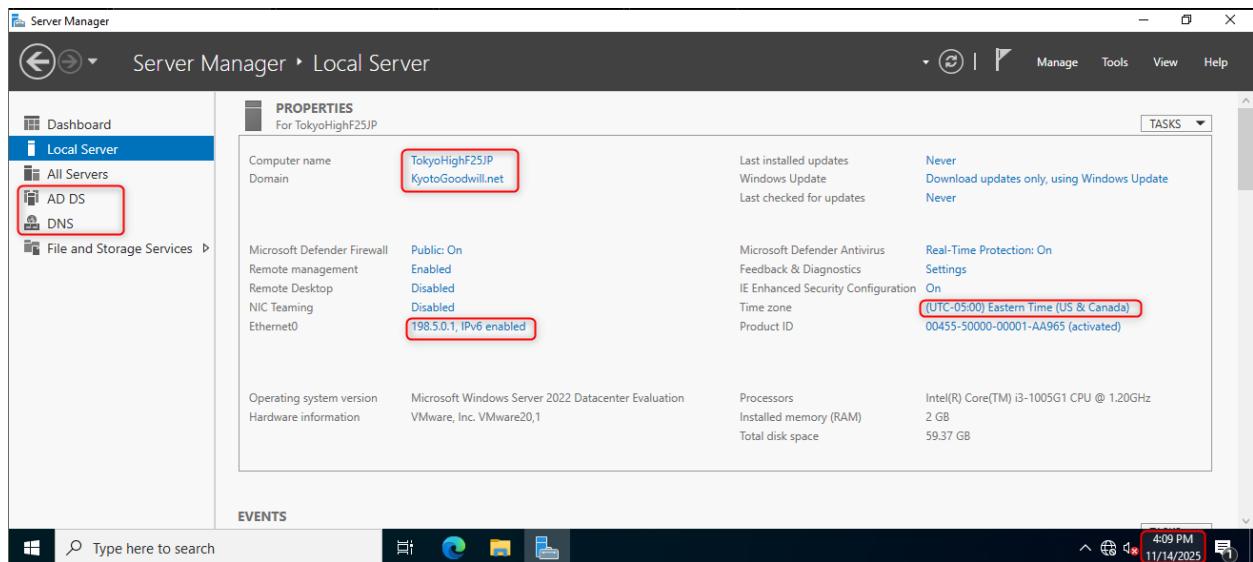


Figure 5 - Local Server Information Showing the server promoted to a Domain Controller

## Server #2 Screenshots

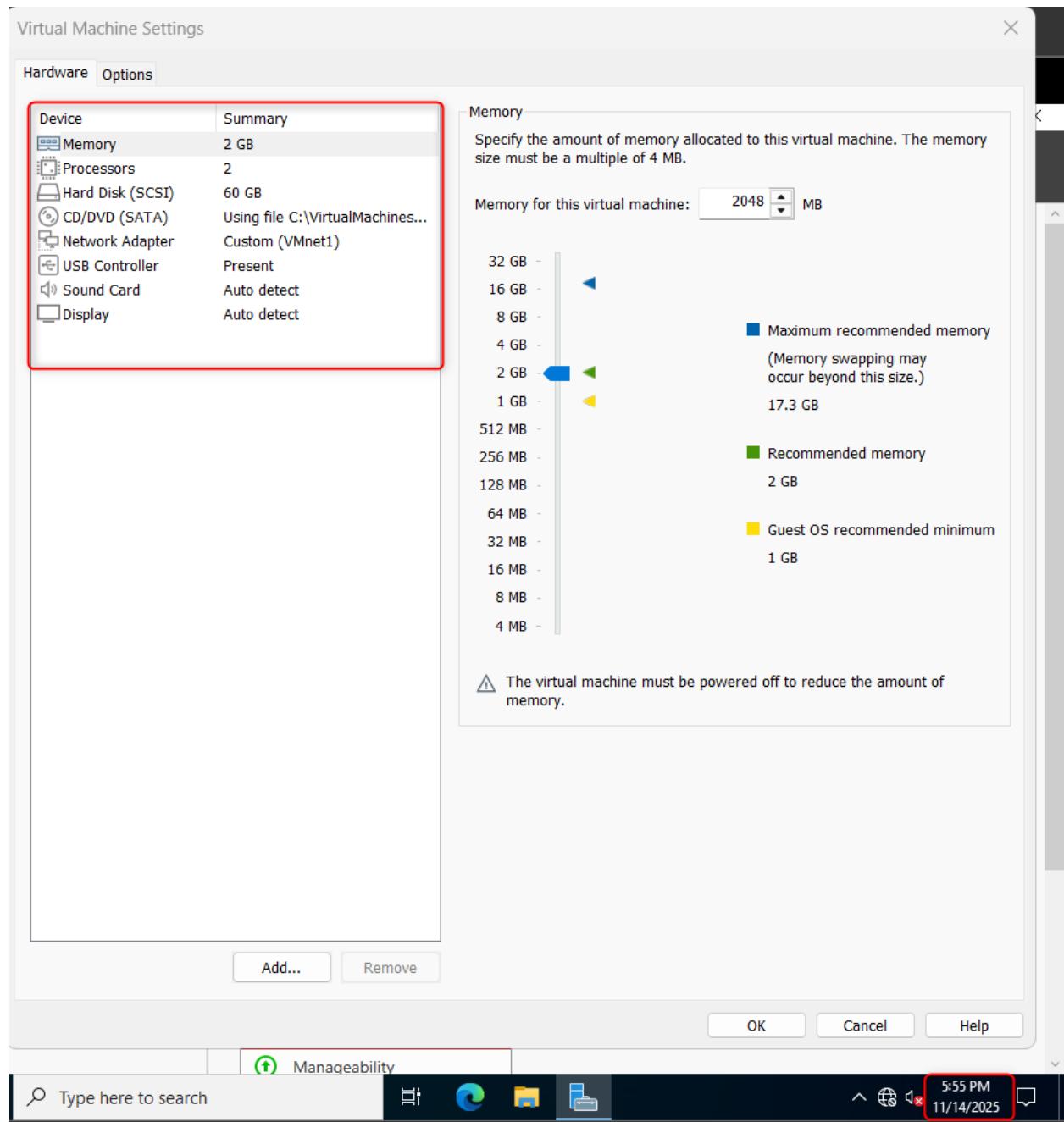


Figure 6 - Server 2 Hardware Settings

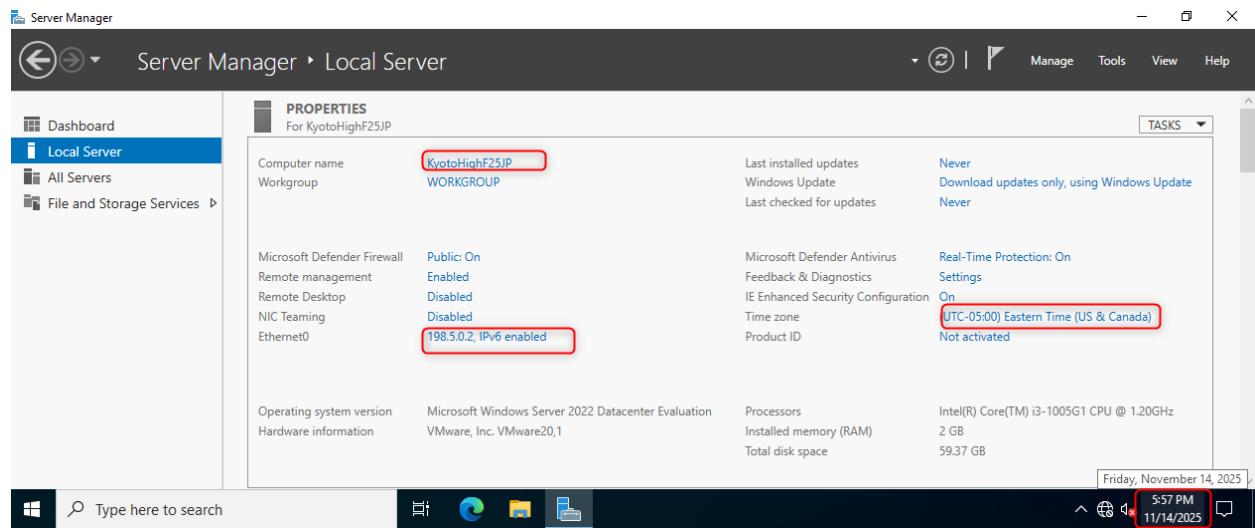


Figure 7 - Server 2 Configuration

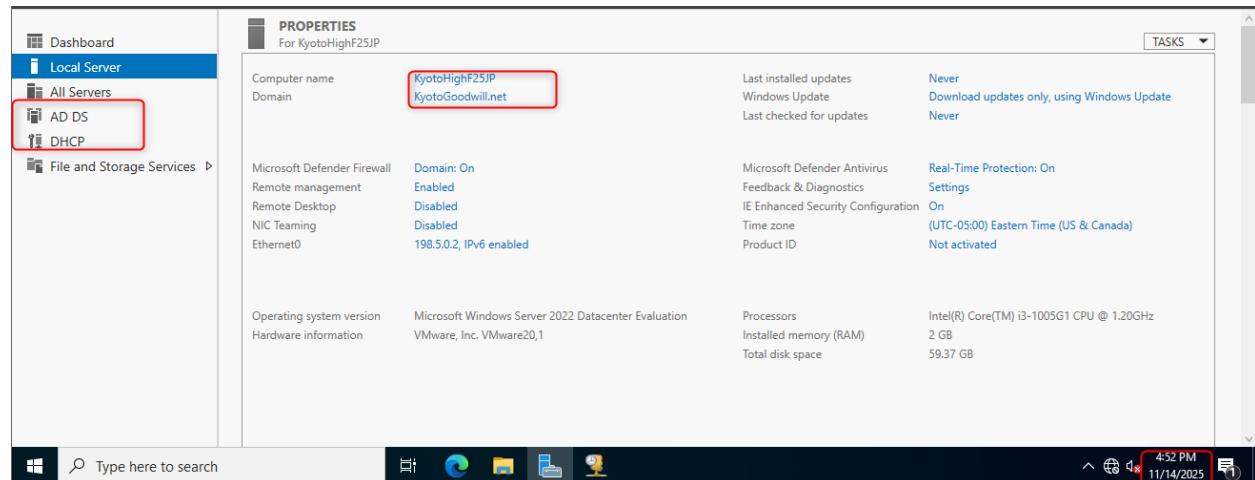


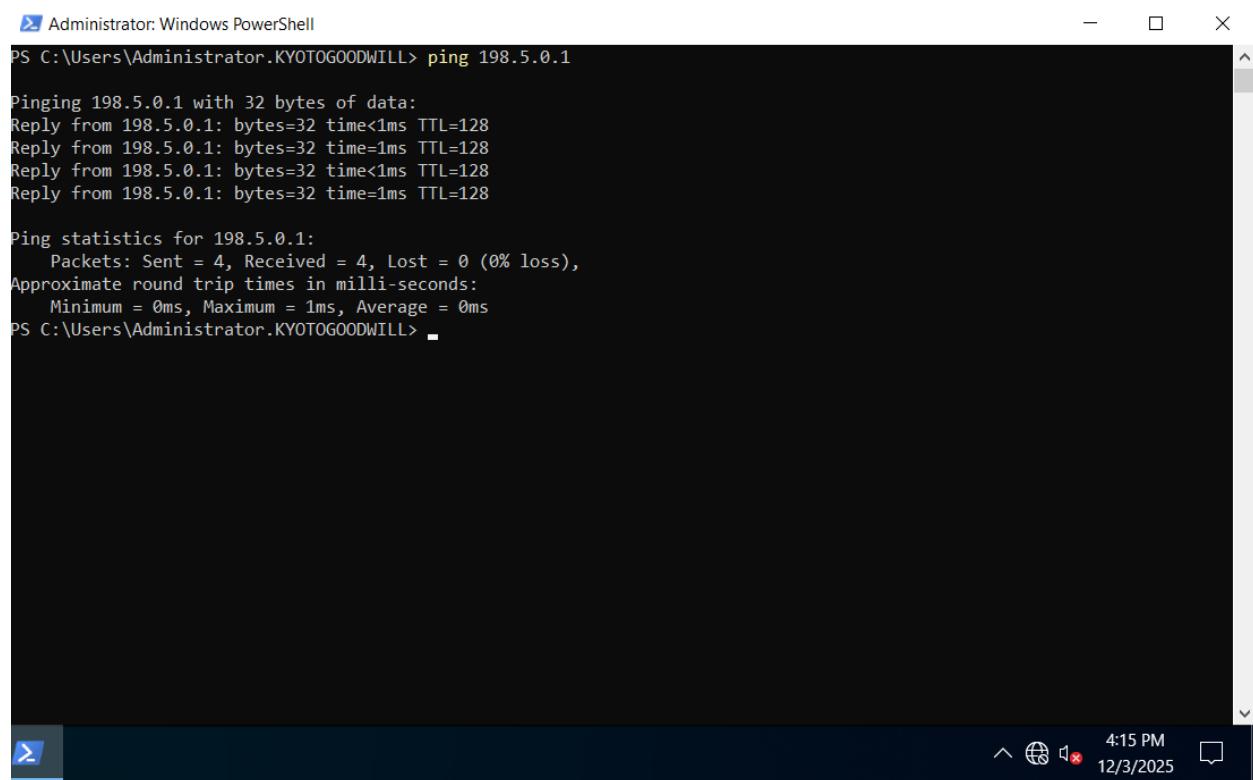
Figure 8 - Server 2 Configuration and Roles

The screenshot displays two windows side-by-side. The left window is the 'DHCP' management console. It shows a tree view of a server named 'kyotohighf25jp.kyotogood'. Under 'IPv4', the 'Scope [198.5.0.0] Inf' node is selected and highlighted with a red box. The right pane lists 'Contents of DHCP Server' including 'Server Options', 'Policies', and 'Filters'. The 'Actions' pane on the right shows 'IPv4' and 'Scope [198.5.0.0] Inf' with their respective 'More Actions' options. The status bar at the bottom indicates the time as 4:08 PM and the date as 12/3/2025. The right window is a 'Administrator: Windows PowerShell' session. It runs the command `Get-DhcpServerv4Scope -ComputerName KyotoHighF25JP`. The output is a table:

ScopeId	SubnetMask	Name	State	StartRange	EndRange	LeaseDuration
198.5.0.0	255.255.255.192	InfiniteVoi...	Active	198.5.0.4	198.5.0.62	8.00:00:00

The 'State' column for the scope is also highlighted with a red box. The status bar at the bottom of the PowerShell window indicates the time as 4:13 PM and the date as 12/3/2025.

Figure 9 - Screenshot of the DHCP console Showing the scope range



Administrator: Windows PowerShell

```
PS C:\Users\Administrator.KYOTOGOODWILL> ping 198.5.0.1

Pinging 198.5.0.1 with 32 bytes of data:
Reply from 198.5.0.1: bytes=32 time<1ms TTL=128
Reply from 198.5.0.1: bytes=32 time=1ms TTL=128
Reply from 198.5.0.1: bytes=32 time<1ms TTL=128
Reply from 198.5.0.1: bytes=32 time=1ms TTL=128

Ping statistics for 198.5.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
PS C:\Users\Administrator.KYOTOGOODWILL>
```

Administrator: Windows PowerShell

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\Administrator> ping 198.5.0.2

Pinging 198.5.0.2 with 32 bytes of data:
Reply from 198.5.0.2: bytes=32 time<1ms TTL=128
Reply from 198.5.0.2: bytes=32 time<1ms TTL=128
Reply from 198.5.0.2: bytes=32 time=1ms TTL=128
Reply from 198.5.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 198.5.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
PS C:\Users\Administrator>
```

Figure 10 - Command Prompt showing the servers can ping each other

## Server #3 Screenshots

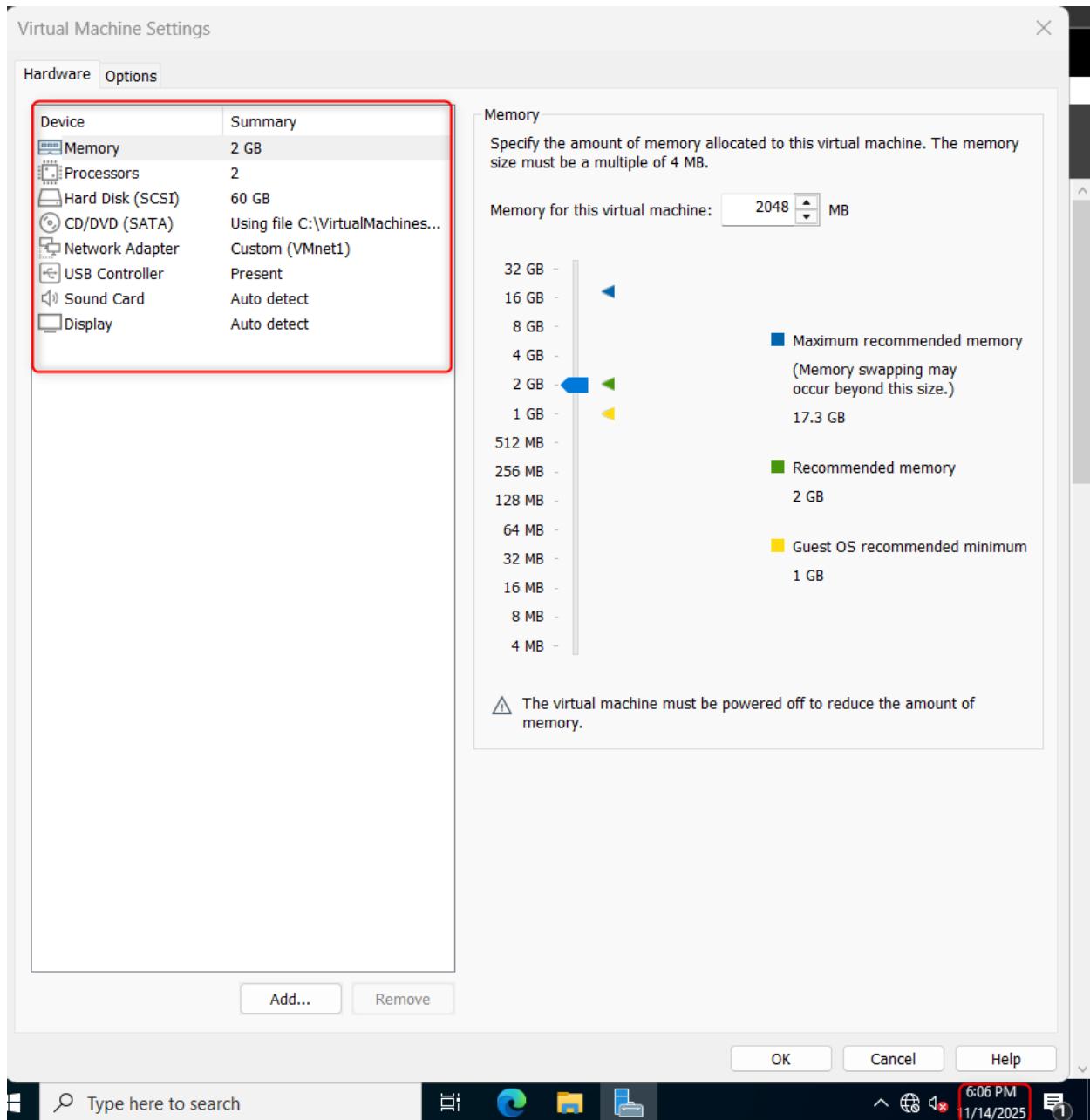


Figure 11 - Server 3 Hardware

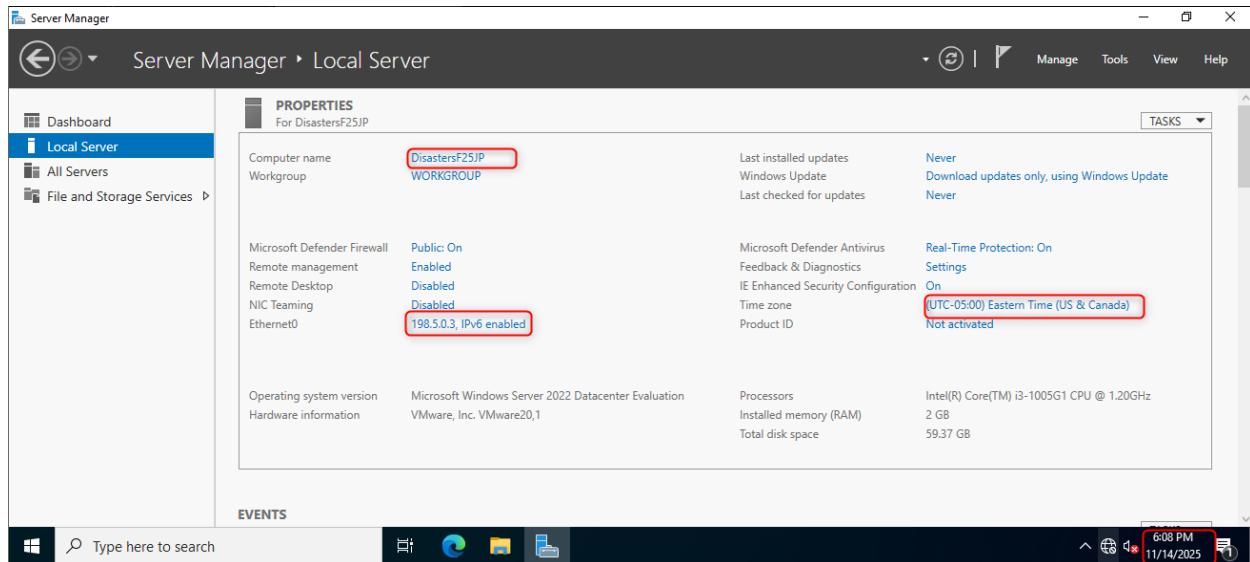


Figure 12 - Server 3 Configuration

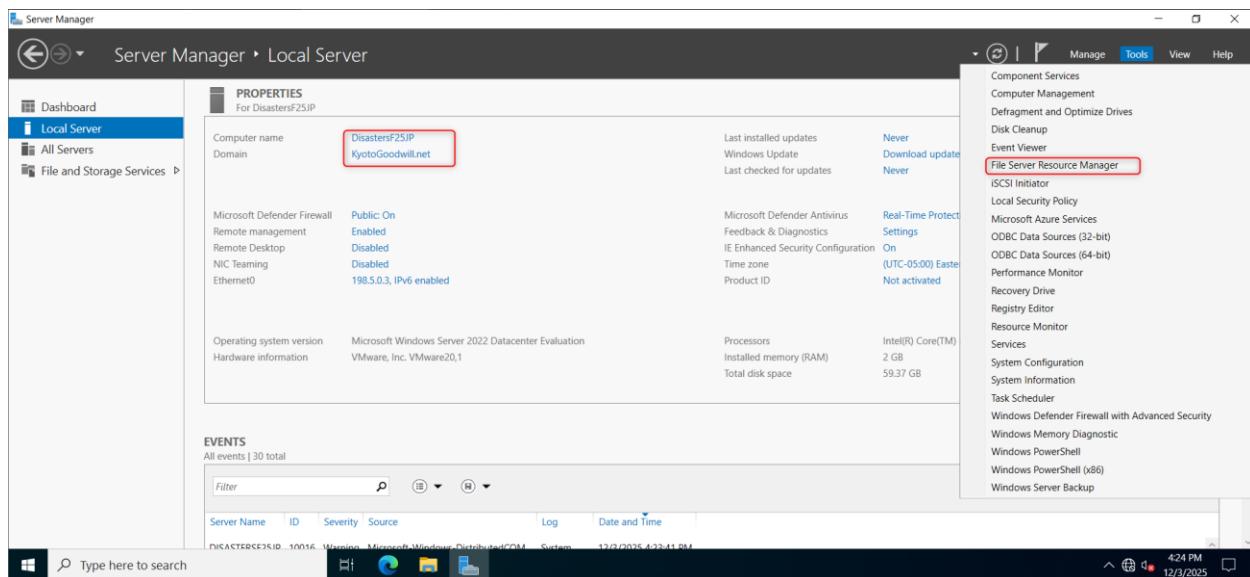


Figure 13 - File Server has FSRM installed

## OU Screenshots

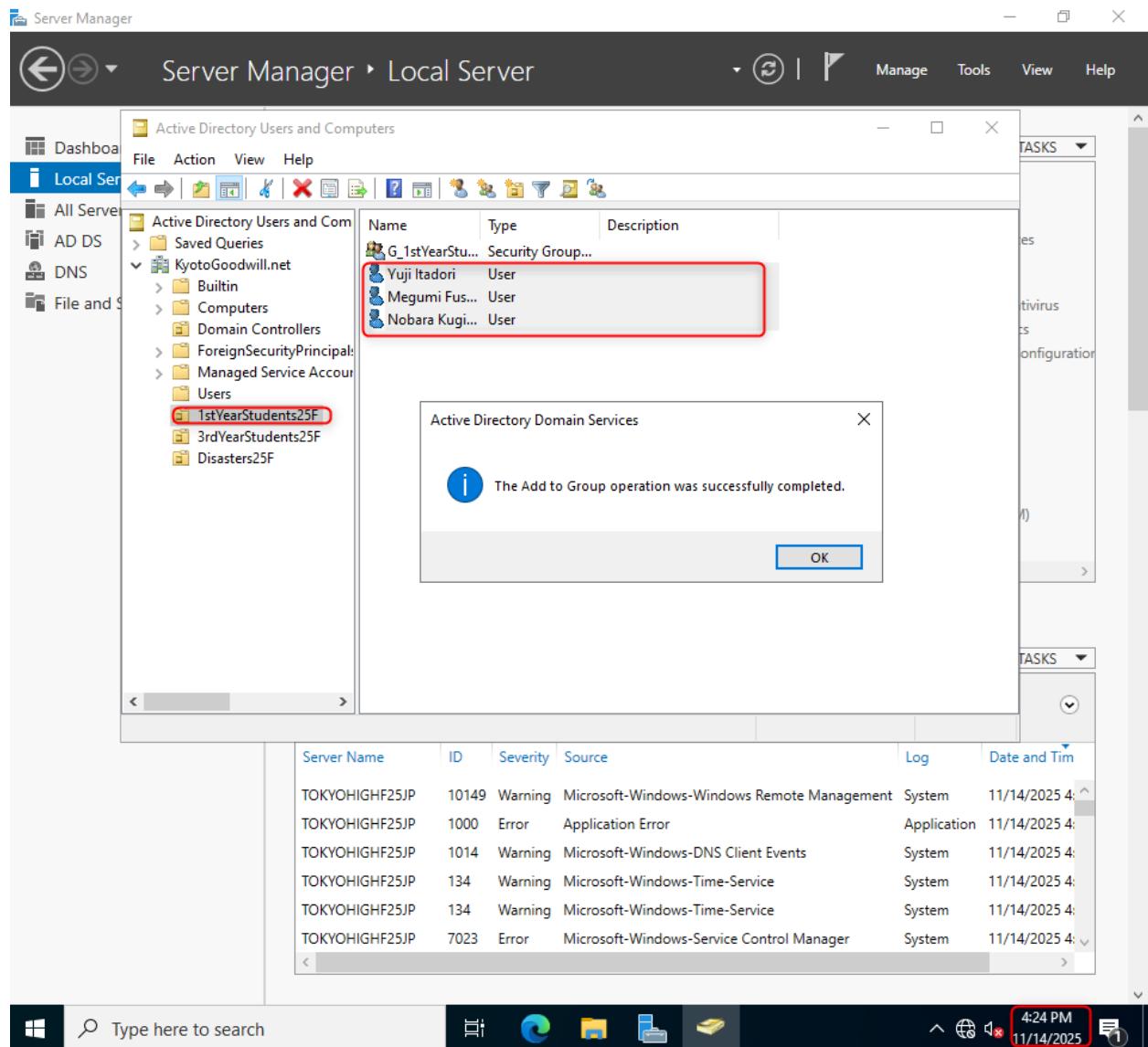


Figure 14 - OU #1

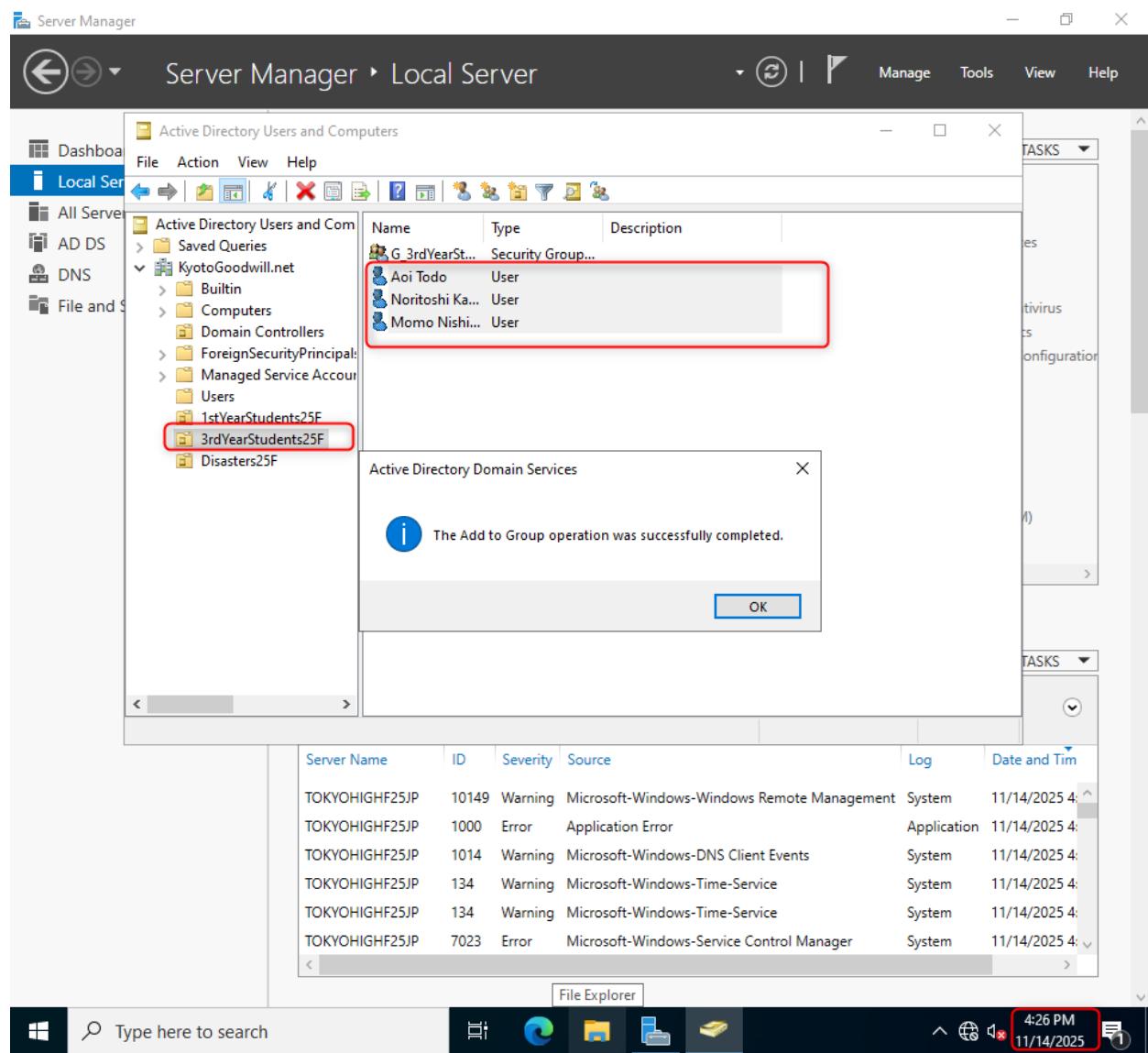


Figure 15 - OU #2

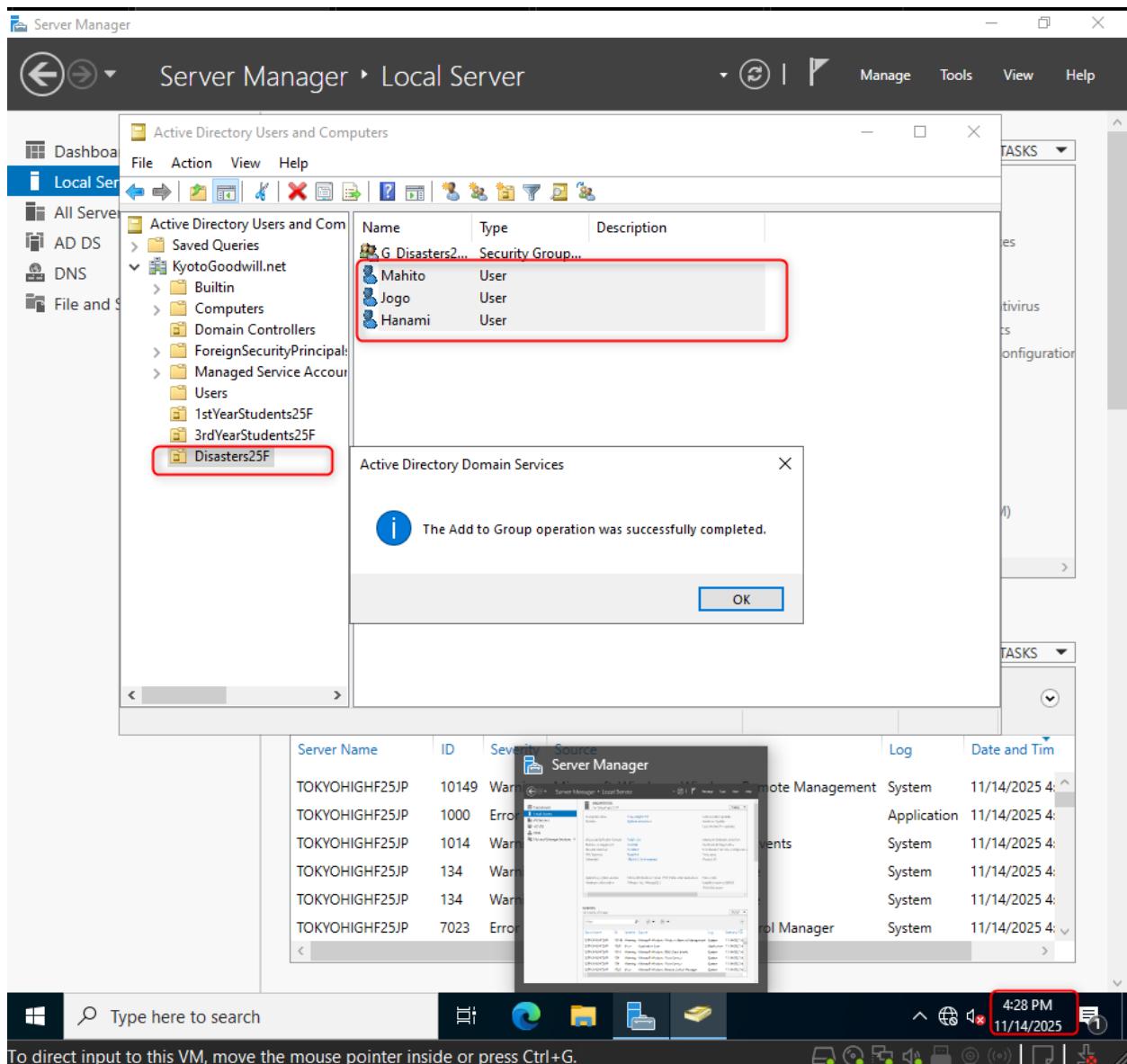


Figure 16 - OU #3

## Shared Folder Screenshots

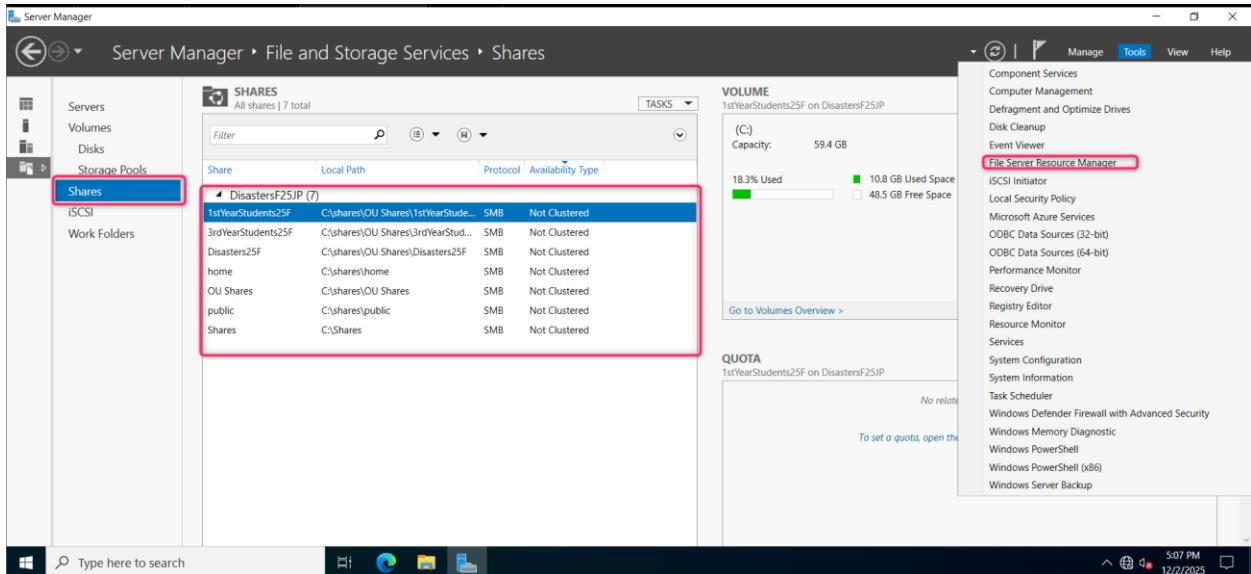


Figure 17 - Proof of FSRM Role Installation and list of folders on file server

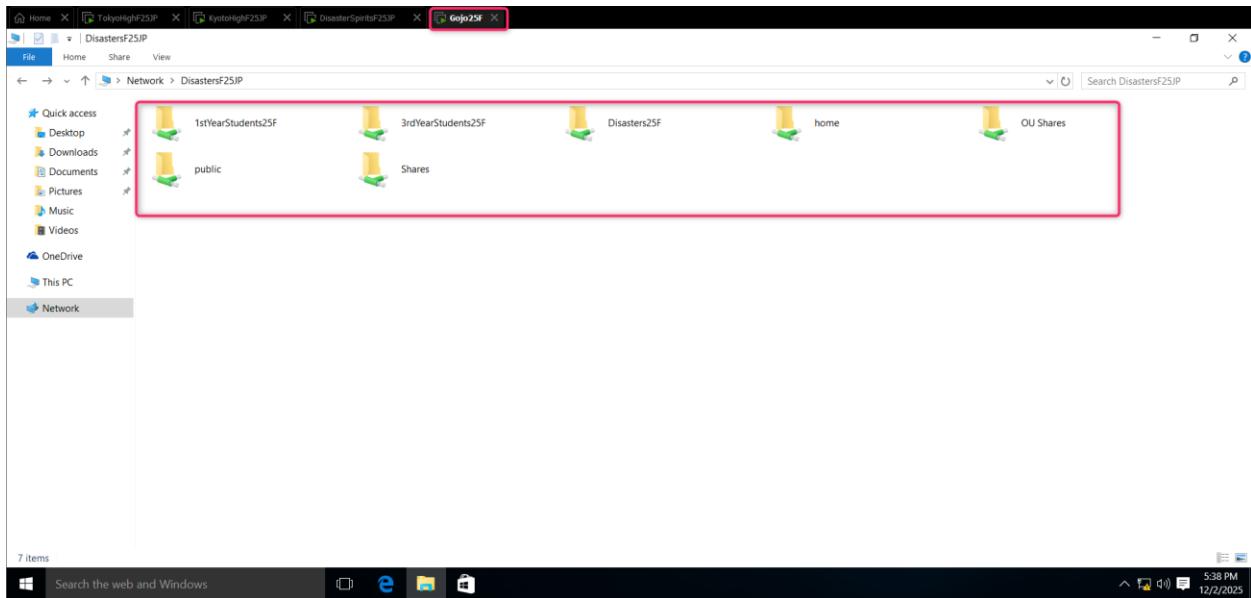


Figure 18 - List of folders on the client machine

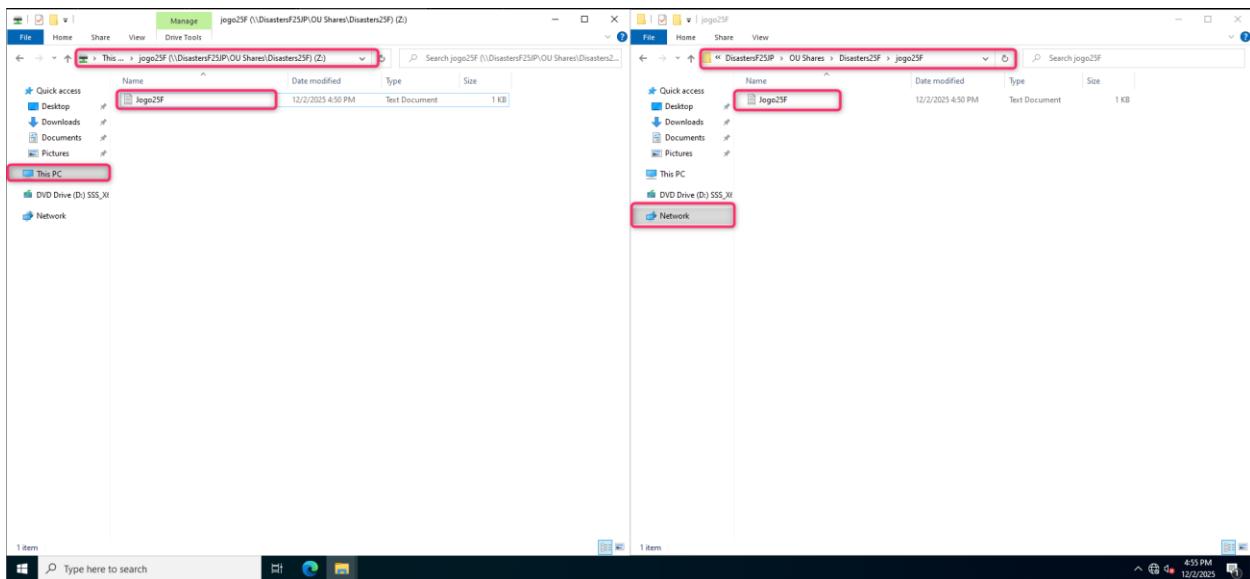


Figure 19 - Document Created on client machine opened on file server

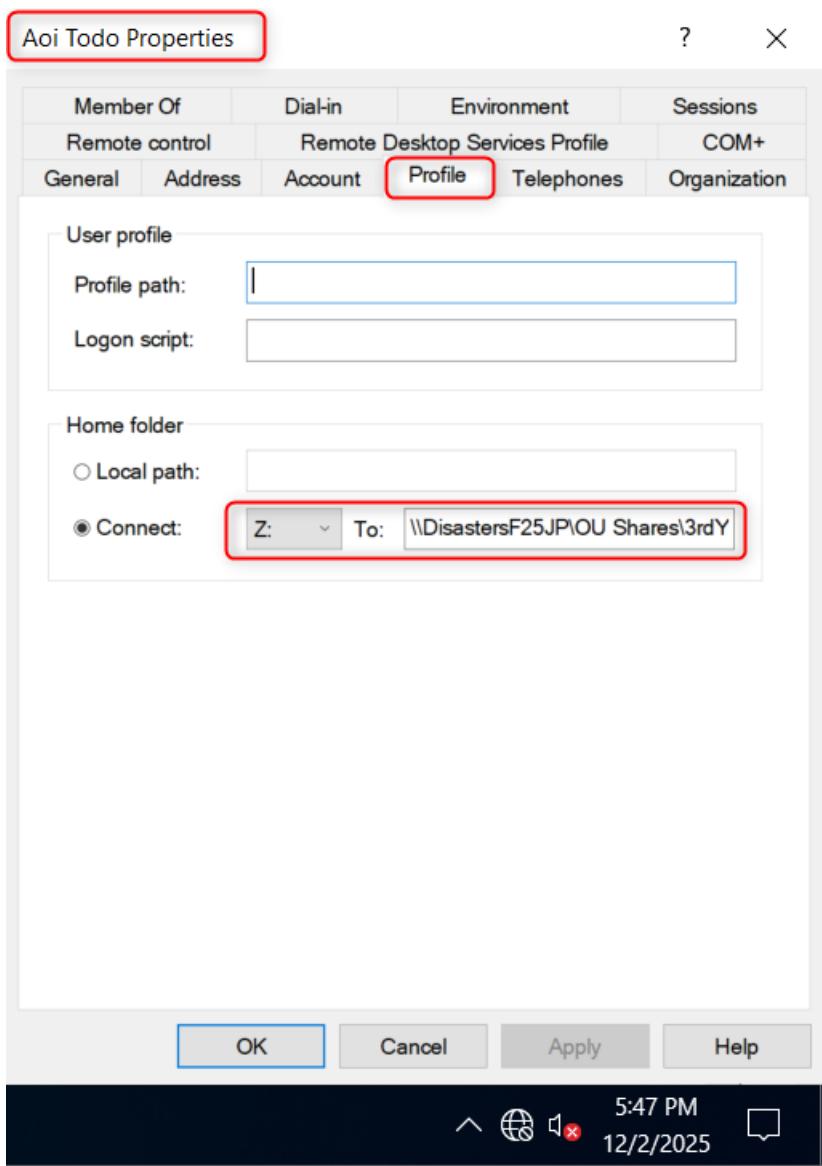


Figure 20 - Profile settings showing the drive letter and the path of the shared folder

## Client Machine

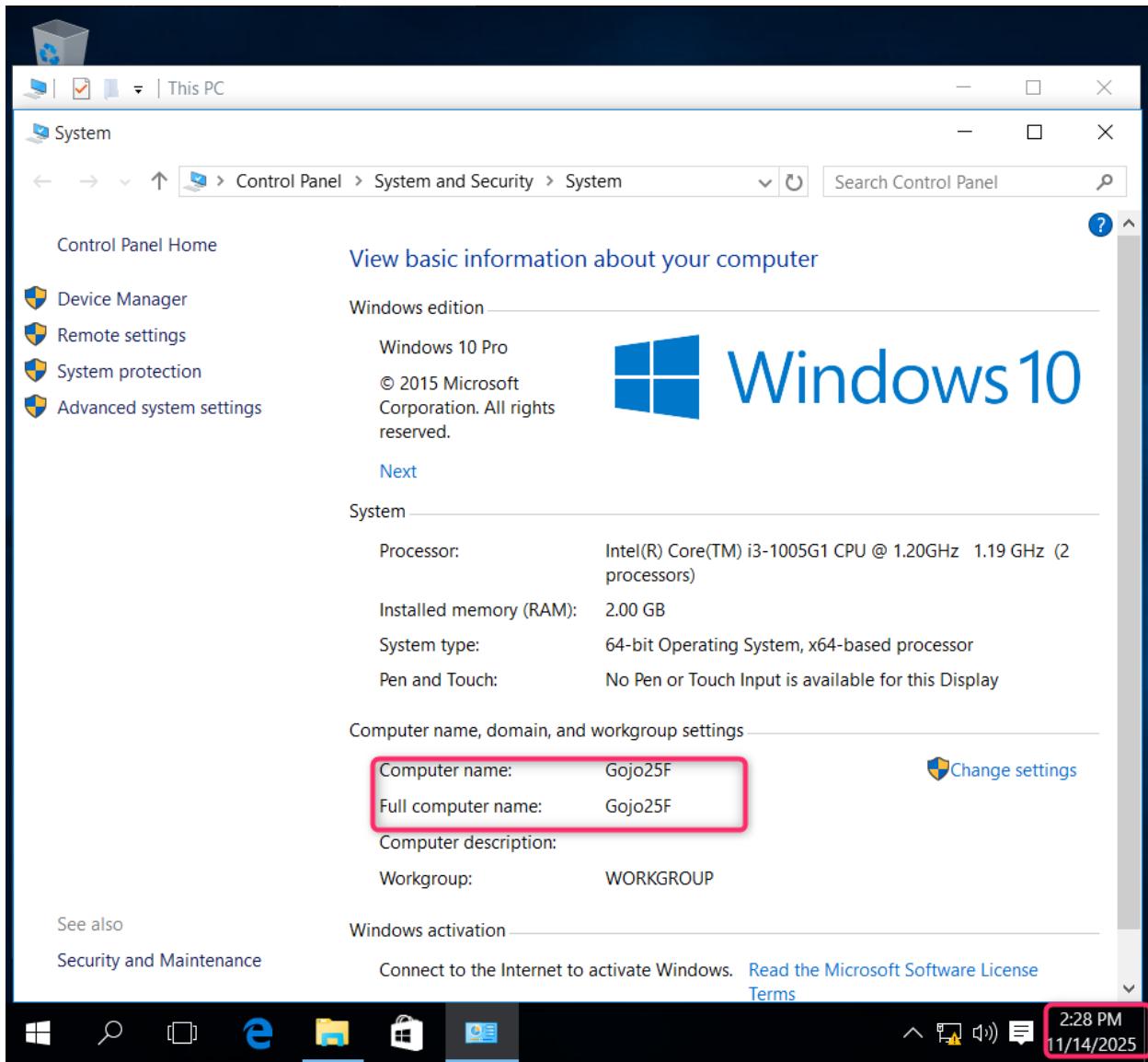


Figure 21 - Windows 10 Machine

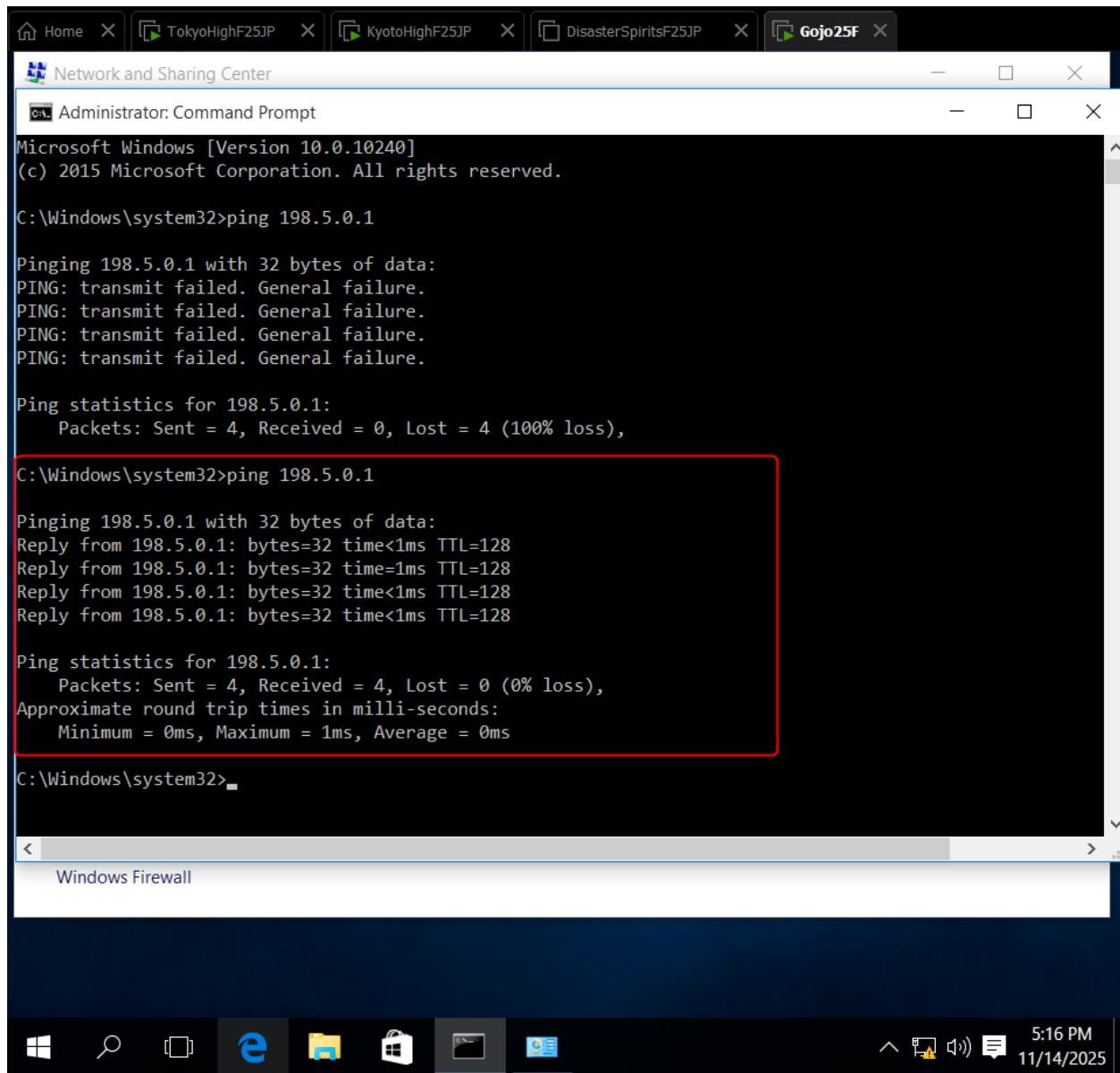


Figure 22 - Connectivity

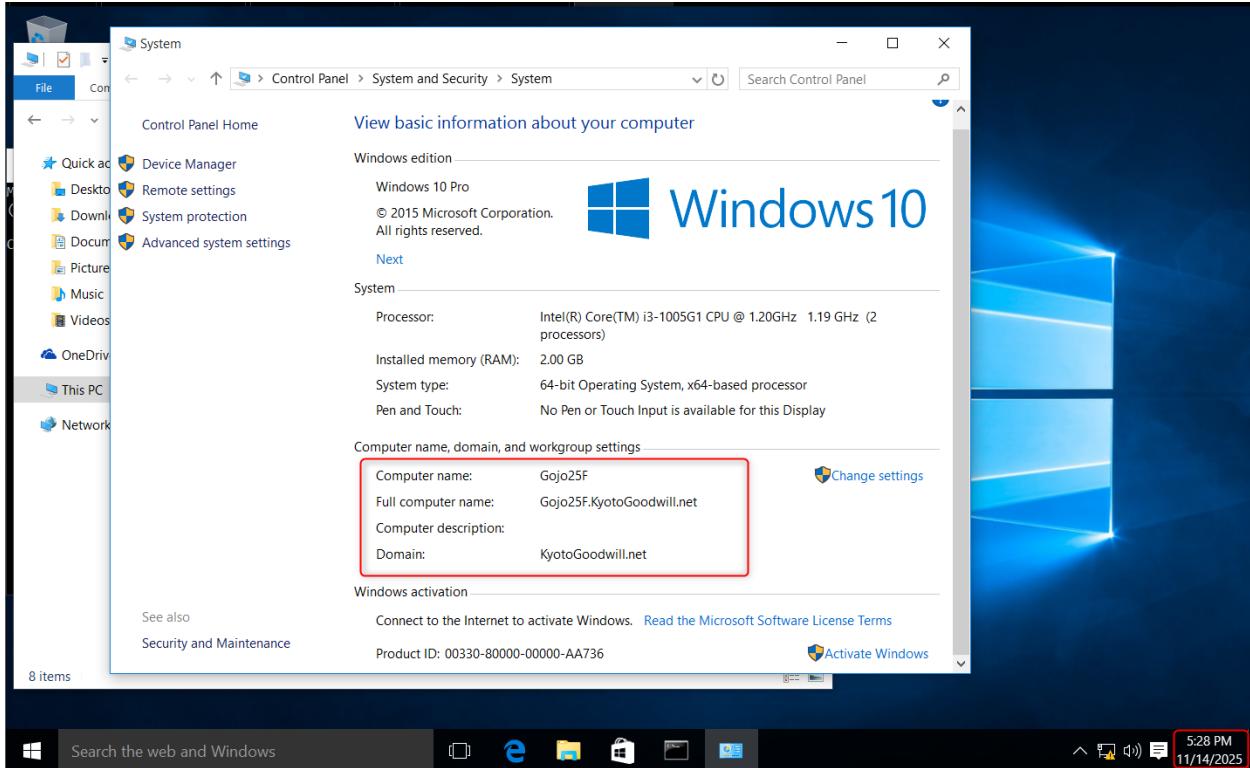


Figure 23 - Client joined to the Network

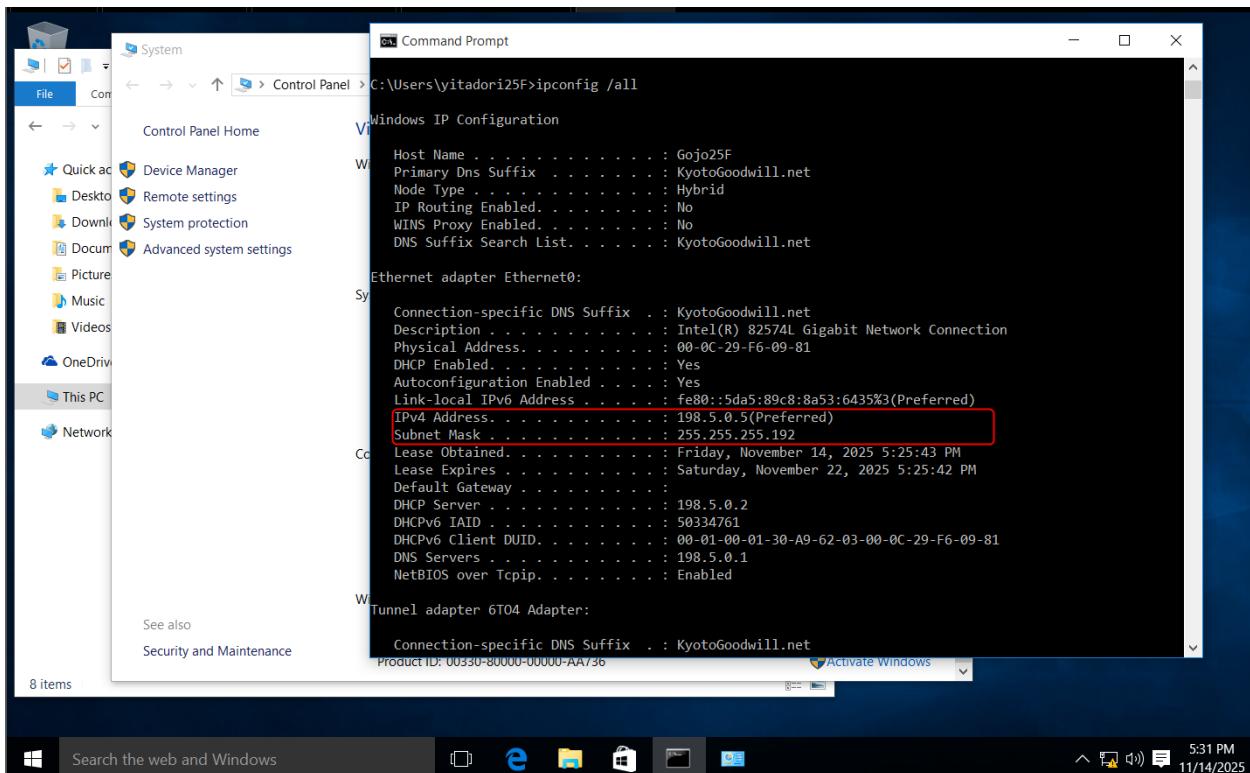


Figure 24 - DHCP console

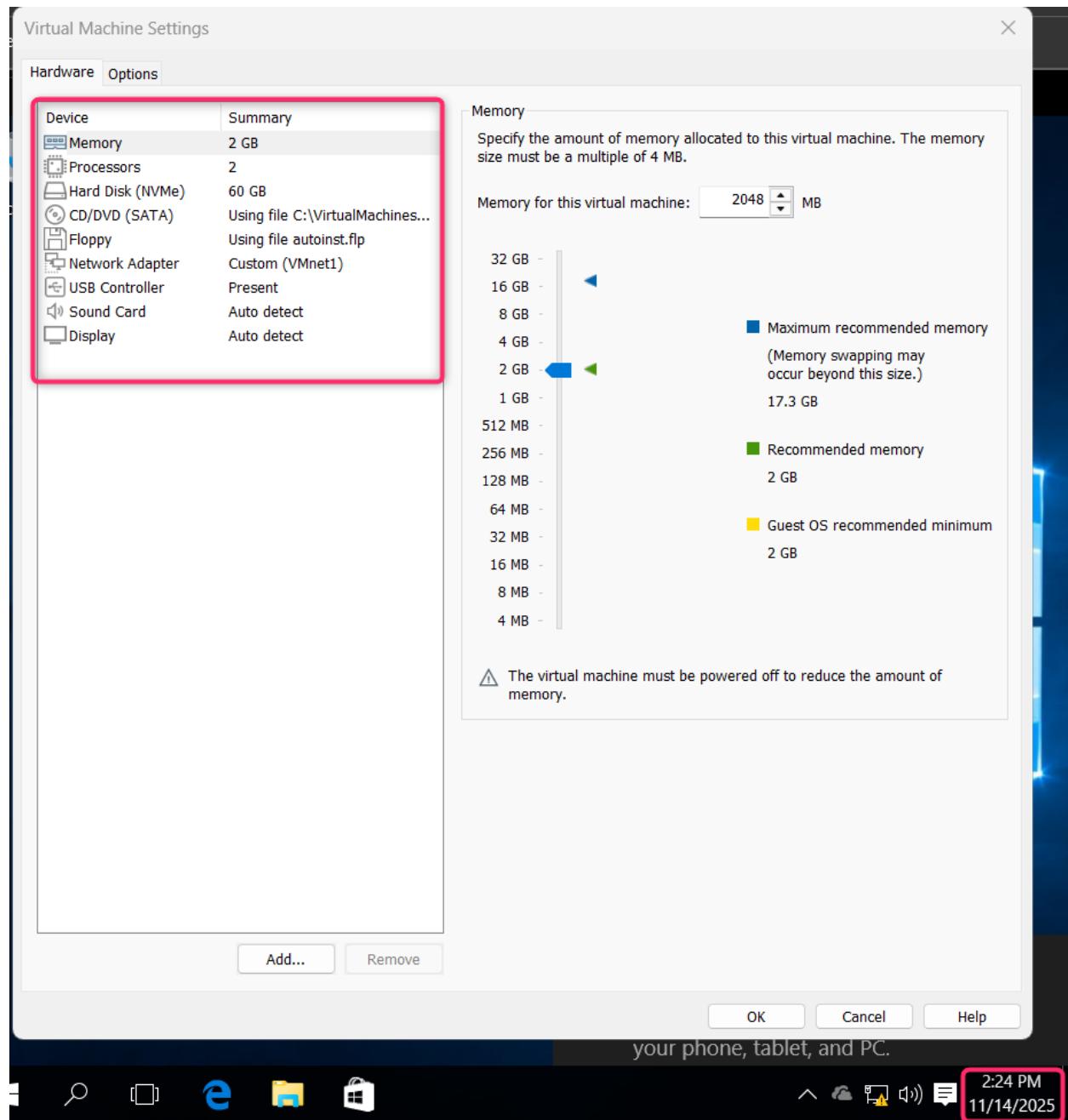


Figure 25 - Client Hardware