**Creating Virtual Machines:**

Install VMware Hypervisor -

**-Windows server:**

-open VMware

A logo of a company

Description automatically generated

-Create virtual machine on VMware Hypervisor

A close-up of a computer

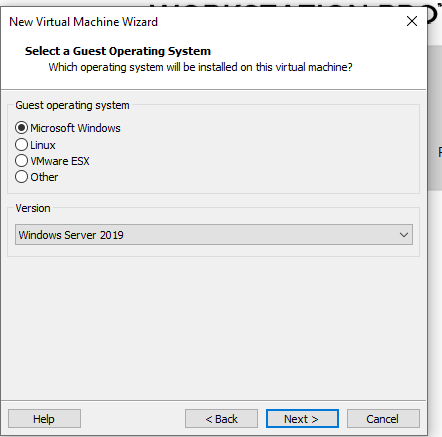
Description automatically generated

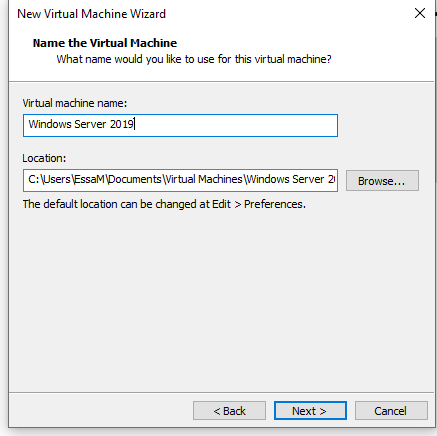
A screenshot of a computer program

Description automatically generated

A screenshot of a computer

Description automatically generated





A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

**-Download the official ISO image for:**

● Windows server: Download from the Microsoft website.

<https://www.microsoft.com/en-us/evalcenter/download-windows-server-2019>

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

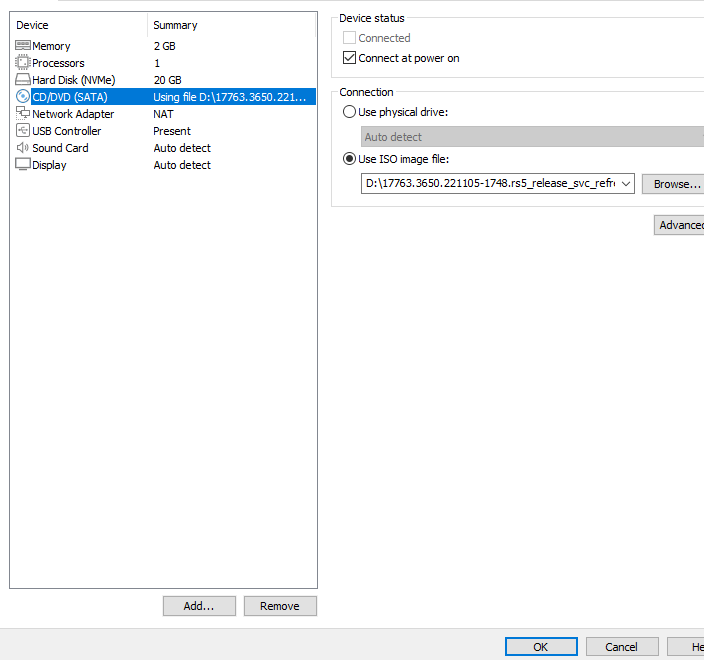


A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated



**-power on this virtual machine to setup server:**

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated



A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

**-Creating user, password**

A blue screen with white text

Description automatically generated

A rock formation on a beach

Description automatically generated

**Then select ctrl+Alt+Del to unlock**

A login screen with a beach and rocks

Description automatically generated

A screenshot of a computer

Description automatically generated

- chick right on windows server 2019 , select install VMware tools

- install VMware tools From: Start, file explorer, D:vmware tools , setup

A screenshot of a computer

Description automatically generated



A screenshot of a software tool setup

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

Then restart windows

**● Install IIS and web services**

A screenshot of a phone

Description automatically generated

A screenshot of a computer menu

Description automatically generated

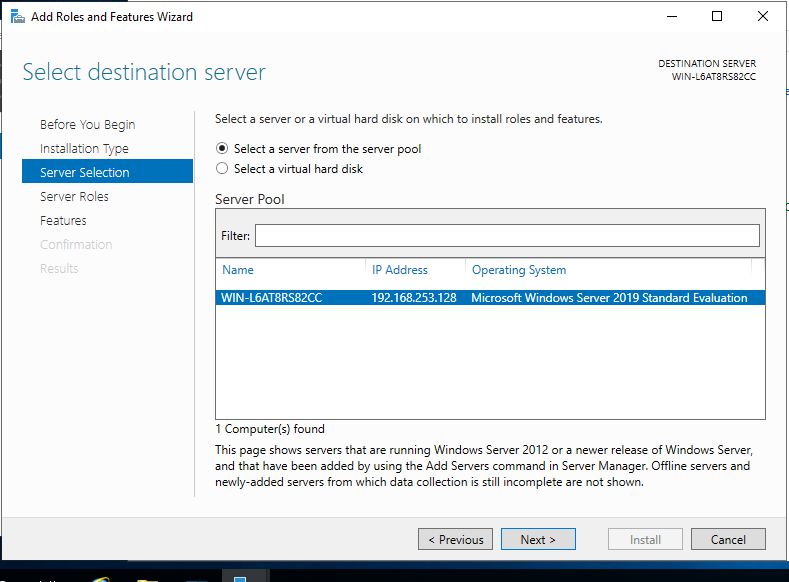


A screenshot of a computer

Description automatically generated

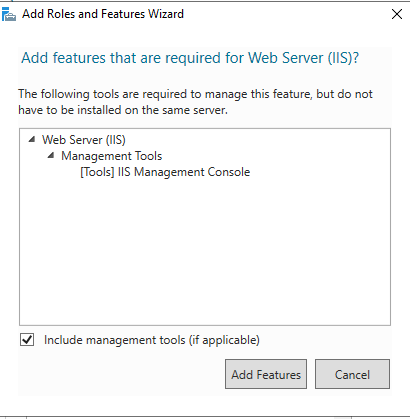
A screenshot of a computer

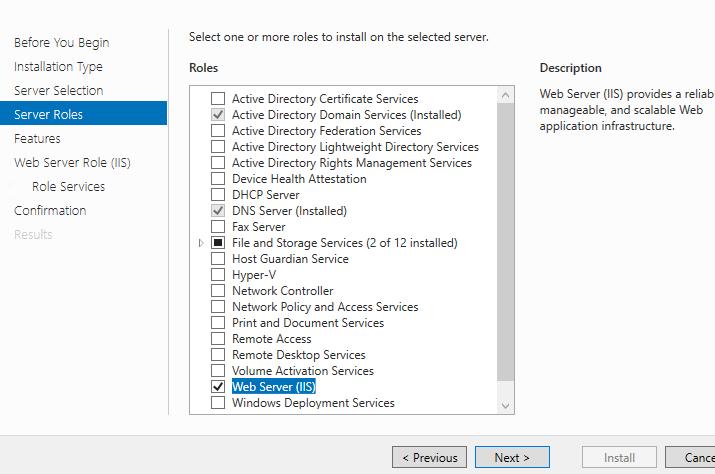
Description automatically generated

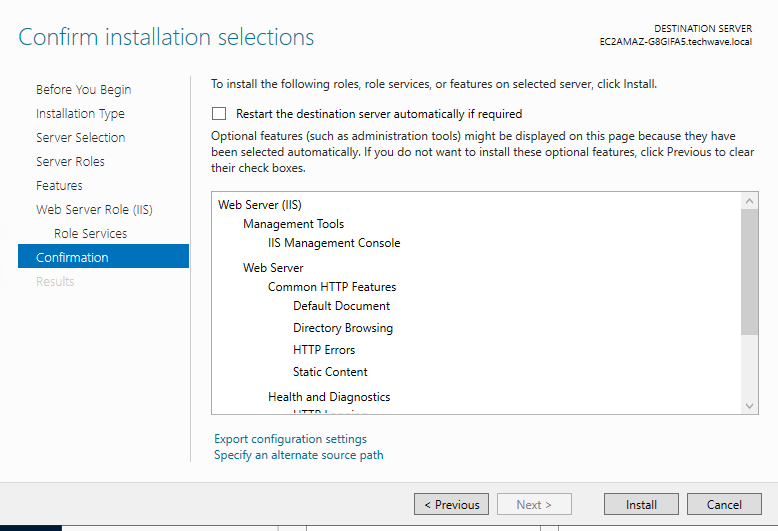


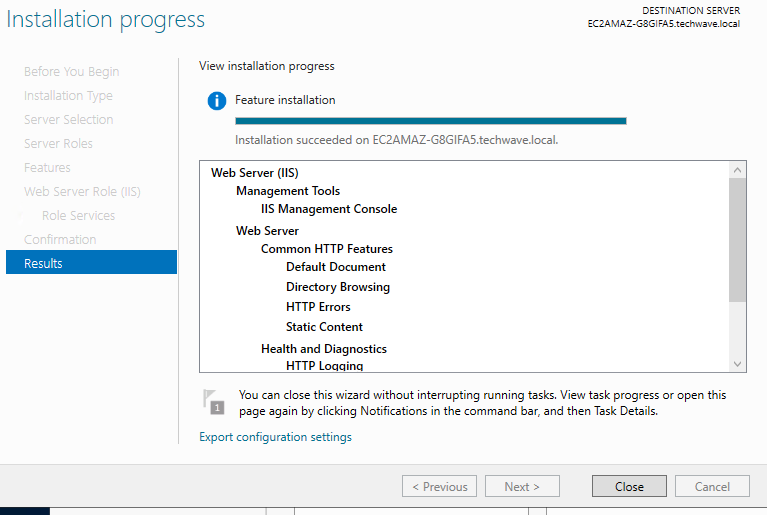
A screenshot of a computer

Description automatically generated





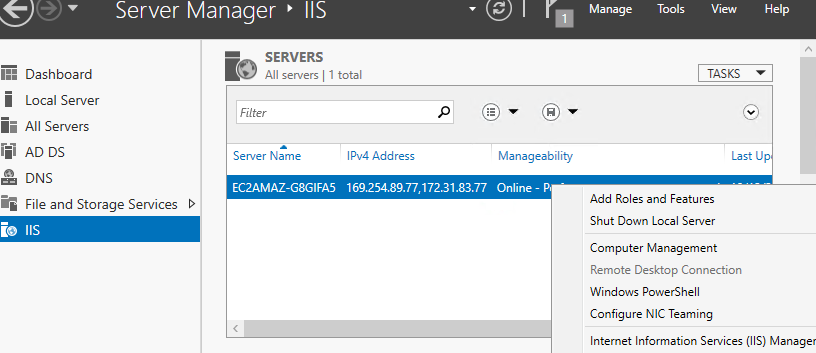


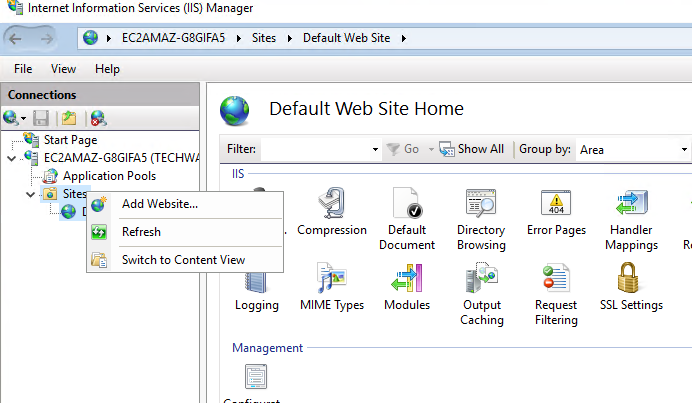


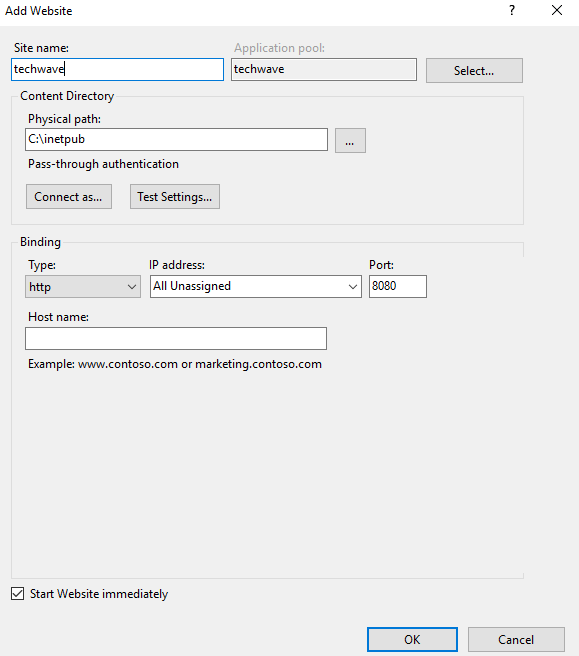
**Add website:**

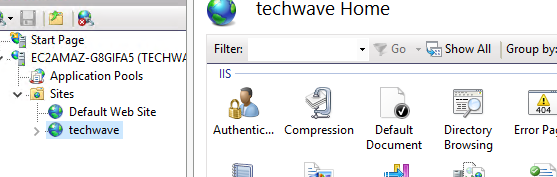
Site name: techwave

Port:8080









**Then open internet explorer and search about this web**

A screenshot of a computer

Description automatically generated

**-setup active Directory:**

- Open control panel, all control item then network and sharing center

A screenshot of a phone

Description automatically generated

A screenshot of a computer

Description automatically generated

A computer screen shot of a network connection

Description automatically generated

A screenshot of a computer

Description automatically generated

IP Address: 172.31.83.77

IP DNS server: 172.31.83.77

A screenshot of a computer screen

Description automatically generated

**-setup active Directory, DNS:**

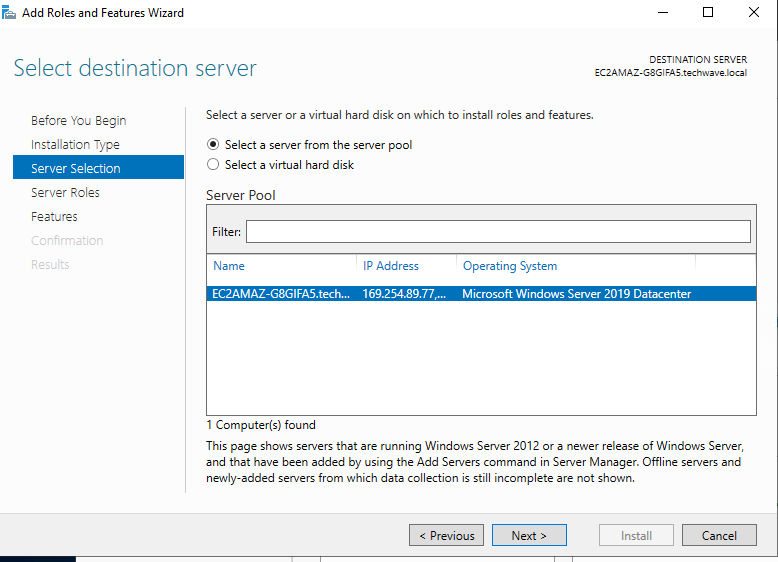
Add roles and features

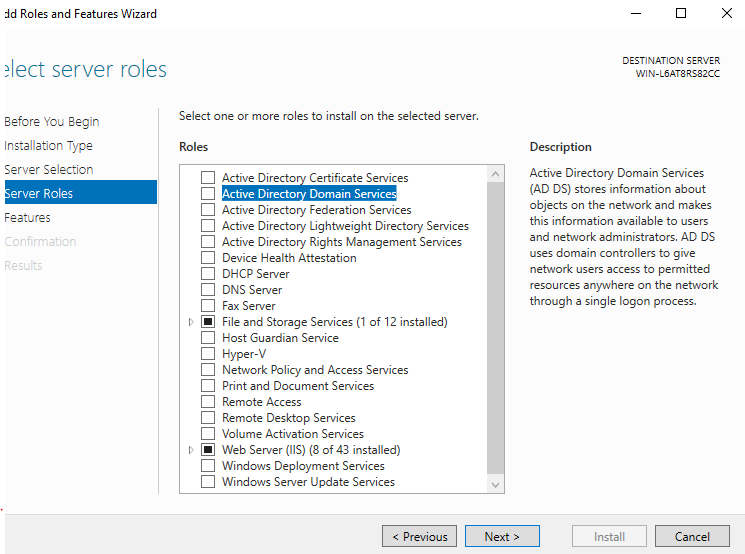
A screenshot of a computer

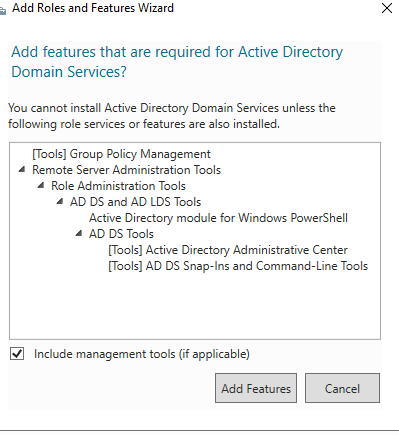
Description automatically generated

A screenshot of a computer

Description automatically generated

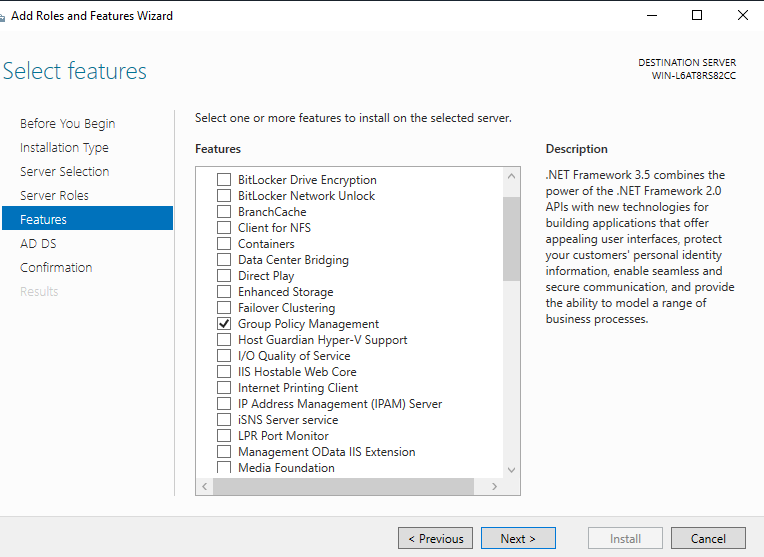






A screenshot of a computer

Description automatically generated



A screenshot of a computer

Description automatically generated

-install active Directory

A screenshot of a computer

Description automatically generated

A screenshot of a computer program

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

-add a new forest

A screenshot of a computer

Description automatically generated

-then select the lowest server and domain server that can be communicated with it

-setup Dns

-create password to protect your information

A screenshot of a computer

Description automatically generated

A screenshot of a computer

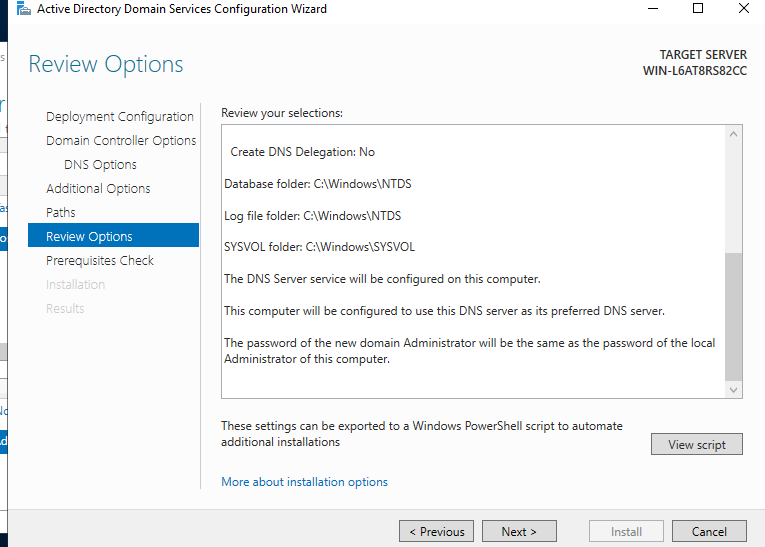
Description automatically generated

A screenshot of a computer

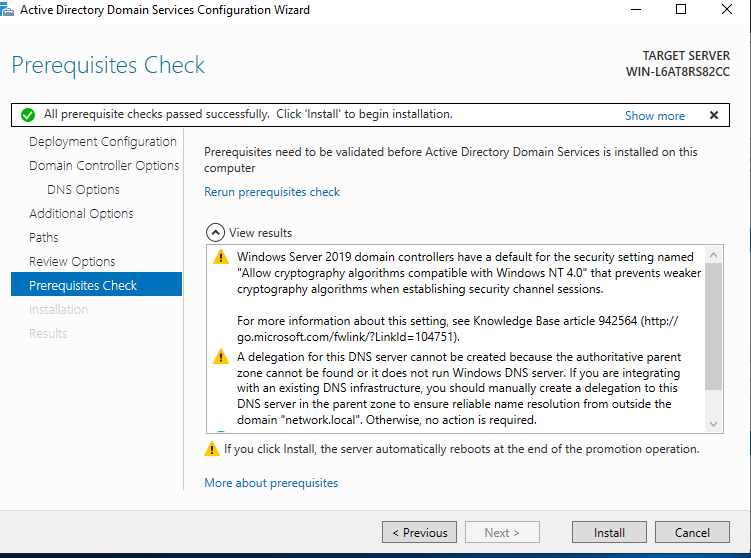
Description automatically generated

A screenshot of a computer

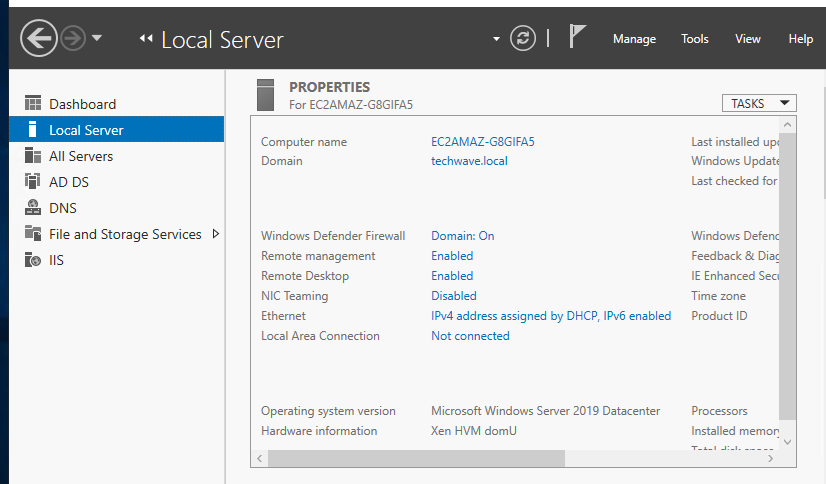
Description automatically generated



-install active directory and restart automatically



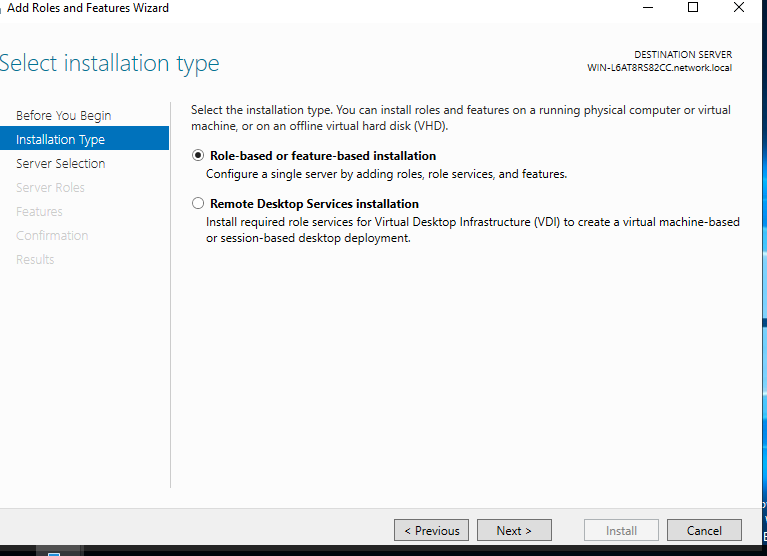
-active directory , domain and many tools of active directory (Done)



**Setup DHCP:**

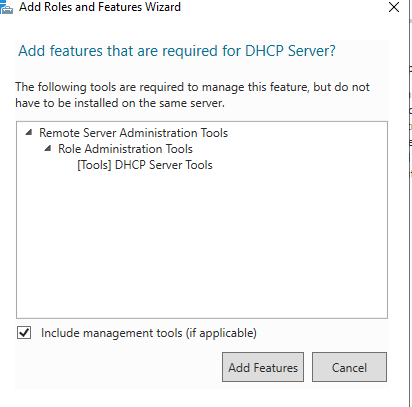
A screenshot of a computer

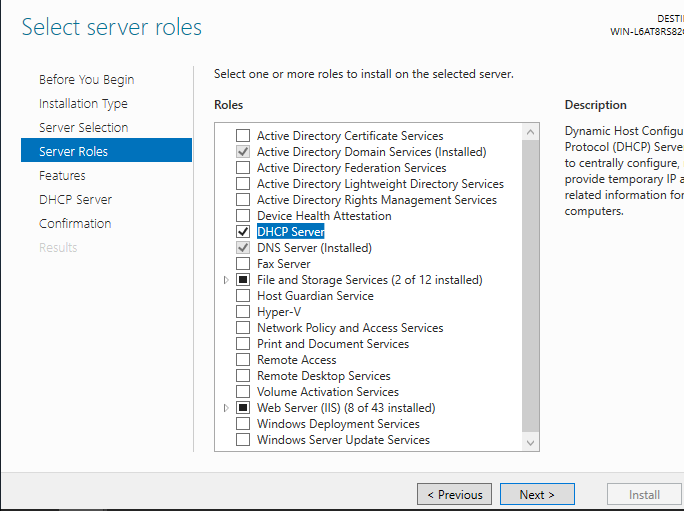
Description automatically generated

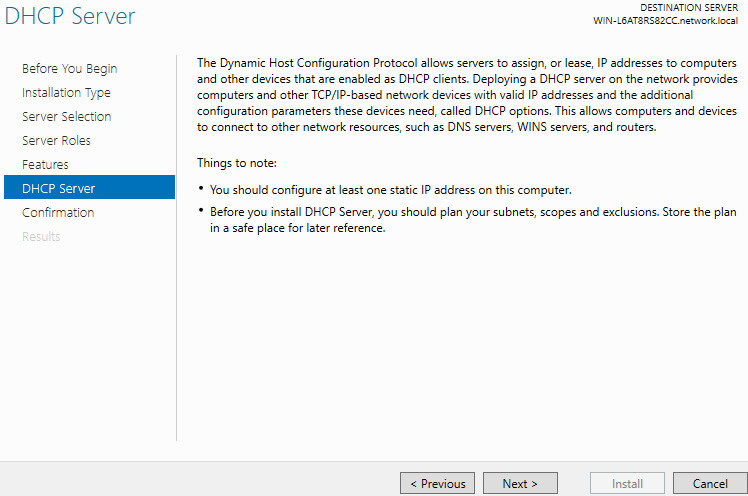


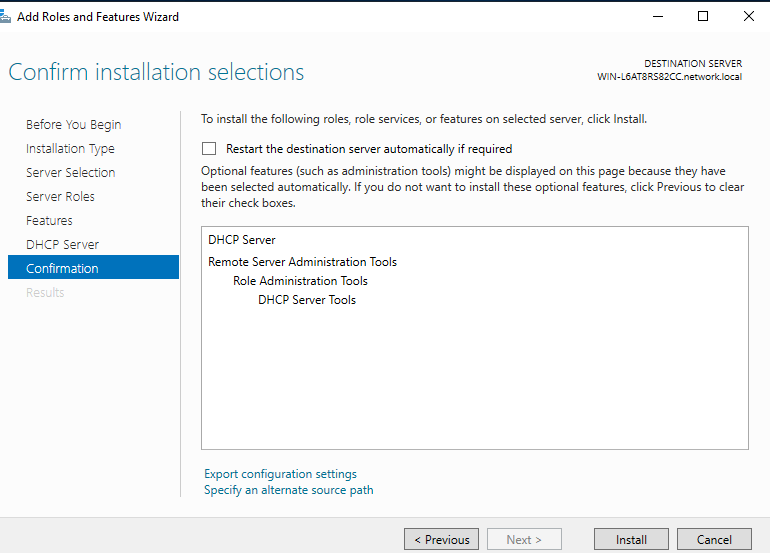
A screenshot of a computer

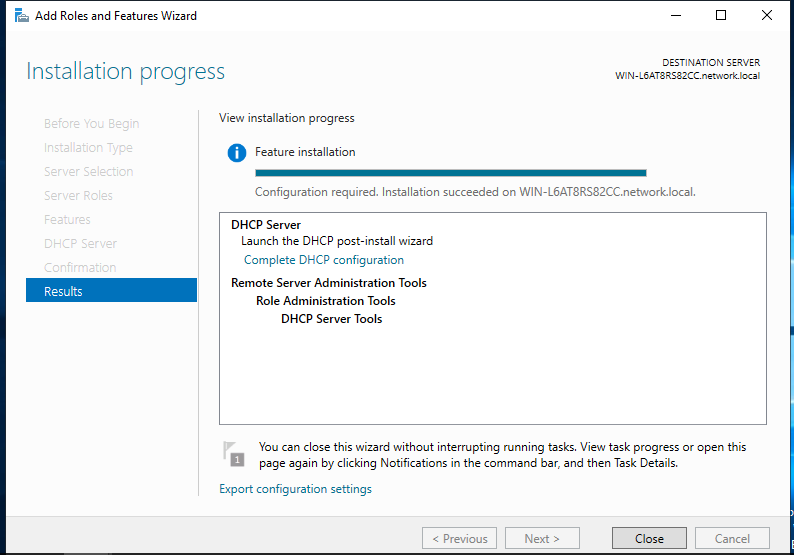
Description automatically generated











A screenshot of a computer

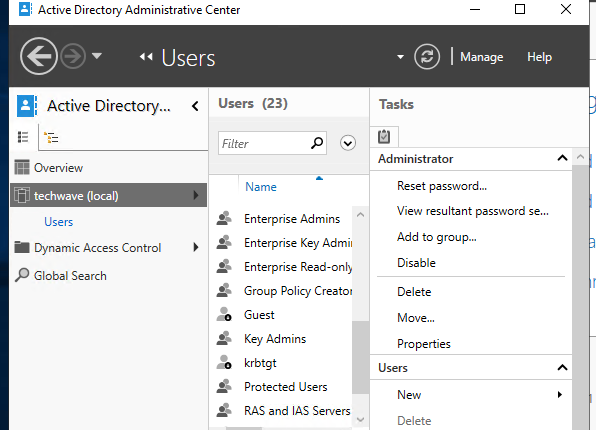
Description automatically generated

**Add users:**

Tools, Active Directory Administrative center, users, new, user

A screenshot of a computer

Description automatically generated



Creating user:

Full name: Esraa mubarak

User samaccount: Esraa mubarak

Select user must change passward at next log on

Then press (ok)

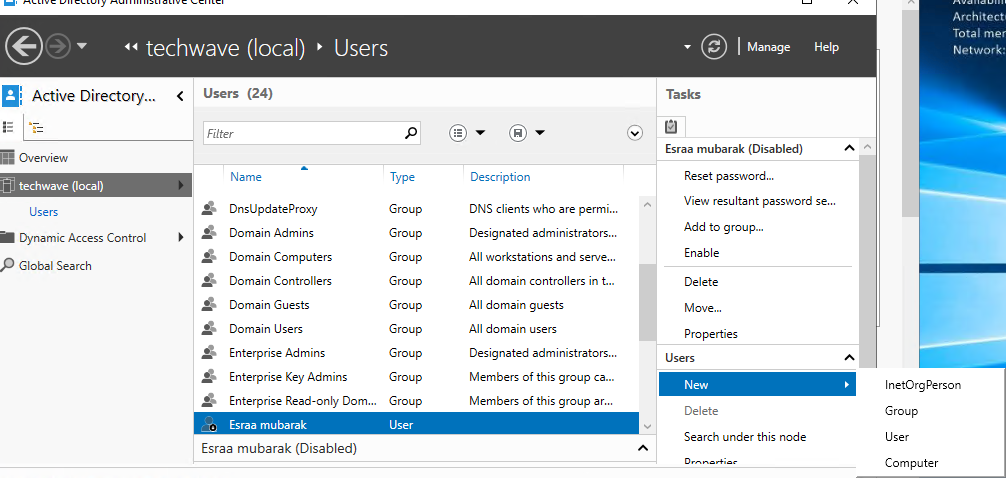
A screenshot of a computer

Description automatically generated

Then create user Abdullah fawzi at the same way.

**Creating Group:**

Select user, new, Group



**Create Group:**

Group name and Group samaccount: IT Admin

Description: All of member of the IT Admin group

A screenshot of a computer

Description automatically generated

-Add member:

Add, Esraa Mubarak(user)

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

Then add Abdullah fawzi, Administrator at the same way

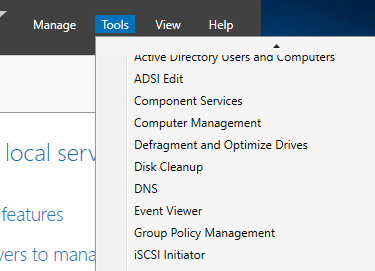
A screenshot of a computer

Description automatically generated

**Create OU for sales Team:**

A screenshot of a computer

Description automatically generated



A screenshot of a computer

Description automatically generated

A computer screen shot of a message

Description automatically generated

Then create OU for IT Admin, HR, Development Team at the same way

A screenshot of a computer

Description automatically generated

**-Create GPO for Sales Team:**

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

**-Create GPO for IT Admin, HR, Development Team at the same way**

A screenshot of a computer

Description automatically generated

**-Add computers for sales Team:**

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A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

-then add others computers that are in sales Team

A screenshot of a computer

Description automatically generated

**-Add computer for IT Admin, HR, Development Team at the same way**

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A screenshot of a computer

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A screenshot of a computer program

Description automatically generated

**1-GPO for IT Admin:**

**To set the password length for IT Admin: at least 8 characters**

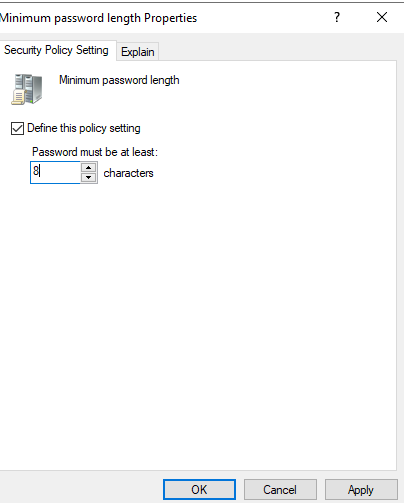
Edit, computer configuration, windows setting, security settings, Account policies, minimum password length

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated



A screenshot of a computer

Description automatically generated

**2--GPO for sales Team:**

Control the use of external devices (USB Policy) :

Edit, computer configuration, Administrative Templates, system, Removable storage Access, Deny rwx access, enabled

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A screenshot of a computer

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A screenshot of a computer

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A screenshot of a computer

Description automatically generated

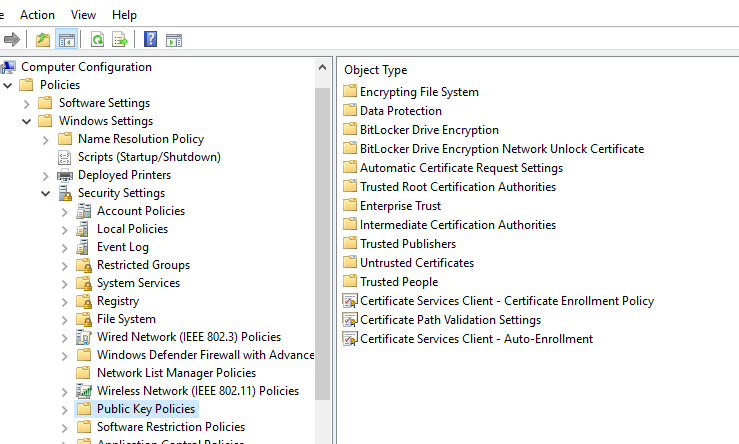
**3- GPO for Development Team:**

**Data Encryption:** Enforce an encryption policy on all data stored on server used by the development team to secure sensitive data.

Edit, computer configuration, windows setting, security settings, public key policies, Encrypting file system, properties, allow to encrypt content

A screenshot of a computer

Description automatically generated



A screenshot of a computer

Description automatically generated

A screenshot of a computer screen

Description automatically generated

**4- GPO for HR:**

**Personal data management policies:**

Edit, computer configuration, windows setting, security settings, file system, add file, select file (employee income), add employee in HR Team (salma, sam), ok

A screenshot of a computer

Description automatically generated

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A screenshot of a computer screen

Description automatically generated A screenshot of a computer

Description automatically generated

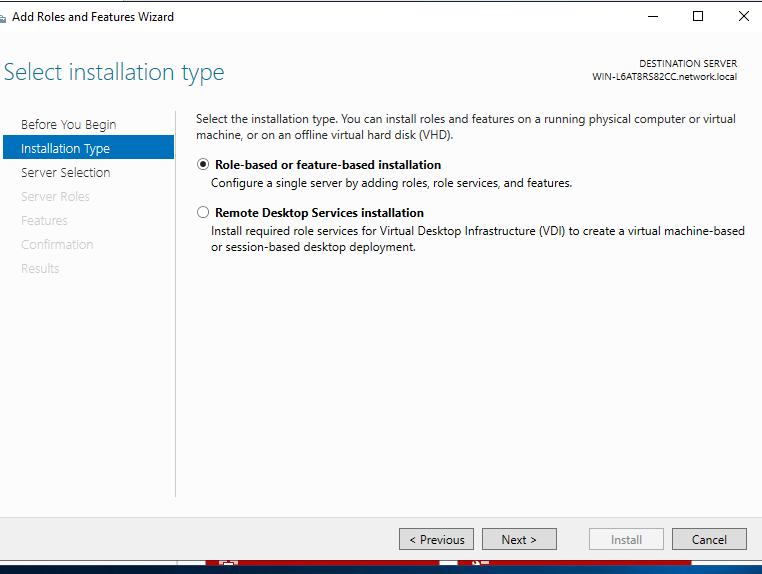
A screenshot of a computer

Description automatically generated

**-printer:**

A screenshot of a computer

Description automatically generated

A screenshot of a computer

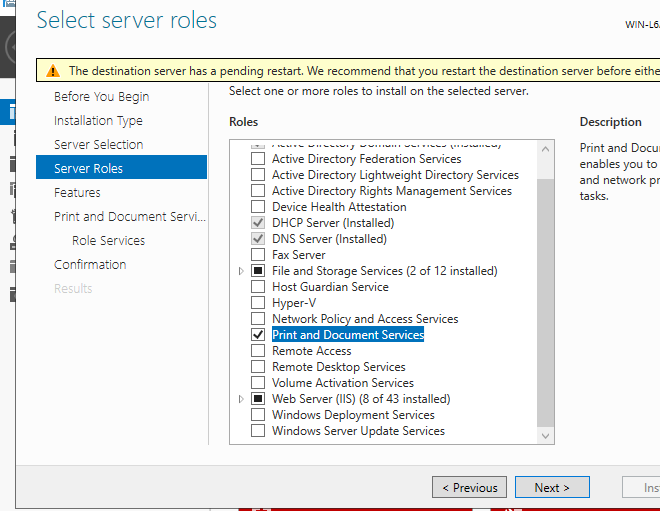
Description automatically generated

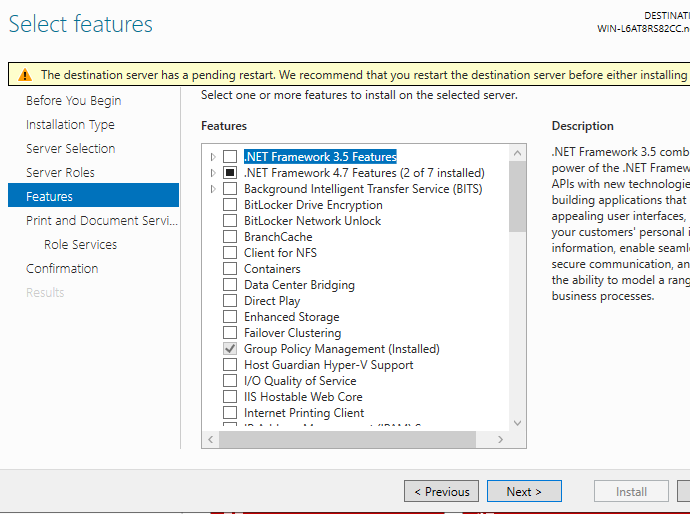
A screenshot of a computer

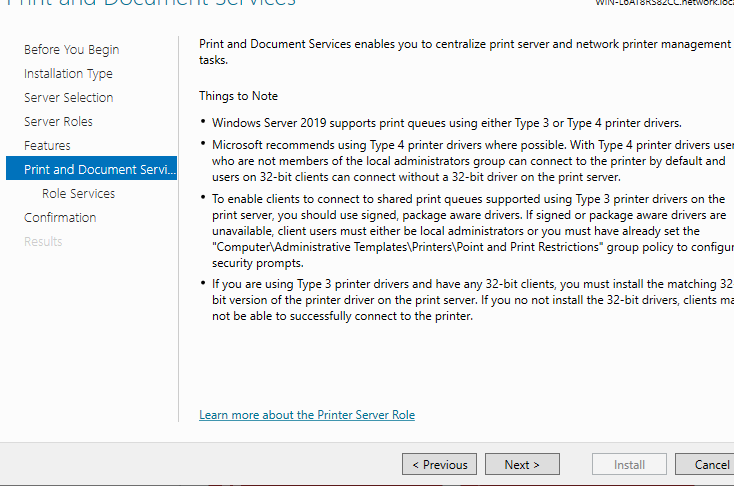
Description automatically generated

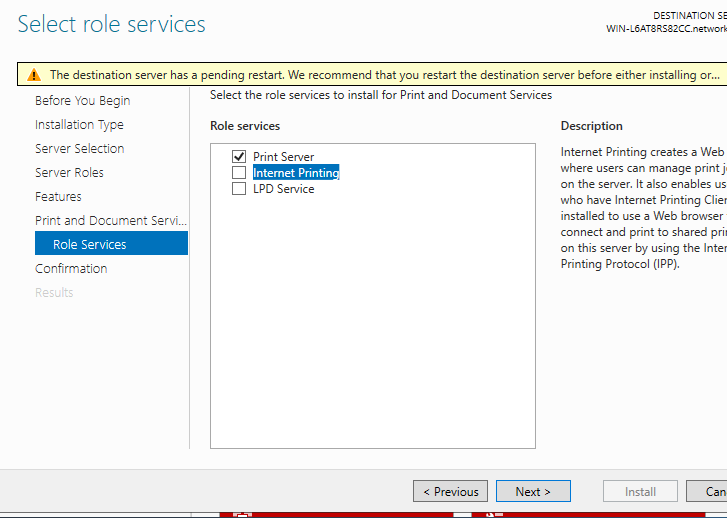
A screenshot of a computer

Description automatically generated



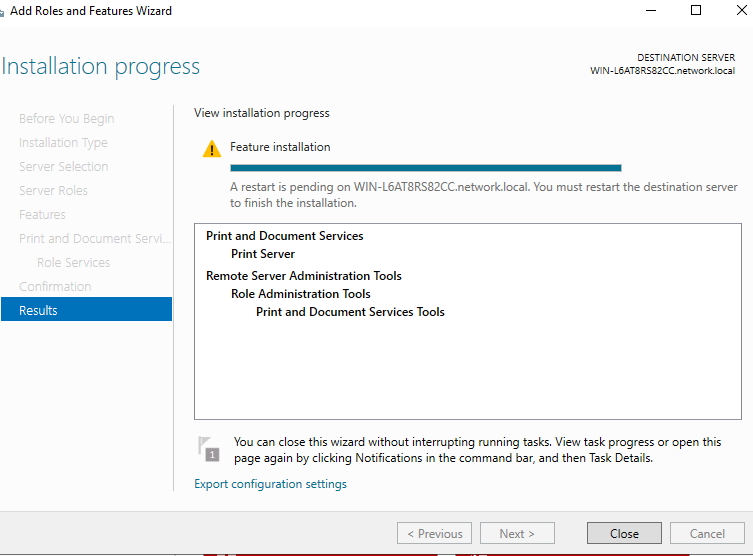






A screenshot of a computer

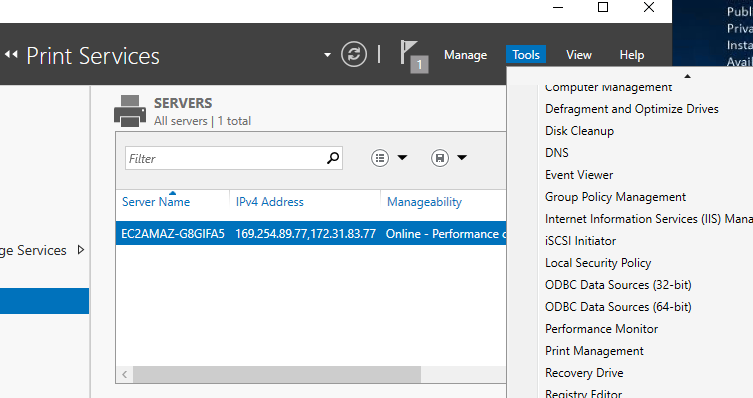
Description automatically generated



**-In addition, there is a virtual printer:**

1-microsoft PCL6 Class Driver.

2- Microsoft XPS Document writer.



A screenshot of a computer

Description automatically generated

-**install Samba share**: To share files and folders

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Description automatically generated

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Description automatically generated

**- share folder by samba**

A screenshot of a computer

Description automatically generated

-click right on space, new share

A screenshot of a computer

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A screenshot of a computer

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A screenshot of a computer

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A screenshot of a computer screen

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Description automatically generated

**-Another way to share:**

Create folder, add data, properties,

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Description automatically generated

A screenshot of a computer

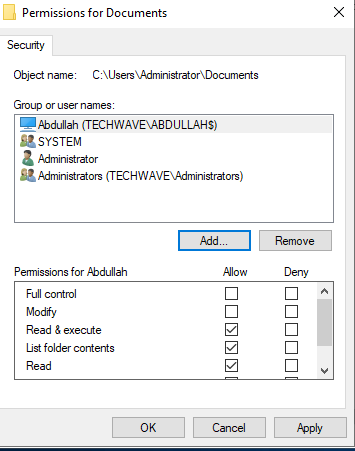
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A screenshot of a computer

Description automatically generated



**-To activate shared folder :**

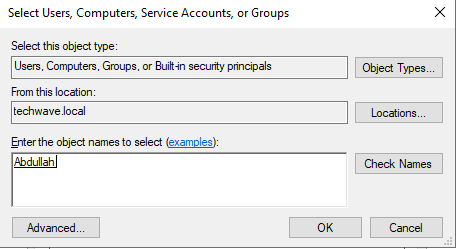
Start, computer management, shared folders, shares

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated



A screenshot of a computer

Description automatically generated

**-to ensure this files (automation, share) shared:**

Open Abdullah pc (File explorer, search about ip for this server (174.129.110.136))

A screenshot of a computer

Description automatically generated

A screenshot of a computer

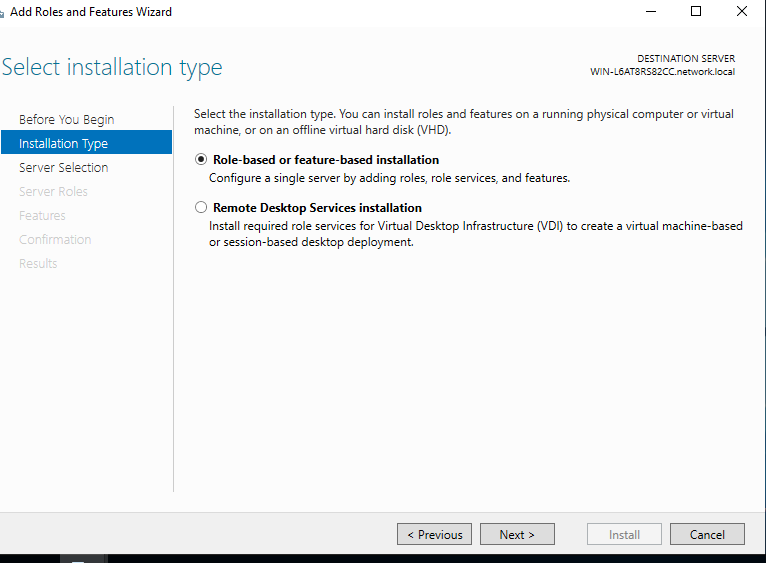
Description automatically generated

**Back up:**

-sarver manger, Add roles and features, features, windows server Bckup, next, install

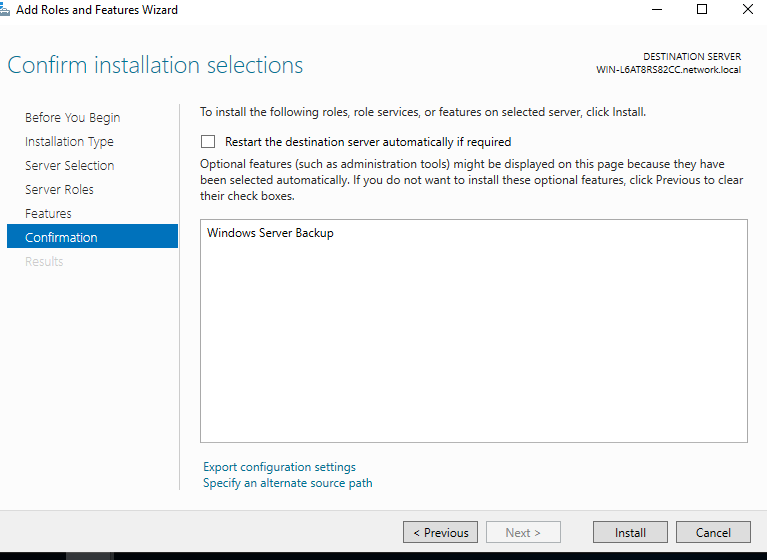
**A screenshot of a computer

Description automatically generated**

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**A screenshot of a computer

Description automatically generated**

****

**-to create backup for custom (omnia):**

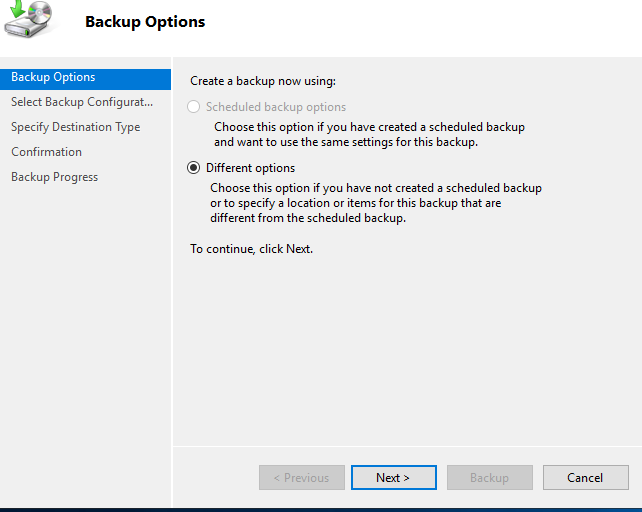
start, Windows Server Backup, Local Backup, Backup Once, Different options, custom, add items, select folder (omnia), select the location where the backup will be saved, Backup.

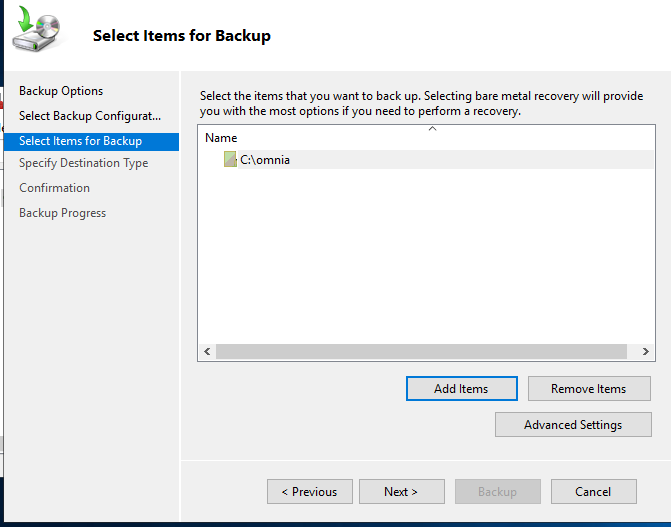
**A screenshot of a computer

Description automatically generated**

**A screenshot of a computer

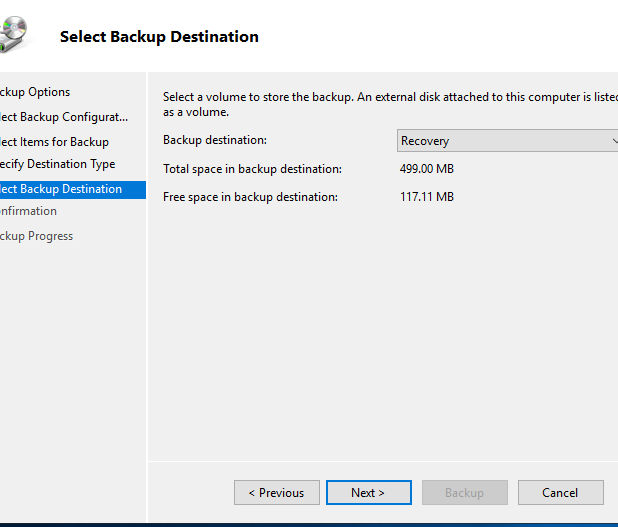
Description automatically generated**

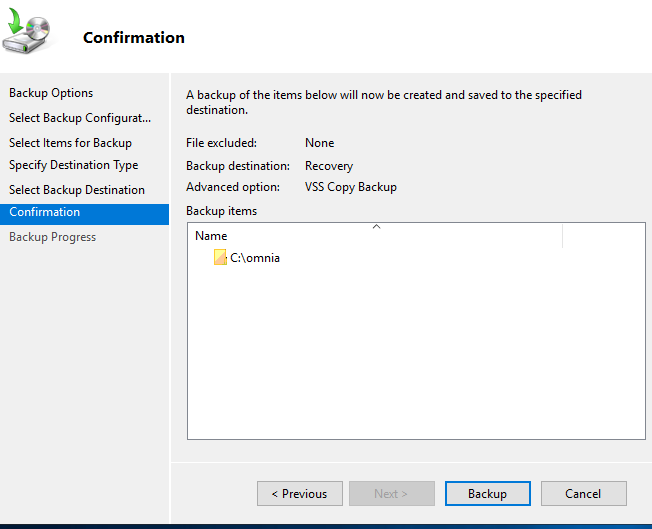
****

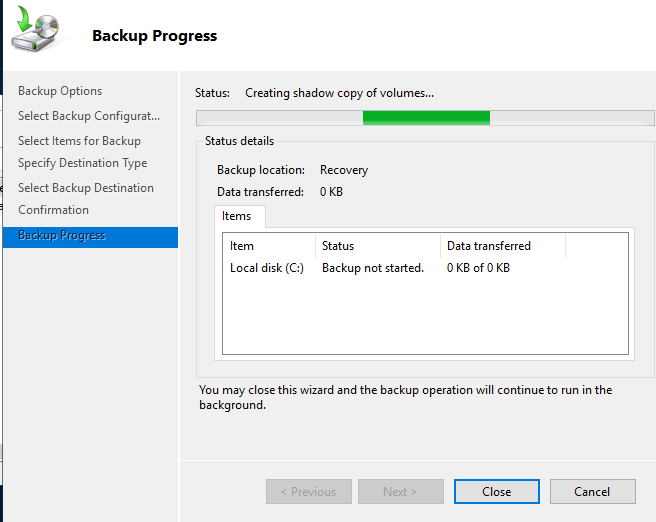
****

**A screenshot of a computer

Description automatically generated**

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**-To ensure that backup is working:**

start, Windows Server Backup

A screenshot of a computer screen

Description automatically generated