

Microsoft SERVER 2019

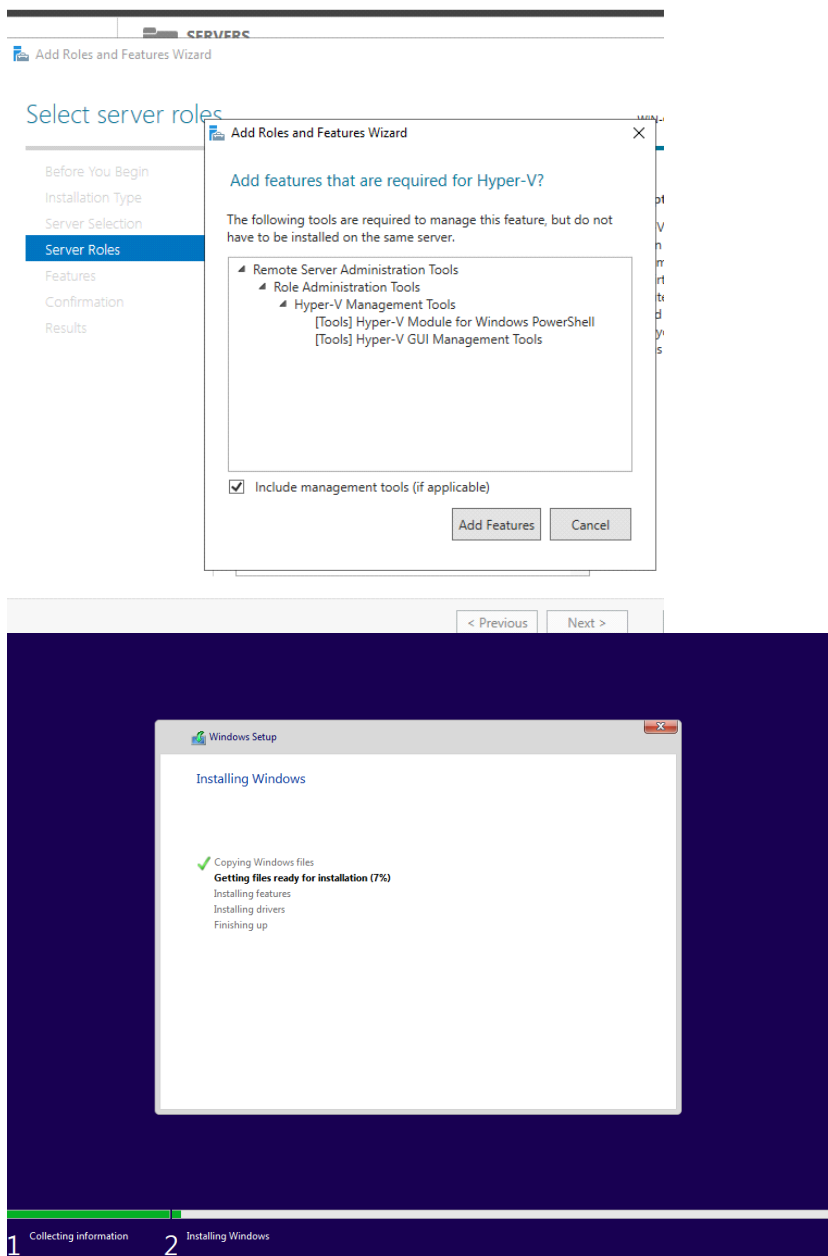
BRADY ROGERS

Virtual Machine Setup

I installed hyper v on my physical machine. I then launched hyper v and created a 192 network as well as 3 vm's that I gave a virtual hard drive and pointed to a network boot from an existing server.

1) Install Hyper V through server manager on physical machine.

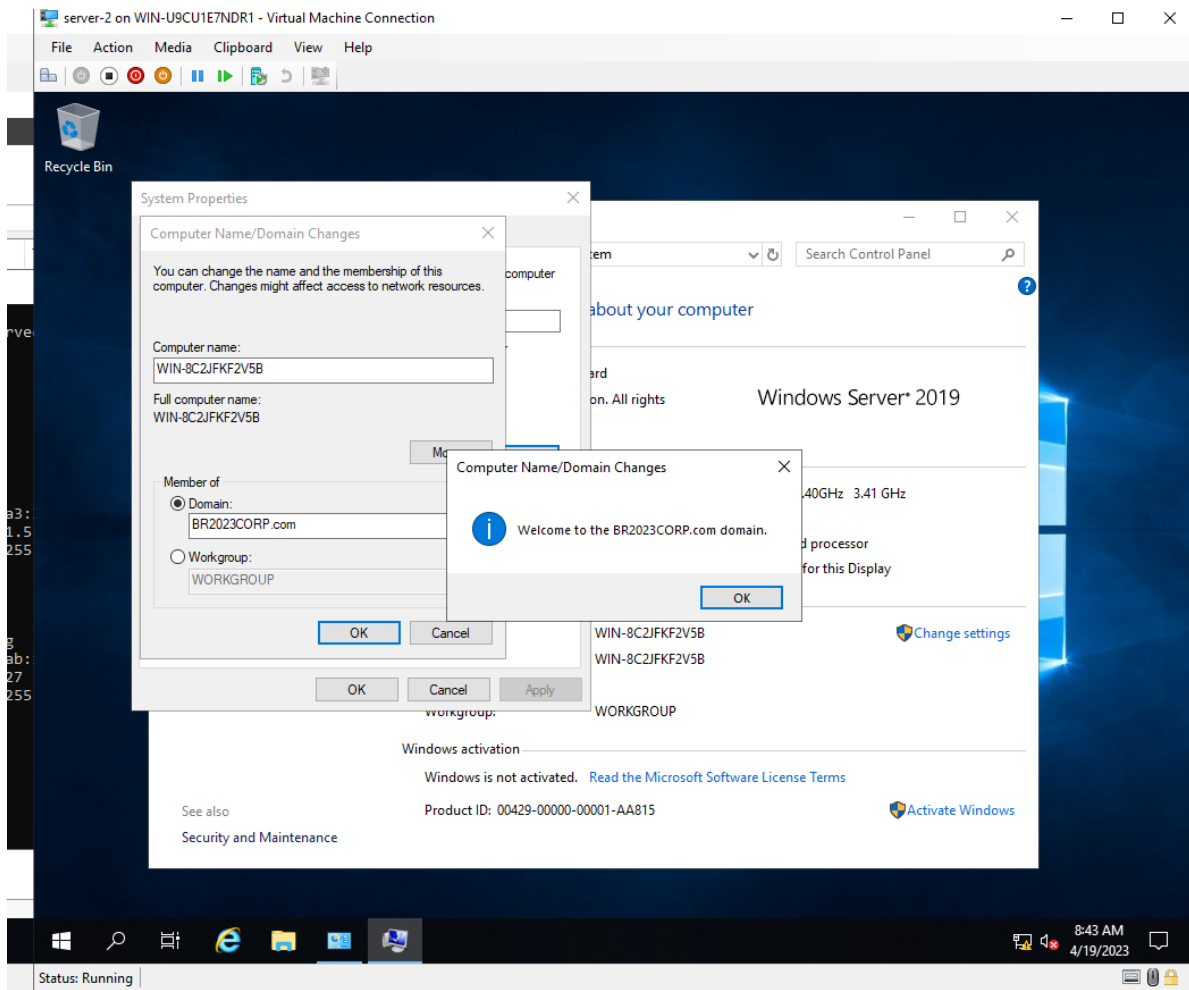
2) Setup Server 2019 and Windows 10 operating systems on the Vm's using a network deployment



Active Directory

Active Directory allows you to create domain users and manage permissions for users as well as computers.

- 1) Install Active Directory domain services and promote server 1 to domain controller
- 2) Join domain on existing servers and Windows 10 client
- 3) Create domain user profiles



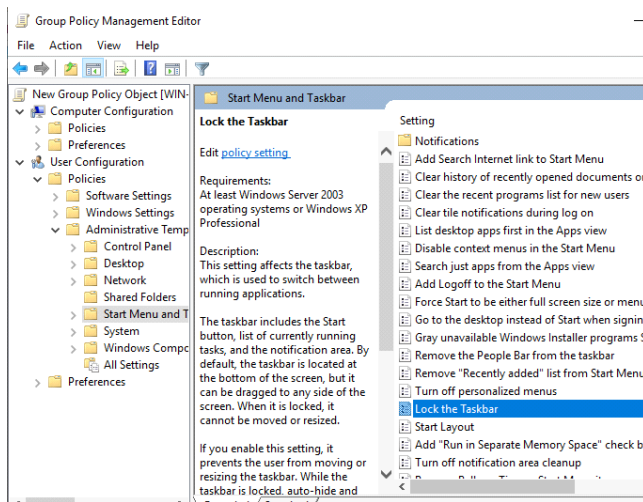
Group Policy & Organizational Units

Organizational units allow for Admins to create specific permission groups for users & computers. Once the Admin has decided the Windows features they want to disable or enable, they simply add the users they want those rules to apply to into the appropriate organizational unit.

1) First I created an OU called HR, I added user Holly Wood to the organizational unit.

2) I then created a group policy object to lock the task bar and then enforced the policy.

Create a GPO in this domain > Edit > User config > Policies > AD Templates > Start Menu & Taskbar > Lock the Taskbar > Enforce



HR					
Linked Group Policy Objects		Group Policy Inheritance		Delegation	
	Link Order	GPO	Enforced	Link Enabled	GPO Status
⬇	1	NOcontrolpanel	Yes	Yes	Enabled
⬆	2	NOedge	Yes	Yes	Enabled
⬇	3	noCMD	Yes	Yes	Enabled
⬇	4	winINSTALLER	Yes	Yes	Enabled
⬇	5	noREGISTRY	Yes	Yes	Enabled

DNS

DNS resolves names to IP addresses like br2023corp.com to 192.168.1.5 for clients on my domain. DNS was already setup for me when I installed Active Directory. In the next step I setup dhcp to automatically point my client to my DNS server.

DHCP

DHCP assigns IP addresses to client devices on a network. I decided to install this on server 2

- 1) Install dhcp and initialize
- 2) Create new scope, configure address range, default gateway and DNS server.
- 3) Set Windows client PC to obtain automatically

```
C:\Users\jpot>ipconfig /renew

Windows IP Configuration

Ethernet adapter Ethernet 2:

    Connection-specific DNS Suffix  . : BR2023CORP.com
    Link-local IPv6 Address . . . . . : fe80::8c81:a8f2:3e66:ee53%7
    IPv4 Address. . . . . : 192.168.1.15
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.5

C:\Users\jpot>
```

New Scope Wizard

IP Address Range
You define the scope address range by identifying a set of consecutive IP addresses.

Configuration settings for DHCP Server

Enter the range of addresses that the scope distributes.

Start IP address: 192 . 168 . 1 . 15

End IP address: 192 . 168 . 1 . 100

Configuration settings that propagate to DHCP Client

Length: 24

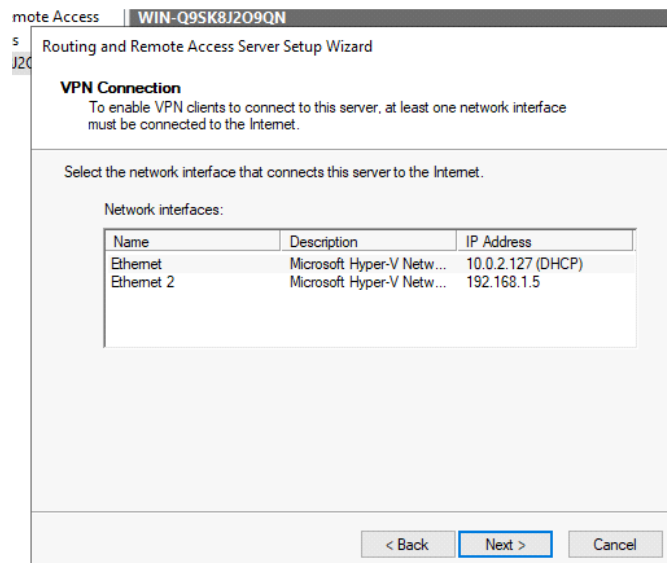
Subnet mask: 255 . 255 . 255 . 0

< Back Next > Cancel

Routing & VPN

Routing and remote access allows for your server to act as a router and allow clients on your network out to the internet. It also allows for VPN access into your network from the internet.

- 1) install routing & remote access from server manager
- 2) Initialiaze and setup NIC's
- 3) Select VPN and NAT
- 4) Allow domain members to connect via VPN in Active Directory



```
PPP adapter 3e:

Connection-specific DNS Suffix  . : BR2023CORP.com
IPv4 Address. . . . . : 192.168.1.24
Subnet Mask . . . . . : 255.255.255.255
Default Gateway . . . . . : 0.0.0.0

Unknown adapter Local Area Connection:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix  . :

C:\Users\istc.DCTC1>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:
Reply from 192.168.1.5: bytes=32 time=1ms TTL=127
Reply from 192.168.1.5: bytes=32 time=1ms TTL=127
Reply from 192.168.1.5: bytes=32 time=1ms TTL=127
Reply from 192.168.1.5: bytes=32 time=1ms TTL=127

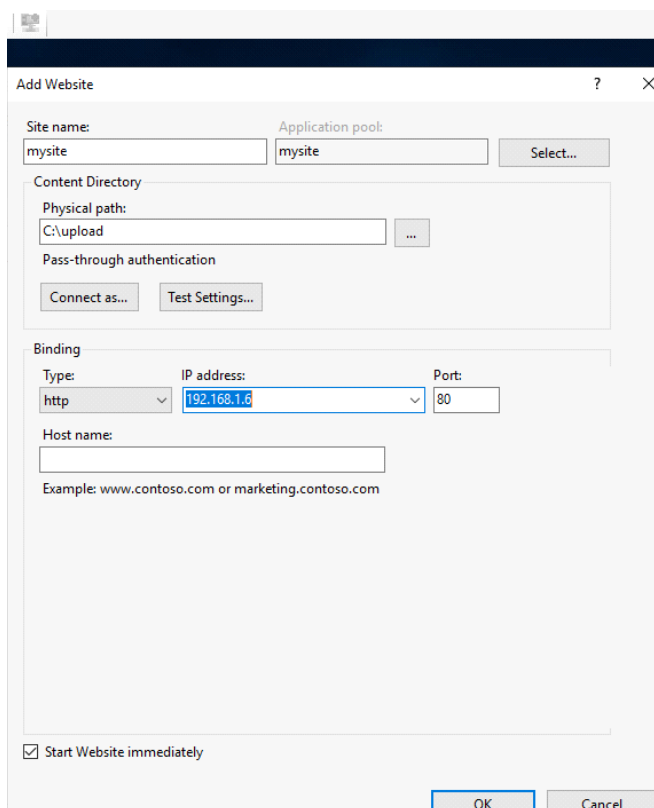
Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\Users\istc.DCTC1>
```

Internet Information Services

IIS allows you to easily host a webpage from your local computer to clients on your local & even public network.

- 1) Install internet information services (IIS)
- 2) Add website files to a shared network folder on my C: drive
- 3) Configure settings inside IIS to map to the website folder



The screenshot shows the 'Add Website' dialog box in IIS Manager. The dialog has a title bar with a question mark and a close button. It contains several sections: 'Site name' with a text box containing 'mysite' and an 'Application pool' dropdown also set to 'mysite' with a 'Select...' button; 'Content Directory' with a 'Physical path' text box containing 'C:\upload' and a browse button (...); 'Pass-through authentication' with 'Connect as...' and 'Test Settings...' buttons; 'Binding' with a 'Type' dropdown set to 'http', an 'IP address' dropdown set to '192.168.1.6', and a 'Port' text box containing '80'; a 'Host name' text box; and an example text 'Example: www.contoso.com or marketing.contoso.com'. At the bottom, there is a checkbox labeled 'Start Website immediately' which is checked, and 'OK' and 'Cancel' buttons.

Site name: Application pool:

Content Directory

Physical path:

Pass-through authentication

Binding

Type: IP address: Port:

Host name:

Example: www.contoso.com or marketing.contoso.com

☒ Start Website immediately

Remote Desktop Services

Remote desktop services allows you to publish applications from a server, so that domain users can use RDP to access special programs that run on the server.

- 1) Install Remote desktop services, do a session deployment
- 2) Configure allowed users and applications
- 3) Connect from remote computer and login with domain credentials

REMOTEAPP PROGRAMS

Last refreshed on 5/1/2023 8:28:40 AM | Published RemoteApp... TASKS ▼

Filter

RemoteApp Program Name	Alias	Visible in RD Web Access
Calculator	Calculator	Yes
Google Chrome	chrome	Yes
Paint	Paint	Yes
WordPad	WordPad	Yes



Work Resources

RemoteApp and Desktop Connection

RemoteApp and Desktops |

Help | Sign out

Current folder: /



Calculator



Google Chrome



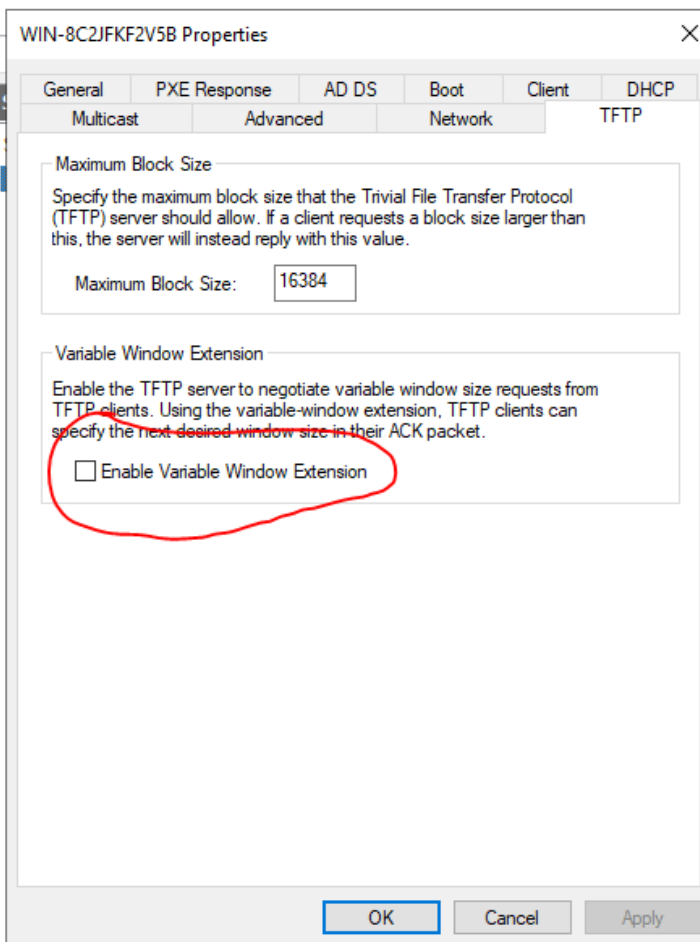
Paint



WordPad

Windows Deployment Services

- 1) First I installed and configured WDS on my server 2
- 2) Then I added the install.wim and boot.wim
- 3) Then I tested and it wasn't working so I had to troubleshoot, with some googleing I found that other people were saying to deselect "Enable Variable Window Extension" in Properties. Once I did that, I was able to successfully network install.



Loading files...

IP: 192.168.1.6, File: \Boot\x64\Images\boot.wim