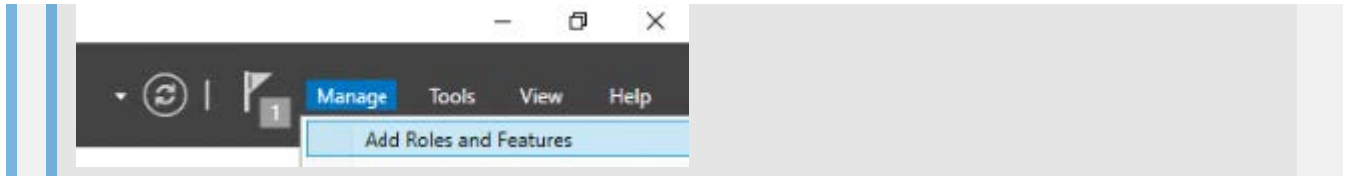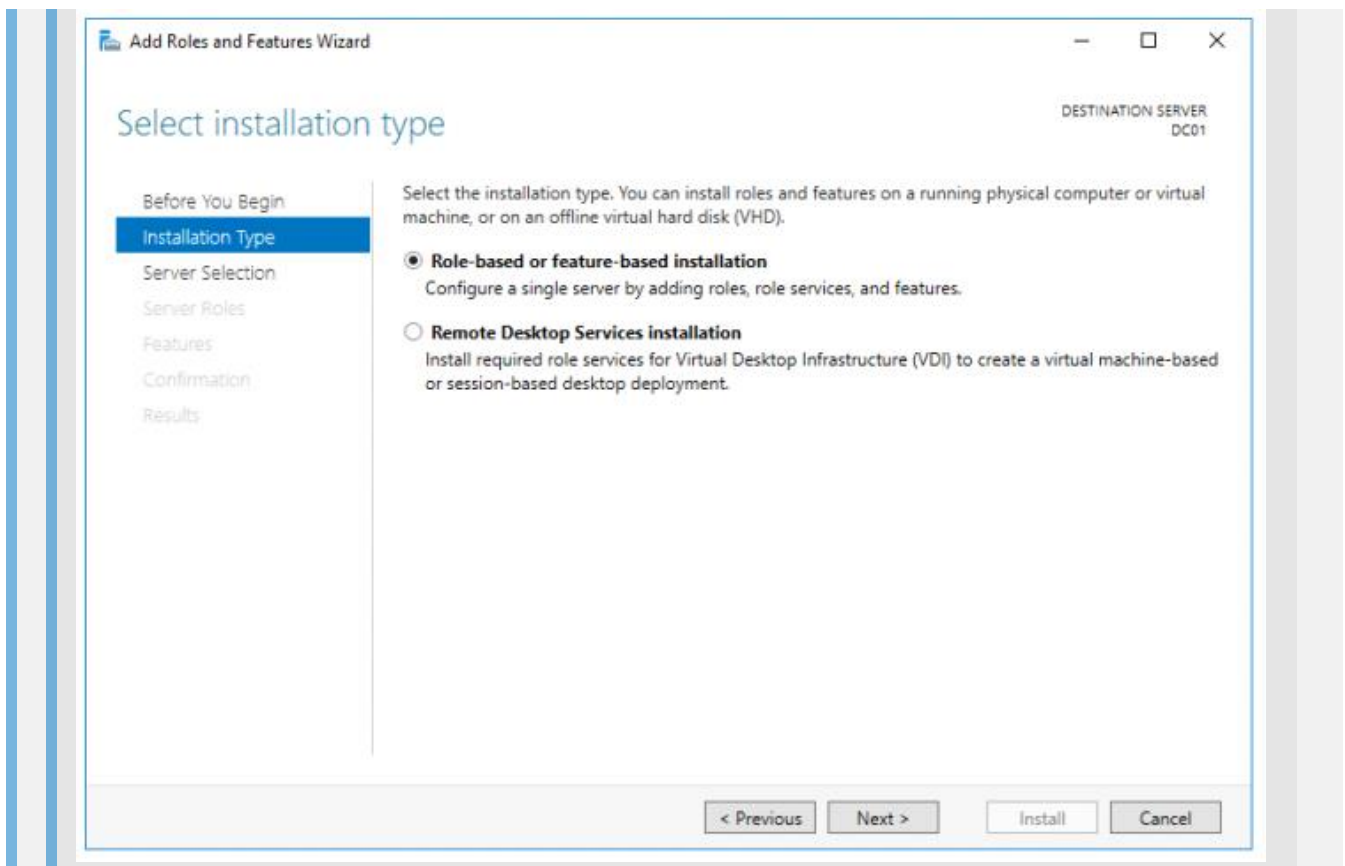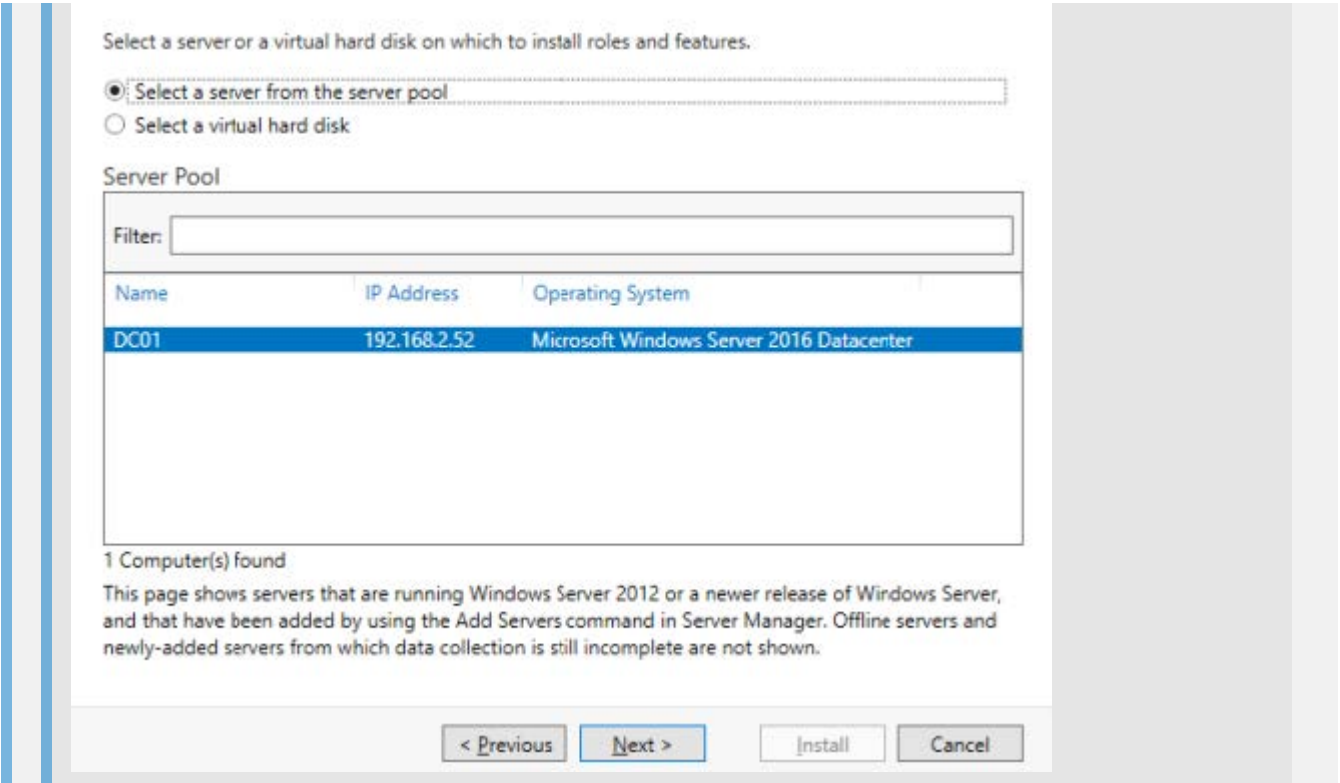# Root-Child Domain Setup

Root Domain

1. 部署4台VM：DC01;EX01;DC02;EX02
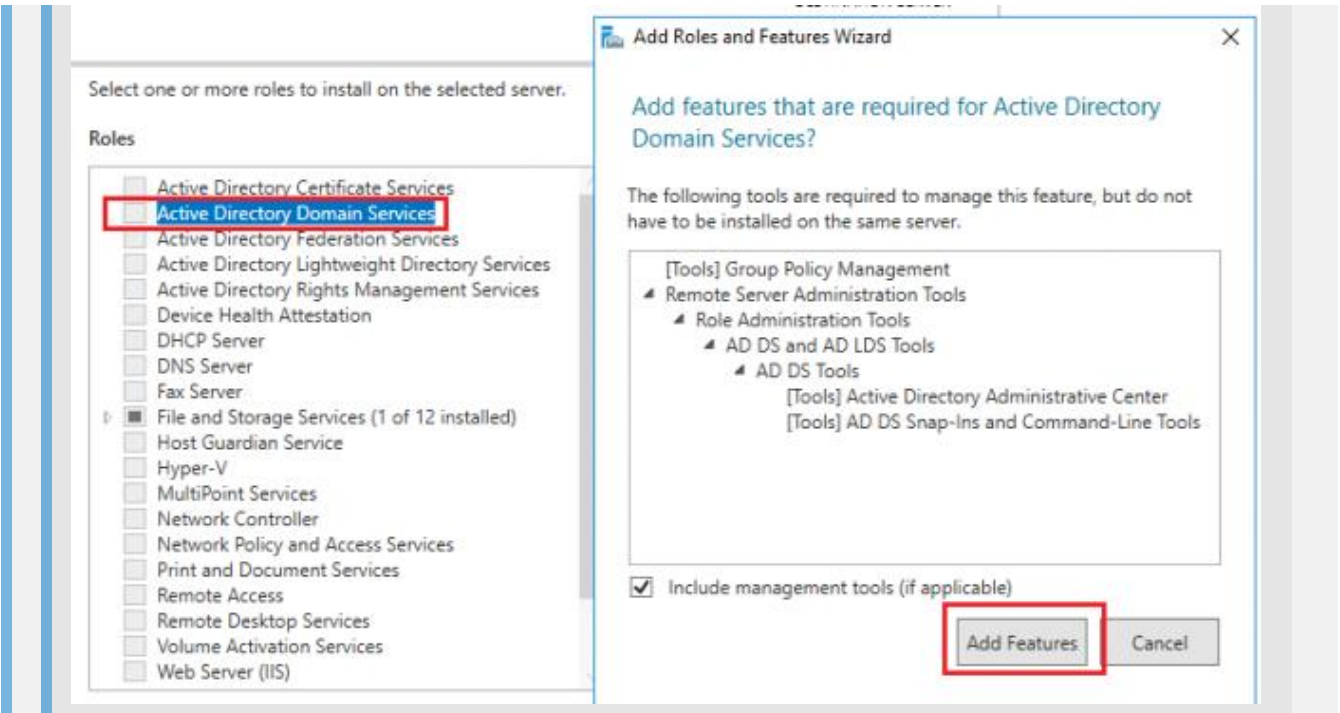2. 登录DC01，打开Server Manager，右上角选择Add Roles and Features

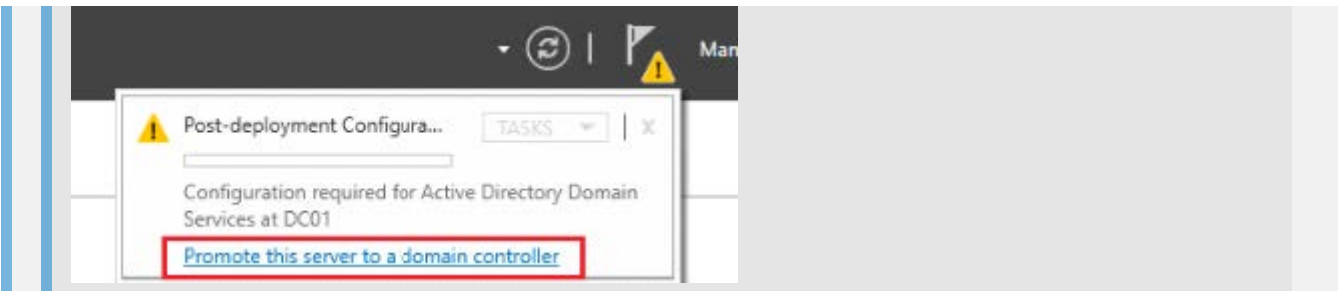3. 选择Role-based or feature-based installation

4. 选择DC01

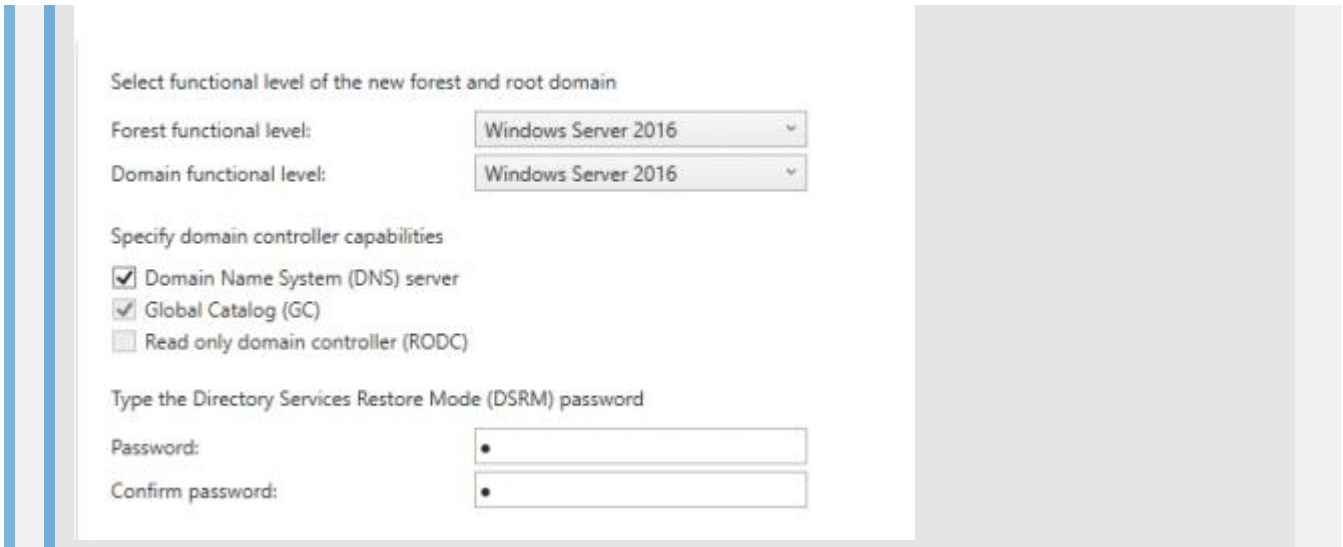5. 添加Active Directory Domain Services

6. 全部默认下一步进行安装
7. 在Server Manager中点击右上角，Promote this server to a domain controller

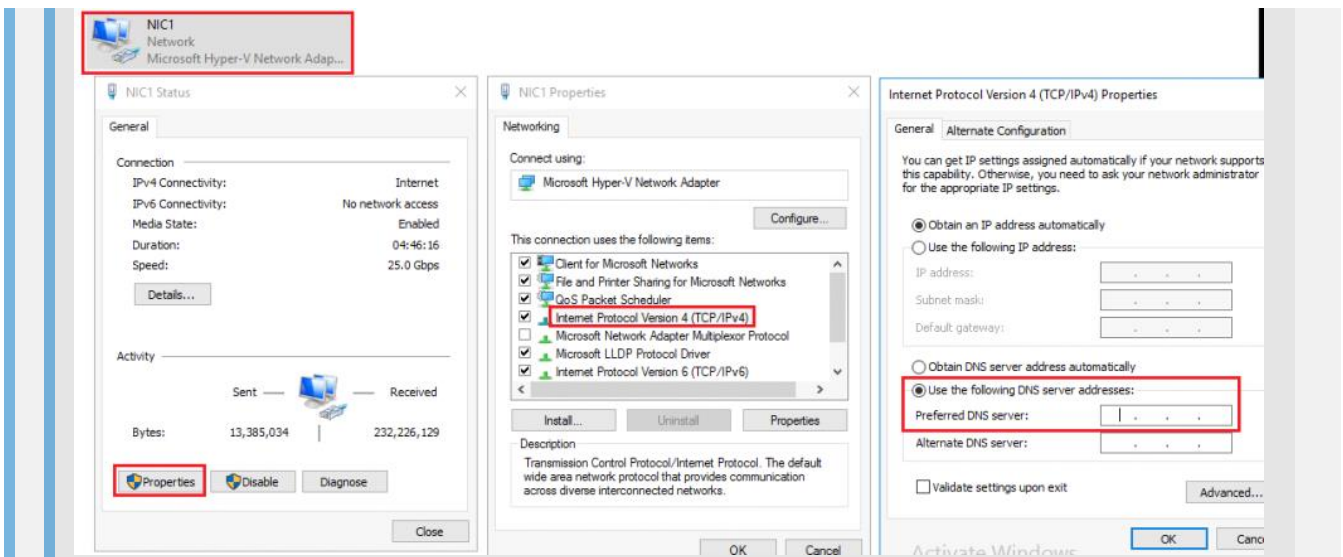8. 选择add a new forest并填入父域名，下一步

9. 创建DSRM密码，下一步

10. 全部默认下一步进行安装
11. 等待AD进行配置，使用新创建的域重新登录DC01
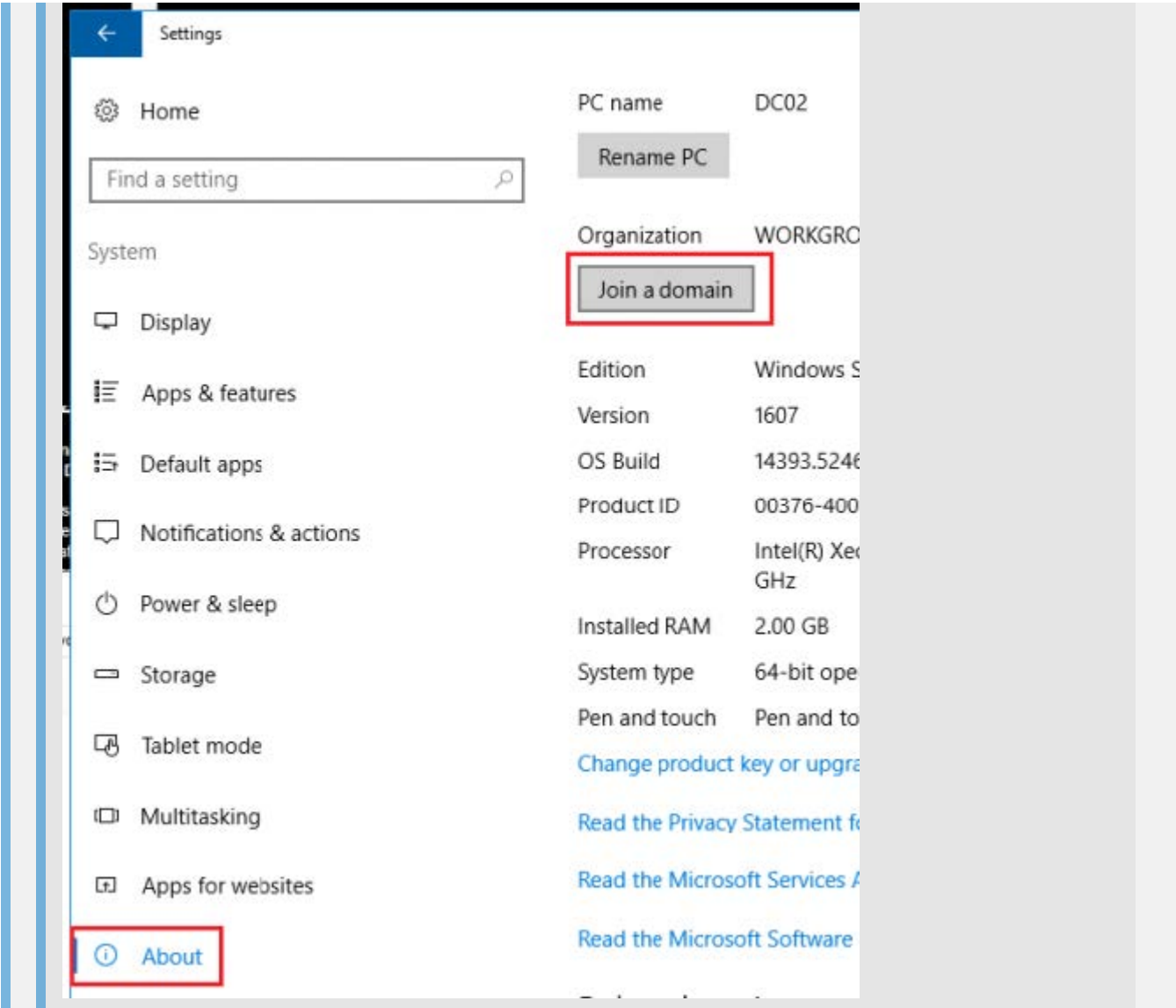
Child Domain

1. 登录准备部署子域的DC02
2. 打开网卡设置，双击打开，选择Properties，选择IPV4，将DC01的IP地址填入DNS服务器，IP地址网关等填写本机默认

3. 打开设置，导航至System -> About -> Join a domain

4. 输入父域域名并登陆父域管理员账号
5. 在本机上添加父域管理员账号并重启电脑完成加父域

6. 使用父域管理员账号登陆DC02

7. 打开Server Manager，右上角选择Add Roles and Features

8. 选择Role-based or feature-based installation

9. 选择DC01
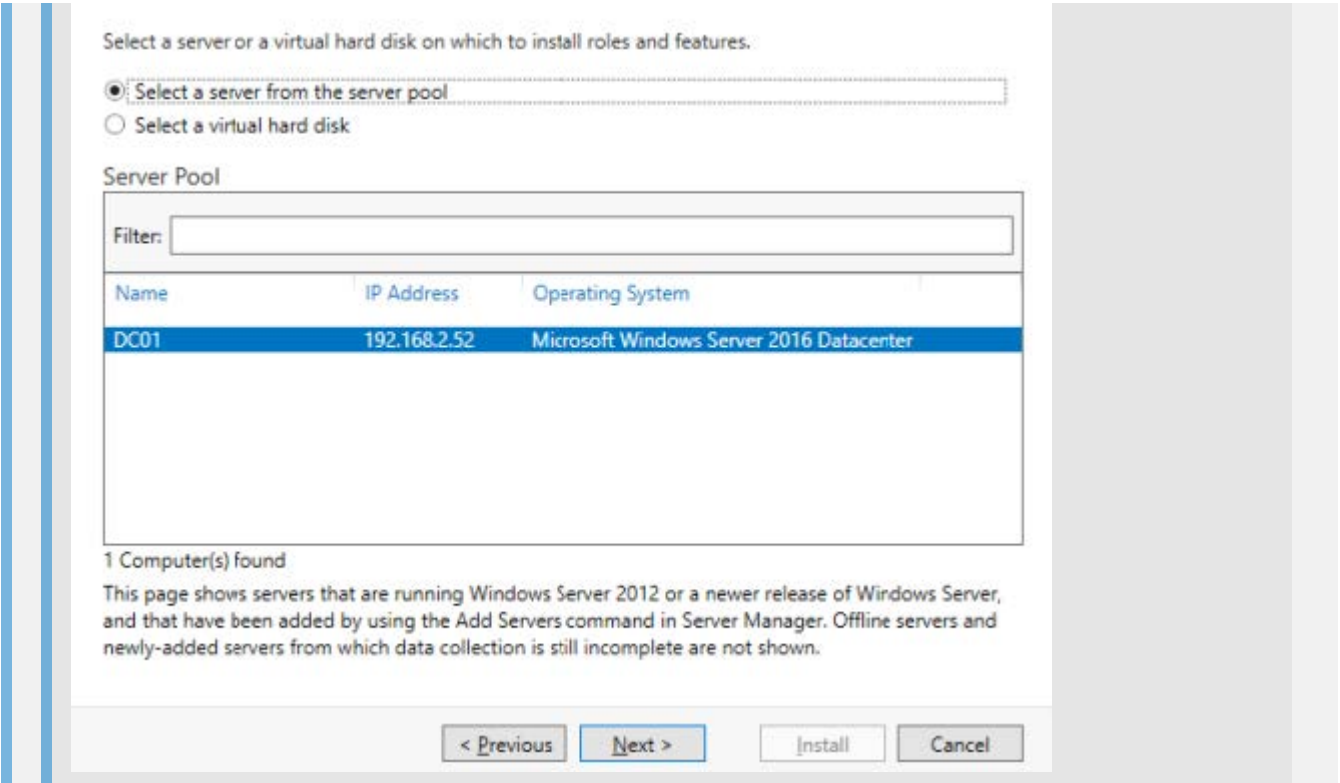
10. 添加Active Directory Domain Services
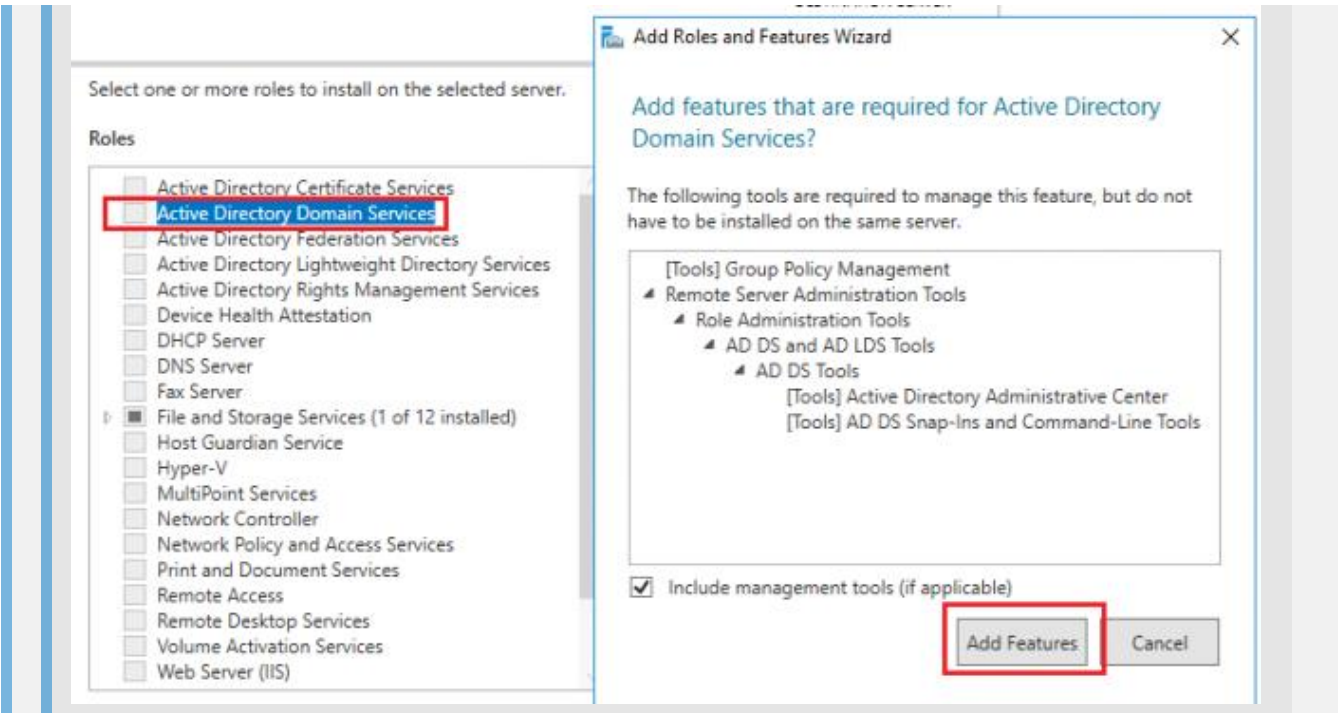
11. 全部默认下一步进行安装
12. 在Server Manager中点击右上角，Promote this server to a domain controller
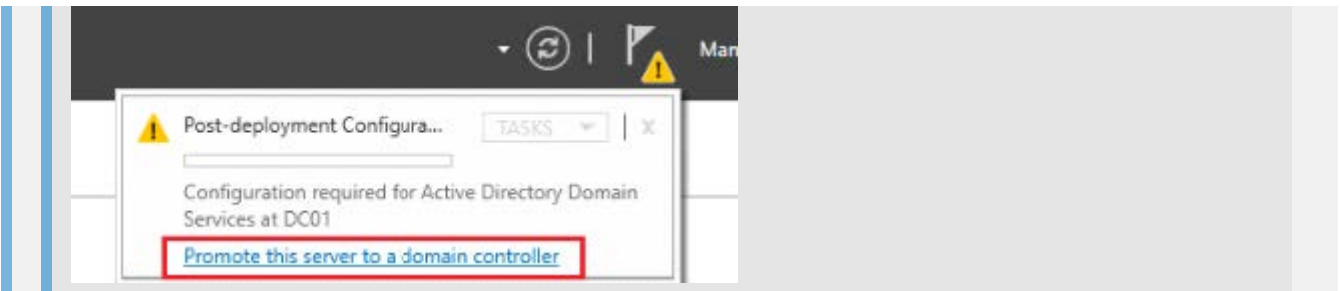
13. 选择add a new domain to an existing forest，选择child domain，填入子域域名

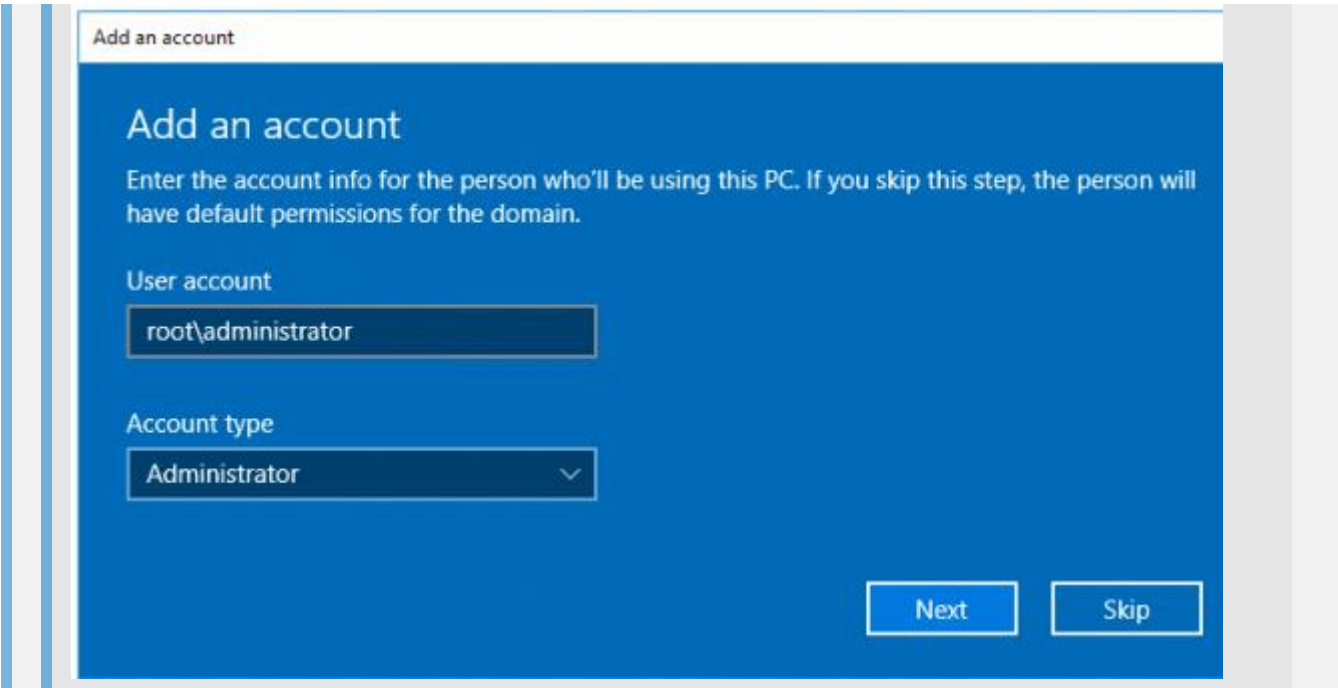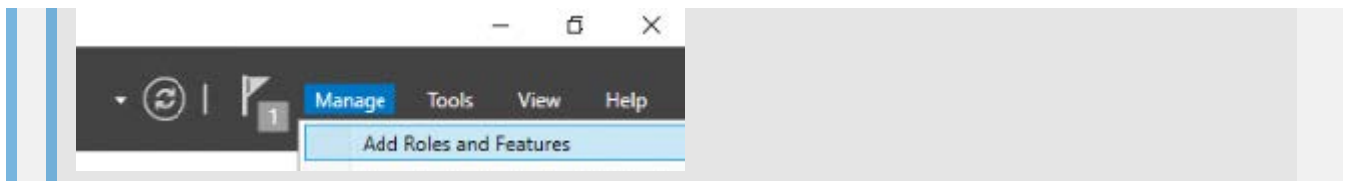14. 创建DSRM密码，下一步

15. 全部默认下一步进行安装

Join Domain

1. 登陆EX01
2. 打开网卡设置，双击打开，选择Properties，选择IPV4，将DC01的IP地址填入DNS服务器，IP地址网关等填写本机默认
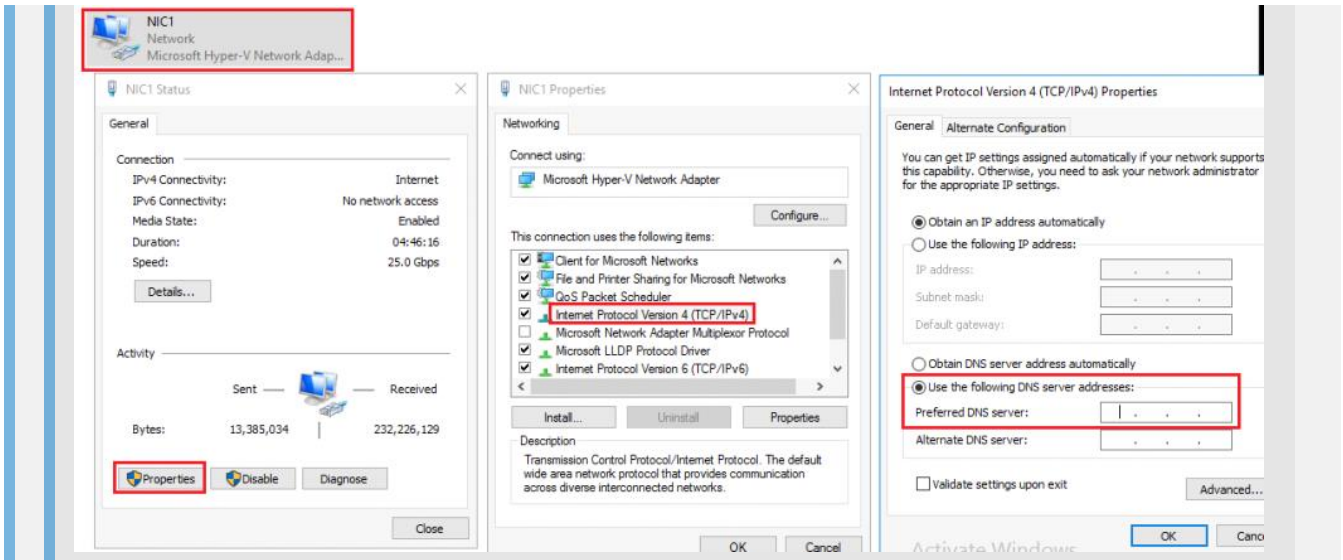
3. 打开设置，导航至System -> About -> Join a domain
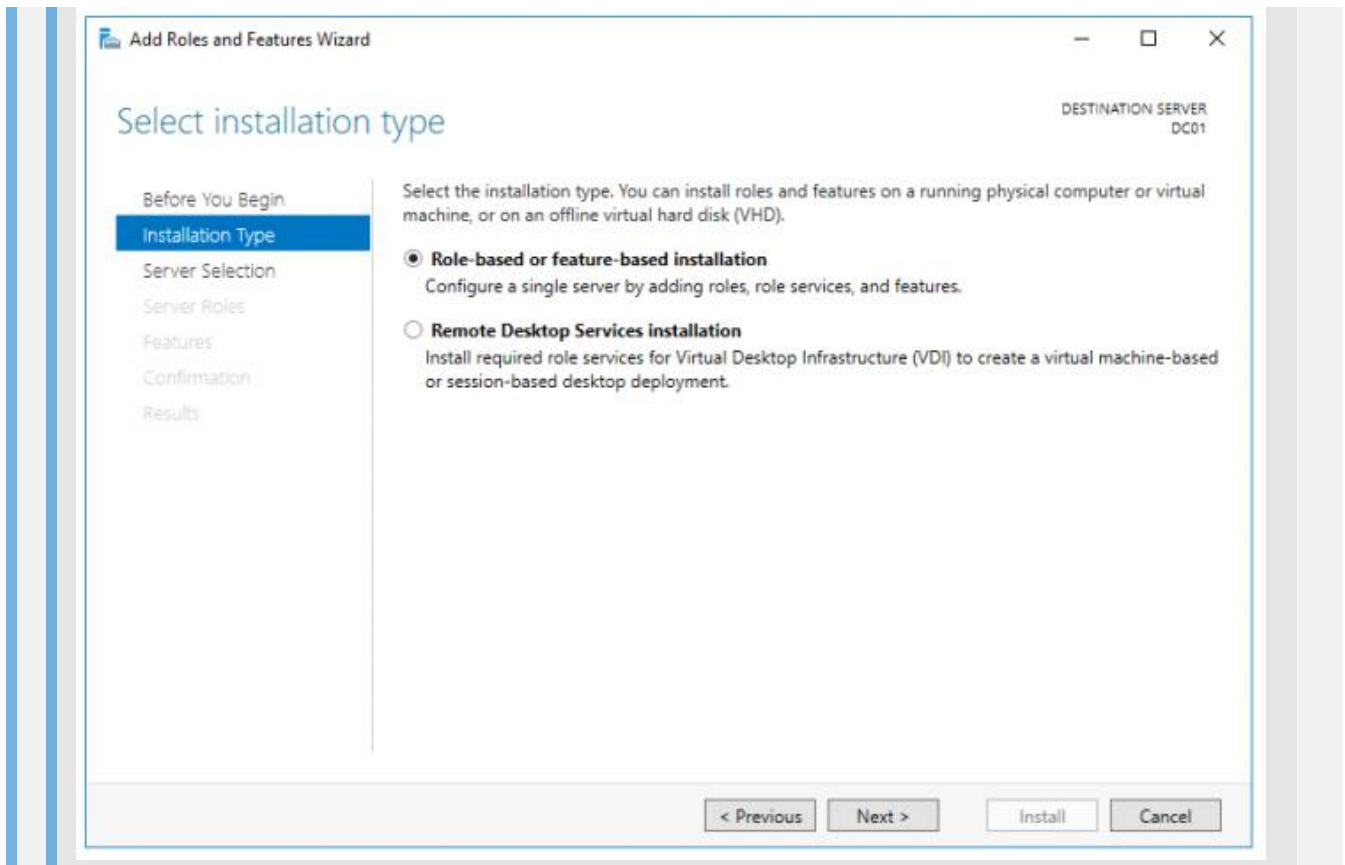

4. 输入父域域名并登陆父域管理员账号
5. 在本机上添加父域管理员账号并重启电脑完成加父域

6. 登陆EX02

7. 打开网卡设置，双击打开，选择Properties，选择IPV4，将DC02的IP地址填入DNS服务器，IP地址网关等填写本机默认

8. 打开设置，导航至System -> About -> Join a domain

9. 输入子域域名并登陆子域管理员账号
10. 在本机上添加子域管理员账号并重启电脑完成加子域

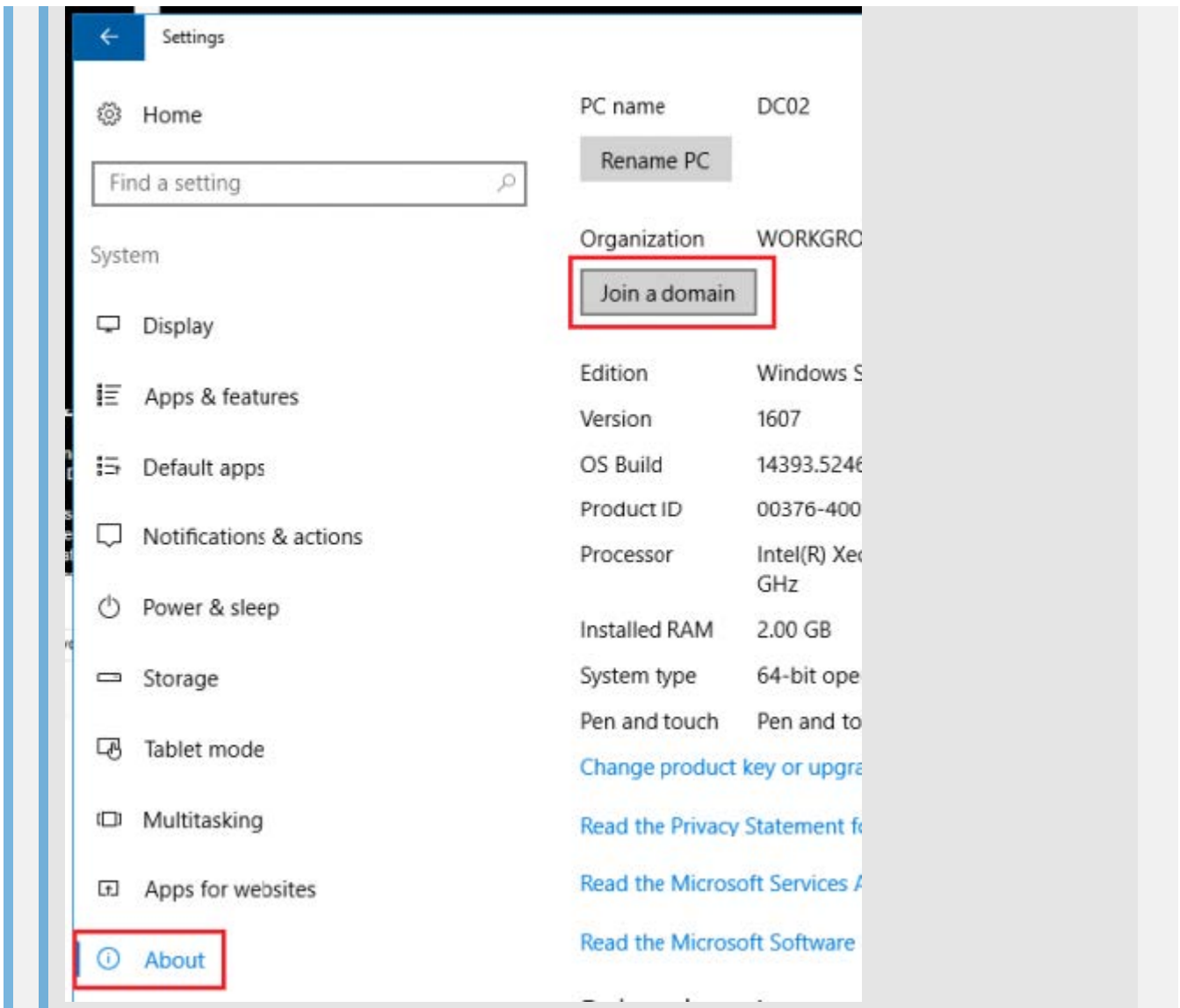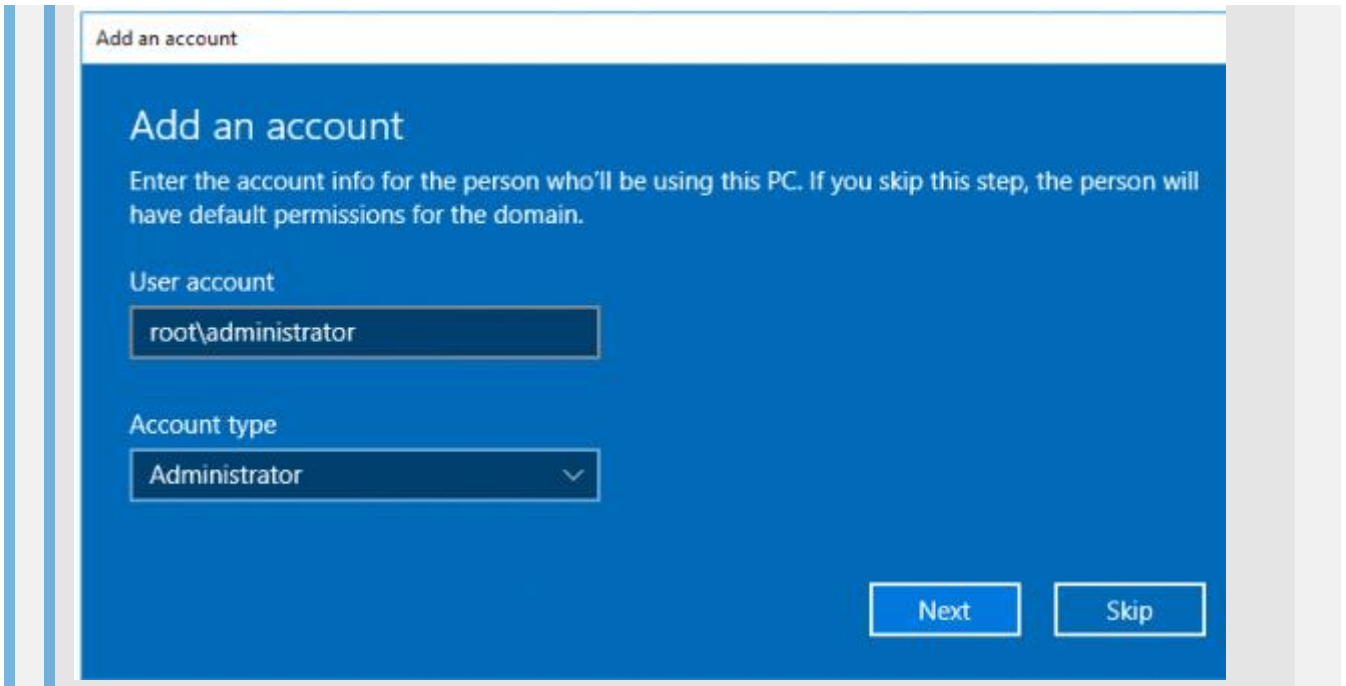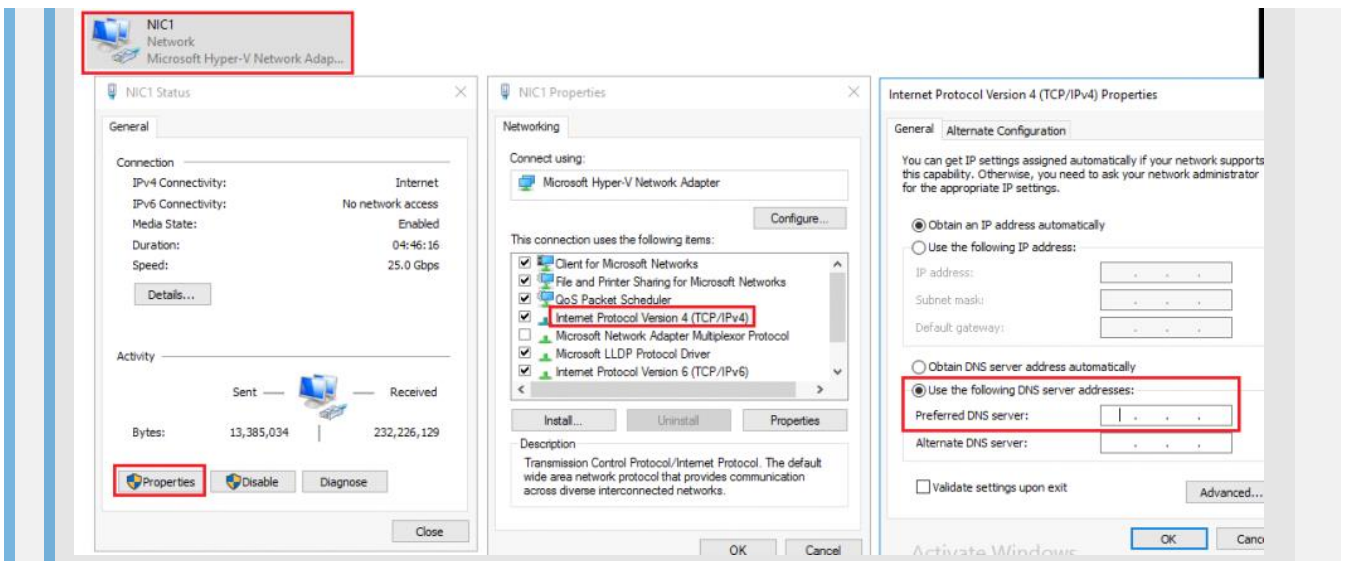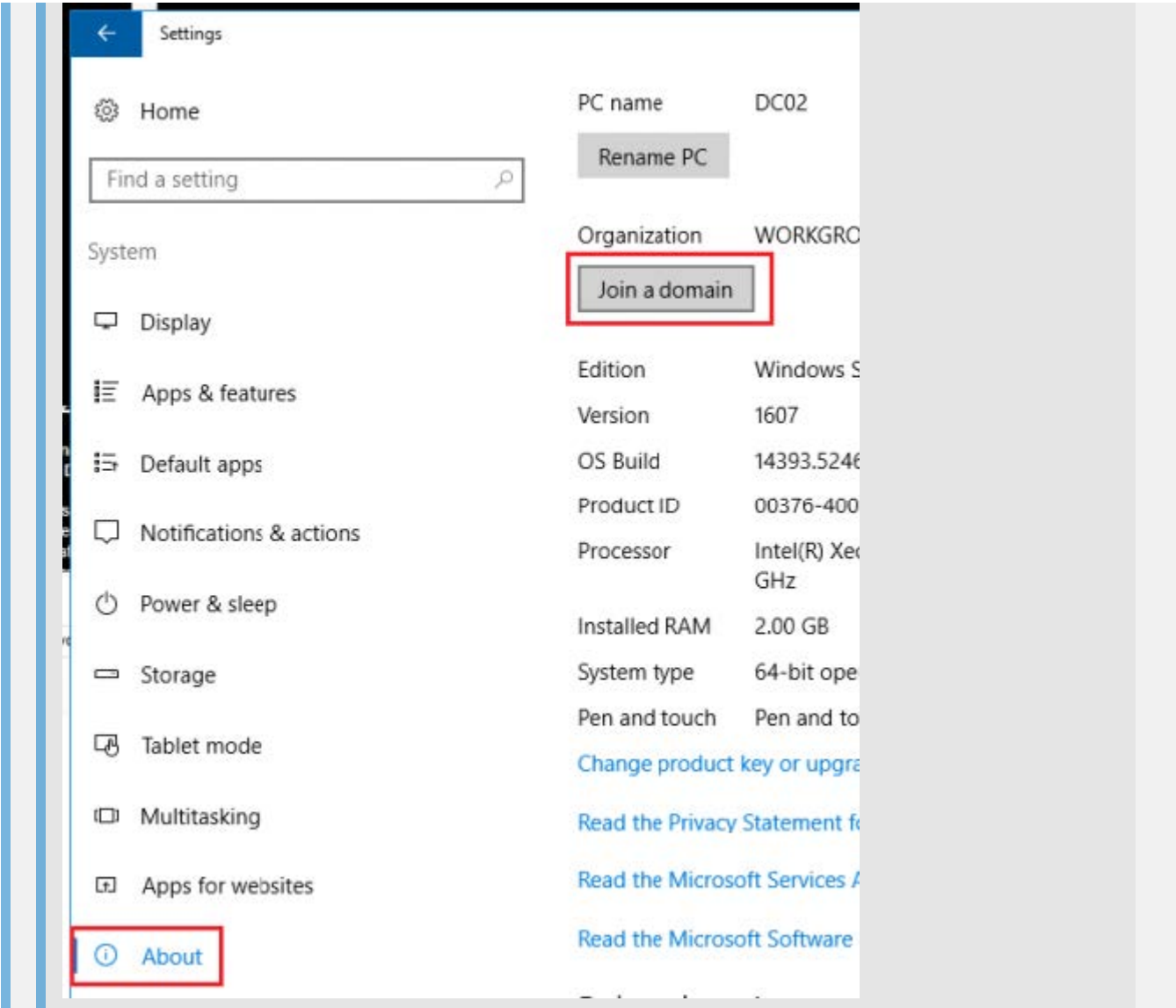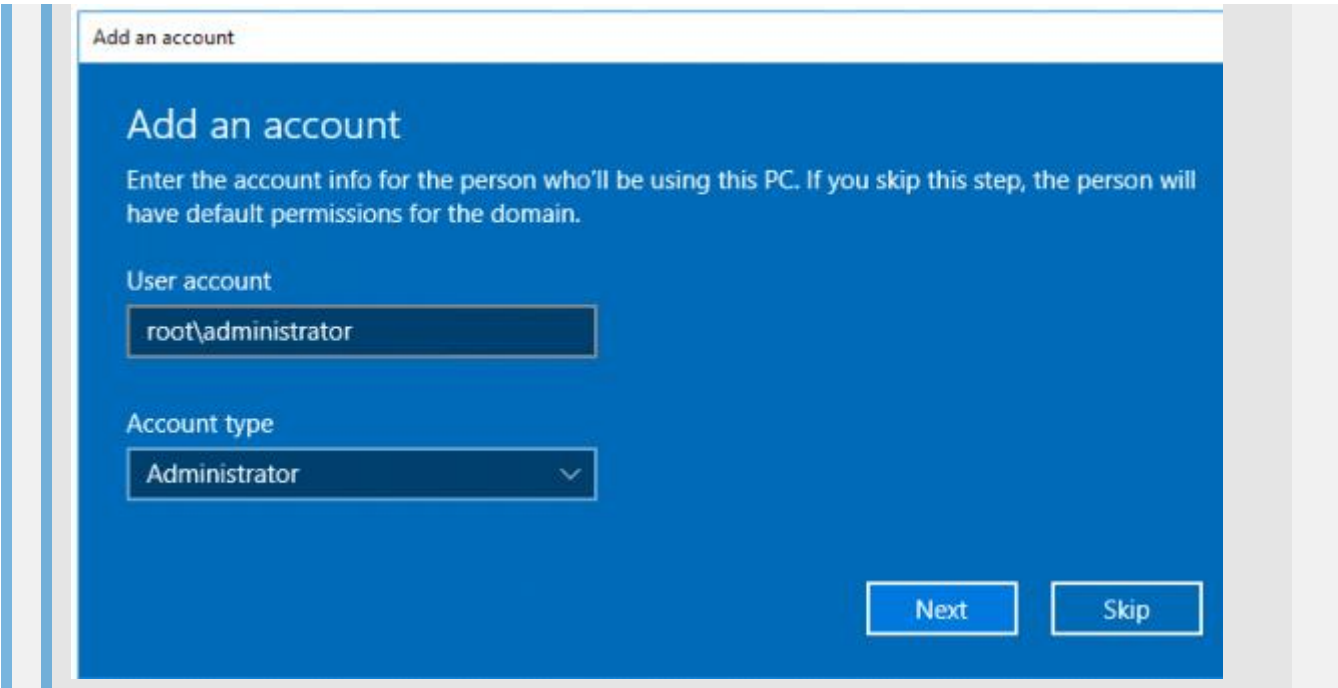# Prerequisites

1. 登陆全部服务器
2. 下载并安装NET4.8

   https://download.visualstudio.microsoft.com/download/pr/014120d7-d689-4305-befd-3cb711108212/0fd66638cde16859462a6243a4629a50/ndp48-x86-x64-allos-enu.exe

3. 下载并安装VC++ 2013

   https://aka.ms/highdpimfc2013x64enu

4. 下载并安装IIS URL Rewrite Module

   https://www.iis.net/downloads/microsoft/url-rewrite

5. 下载并安装Microsoft Unified Communications Managed API 4.0, Core Runtime 64-bit

   https://www.microsoft.com/download/details.aspx?id=34992

6. EX服务器使用PowerShell运行以下命令

   Install-WindowsFeature NET-Framework-45-Features, Server-Media-Foundation, RPC-over-HTTP-proxy, RSAT-Clustering, RSAT-Clustering-CmdInterface, RSAT-Clustering-Mgmt, RSAT-Clustering-PowerShell, WAS-Process-Model, Web-Asp-Net45, Web-Basic-Auth, Web-Client-Auth, Web-Digest-Auth, Web-Dir-Browsing, Web-Dyn-Compression, Web-Http-Errors, Web-Http-Logging, Web-Http-Redirect, Web-Http-Tracing, Web-ISAPI-Ext, Web-ISAPI-Filter, Web-Lgcy-Mgmt-Console, Web-Metabase, Web-Mgmt-Console, Web-Mgmt-Service, Web-Net-Ext45, Web-Request-Monitor, Web-Server, Web-Stat-Compression, Web-Static-Content, Web-Windows-Auth, Web-WMI, Windows-Identity-Foundation, RSAT-ADDS

7. 在所有服务器上下载Exchange镜像，并用PowerShell挂载

   Mount-DiskImage -ImagePath C:\ExchangeServer2016-x64-CU23.ISO

Installation

1. 在主DC上运行prepare ad

   E:\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataON /PrepareAD /OrganizationName:"TestOrg"

2. 在主DC上运行prepare schema

   E:\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataON /PrepareSchema

3. 在主DC上运行prepare 主domain

   E:\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataON /PrepareDomain:root.com

4. 在主DC上打开ADUC，找到以下的组并将子域admin添加为成员，添加后需要重新logon生效

   Enterprise Admins; Schema Admins; Organization Management

5. 在子DC上运行prepare 子domain

```
E:\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataON
/PrepareDomain:child.root.com
```

6. 重启所有服务器

7. 打开父域的ADUC，找到Enterprise Admins; Organization Management; Schema Admins组，添加子域管理员为成员

Enterprise Admins	root.com/Users
Organization Managem...	root.com/Microsoft Exchange Security Groups
Schema Admins	root.com/Users

8. 根据各自Ex服务器所属的域，指定对应DC进行安装

```
E:\Setup.exe /IAcceptExchangeServerLicenseTerms_DiagnosticDataON /mode:Install
/role:Mailbox /DomainController:DCxx
```