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Labo 1

Config VM

Operating system : [Windows Server 2016](#)

Virtual machine name : [SRW3](#)

Live other param by default

In customize hardware, remove **sound card** and **printer**

Config Windows

System : [Windows Server 2016 V1607 \(OS Build 14393.447\)](#)

Langage : [english-US](#)

Time format : [US](#)

Keyboard : [Swiss French](#)

Windows Key : [WC2BQ-8NRM3-FDDYY-2BFGV-KHKQY](#)

System : [Windows server 2016 \(Desktop Experience\)](#)

Installation : [Custom](#)

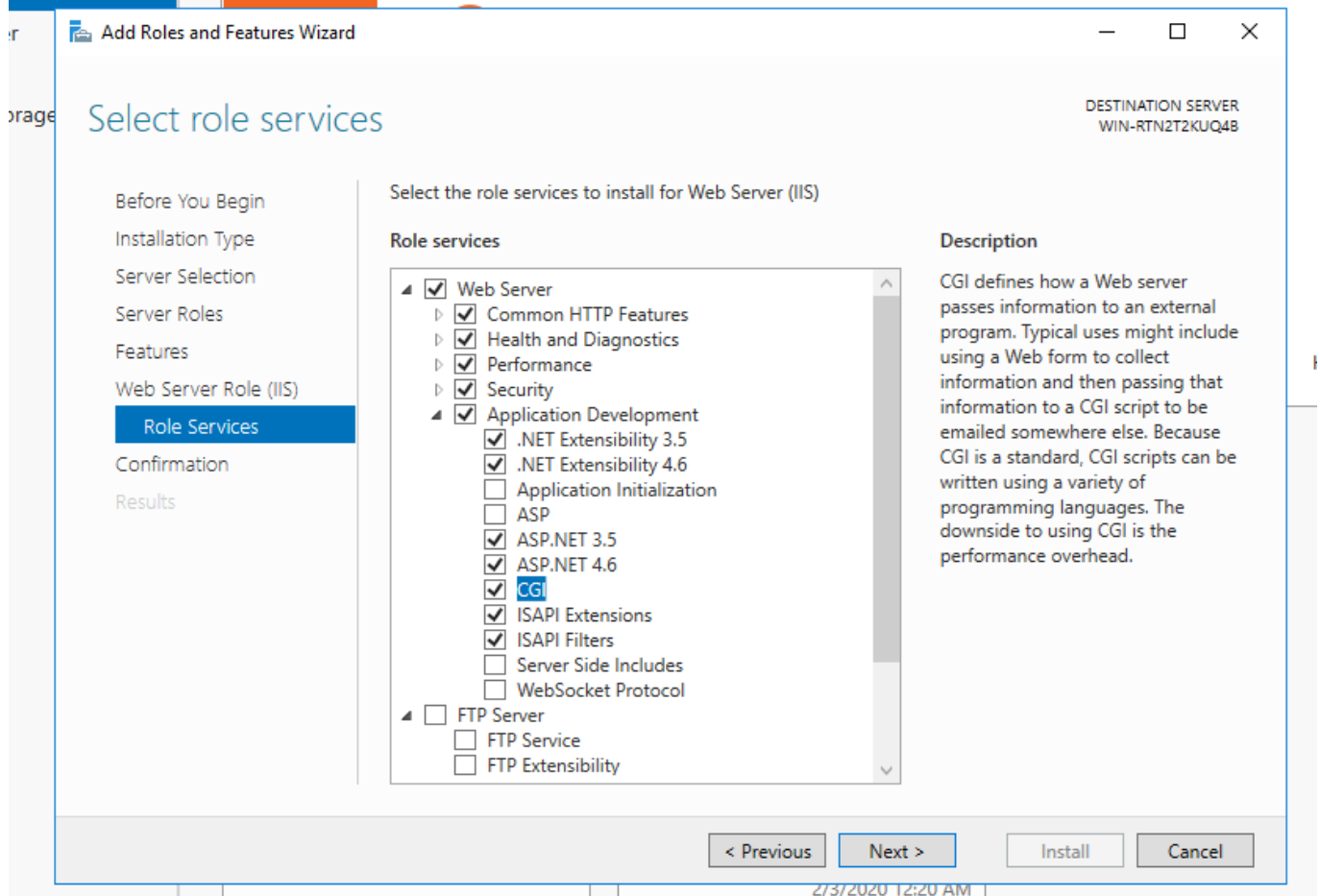
Install IIS 10

On dashboard, choose **Add roles and features**

Select server roles **Web Server (IIS)**

No change in Features

On Role Services, choose in Application Development :

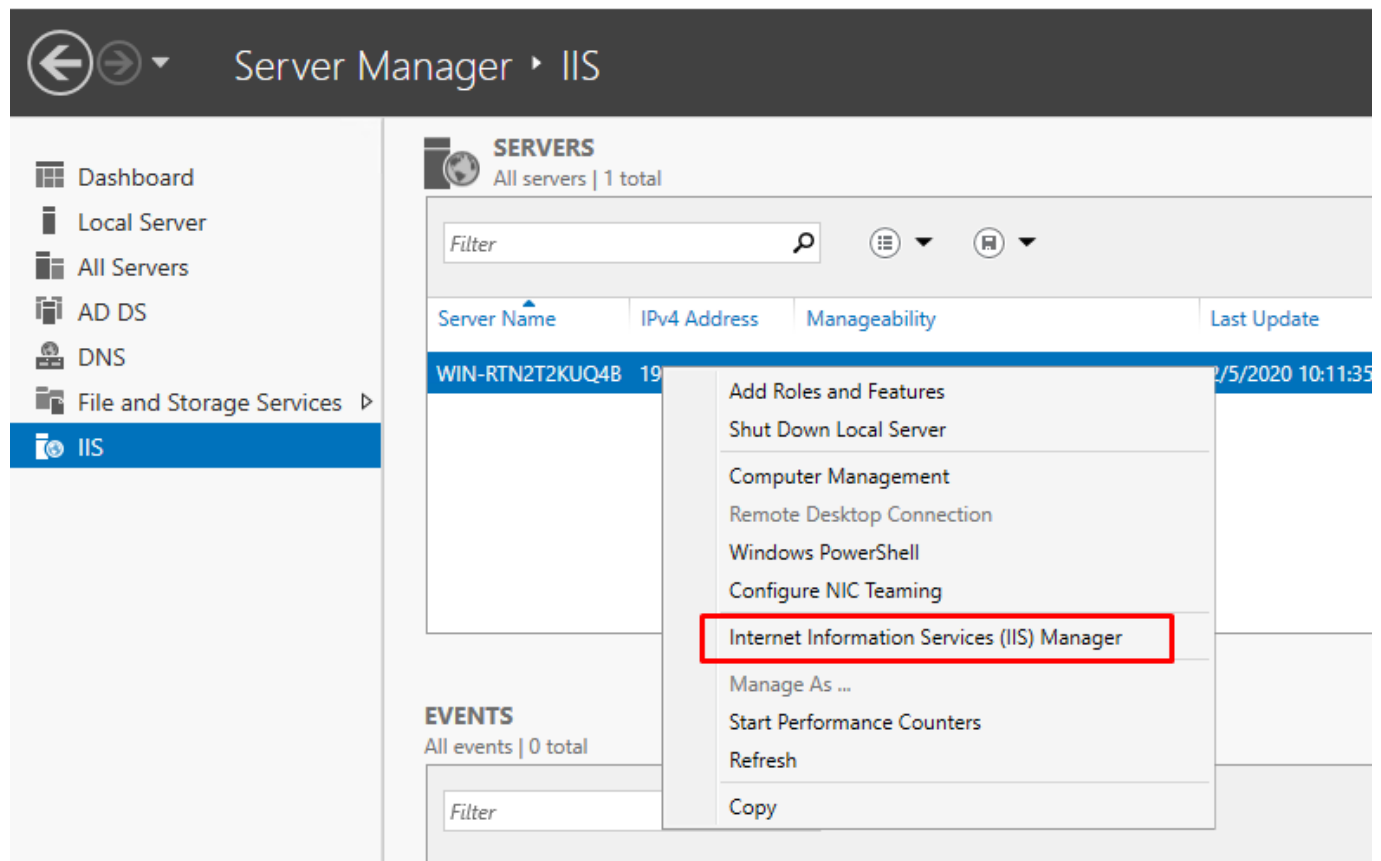


Finish installation

Config IIS 10

Go on **Internet Information Services (IIS) Manager**

Server Manager



Disabled default site : **WIN-XXX...** -> **Sites** -> **Default Web Site** -> right clic -> **Manage** -> **Stop**

Add new site : **WIN-XXX...** -> **Sites** -> right clic -> **Add Website**

Fill like this :

The screenshot shows the 'Add Website' dialog box with the following configuration:

- Site name:** Site IIS
- Application pool:** Site IIS
- Content Directory:**
 - Physical path:** C:\iis_www
 - Pass-through authentication:** (unchecked)
 - Buttons:** Connect as..., Test Settings...
- Binding:**
 - Type:** http
 - IP address:** All Unassigned
 - Port:** 8080
 - Host name:** (empty)
 - Example:** www.contoso.com or marketing.contoso.com
- Start Website immediately:** ☒
- Buttons:** OK, Cancel

Clic on the new site **Site IIS** -> **Default Document** and add new default document `iis.html`

Next go on **C:\iis_www** and add new file `iis.html` and paste "MON Site IIS" into

Add new **Inbound Rules** in firewall to **Port 8080**

Install PHP

Create folder `PHP7.4.2` in **C:**

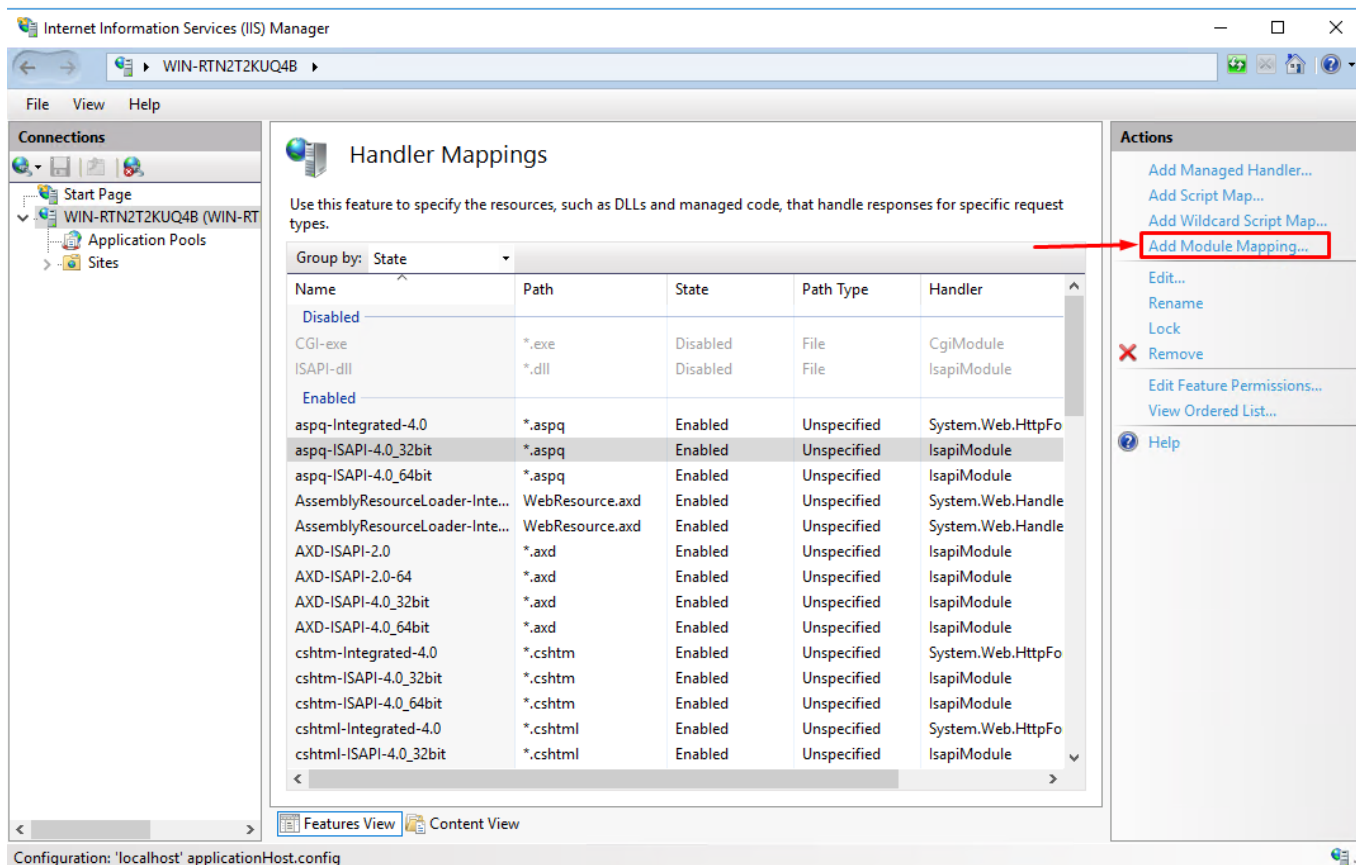
Go on <https://windows.php.net/download/> and download PHP 7.4.2 in zip format

Extract content of zip in **C:\PHP7.4.2** folder

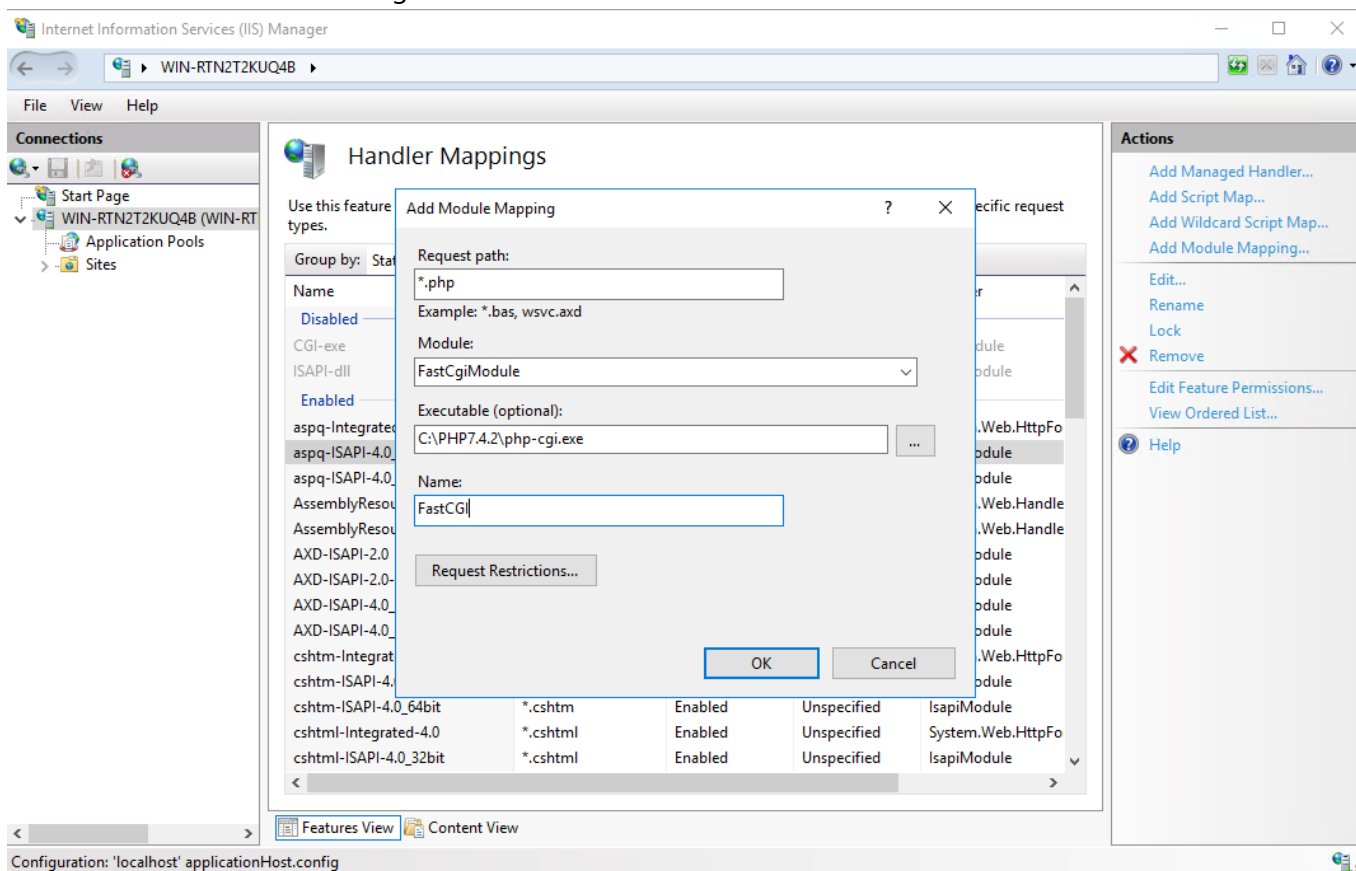
Go on https://aka.ms/vs/16/release/vc_redist.x64.exe and execute the exe file

Next go back on **Internet Information Services (IIS) Manager** -> **WIN-XXX...** and choose **Handler Mappings**

Add new mapping



Fill content with the same configuration



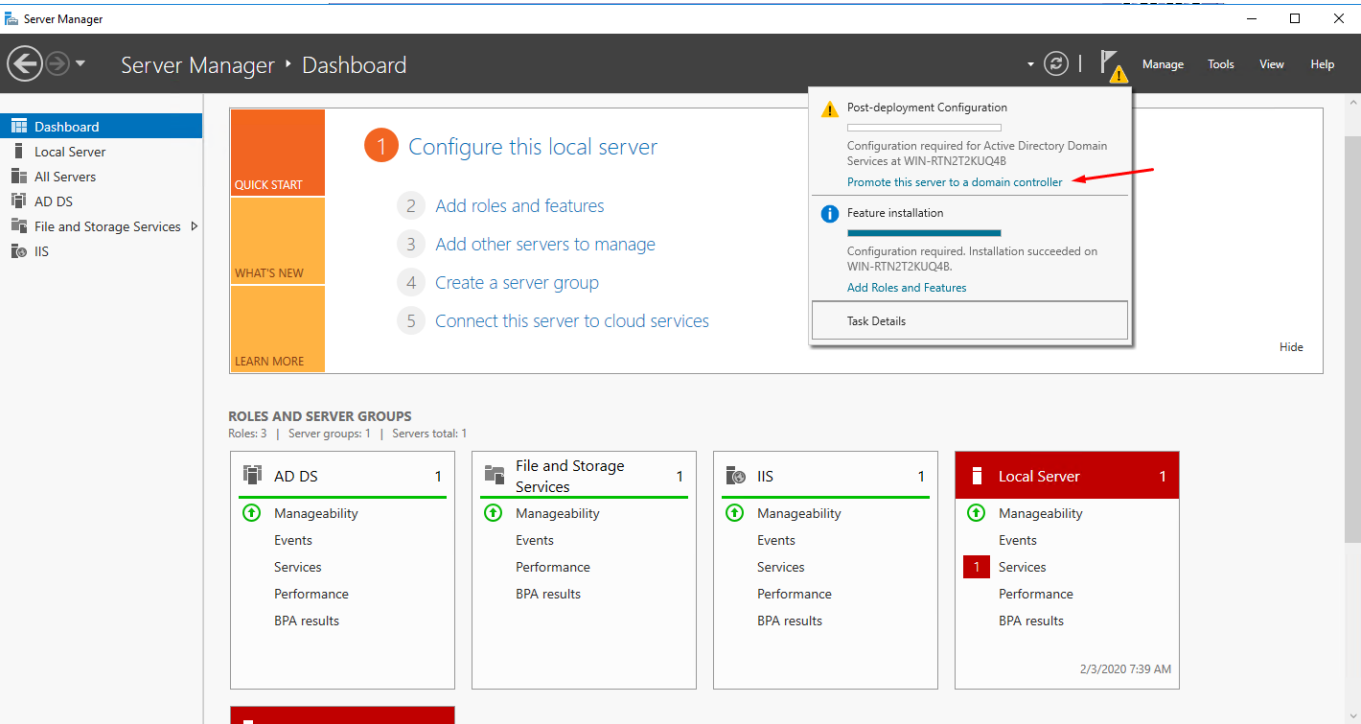
Restart site : **WIN-XXX...** -> **Sites** -> **Site IIS** -> right clic -> **Manage** -> **Restart**

Next go on **C:\iis_www** and add new file **index.php** and paste `<?php phpinfo() ?>` into

Add Auth

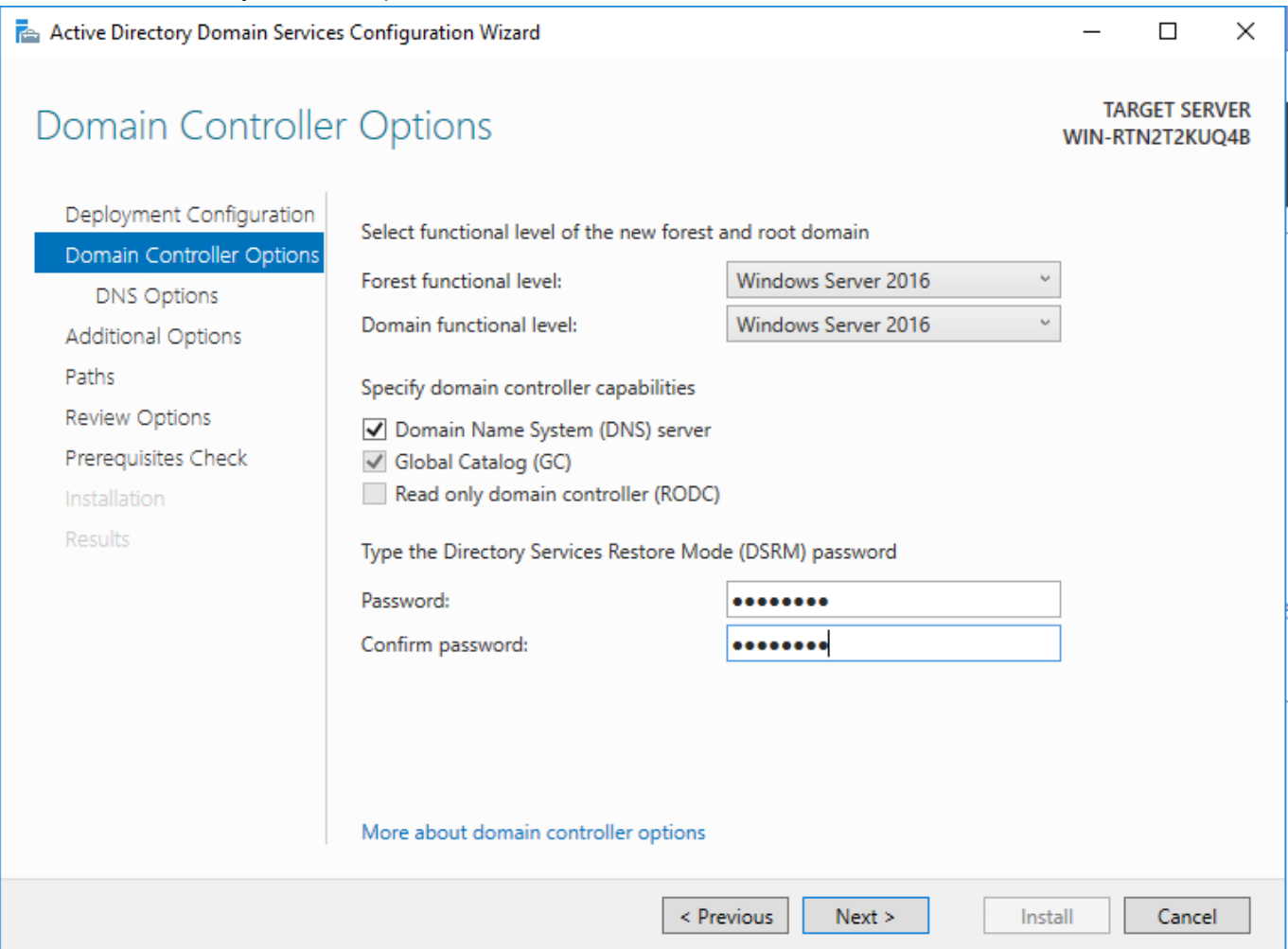
Install Server Roles **Active Directory Domain Services**

Show warning message et clic on **Promote this ...**



Add a new forest **srw3.local**

Check form is same (you choose password) :



After just go of end of config and finish installation

Add **Windows Authentication** on **Manage** -> **Add Roles and Features**

Add Roles and Features Wizard

DESTINATION SERVER
WIN-RTN2T2KUQ4B.srv3.local

Select server roles

Before You Begin
Installation Type
Server Selection
Server Roles
Features
Confirmation
Results

Select one or more roles to install on the selected server.

Roles	Description
<input type="checkbox"/> Active Directory Certificate Services	Windows authentication is a low cost authentication solution for internal Web sites. This authentication scheme allows administrators in a Windows domain to take advantage of the domain infrastructure for authenticating users. Do not use Windows authentication if users who must be authenticated access your Web site from behind firewalls and proxy servers.
<input checked="" type="checkbox"/> Active Directory Domain Services (Installed)	
<input type="checkbox"/> Active Directory Federation Services	
<input type="checkbox"/> Active Directory Lightweight Directory Services	
<input type="checkbox"/> Active Directory Rights Management Services	
<input type="checkbox"/> Device Health Attestation	
<input type="checkbox"/> DHCP Server	
<input checked="" type="checkbox"/> DNS Server (Installed)	
<input type="checkbox"/> Fax Server	
▸ <input checked="" type="checkbox"/> File and Storage Services (2 of 12 installed)	
<input type="checkbox"/> Host Guardian Service	
<input type="checkbox"/> Hyper-V	
<input type="checkbox"/> MultiPoint Services	
<input type="checkbox"/> Network Policy and Access Services	
<input type="checkbox"/> Print and Document Services	
<input type="checkbox"/> Remote Access	
<input type="checkbox"/> Remote Desktop Services	
<input type="checkbox"/> Volume Activation Services	
▾ <input checked="" type="checkbox"/> Web Server (IIS) (15 of 43 installed)	
▾ <input checked="" type="checkbox"/> Web Server (14 of 34 installed)	
▸ <input checked="" type="checkbox"/> Common HTTP Features (4 of 6 installed)	
▸ <input checked="" type="checkbox"/> Health and Diagnostics (1 of 6 installed)	
▸ <input checked="" type="checkbox"/> Performance (1 of 2 installed)	
▾ <input checked="" type="checkbox"/> Security (1 of 9 installed)	
<input checked="" type="checkbox"/> Request Filtering (Installed)	
<input type="checkbox"/> Basic Authentication	
<input type="checkbox"/> Centralized SSL Certificate Support	
<input type="checkbox"/> Client Certificate Mapping Authentication	
<input type="checkbox"/> Digest Authentication	
<input type="checkbox"/> IIS Client Certificate Mapping Authentication	
<input type="checkbox"/> IP and Domain Restrictions	
<input type="checkbox"/> URL Authorization	
<input checked="" type="checkbox"/> Windows Authentication	
▸ <input checked="" type="checkbox"/> Application Development (7 of 11 installed)	
▸ <input type="checkbox"/> FTP Server	
▸ <input checked="" type="checkbox"/> Management Tools (1 of 7 installed)	
<input type="checkbox"/> Windows Deployment Services	
<input type="checkbox"/> Windows Server Essentials Experience	
<input type="checkbox"/> Windows Server Update Services	

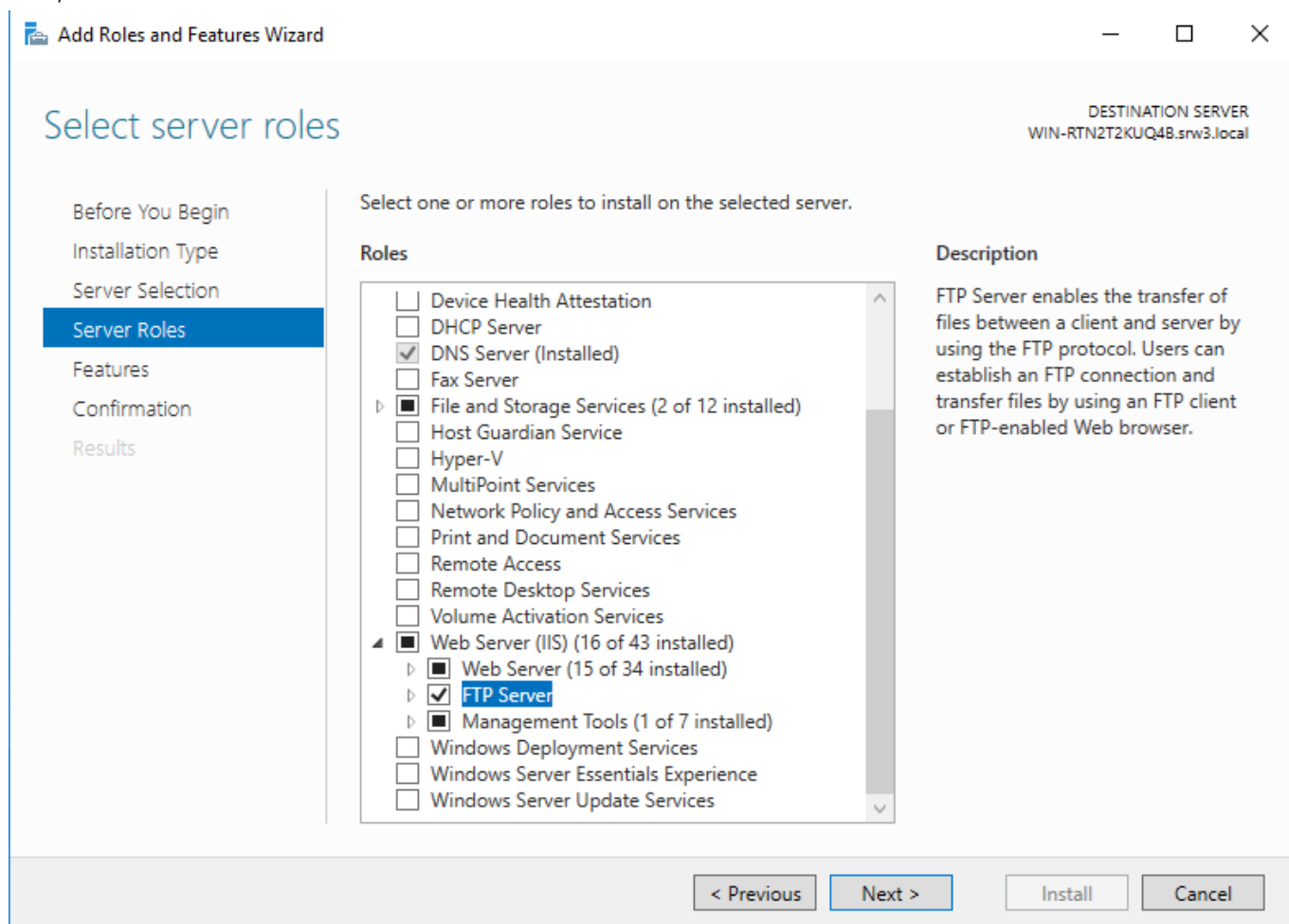
< Previous Next > Install Cancel

Next Go on **Internet Information Services (IIS) Manager** -> **WIN-XXXX...** and select **Authentication** on IIS

Disabled all and Enable **Windows Authentication**

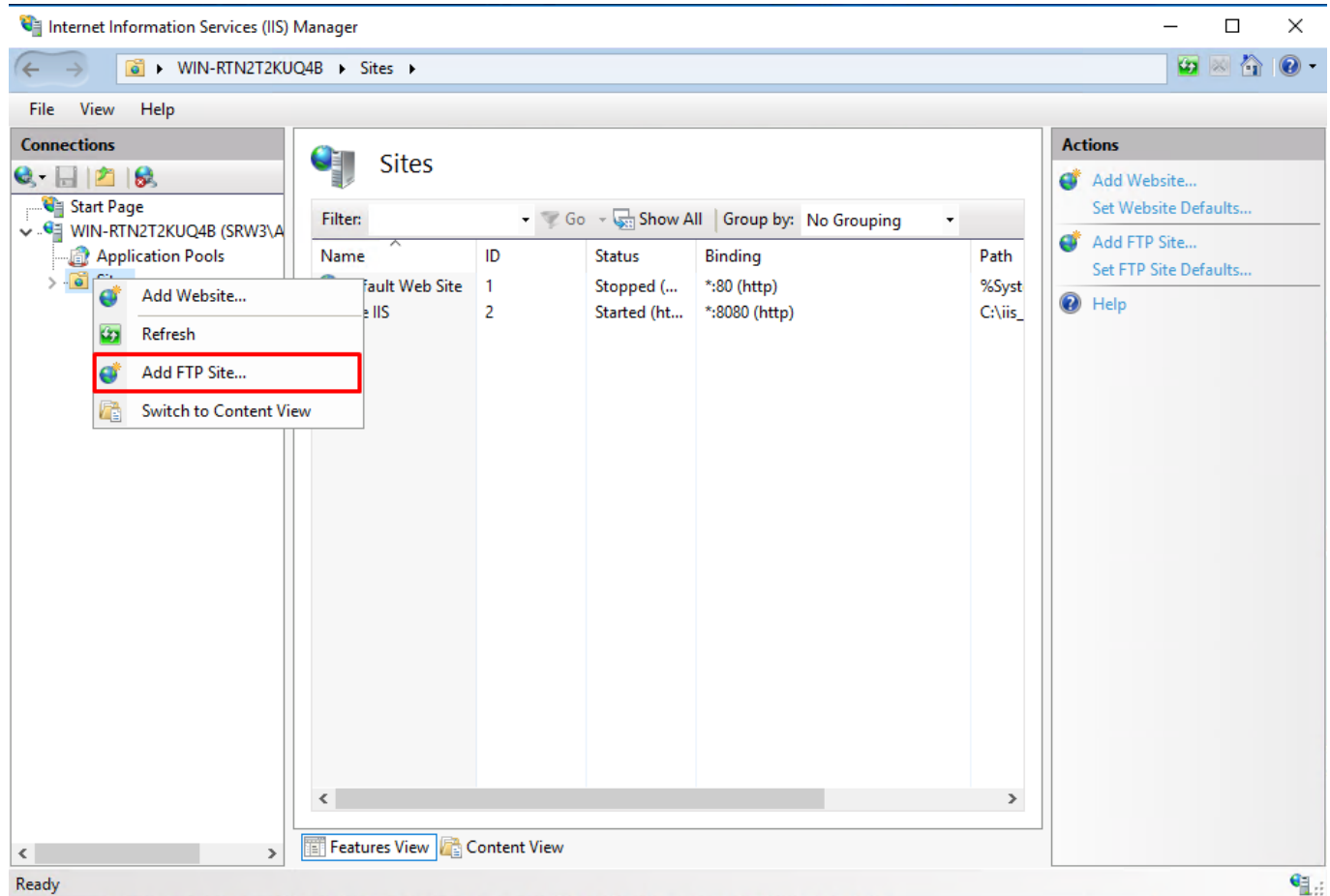
FTP

First, install Server Roles **FTP**



On confirmation page, active **Restart the dest...** and finish installation


Reload **Internet Information Services (IIS) Manager** and add FTP site :



Field form with **FTP IIS** for the name and site folder **C:\iis_www** for physical path

Check you are the same information :

Add FTP Site?×

**Binding and SSL Settings**

Binding

IP Address:

All Unassigned

Port:

21

☐ Enable Virtual Host Names:

Virtual Host (example: ftp.contoso.com):

☒ Start FTP site automatically

SSL

☒ No SSL

☐ Allow SSL

☐ Require SSL

SSL Certificate:

Not Selected

Select...

View...

Previous

Next

Finish

Cancel

Add FTP Site

?

✕

**Authentication and Authorization Information****Authentication**

- ☐ Anonymous
- ☒ Basic

Authorization

Allow access to:

All users ▼

Permissions

- ☒ Read
- ☒ Write

Previous

Next

Finish

Cancel

Apply change and restart **FTPSVC Services** on Task Manager

Task Manager

File Options View

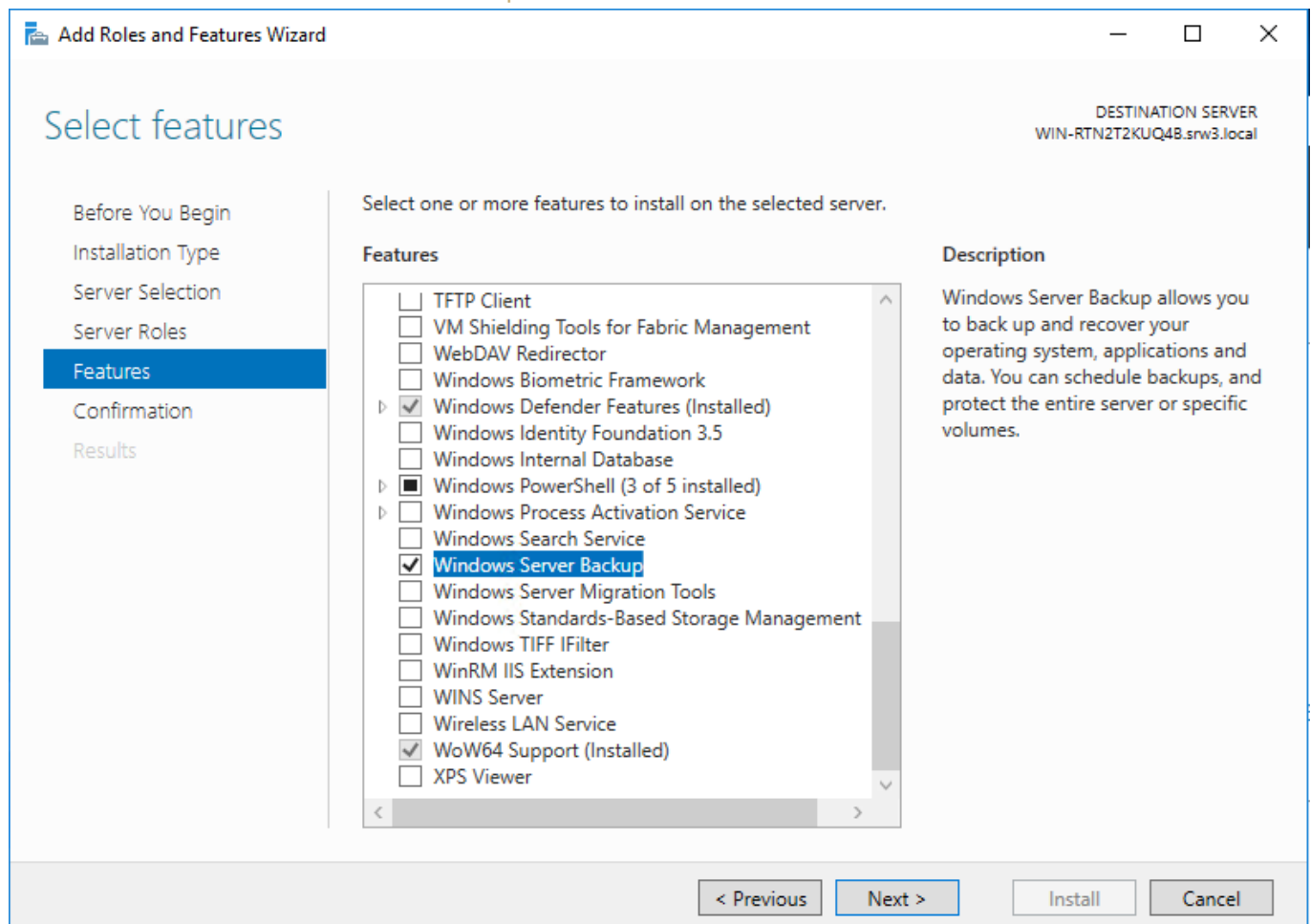
Processes Performance Users Details **Services**

Name	PID	Description	Status	Group
Dnscache	856	DNS Client	Running	NetworkService
dot3svc		Wired AutoConfig	Stopped	LocalSystemN...
DPS	1072	Diagnostic Policy Service	Running	LocalServiceN...
DsmSvc	980	Device Setup Manager	Running	netsvcs
DsRoleSvc		DS Role Server	Stopped	
DsSvc		Data Sharing Service	Stopped	LocalSystemN...
Eaphost		Extensible Authentication Protocol	Stopped	netsvcs
EFS	580	Encrypting File System (EFS)	Running	
embeddedmode		Embedded Mode	Stopped	LocalSystemN...
EntAppSvc		Enterprise App Management Service	Stopped	appmodel
EventLog	264	Windows Event Log	Running	LocalServiceN...
EventSystem	256	COM+ Event System	Running	LocalService
fdPHost		Function Discovery Provider Host	Stopped	LocalService
FDResPub		Function Discovery Resource Public...	Stopped	LocalServiceA...
FontCache	256	Windows Font Cache Service	Running	LocalService
FontCache3.0.0.0		Windows Presentation Foundation F...	Stopped	
FrameServer		Windows Camera Frame Server	Stopped	Camera
FTPSVC	548	Microsoft FTP Service		ftpsvc
gpsvc	980	Group Policy Client		netsvcs
hidserv		Human Interface Device S...		LocalSystemN...
HvHost		HV Host Service		LocalSystemN...
icssvc		Windows Mobile Hotspot		LocalServiceN...
IKEEXT		IKE and AuthIP IPsec Kevin		netsvcs

Start
Stop
Restart
Open Services
Search online
Go to details

Fewer details | Open Services

Backup

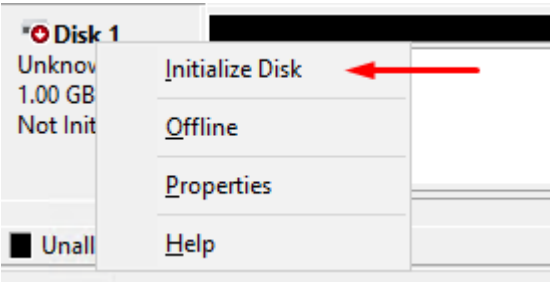
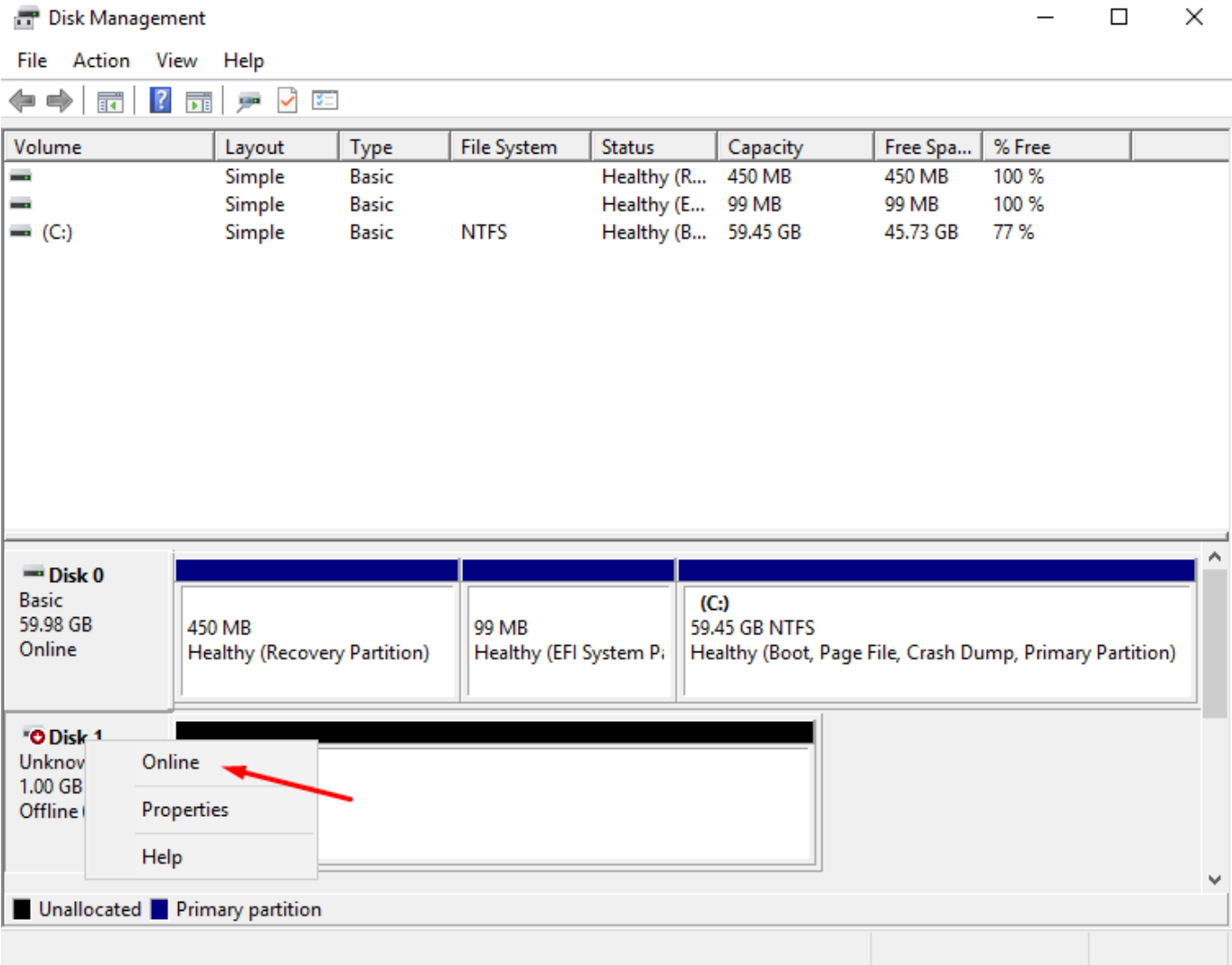
Add new feature **Windows Server Backup**

On confirmation page, active **Restart the dest...** and finish installation

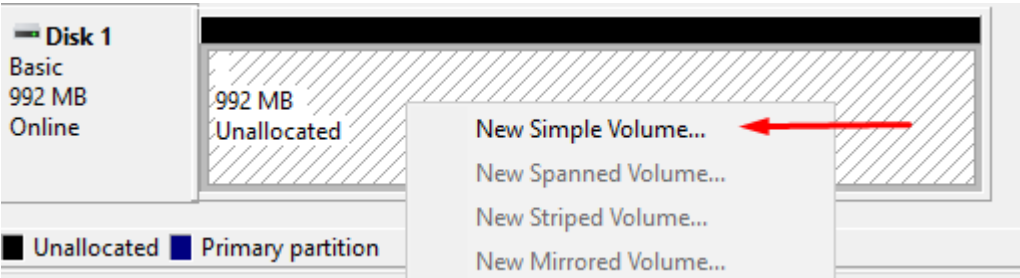
Next shut down the VM and add new disk with 1GB

Restart VM and open **Disk Management** console

Set the new disk on Online and Initialize it

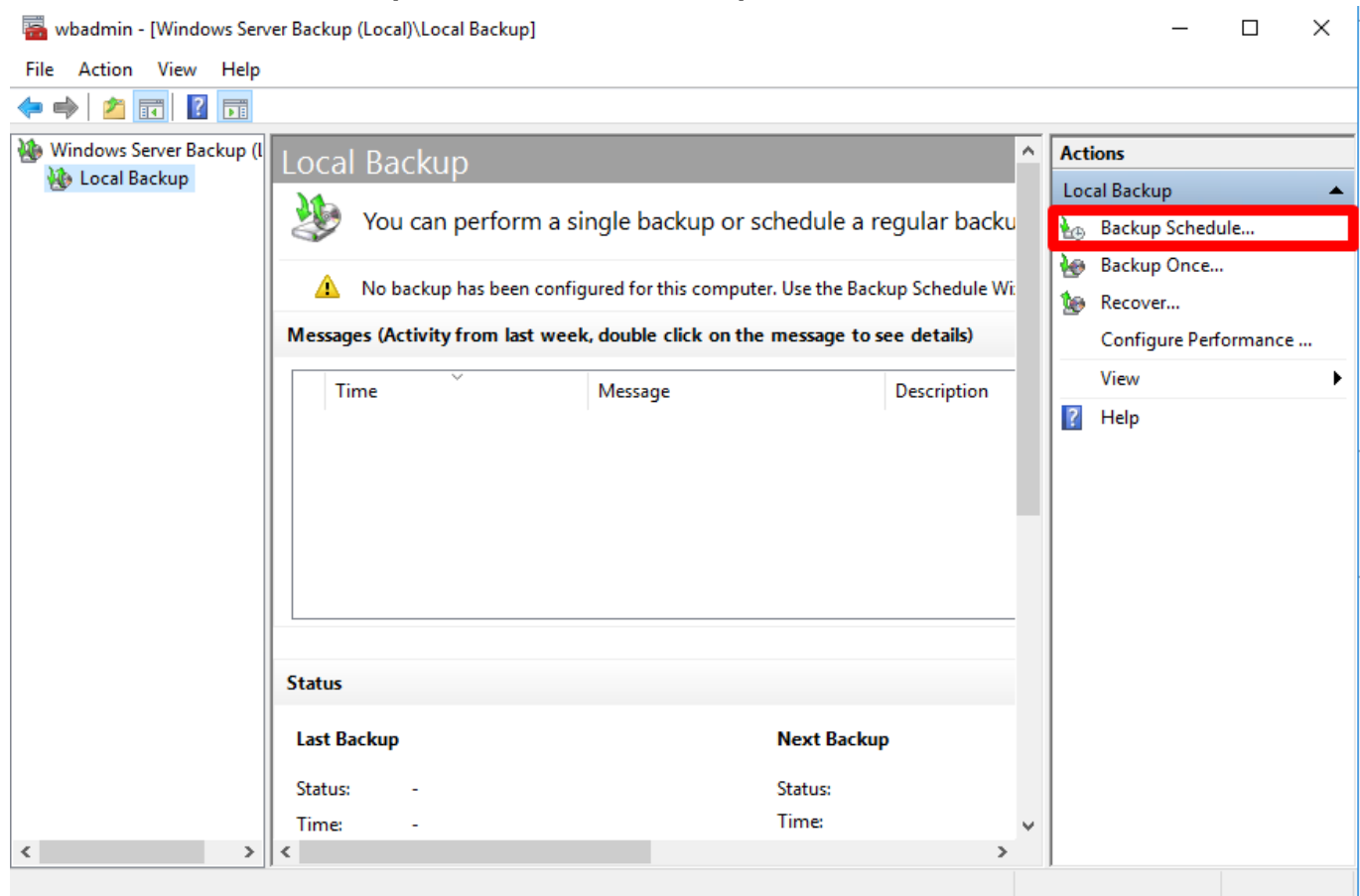


Create simple partition



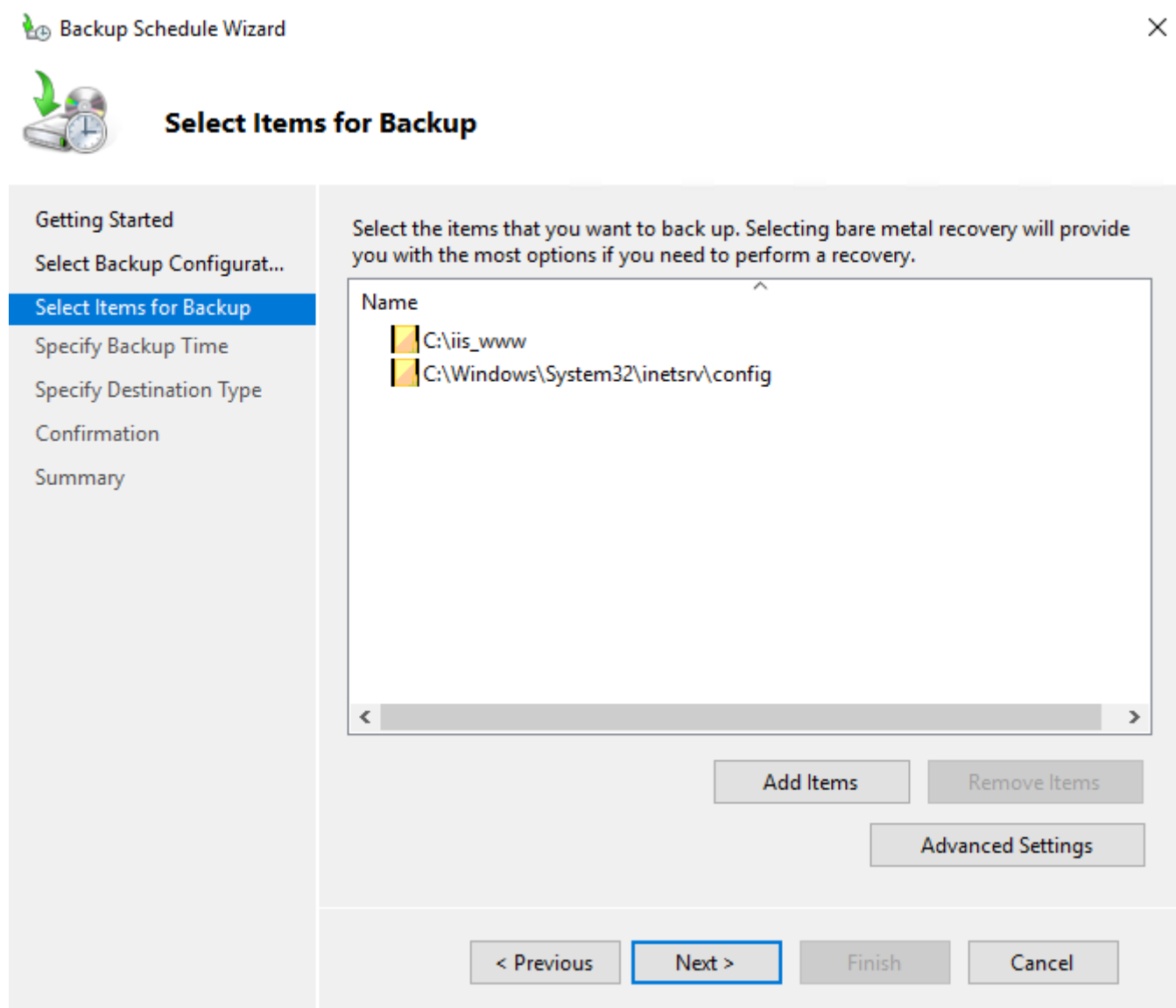
with max size, use B for drive letter, named volume Backup and finish configuration

Go on **Windows Server Backup** console and clic on **Backup Shedule...** :



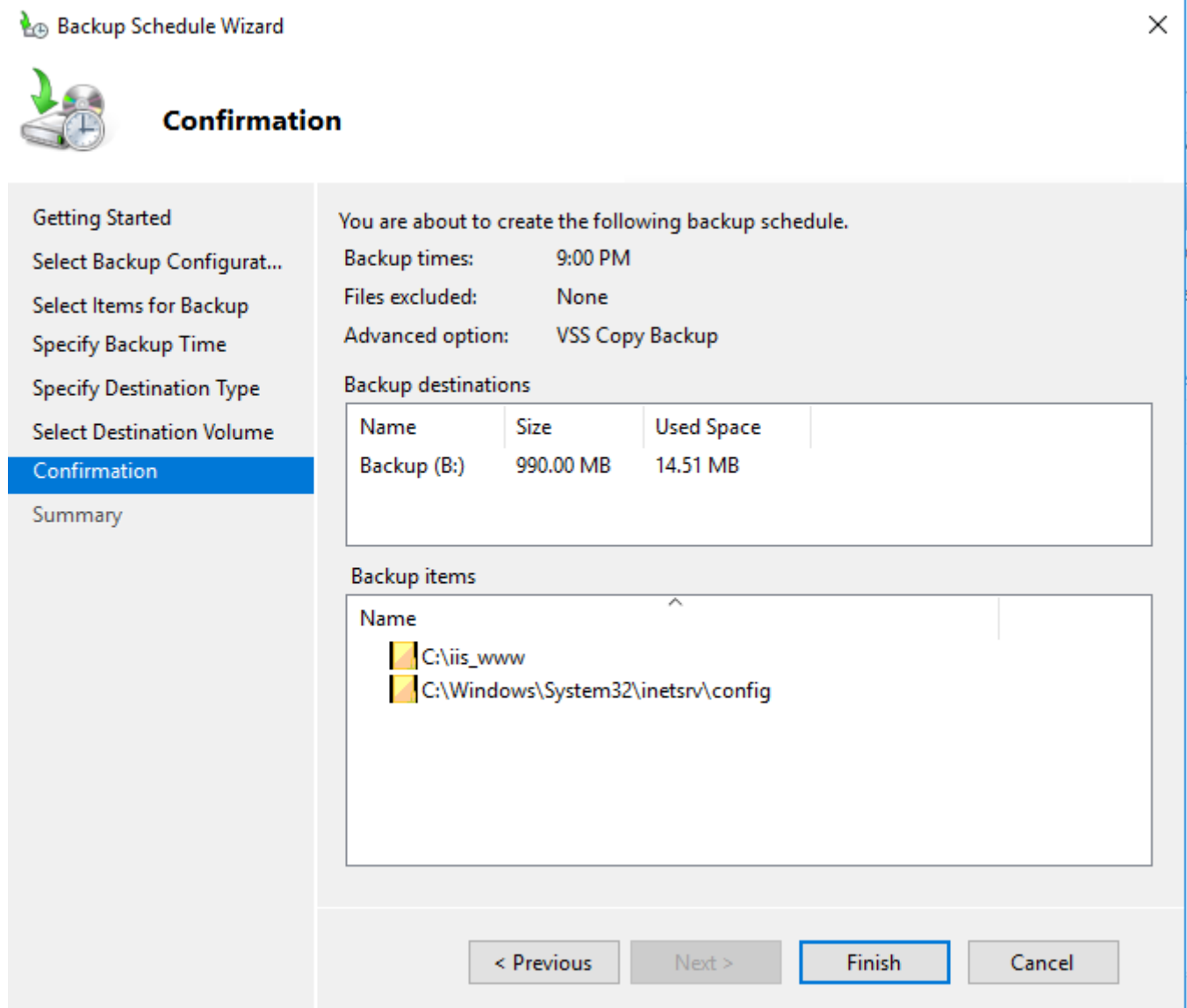
On **Select Backup Config...** choose **Custom**

On **Select Items for Backup** add "C:\iis_www\" et C:\Windows\System32\inetsrv\config\ :



Backup up to a volume and select **Backup (B:)**

Check you have the same informations :



Finish configuration

[Content Table](#)

Labo 2

Before start, disabled all active sites in **Internet Information Services (IIS) Manager** -> **WIN-XXX...** -> **Sites**

Exe 1

Run this in **cmd** :

```
md C:\SRW\Site01\ C:\SRW\repvirtuel\ && echo "indexsite01" >
C:\SRW\Site01\indexsite01.html && echo "indexvirtuel" >
C:\SRW\repvirtuel\indexvirtuel.html
```

On **Internet Information Services (IIS) Manager** -> **WIN-XXX...** -> **Sites** -> right click -> **Add Website...**, fill with the same config :

Add Website ? X

Site name: Application pool:

Content Directory

Physical path:

Pass-through authentication

Binding

Type: IP address: Port:

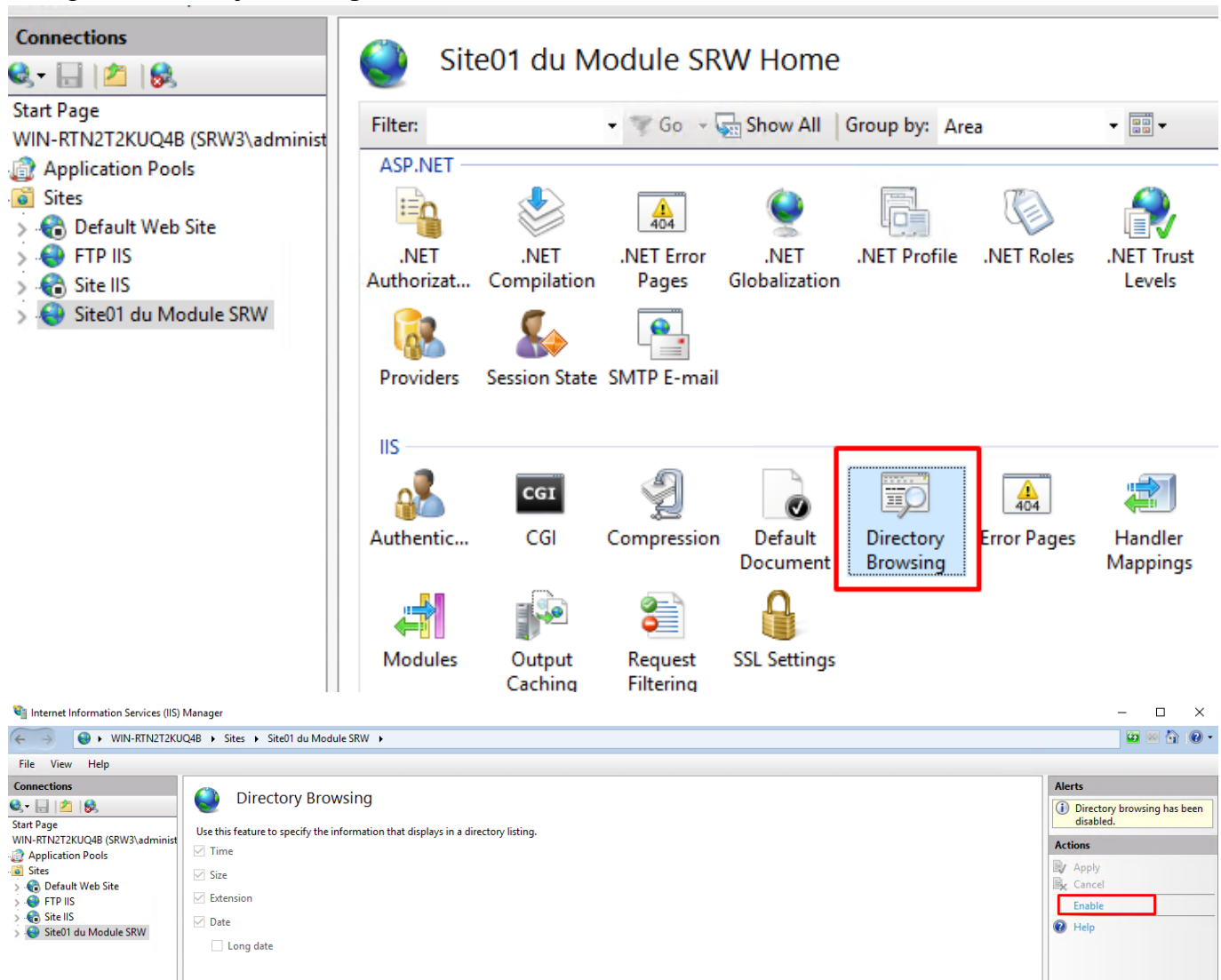
Host name:

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

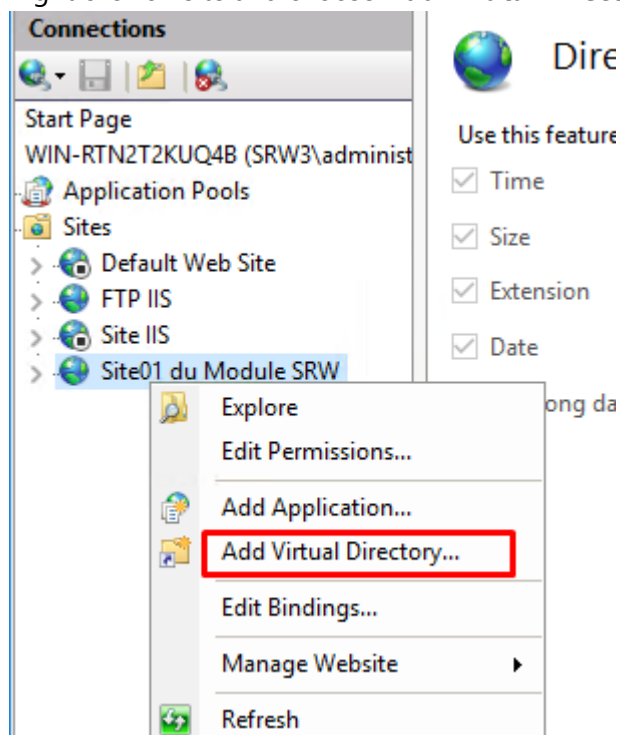
☒ Start Website immediately

Choose **Site01 ...** and open **Advanced Settings...** and change **ID** by **31** and close Open **Default Document** and remove all Add default document **indexsite01.html**

Next go on **Directory Browsing** and enable



Right click on site and choose **Add Virtual Directory...**



And fill like this :

Add Virtual Directory ? X

Site name: Site01 du Module SRW
 Path: /

Alias:

Example: images

Physical path:
 ...

Pass-through authentication

Exe 2

Run this in **cmd** on admin mode :

```
md C:\SRW\Site02\ && echo "indexsite02" > C:\SRW\Site02\indexsite02.html

cd C:\Windows\System32\inetsrv

appcmd add site /name:"Site02 du Module SRW" /id:32 /physicalPath:C:\SRW\Site02
/bindings:http/*:8888:

appcmd set config "Site02 du Module SRW" /section:defaultDocument /~files"

appcmd set config "Site02 du Module SRW" /section:defaultDocument /+files.
[value='indexsite02.html']

appcmd set config "Site02 du module SRW" /section:directoryBrowse /enabled:true

appcmd add vdir /app.name:"Site02 du Module SRW/" /path:/test2
/physicalPath:C:\SRW\repvirtuel

netsh advfirewall firewall add rule name="Port 8888" protocol=TCP dir=in
localport=8888 action=allow
```

Exe 3

Run this in **cmd** :

```
md C:\SRW\Site03\ && echo "indexsite03" > C:\SRW\Site03\indexsite03.html && echo
"" > C:\SRW\Site03\web.config
```

Next open **C:\Windows\System32\inetsrv\config\application\Host config** and add between ... :

```
<<<xml
<site name="Site03 du Module SRW" id="33" serverAutoStart="true">
  <application path="/">
    <virtualDirectory path="/" physicalPath="C:\SRW\Site03" />
    <virtualDirectory path="/test3" physicalPath="C:\SRW\repvirtuel" />
  </application>
  <bindings>
    <binding protocol="http" bindingInformation="*:8880:" />
  </bindings>
</site>
<<<
```

Save and quit file

Open **C:\SRW\Site03\web.config** and paste :

```
<<<xml
<site name="Site03 du Module SRW" id="33" serverAutoStart="true">
  <application path="/">
    <virtualDirectory path="/" physicalPath="C:\SRW\Site03" />
    <virtualDirectory path="/test3" physicalPath="C:\SRW\repvirtuel" />
  </application>
  <bindings>
    <binding protocol="http" bindingInformation="*:8880:" />
  </bindings>
</site>
<<<
```

Save and quit

Run this in **cmd** on admin mode :

```
netsh advfirewall firewall add rule name="Port 8880" protocol=TCP dir=in
localport=8880 action=allow
```

Exe 4

Show available sites :

```
appcmd list sites
```

Show sites with port **8080** :

```
appcmd list sites /bindings:http/*:8080:
```

Stop site with port **8080** :

```
appcmd list site /bindings:http/*:8080: /xml | appcmd stop site /in
```

Start site with port **8080** :

```
appcmd list site /bindings:http/*:8080: /xml | appcmd start site /in
```

Remove virtual repository **test1** from **site01** :

```
appcmd delete vdir /vdir.name:"Site01 du module SRW/test1"
```

Backup IIS config :

```
appcmd add backup monbackup
```

Remove site **Site01** :

```
appcmd delete site "Site02 du module SRW"
```

Restore preview backup on IIS config :

```
appcmd restore backup monbackup
```

[Content Table](#)

Labo 3

Add new site

Run in **cmd**:

```
md C:\SRW\labo\ C:\SRW\labo\Private\ C:\SRW\labo\Public\ && echo "labo" >
C:\SRW\labo\labo.html && echo "private" > C:\SRW\labo\Private\private.html && echo
"public" > C:\SRW\labo\Public\public.html

cd C:\Windows\System32\inetsrv

appcmd list site /xml /state:"$=started" | appcmd stop site /in

appcmd add site /name:"labo du Module SRW" /id:41 /physicalPath:C:\SRW\labo
/bindings:http/*:80:

appcmd set config "labo du Module SRW" /section:defaultDocument /~files"
appcmd set config "labo du Module SRW" /section:defaultDocument /+files.
[value='labo.html']

appcmd set config "labo du Module SRW/Private" /section:defaultDocument /~files"
appcmd set config "labo du Module SRW/Private" /section:defaultDocument /+files.
[value='private.html']

appcmd set config "labo du Module SRW/Public" /section:defaultDocument /~files"
appcmd set config "labo du Module SRW/Public" /section:defaultDocument /+files.
[value='public.html']

appcmd set config "labo du Module SRW" /section:directoryBrowse /enabled:true
```

Test site

Test access (where IP is Server address):

```
http://192.168.119.141 => access granted
http://192.168.119.141/public => access granted
http://192.168.119.141/private => access granted
```

Config rules

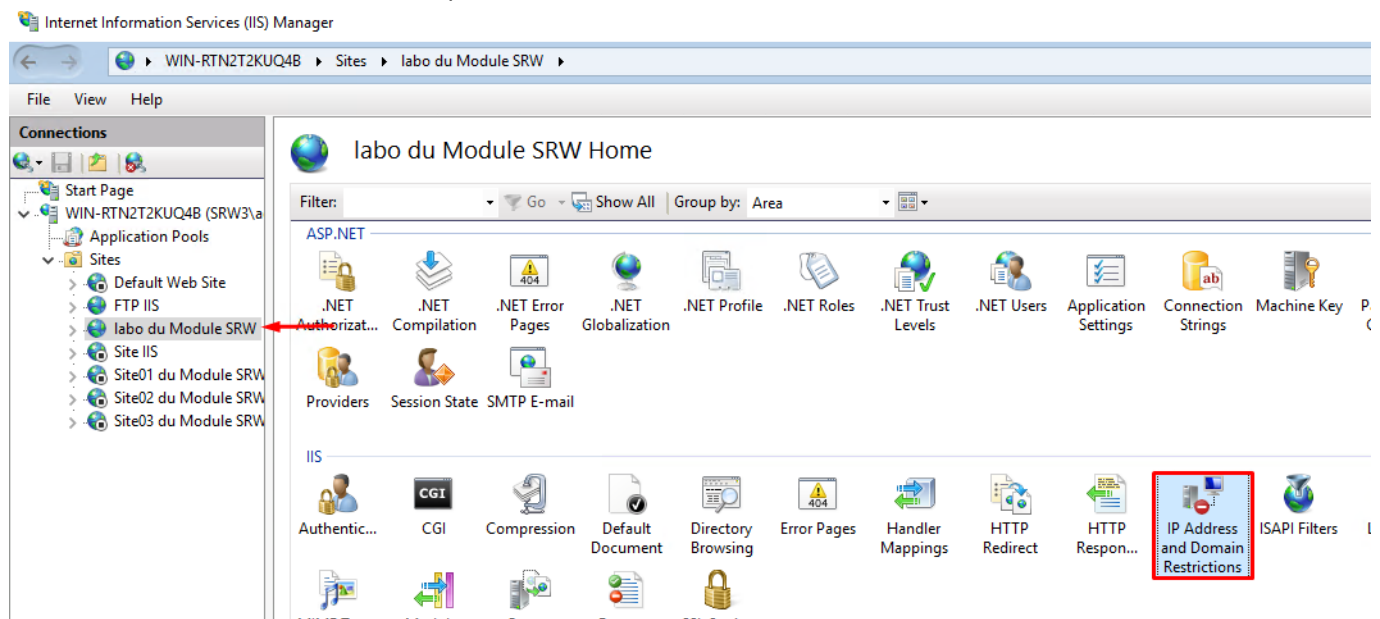
Open **Server Manager** console and choose **Add Roles and Features**

Go to **Server Roles** -> **Web Server (IIS)** -> **Web Server** -> **Security**

Check **IP and Domain Restrictions** and finish installation

Next open **Internet Information Services (IIS) Manager**

Select **labo du Module SRW** and open **IP Address and Domain Restrictions**



Choose **Add Deny Entry...** and write IP of WMvare Network adapter (192.168.119.1 for me)

Test site

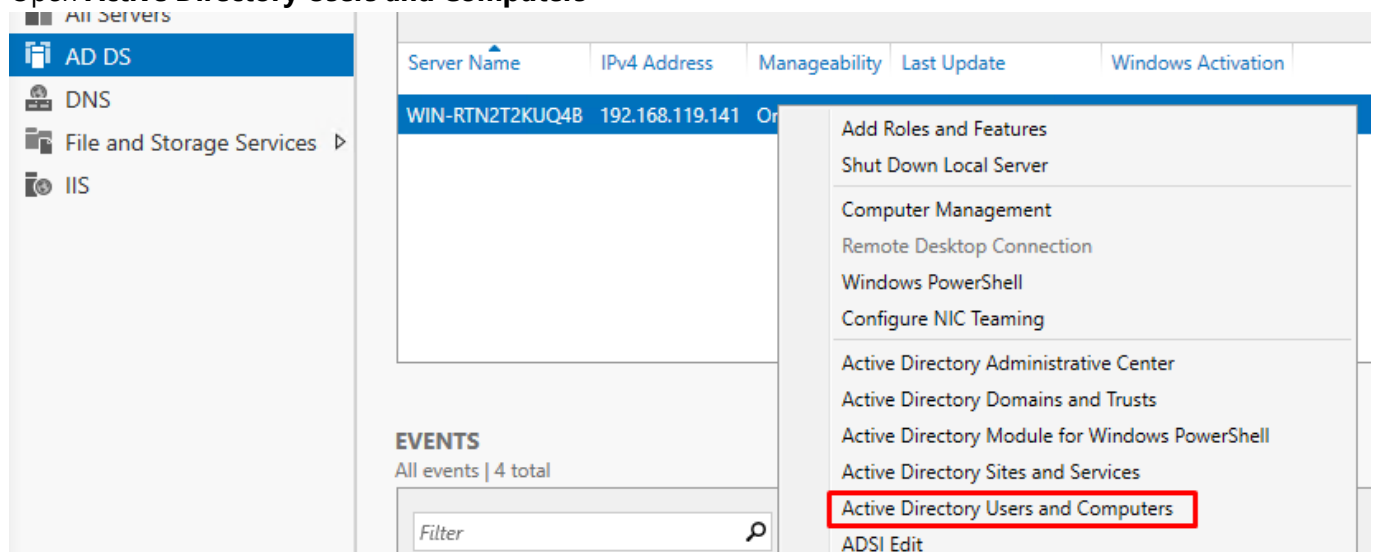
Test access (where IP is Server address):

```
http://192.168.119.141 => access denied
http://192.168.119.141/public => access denied
http://192.168.119.141/private => access denied
```

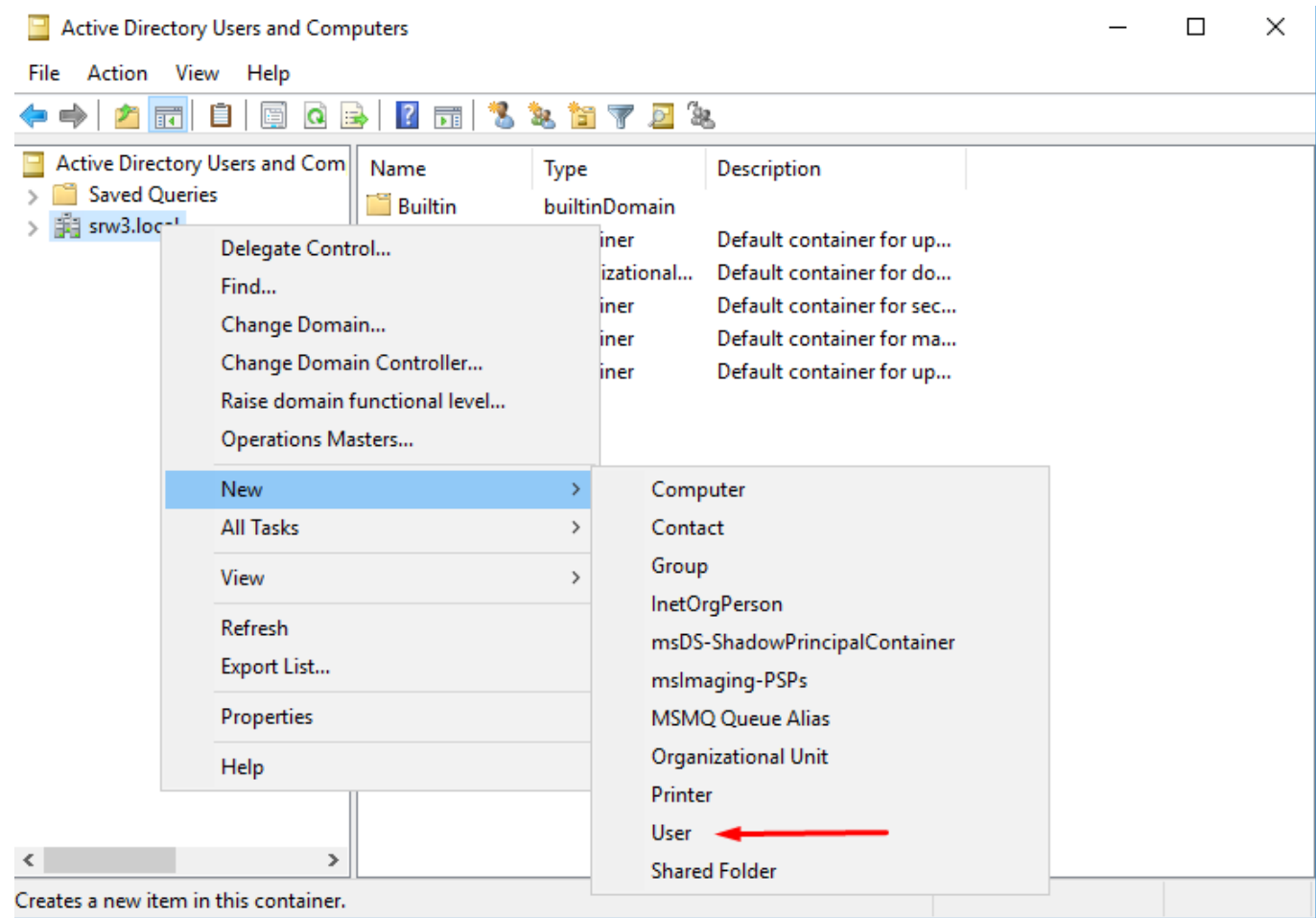
Config Auth

Remove deny IP previously added

Open **Active Directory Users and Computers**



Add new User in **srw3** forest



Fill like this

The 'New Object - User' dialog box is shown. The 'Create in:' field is set to 'srw3.local/'. The fields are filled as follows:

- First name: SRW
- Initials: (empty)
- Last name: labo
- Full name: SRW|labo
- User logon name: SRW_labo
- Domain (dropdown): @srw3.local
- User logon name (pre-Windows 2000): SRW3\SRW_labo

At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

New Object - User ✕

Create in: `srw3.local/`

Password:

Confirm password:

☐ User must change password at next logon

☐ User cannot change password

☐ Password never expires

☐ Account is disabled

< Back Next > Cancel

Repeat with another new user named `SRW_private` with password `Qwertz123456`

Go on **Internet Information Services (IIS) Manager** -> **WIN-XXX...** -> **Sites** -> **labo du Module SRW** -> **Authentication**

Enable and edit **Anonymous Authentication** and set the new user `SRW_labo` to the specific user

On **Server Management**, add new roles `Digest Authentication` and `URL Authorization`

Select server roles

Before You Begin

Installation Type

Server Selection

Server Roles

Features

Confirmation

Results

Select one or more roles to install on the selected server.

Roles	Description
▶ <input checked="" type="checkbox"/> Common HTTP Features (5 of 6 installed)	URL A
▶ <input checked="" type="checkbox"/> Health and Diagnostics (1 of 6 installed)	create
▶ <input checked="" type="checkbox"/> Performance (1 of 2 installed)	Web c
▶ <input checked="" type="checkbox"/> Security (3 of 9 installed)	rules t
<input checked="" type="checkbox"/> Request Filtering (Installed)	heade
<input type="checkbox"/> Basic Authentication	autho
<input type="checkbox"/> Centralized SSL Certificate Support	empic
<input type="checkbox"/> Client Certificate Mapping Authentication	certain
<input checked="" type="checkbox"/> Digest Authentication	conte
<input type="checkbox"/> IIS Client Certificate Mapping Authentication	pages
<input checked="" type="checkbox"/> IP and Domain Restrictions (Installed)	
<input checked="" type="checkbox"/> URL Authorization	
<input checked="" type="checkbox"/> Windows Authentication (Installed)	
▶ <input checked="" type="checkbox"/> Application Development (7 of 11 installed)	

Open site **labo du Module SRW**, select **Private** and choose **Authentication**

Enable `Digest Authentication` and `Windows Authentication`, disable others

Edit `Digest Authentication` and add `srw3.local`

Open **Authorization Rules** and edit the rule

Change To specific users **SRW_private**

Restart site **labo du Module SRW**

Test

Test access (where IP is Server address):

```
http://192.168.119.141 => access granted
http://192.168.119.141/public => access granted
http://192.168.119.141/private => authentication required, granted with
SRW_private user
```

[Content Table](#)

Lab 4

Stop the machine and edit th config

Check the **Network adapter** is : **NAT**

Add new network adapter **Network adapter 2** and define it : **Bridged**

Start server

Open **Active Directory User and Computer** -> **srw3.local** -> **Users**

Add 4 groups : **Directeurs**, **Ingénieurs**, **Comptables**, **Clients**

