Passerelles numériques

A Gateway for Life

Microsoft System Administration

Chapter 2: Install and Configure Domain Controller

Objective

After finished this lesson students will be able to:

- Describe introduction of Domain Controller
- Explain the meaning of Domain Controller
- Determine Preparation Server Install Domain Controller
- Implement for Install Domain Controller Feature
- Identify to configure Domain Controller
- Manage client computer to join domain

Introduction of Domain Controller

- The AD DS database stores information on user identity, computers, groups, services, and resources. AD DS domain controllers also host the service that authenticates user and computer accounts when they sign in to the domain. AD DS is the primary meaning by which you can configure and manage user and computer accounts on your networks.

Microsoft Active Directory

Meaning of Domain Controller

- **An AD DS** is a logical container used to manage user, computer, group, and other objects. All of the domain objects are stored in the AD DS database, a copy of which is stored on each domain controller.

- **Domain Controller (DC)** A domain controller is a server that is running a version of the Windows Server operating system and has Active Directory Domain Services installed.

Preparation Server install Domain Controller

- **There are many step to prepare before installation Domain Controller**

✓ Change IP address of Windows Server to Static IP address (EX: 172.16.20.10/24)

✓ Change Hostname default Windows Server Operating System (EX: DC-01)

✓ Disable IPv6 (It mean, you should not using IPv6)

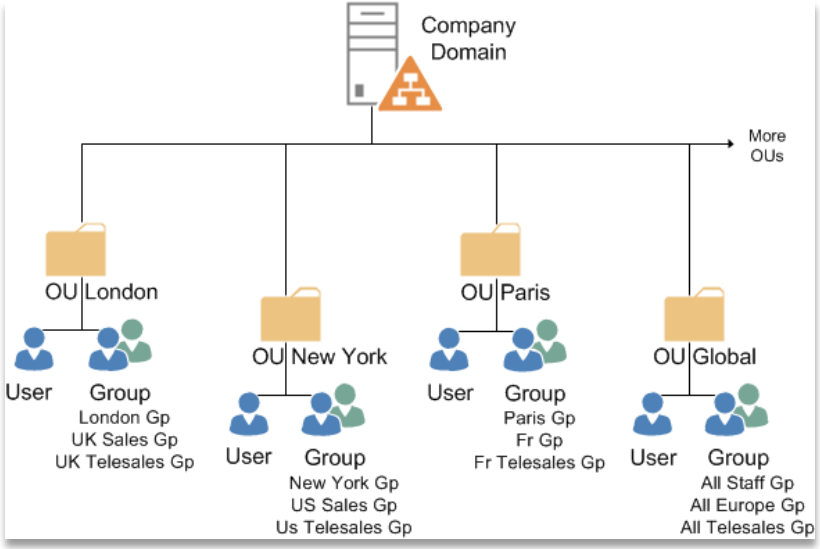
Install Domain Controller Feature

- **Note**: To install Domain Controller you need to add roles/feature Active Directory Service

1. Open **the Server Manager console** and click on **Add roles and features**
2. Select **Role-based of featured-based installation** and select **Next**.
3. Select the **Active Directory Services** role and click **Next**

Install Domain Controller Feature

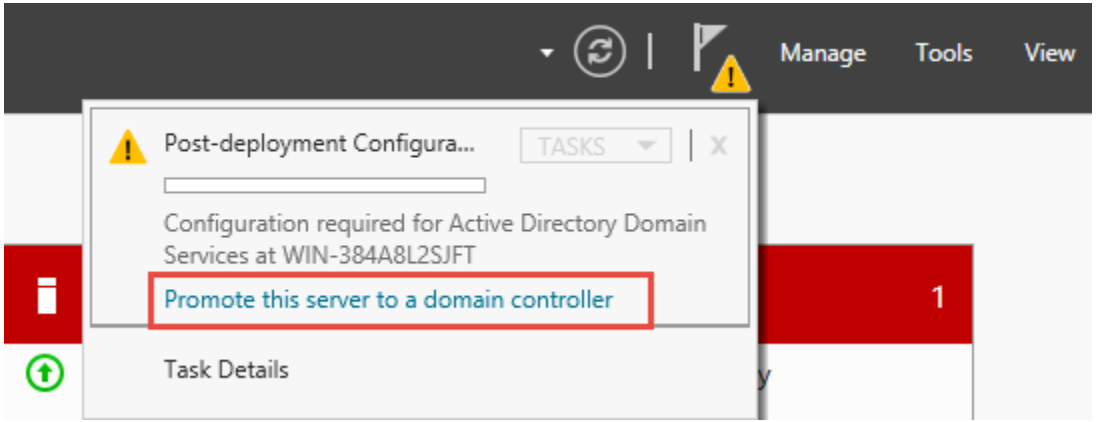
4. Accept the default features required by clicking the **Add Features** button.
5. On the **Features** screen click the **Next** button.
6. On the **Confirm installation selections** screen click the **Install** button.
7. Click the **Close** button once the installation has been completed.



Configure Domain Controller

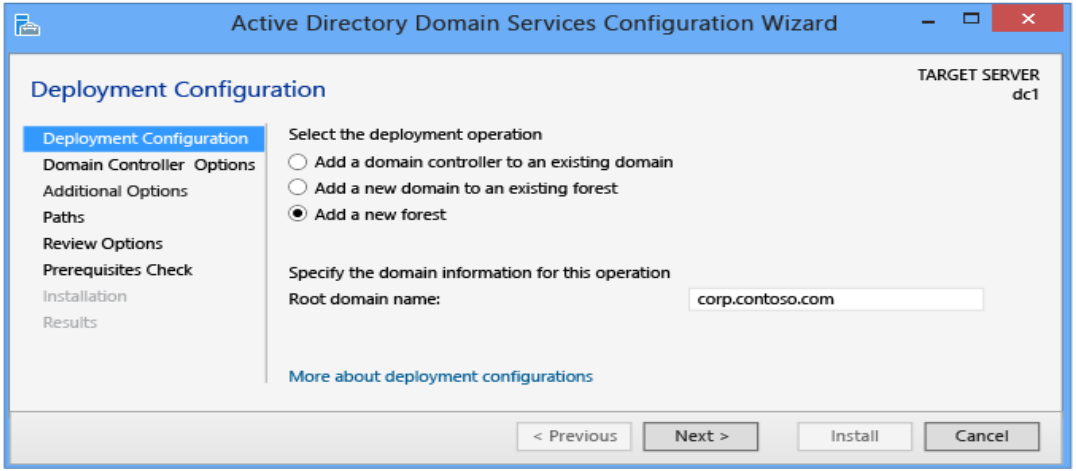
- **Note**: After we was added role on Server Manager ready, we need to **promote Server to Domain Controller**, so Server can become Domain Controller.
- **Step to configure Promote Domain Controller**

1. Once completed, notification is made available on the dashboard highlighted by an exclamation mark. Select it and amidst the drop down menu select **Promote this server to a domain controller.**



Configure Domain Controller

2. Select **add a new forest** type on **Root domain name** option type **Domain (abc.com)** then click **Next**
3. Defined password to set for **DSRM** prevent fore recovery option then **Click Next**
4. DNS delegation warning, click **OK** then click **Next**
5. Check NetBIOS name, and it already assigned then Click **Next**

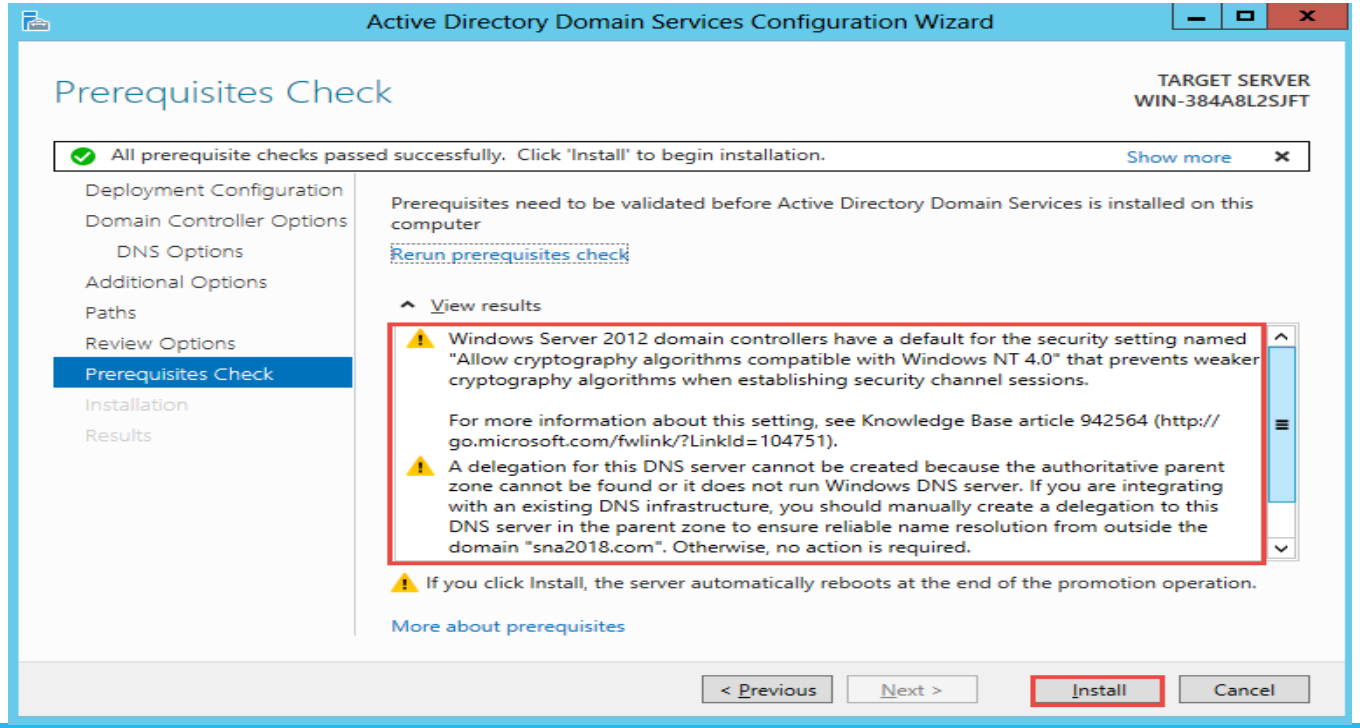


Configure Domain Controller

6. Specify the location of the AD related folders and then click next. Click **Next** to continue
7. Summary Of All Installation Options/Selections, then click **Next**
8. Before the actual install of AD, all prerequisites are checked. If all prerequisites checks are passed successfully then click **Install**
9. After the promotion of the server to a DC finished server restart automatically.

Configure Domain Controller

After configured on promote server with checked configuration, it will show message like picture below:



Activities #1

Instructor Demo

After finished this activity students will be able to:

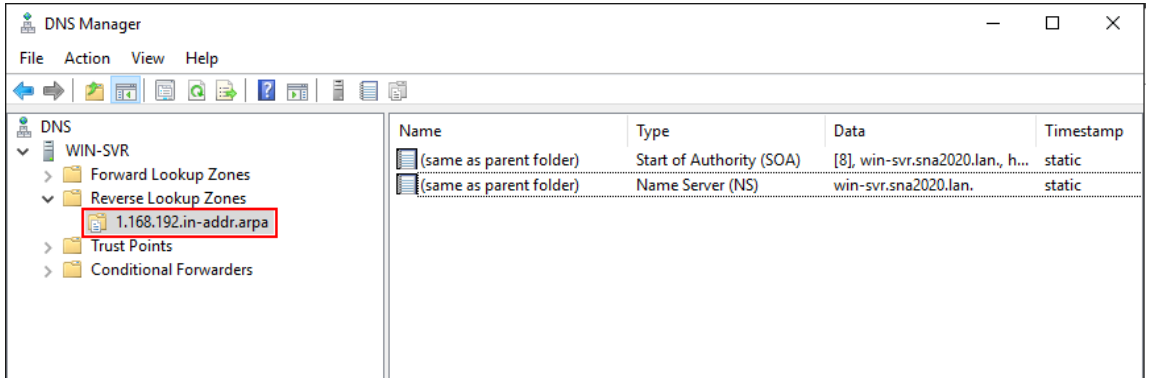
- Add Roles/feature on Server Manager
- Install Domain Controller on Windows Server 2016
- Configure on Server Promote to Domain Controller
- Understand Some option during configure Domain Controller

Configure Domain Controller

After Server was installed Domain Controller, so we need to configure some option of **DNS Service** to allow Server using Domain.

- **Note:** Configure only Reverse Option on DNS Manager

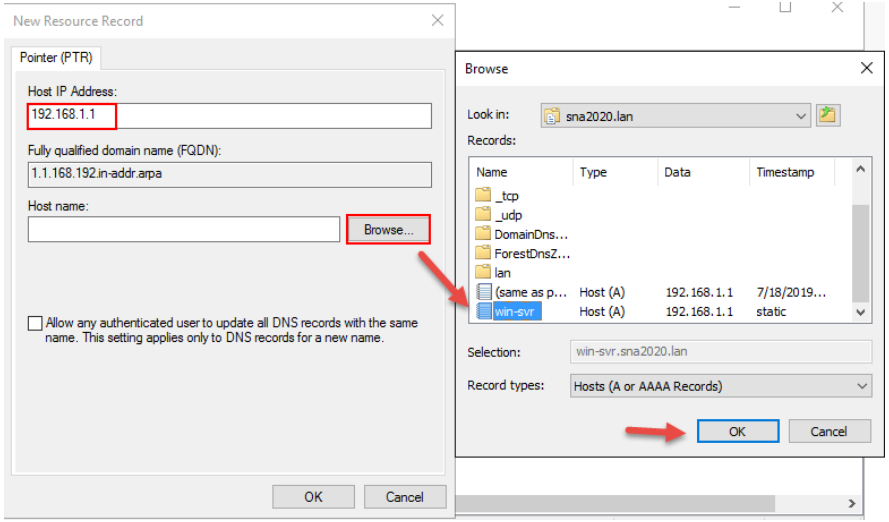
- ✓ Launch DNS Manager wizard
- ✓ Add new option Reverse Lookup Zones
- ✓ Choose Primary Zone, choose default
- ✓ Choose IPv4 Reverse lookup zone
- ✓ Add IP address of Domain Controller in to Network ID box
- ✓ Choose default option to allow only secure dynamic updates
- ✓ Click on finish option

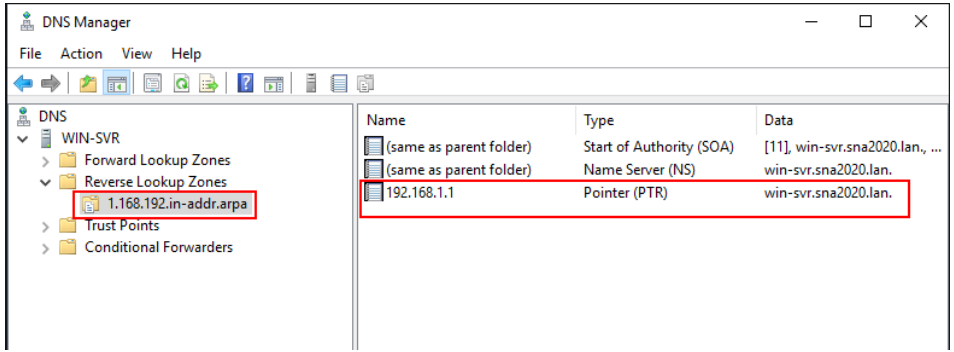


Configure Domain Controller

- **Configure New Pointer(PTR) record on Reverse lookup zone**

✓ Right click on reverse zone record, choose New Pointer(PTR)
✓ Choose option brows to **forward** lookup zone and find Host A record
✓ Choose **Ok** option to finish configuration

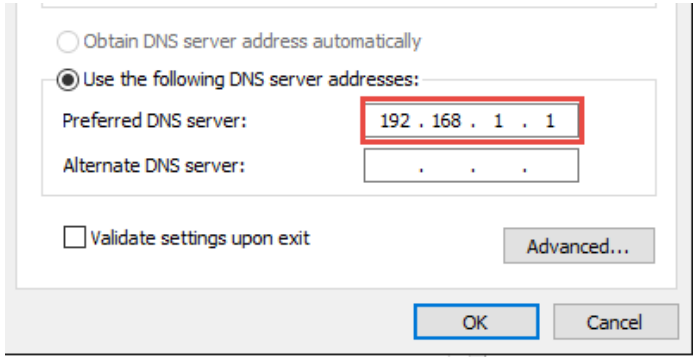


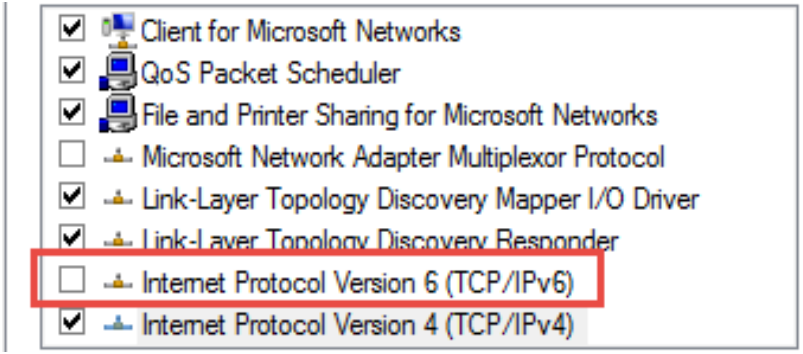


Configure Domain Controller

- After you configured on DNS with Reverse record, the Domain controller not working, so you need to configure some option below:

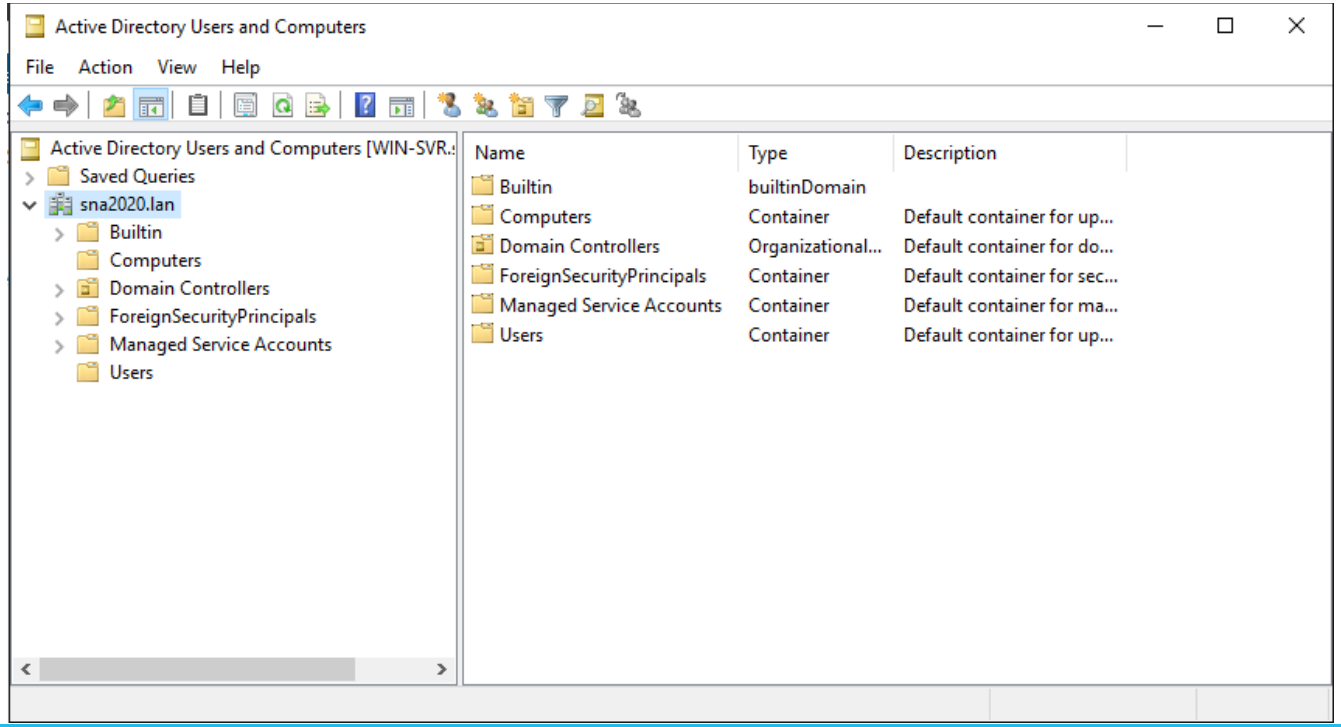
✓ Add IP address of Domain controller to DNS Preferred in Network Adapter (Ex: 10.10.10.1)
✓ Make sure you un tick(disable) on IPv6 in Network Adapter





Result after install Domain Controller

Result Domain Controller after Installed



Activities #2

Instructor Demo

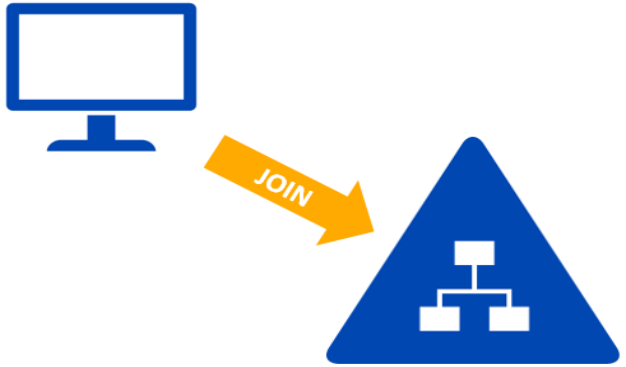
After finished this activity students will be able to:

- Configure reverse Lookup Zone on DNS Manager
- Configure new record Pointer (PTR) on DNS Manager
- Configure DNS IP address on adapter Address
- Disable IPv6 Address on Network Adapter

Join Domain on Windows Client

When a client computer joins a domain:

- Central management and control of security settings for all computers on the domain.
- Roaming profile, users can login to any PC that is in the domain using their standard active directory credentials.
- This computer is able to access all that shared resources including the files, Document, Printers, etc.

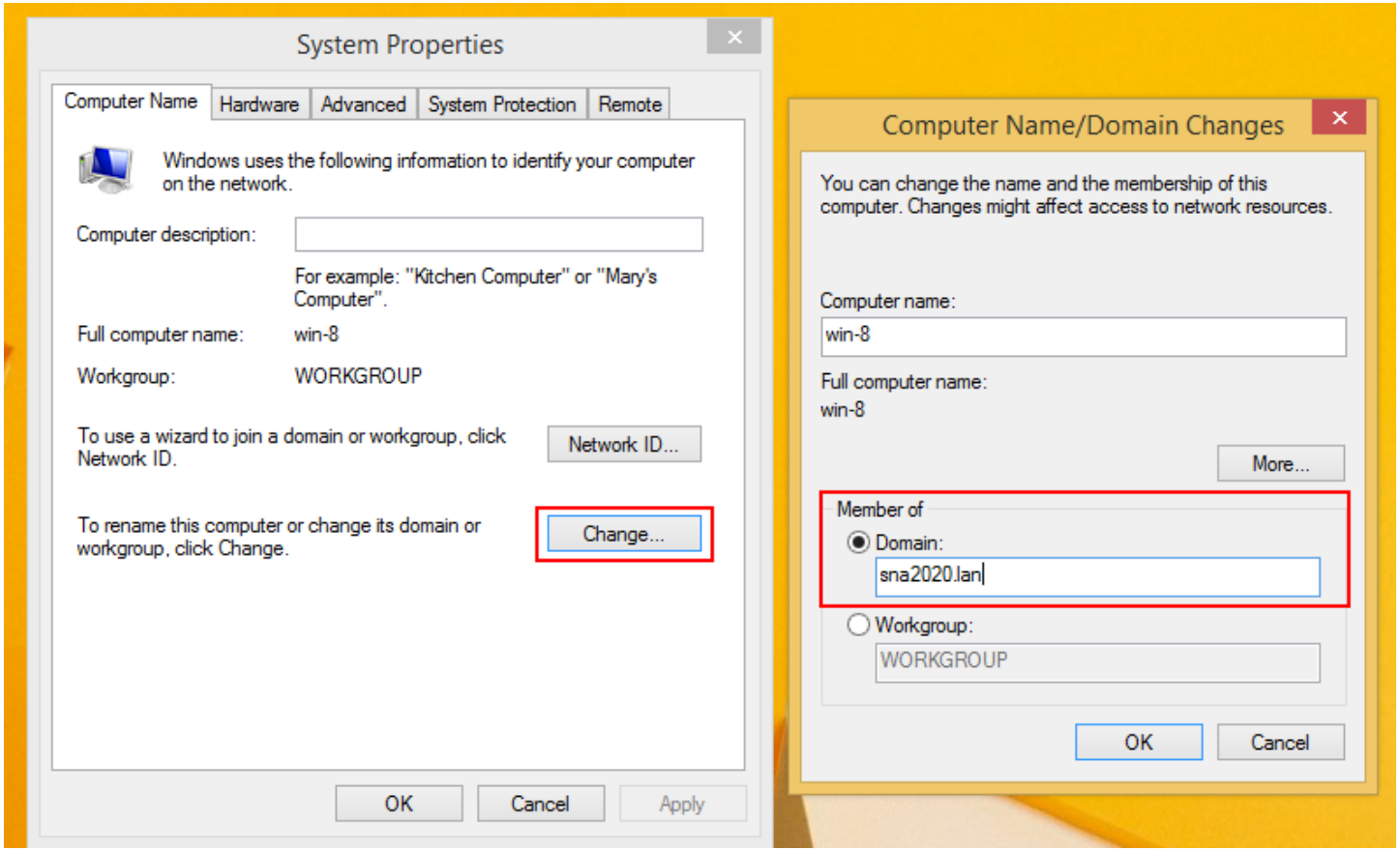


Join Domain on Windows Client

Steps to join Domain Controller:

1. Make sure on Computer Client can Communicate with Domain Controller by using ping or nslookup
2. Go to by using **Windows Run** type **sysdm.cpl**
3. Type Domain name of Domain Controller **Ex: sna2020.lan** then click Next other wizard will appear on the screen to require you fill Authentication (Username, Password) then Click OK then restart you computer
4. Take Users on Domain Controller to log on client Computer that already joined to domain

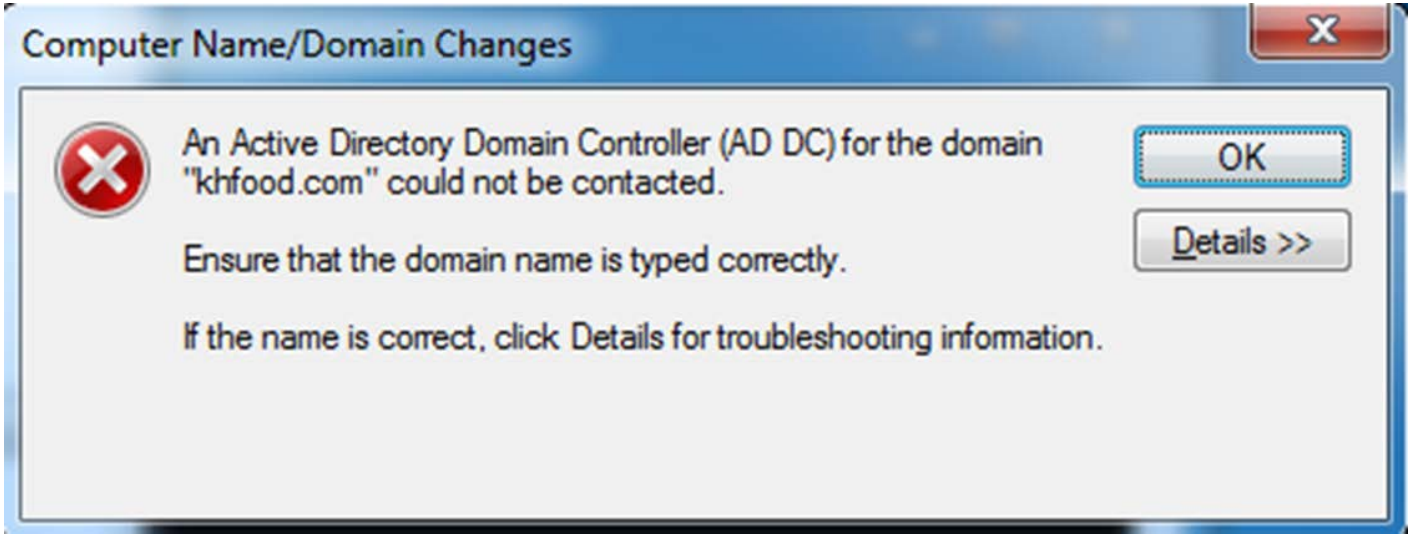
Join Domain on Windows Client



Trouble Shooting Joining Domain

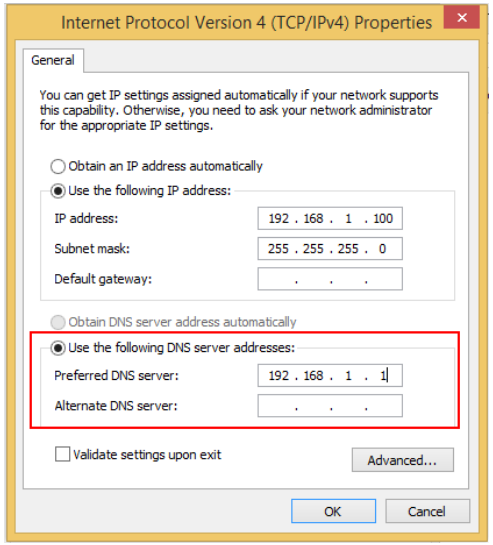
They are many problem during Join Domain from Computer Client if you don't follow the step to join domain, you will get this problem.

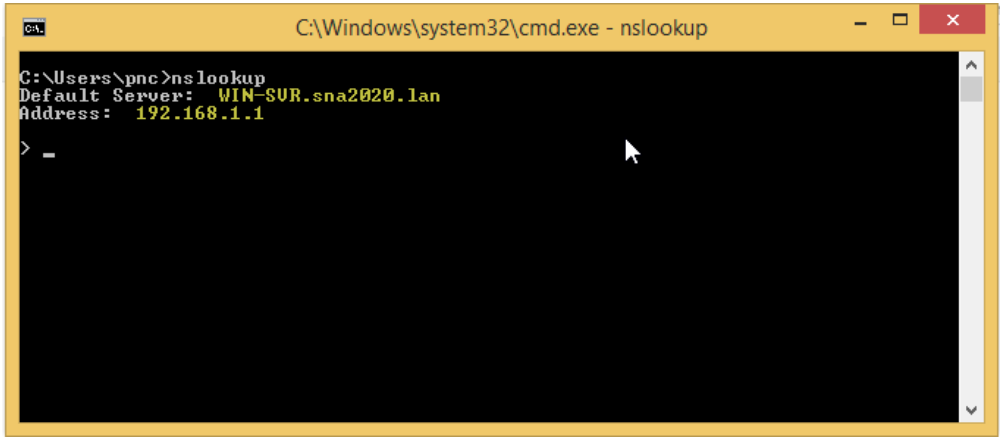
Below is the problem during join domain on Windows Client.



Trouble Shooting Joining Domain

1. Make sure that the domain name you type is correctly
2. Check connection between client PC and Domain controller using **Ping** command
3. Make sure that client PC using with correct IP DNS server, using CMD **nslookup** as show on the picture below:
4. Check your username and Password you use during authenticate to join domain.





Practice on Windows Server 2012 R2

- Install Domain Controller feature
- Promote Server to domain controller
- Configure Domain Name sna2020.lan
- Configure password DSRM to prevent Recovery option
- Configure Revers zone and add PTR record on DNS server
- After Domain controller configure completed, let windows client join domain

Any Questions?