

WINDOWS SERVER

6/5/2022

INSTALLATION

1. CUSTOM (Advanced) > Next
2. I will install the operating system later
3. Select operating system: Microsoft Windows
Windows Server 2016
4. Name: Domon Location: Create New folder > Domon
5. BIOS
6. Processor configuration: 1, 2 = 2
7. RAM: 4 GB
8. I/O Controller: Recommended
9. Virtual Disk Type: Recommended
10. Create a new virtual disk
11. Disk capacity: 80 GB
Split virtual disk into multiple files
12. Specify Disk File choose the same folder > hdd1
filename: domon-hdd1
1. Hard Disk > Add
Disk space: 10 GB
Choose some folder > hdd2
filename: domon-hdd2
2. Hard disk > Add
Disk space: 10 GB
Domon > hdd3
filename: domon-hdd3
3. CD/DVD
use an ISO image
choose Windows server file from downloads
4. Network Adapter
There must be 2 Network Adapters
> Add

AFTER INSTALLATION

1. Server Manager
2. Network
3. Network Settings
4. We need to set static IP Address to server
4. Network and Sharing Center
5. Change Adapter Setting
6. RC Ethernet 1
 - Disable
 - Rename HyperV
7. Rename Server to 'Domain'
8. RC Domain > Properties
9. IP Version 4 > Properties
use the following IP Add: 192.168.150.1
Subnet: 255.255.255.0
OK > Close

NOTE - IF we need to configure it as a server there are some prerequisites:
1. Assign IP Add (static)
2. change computer name

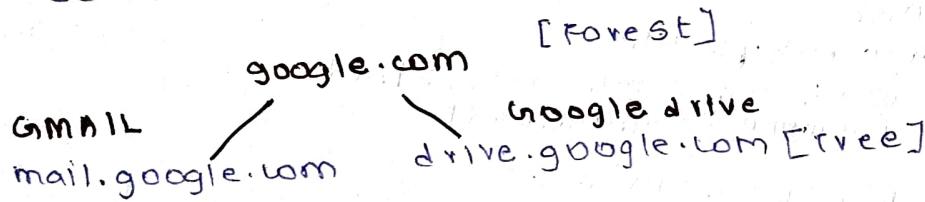
CHANGING COMPUTER NAME

1. File Explorer
2. RC This PC > Properties
3. Change Settings > Change
4. Computer Name: Domcon > OK
5. Restart

LOGICAL NETWORK

Peer to Peer: This type of network do not have only dedicated server to control the client PCs. These network are easy to setup but are less secured.

Domain: These type of network have a dedicated central node called domain controller that manages the client within the network. These type of networks are pretty secured and needs expert hands to configure it.



IMP Note —
1. Always make sure to change dynamic IP Address to static IP Add for servers
2. Change your computer Name

CONFIGURE DOMAIN CONTROLLER

1. Server Manager
2. Add Roles and Features
3. Role Based > Next
4. Select Server - Domain > Next
5. Roles: Active Directory Domain Service (ADDS)
6. Add Features > ADDS
Features we want are already selected
7. Install

AD DS: It stores information about users, computers and other devices on the network. AD DS helps admins securely manage the information and facilities resource sharing and collaboration b/w users.
• AD DS requires a DNS server to be installed on this server.
example: How one user can login at any place in organization
It is used to manage users

1. Flag
2. Promote this server as a domain controller
3. Add a new forest
4. Root domain name: example.com
5. Password: windows@123 > Next > NAME
6. Specify the location: Keep it same

7. Prerequisites check It must be green

8. Install

NOW - WE NEED DNS FOR ADDS SO IT AUTOMATICALLY GOT CONFIGURED

1. Login as Example\Admin

2. NETWORK > Network settings

3. Network and sharing center

4. Change Adapter settings

5. RC Domain

6. IP Version 4 > Properties

NOW DNS server 127.0.0.1 (Class A) is automatically added

NOW DNS server 127.0.0.1 (Class A) is automatically added

1. Server Manager

2. Tools

3. Active Directory Users & Computers

4. example.com

 | Expand it

 | Builtin

 | Computers

 | Domain controllers

 | Foreign security

 | Managed service

 | Users

These are components of this server

USER CREATION

1. RC on users

2. New > User Naruto Naruto@example.com

3. Password hello@123

user must change the password

4. Naruto RC > Properties

5. Account

6. Login Hours - we can give login hours

CREATION OF CLIENT (WINDOWS MACHINE)

1. Create a New Virtual Machine

13. Disk capacity : 30 GB

2. Custom (Advanced)

14. CD/DVD : Use ISO Image

3. I will install OS later

Windows 10

4. Operating System : Microsoft Windows

Windows 10 X 64

5. Name : Client 4

15. English India

Location : Client 4

16. Install Now

6. Firmware type : BIOS

17. Custom : Install Windows Only

7. Processor 1 2 2

18. New : 40000

8. RAM : 2 GB

9. NAT

10. Recommended

11. Recommended

12. Create a new virtual disk

GROUP CREATION

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Create two more users

1. Server Manager
2. Tools
3. Active Directory Users & Computers
4. Example.com

↳ Users

↳ AC Users

New > User : Sasuke sasuke@example.com

Password: hello@123

New > User

Sakura sakura@example.com

Password hello@123

GROUP CREATION

1. AC > User

2. New > Group shinobi Group scope: Global Type: Security

ADD USERS TO GROUP

1. DC on shinobi

2. members

3. Add

4. select Object type: users Find Now > select

5. Add > OK

Note: Any user we create gets added to [Domain Users] Group

MAKE NARUTO AS ADMINISTRATOR

1. DC on Naruto

2. Member Of > Add

3. Object type: Group > Advanced > Find Now

• Administrators

• Domain Admins

• Enterprise Admins

• Group Policy creators Owners

• Schema Admins

Tip: Press Ctrl and select all these groups in one go

Now Naruto's credentials can be used whenever Admin access is required.

1. Open Client 1

2. Network Setting

3. Change Adapter settings

4. AC on Ethernet > Properties > IPv4

IP Add: 192.168.250.2

255.255.255.0

DNS Server: 192.168.250.1

1. File Explorer

2. This PC > AC > Properties > Change Settings

3. Name: Client 1

Domain: example.com

4. OK > Restart

★ PARTITION CREATION

1. RC on Start
2. Disk Management
3. Click on black disk
4. Simple Volume > Size > 10000 MB
5. Next > Next
6. Partition is created

★ SHARING

1. Create New folder in E
2. Name: Central Store > RC
3. Properties > Sharing
4. Share
5. Find people > Object type: Group > Find now
6. Select Domain Group
7. Permission level: Read & write
8. Share > Done

1. Come Inside Central Store
2. Create a new file: file1
3. Login to Client 1
4. File Explorer
5. Network
6. Network discovery and file sharing > OK
7. Click on Bar > Turn On
8. Enter Link to Domain
We can access this folder from any PC, user

ORGANIZATIONAL UNIT (OU)

An organizational unit is a construct used to represent an organization whose resources are logically separate from those resources of other similar organizations. You can use OU's to control access to resources and to ensure data segregation.

1. Server Manager
2. Tools > Active Directory Users & Comp.
3. RC on Example.com > New > organizational unit
4. Name: Example
5. Create two more users OU under Example
 - Computers
 - Users

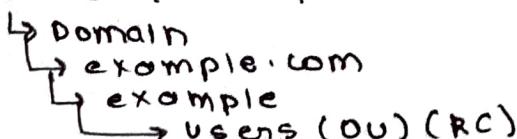
How to set GPO to control Action of clients

1. Login with Sasuke
2. Check you can move taskbars
3. Recycle Bin is visible on desktop

CREATING GPO (in domain)

1. Drag users (Sasuke & Sakura) in users (OU)

2. Server Manager > Tools
3. Group Policy Management
4. Forest: example.com



5. AC Users > Create a GPO and link it here

6. Name: Shinobi_Rule

GPO is created now edit it to set the rules

7. RC Edit

★ SET THE RULES

1. Editor will open

2. Now we are trying to set GPO for user so we will select User Configuration

2. User Configuration > Policies

3. Administrative template

4. Desktop / Start menu Taskbar > Lock Taskbar

5. Now you can enable / disable this

6. Desktop > Remove Recycle bin icon

7. OK

★ CHECKING IT

1. Go to client machine
2. sign in sign out sign in
3. This will work or otherwise
- 3 - Command Prompt
4. gpupdate /force

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WORK FOLDER

INSTALLATION & CONFIGURATION

PHASE I: PREREQUISITES

Another IMP Task

1. RCON start
2. Disk management
3. Create partition with complete space available : 3.6 GB

Work Folder - A role service for file servers running on Windows server that provides a consistent way for users to access their PCs and devices

PHASE 1

1. Create a folder in drive F
 2. Name: common
 3. RC > Properties > sharing
 4. Share > find > domain users > Read & write
 5. share
-
1. Server Manager
 2. Add Roles & Features > Next
 3. Role Based > Next
 4. Destination server > Next
Note - Work Folder is in File and Storage Devices so expand it
File and iSCSI services
 - ↳ Work Folder
 - ↳ IIS → OK
 5. Add IIS Web Server > Next

CREATING SYNC SHARE

1. Server Manager
2. File and Storage Devices > Work Folders
3. Create a sync share for work folders
4. Next → common [folder] > Next
5. User Alias UserAlias@domain

Note - In real life we must choose one.



since Naruto is working for both villages on some project
in such cases Naruto@domain must be selected

6. Enter sync share Name: common_ss
7. Sync Access > Group: Domain users
8. Automatically lock screen

Note - In Real life: Encrypt work folders should be selected

9. Create > Close

CREATING SELF SIDE SSL CERTIFICATE

1. Server Manager
2. Tools
3. IIS Manager
4. Expand POMCON
5. Server certificates
6. Create Self Signed Certificate
7. Specify name comm-cert
8. Personal > OK

Note - stop the service before doing these steps

BINDING THE CERTIFICATE

on the same page

1. sites
2. default websites
3. Edit site → Bindings > Add
4. Hostname : domain.example.com
5. HTTPS
6. SSL certificate : comm-cert > OK

1. windows + R / RUN

2. type mmc
3. console |
4. File > Add/Remove snapin
5. Certificates > Add
6. Certificates snapin
7. Computer Account > Next
8. Local Computer
9. OK

EXPORTING CERTIFICATE

1. Expand certificates
2. Trusted Root Certificates
 - ↳ certificates
3. Find certificate that we created
4. Domain example.com
5. Certificate Export Wizard
6. Next > Next
7. Set a password : p@ssword
8. filename : Browse
9. Note - store this file where it is accessible to all clients
Don't select sysvol [It is critical share folder]
cert file name : comm-cert_file
10. Finish

IMPORTING CERTIFICATE

1. Login with NARUTO / sosuke
2. windows R / m:
3. type mmc
4. File Add/Remove snapin
5. Certificates > Add
6. EXPAND certificates & Trusted Root → Certificates
7. AC → All Task → Import
8. BROWSE : Now go to comm-cert-file \\domain
9. Enter password that we selected earlier
10. Next
11. Domain.example.com is imported

CONFIGURING WORK FOLDER

1. In Client Machine
2. Control Panel
3. View by icon
4. Work folder in the list
5. Setup Work Folder
6. Work folder URL : <https://domcon.example.com>
7. Next
8. Work folder is now created
9. Create one file in work folder

DHCP SERVER

1. Edit of VMWare > Virtual Network Editor
2. Select VMNet8
3. Disable Use local DHCP service to distribute IP Add. to VMS
4. Click on OK

1. Add Roles & Features
2. Role Based > Next
3. Server Selection > Next
4. Select DHCP Server
5. Next > Next > Next > Install

The Dynamic Host Configuration Protocol allows servers to assign or lease IP addresses to computers and other devices that are enabled as DHCP clients. Deploying a DHCP server on the network provides computers and other TCP/IP based network devices with valid IP Address.

POST INSTALLATION CONFIGURATION

1. Click on Flag
2. Complete DHCP configuration
3. Use following credentials EXAMPLE\Administrator
4. Close

CONFIGURATION

1. Tools
2. DHCP
3. Export domcon.example.com
4. RC IPV4 > New Scope
5. Scope name : Example
- Starting IP Add : 192.168.250.101
- End IP Add : 192.168.250.200
- Length : 24
- 192.168.250.185 Add
- Add Exclusions and Delay : 192.168.250.176 to 180
- since All servers should have static IP Add. we will provide these addresses in Exclusions
- Lease duration : 8 Days

8. Yes I will configure these options now
9. Router (Default Gateway): 192.168.250.1 > Add
10. Domain Name and DNS Server: Already Added
11. WINS Server

1. Login to Client 2
2. Network settings > Network & sharing center
3. Ethernet 0 RC > Properties
4. IPv4 > Properties
5. Obtain IP Address automatically
6. Obtain DNS server automatically
7. OK
8. Check Status IP Add (New) have been allotted by DHCP Server

1. Go to DOMLON
2. Tools > DHCP
3. IPv4 > Scope > Address pool PC
The Allotted Addresses will be visible here
4. Reservation: It is like fixing IP Add for particular computer

RESERVATION OF IP ADD.

1. Go to Client 2
2. Network settings > change Adapter setting
3. IPv4 > Properties
4. RC Ethernet 0 > status
5. Note down Physical Address
6. Go to command prompt
7. ipconfig /all
8. Physical Add. Note down
(MAC Add.)

1. DOMLON
2. RC Reservation > New Reservation
3. CEO-PC
4. IP Address: 192.168.250.150
MAC Address: [MAC Address]
5. Supported type: both
6. Add

Note - Reservation of IP Address of this system is done but it will be same as of the older one till LEASE PERIOD if you want to make immediate changes

1. Go to Client 2
2. Run command prompt as Admin
3. ipconfig / renew
4. Now IP Address has been changed

DNS SERVER

11/15/2022

1. TOOLS
2. DNS MANAGER
3. DOMAIN > example.com
4. FORWARD LOOKUP ZONES
5. Start of Authority (SOA) Name Server (NS)
6. REVERSE LOOKUP ZONE
7. ACTION > NEW > Next

Primary zone: Master copy of DNS server. This replies to queries made by clients.

Secondary zone: Backup copy of master/primary zone
Note - In real life it is must. This acts as Load Balancer

Stub zone: 2nd backup copy and don't do any resolution
only SOA, NS, MX records are updated

8. Primary user/zone > To all DNS servers running on this domain controller
9. Network ID: > Reverse lookup Network ID: 192.168.2.0
10. Allow only secure > Next
11. Finish dynamic updates

Forward lookup: Client will send name to get the IP add from this database

Reverse lookup zone: Client will send the IP add to get the domain name from this database.

DISK MANAGEMENT

1. DOMAIN
 2. DISK Management
 3. Switch ON DISK 1 & DISK 2 > Initialize Disk
 4. AC > Convert to dynamic
 5. Select DISK 1 & DISK 2
- Note - Never make DISK 0 dynamic because when we make it normal we have to delete the partitions

CONFIGURE STRIPPED VOLUMES

1. RC on DISK 1
 2. New striped volume
 3. Select DISKS
choose DISK 2 > Add
2048 MB from both the disk will be selected total 4096 MB
 4. NTFS
 5. Quick Format
 6. Confirmation Summary
 7. Finish
- New Partition [G] is created with 4GB of space by taking 2GB from both DISK 1 and DISK 2
- * Two disks are required to configure striped volumes

SPANNED VOLUME

1. RC Black Area
2. NEW SPANNED VOLUME
3. WE need both the Hardisks here as well (1&2)
4. Specify how much space you want

DISK1: 1024

DISK2: 1024

NOTE - Here we have to individually select DISK space

NTFS

5. Perform a quick format

6. FINISH

NEW DISK H is created space 2GB 1GB from each

MIRRORED VOLUME

1. RC Black Area

2. NEW MIRRORED VOLUME > NEXT

3. MINIMUM 2 Hard disk

DISK1: 2048

DISK2: 2048

some space is automatically selected

4. NTFS

5. Quick Format

This creates 1 column with only 2GB

whatever we store in Disk1's mirrored volume

It gets copied to Disk2's 1 column

It keeps creating a backup

EXTEND VOLUME

1. RC on Spanned Volume

2. Extend Volume

We cannot extend striped & mirrored volume

QUOTA MANAGEMENT

1. FILE EXPLORER

2. RC on Disk F > Properties

3. Enable Quota Management

4. Deny Disk Space to users exceeding quota limit.

Limit Disk Space to _____ MB

Set Warning Level to _____

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WDS SERVER

1. Disk Management

2. Delete all the partitions that we created

3. Create two striped volumes each 5GB

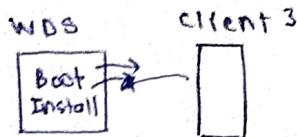
One for WDS other for HYPERV

4. NTFS, Quick Format

5. Create one folder in WDS drive named WDS

Create New Windows 10 machine but don't give ISO image in DVD CD section.

WDS - Windows Deployment Service



WDS will be able to install OS, Servers
WDS contains the ISO image of OS
↳ Boot Image, Install Image

WDS is a server role that gives administrators the ability to deploy Windows operating systems remotely. WDS can be used for network based installations to setup new computers so admins don't have to install each OS.

Prerequisite: AD & DCP must be configured

1. Server Manager

2. Add Roles & Features

3. Role Based

4. Destination Server: Selected

5. Next > Next

6. Windows Deployment Service (WDS)

7. Add Features

8. Role Services: Deployment Server, Transport Server

9. Install

1. Server Manager > Tools

2. Windows Deployment Service

3. Servers L > domcon.example.com

4. RC domcon > Configure

5. Next

6. Integrated with Active Directory

7. G:\WDS

8. Respond to all client >

BOOT

ADD INSTALL IMAGE

1. PC Boot Image > Install

2. Browse > THIS PC > CDDVD > Open

3. Sources > (boot file) > select > Next

4. Finish

ADD INSTALL IMAGE

1. Create an image group windows client
windows server

2. Windows Client > Add Install Image

Browse > CDDVD > Open > source > install.vim

3. Next > Next > Next

1. DOMAIN RC → PROPERTIES
2. PXE RESPONSE : Respond to all Clients
3. ADDS : same domain in WDS
4. Boot : select Default Boot Image [
5. OK [Always continue the PXE Boot]
for both known & unknown clients

Start client 3 (VM) Installation

1. GO TO DOMAIN
2. WDS
3. Pending Devices
4. APPROVE REQUEST

VIRTUALISATION