

Informatika, 2. maila

Active Directory (AD) Instalazioa

1

Beharrezko baldintzak

Beharrezko baldintzak

- 1. Zerbitzariari IP helbide estatiko bat esleituta edukitzea.**

- 2. Zerbitzariari izen bat esleitzea.**

- 3. AD-arekin batera, DNS zerbitzaria instalatzea.**

*AD-aren instalazioarekin batera egiten da.

- Baldin eta domeinuaren lehen AD-a bada.

- AD batek beti izan behar du DNS zerbitzari bat.

Zergatik behar da DNS zerbitzaria instalatzea?

AD-k beharrezkoak du DNS-a hainbat funtziok kritikoetarako:

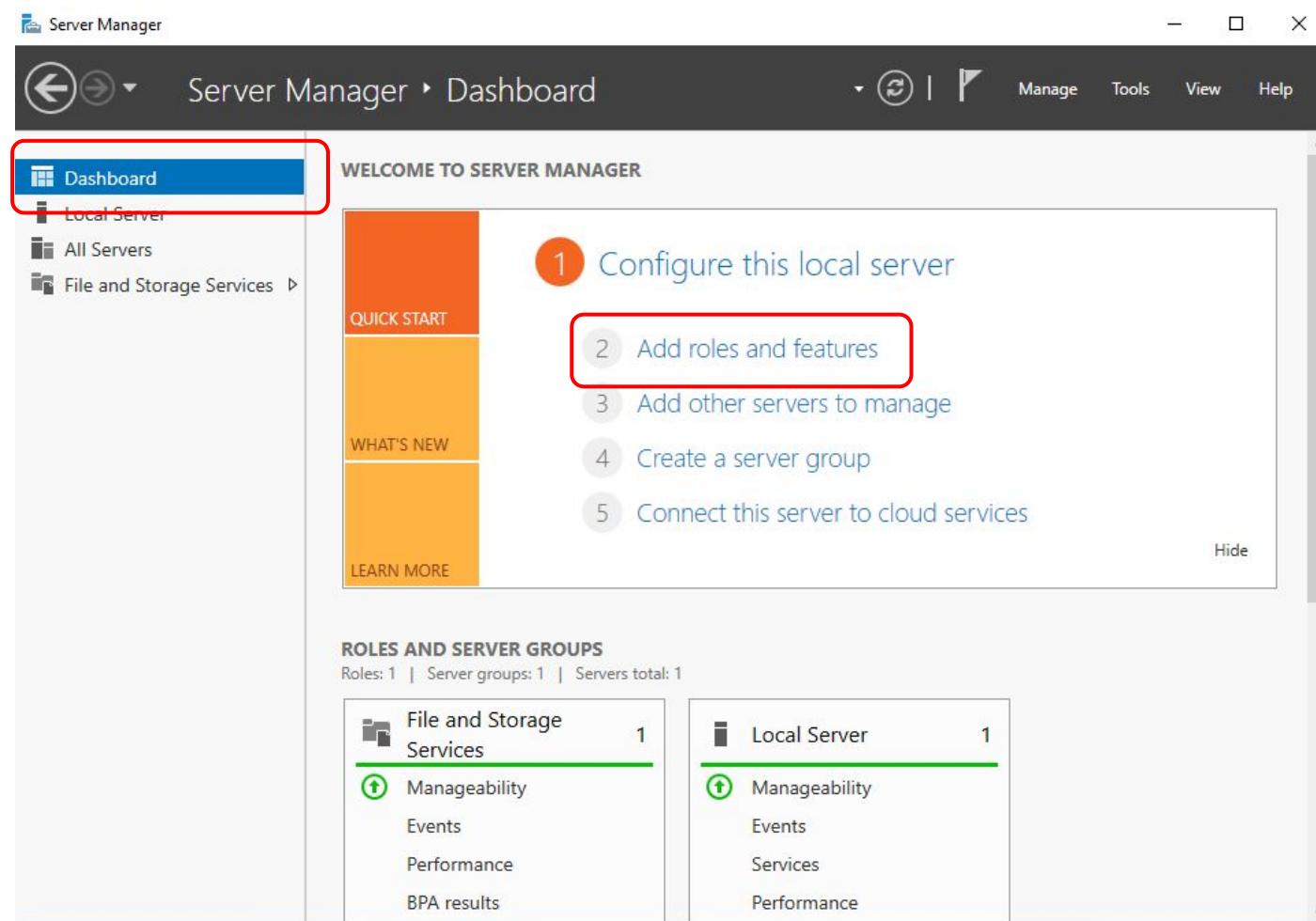
- Domeinu Kontrolatzailea aurkitzea:** AD bezeroak eta beste domeinu kontrolatzaileek DNS erabiltzen dute domeinu kontrolatzaileak aurkitzeko AD ingurunean. SRV erregistroak DNS-en funtsezkoak dira prozesu honetarako.
- Zerbitzua aurkitzea:** AD zerbitzu desberdinek, hala nola Kerberos, LDAP eta Global Catalog, DNS zerbitzuaren (SRV) erregistroak erabiltzen dituzte bezeroek eta beste domeinu kontrolatzaileek aurkitzeko.
- Izenen ebazena:** AD DNS-rekin guztiz integratzen da domeinuaren barruan izenen ebazpenerako. DNS gabe, AD objektuak (hala nola ordenagailuak eta erabiltzaileak) ezin dira izenez aurkitu, eta horrek AD ingurunea funtzionamendu gabe utziko luke.

2

AD - GUI bidezko instalazioa

AD - GUI Instalazioa

- Server Manager → Dashboard → Add roles and features



AD - GUI Instalazioa

Add Roles and Features Wizard

DESTINATION SERVER
server

Before you begin

Before You Begin

- Installation Type
- Server Selection
- Server Roles
- Features
- Confirmation
- Results

This wizard helps you install roles, role services, or features. You determine which roles, role services, or features to install based on the computing needs of your organization, such as sharing documents, or hosting a website.

To remove roles, role services, or features:
[Start the Remove Roles and Features Wizard](#)

Before you continue, verify that the following tasks have been completed:

- The Administrator account has a strong password
- Network settings, such as static IP addresses, are configured
- The most current security updates from Windows Update are installed

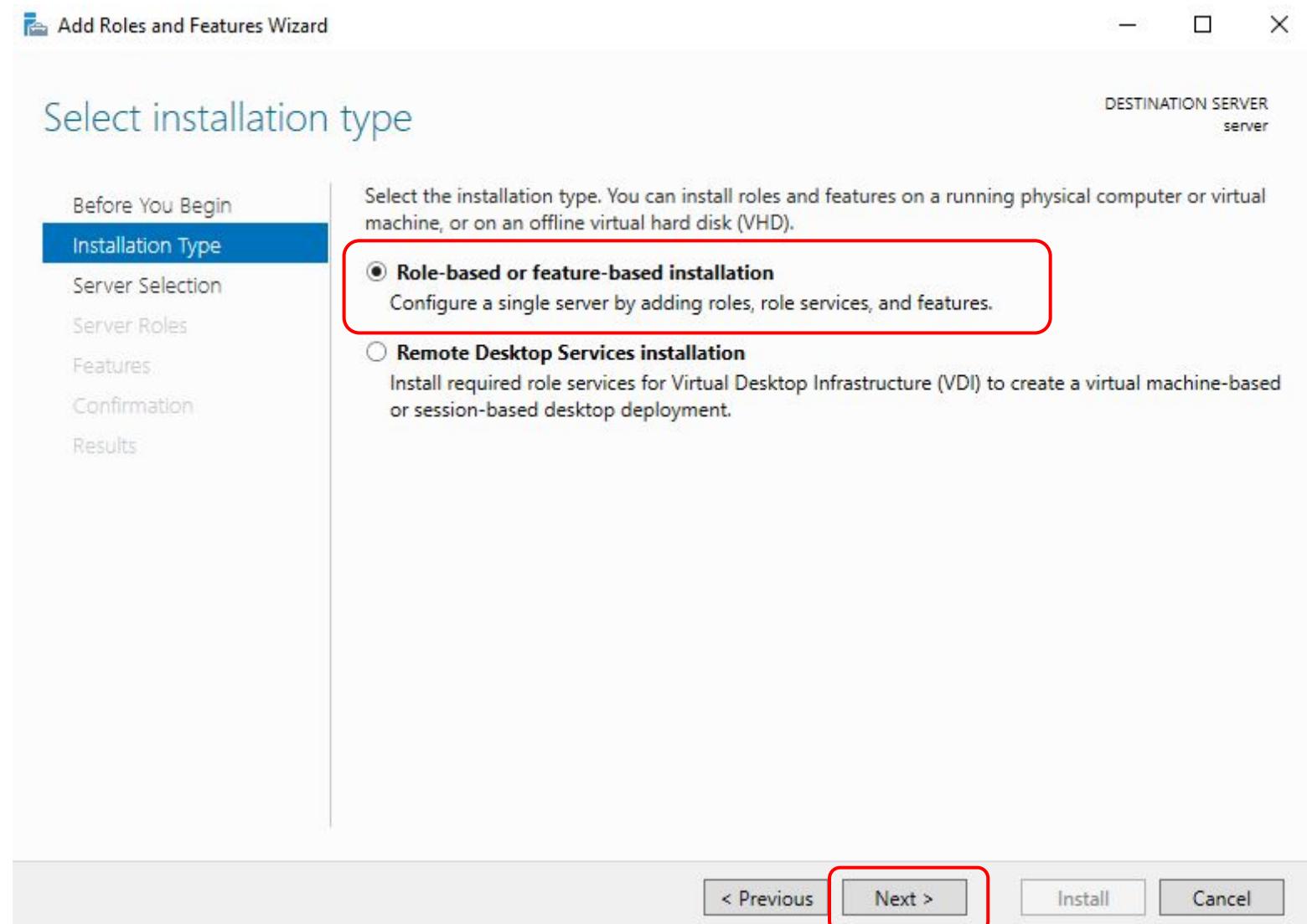
If you must verify that any of the preceding prerequisites have been completed, close the wizard, complete the steps, and then run the wizard again.

To continue, click Next.

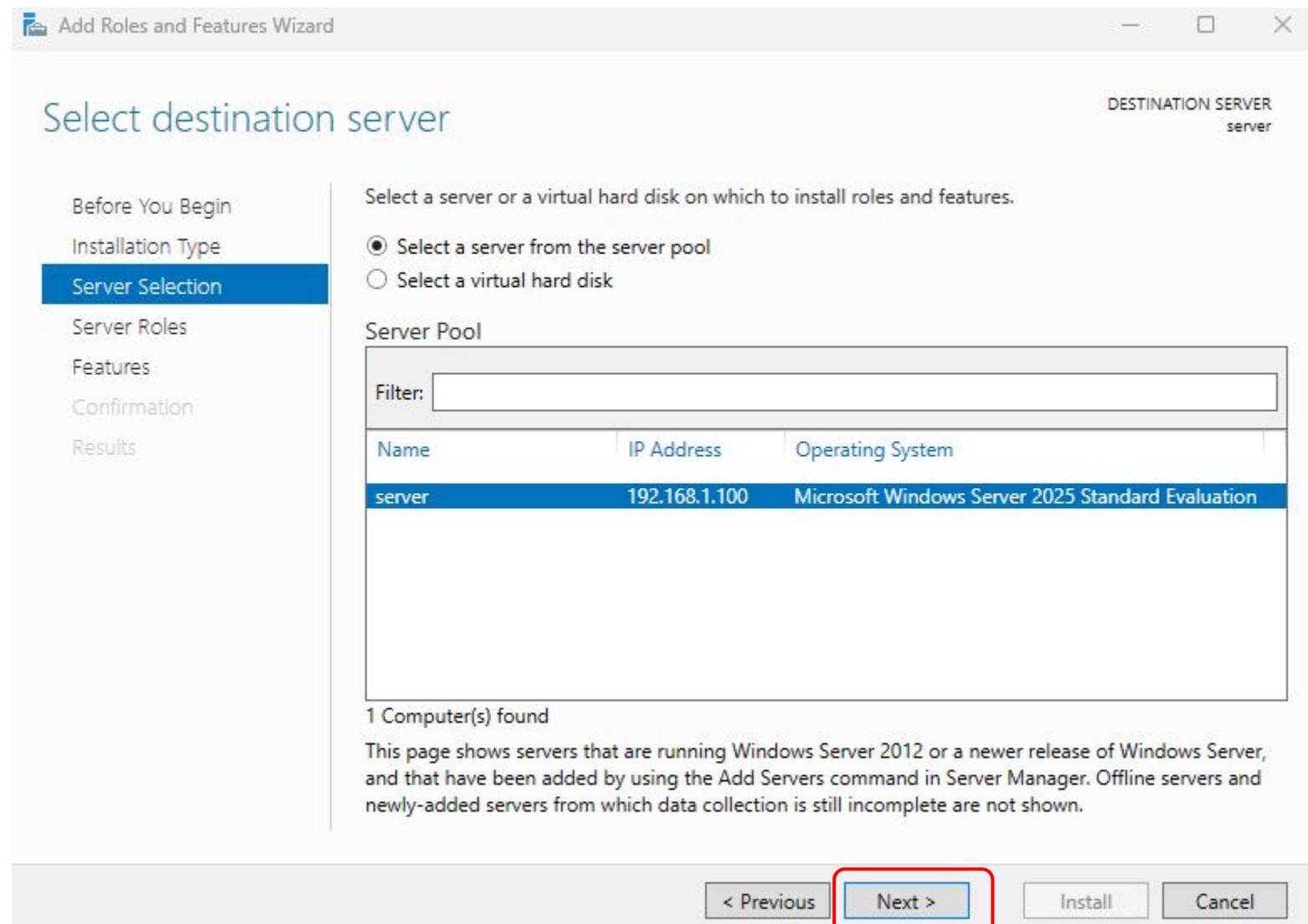
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< Previous **Next >** Install Cancel

AD - GUI Instalazioa

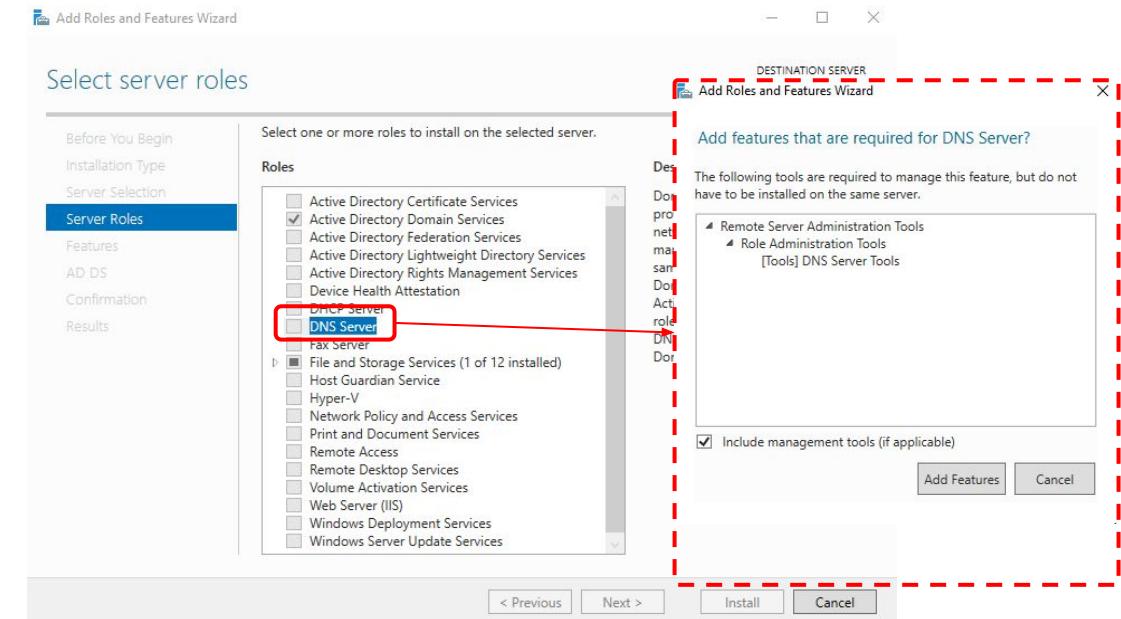
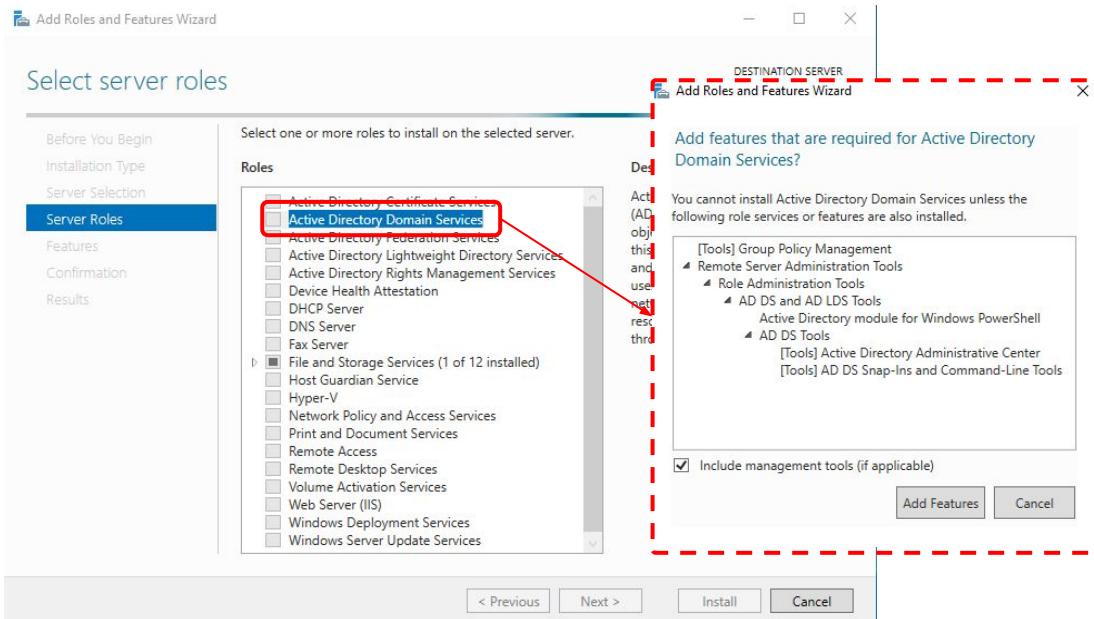


AD - GUI Instalazioa

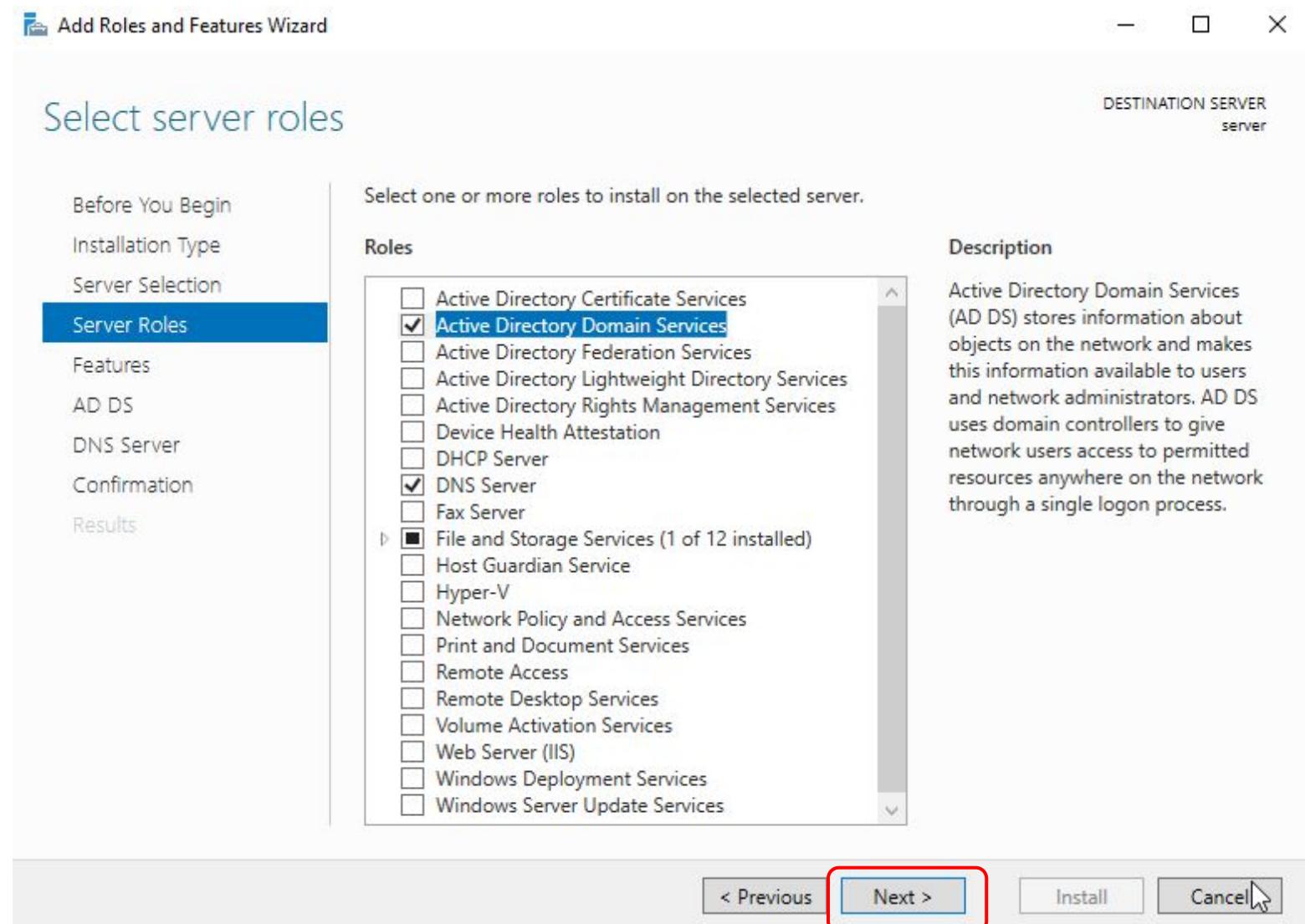


AD - GUI Instalazioa

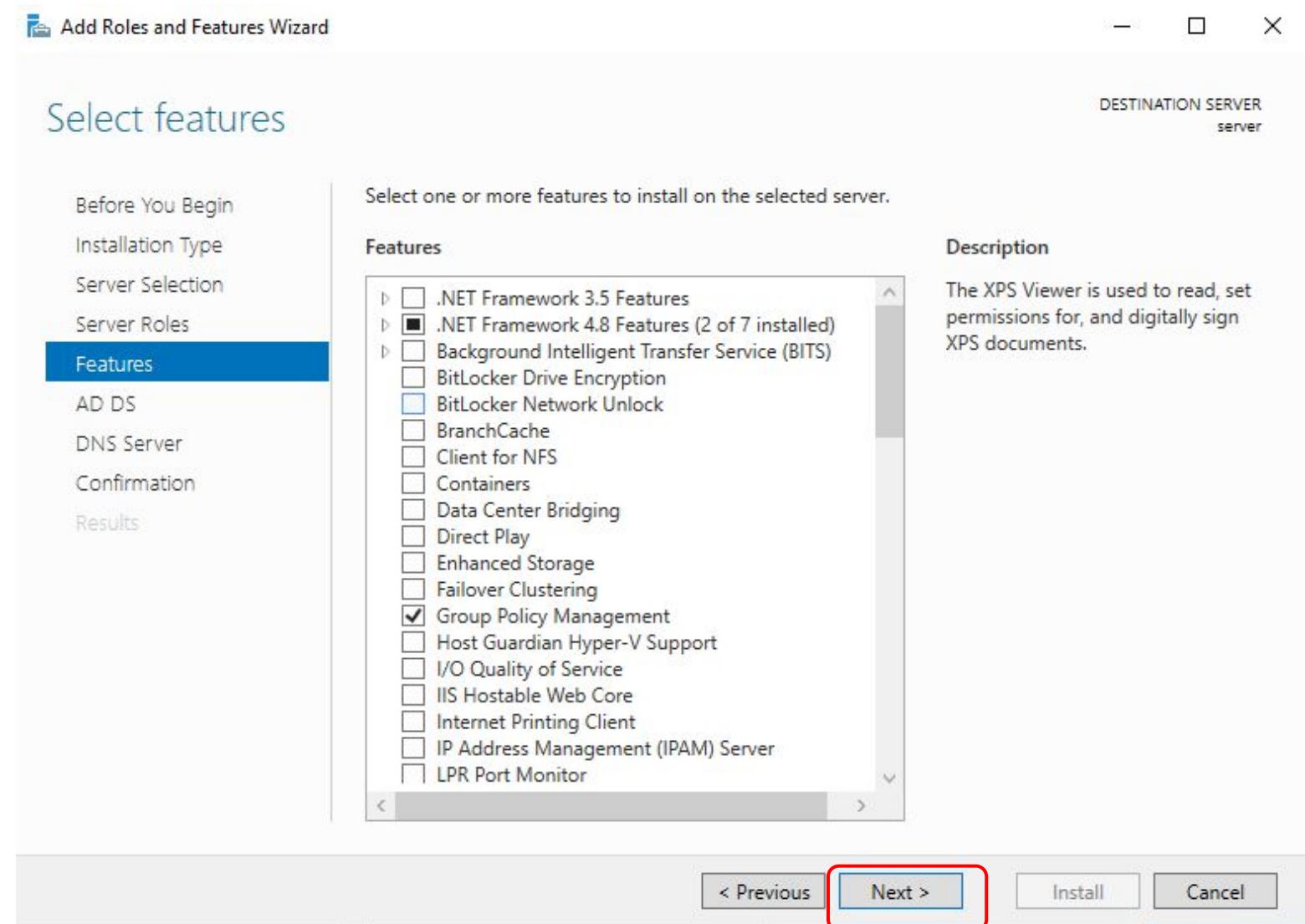
- “Server Roles”-en, **Active Directory Domain Services** eta **DNS Server** rolak aukeratu behar dira.
 - Horietako bakoitzak aukeratzean leihoa bat irekiko da, rolarekin batera instalatuko diren ezaugarriak erakutsiz.
 - Leihon honetan **Add Features** sakatu.



AD - GUI Instalazioa



AD - GUI Instalazioa



AD - GUI Instalazioa

Add Roles and Features Wizard

Active Directory Domain Services

DESTINATION SERVER
server

Before You Begin
Installation Type
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Features
AD DS
DNS Server
Confirmation
Results

Active Directory Domain Services (AD DS) stores information about users, computers, and other devices on the network. AD DS helps administrators securely manage this information and facilitates resource sharing and collaboration between users.

Things to note:

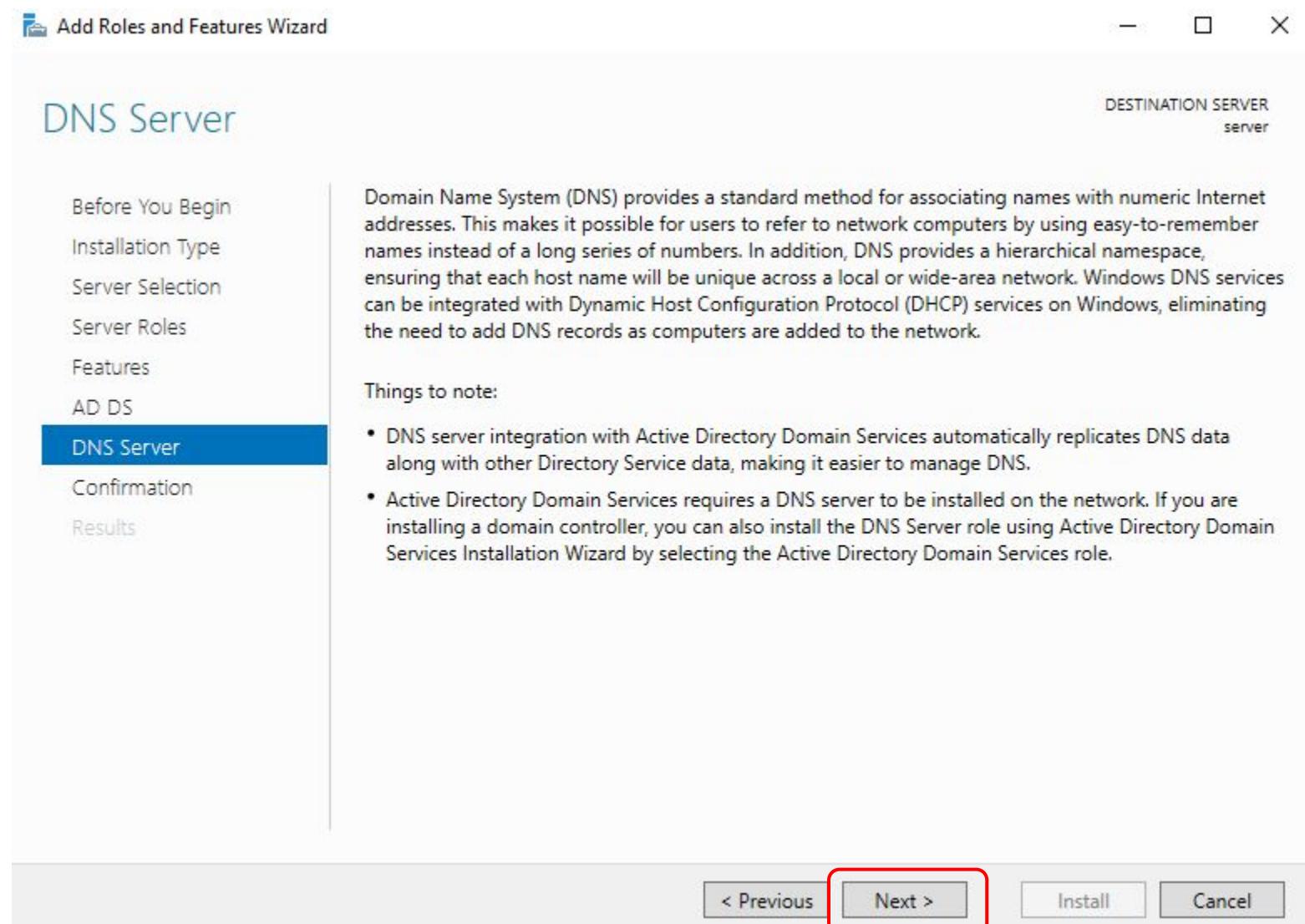
- To help ensure that users can still log on to the network in the case of a server outage, install a minimum of two domain controllers for a domain.
- AD DS requires a DNS server to be installed on the network. If you do not have a DNS server installed, you will be prompted to install the DNS Server role on this machine.

Azure Active Directory, a separate online service, can provide simplified identity and access management, security reporting, single sign-on to cloud and on-premises web apps.

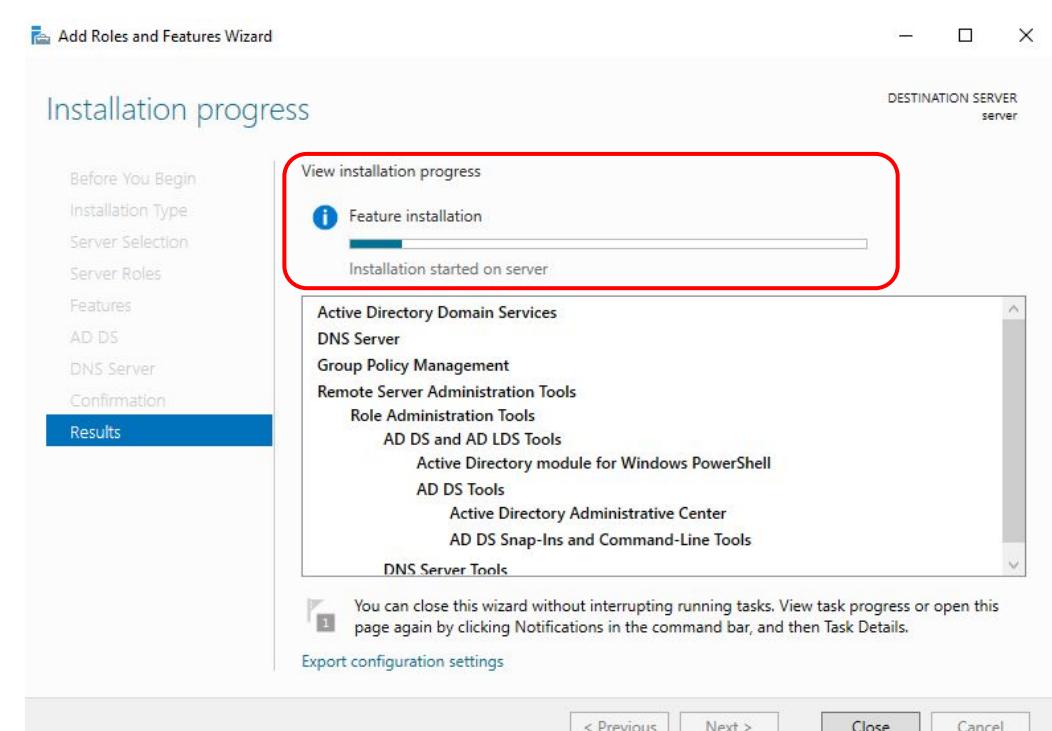
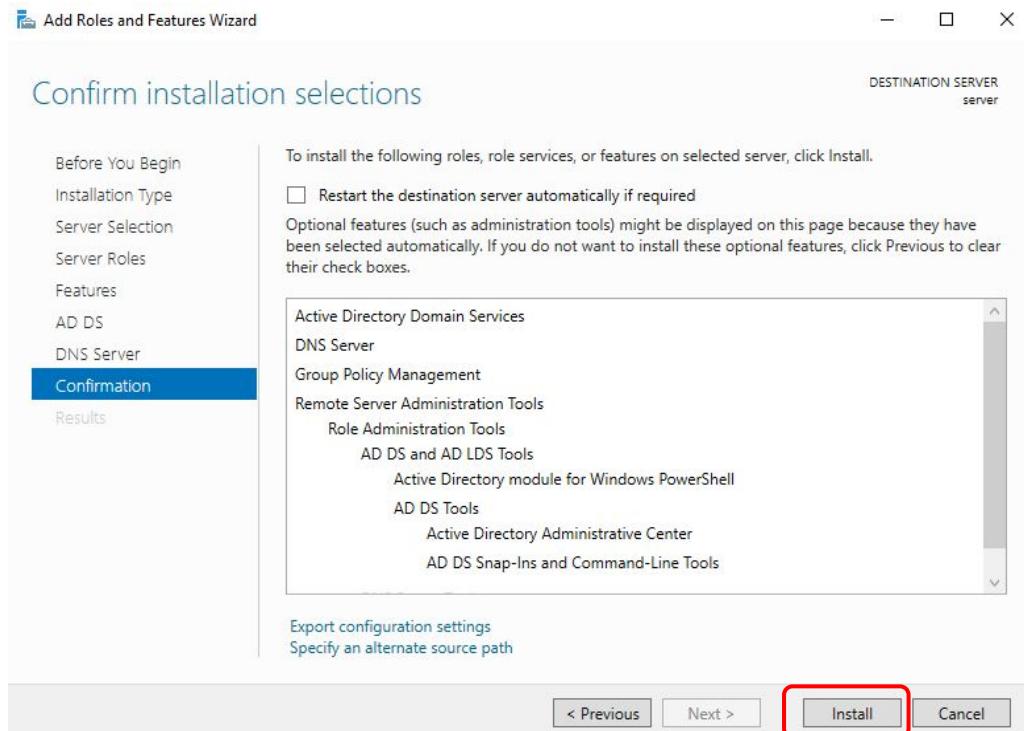
[Learn more about Azure Active Directory](#)
[Configure Office 365 with Azure Active Directory Connect](#)

< Previous **Next >** Install Cancel

AD - GUI Instalazioa



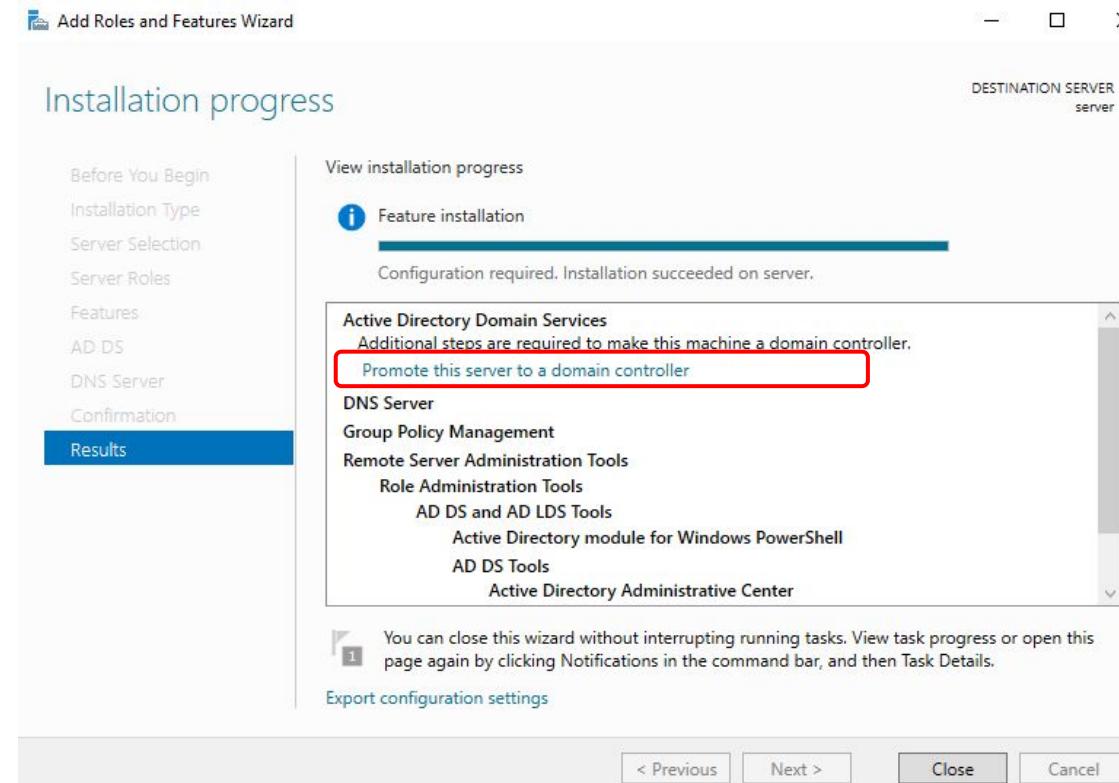
AD - GUI Instalazioa



Itxaron instalazioa amaitu arte.

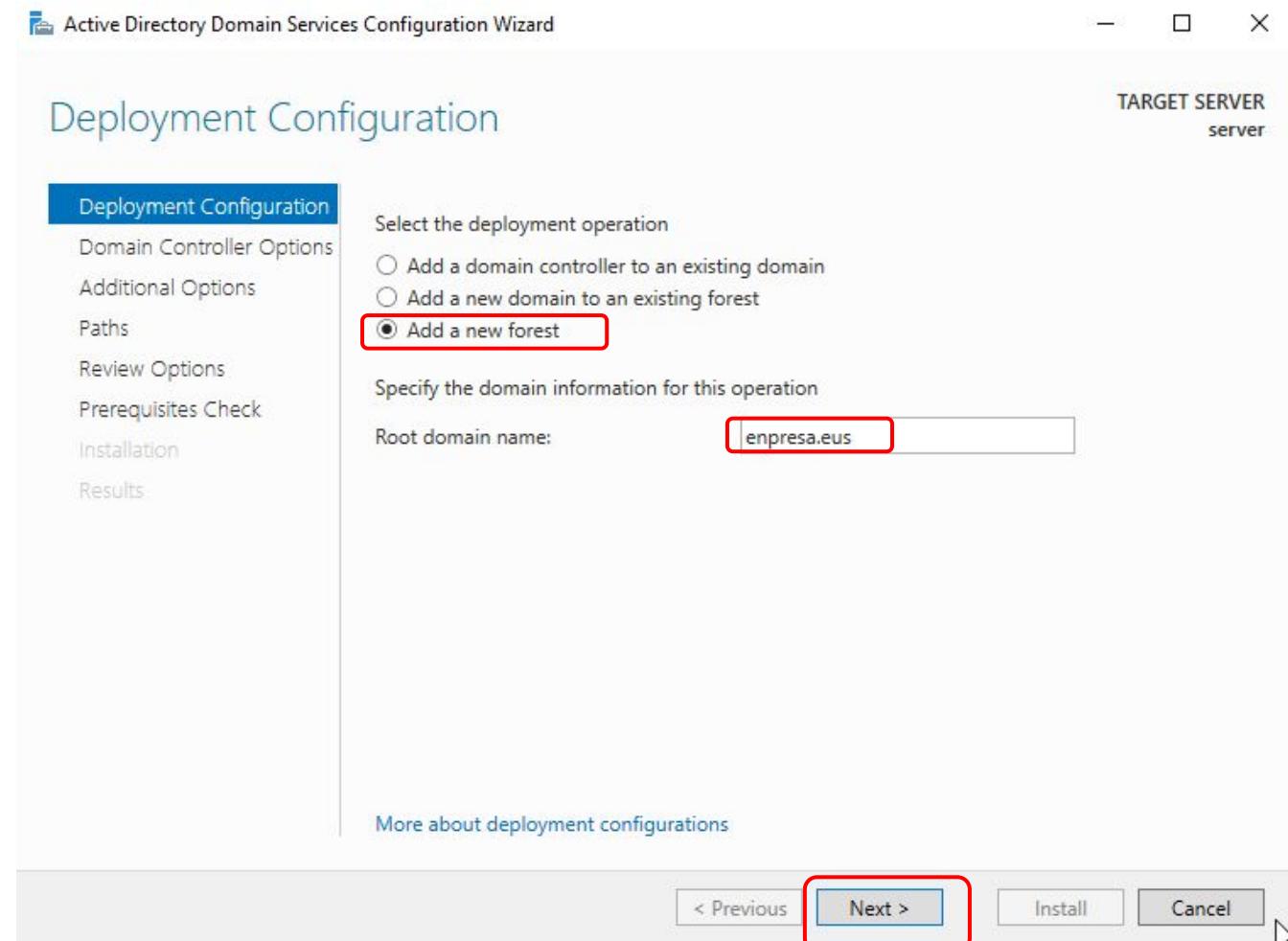
AD - GUI Instalazioa

- Instalazioa amaitzean, zerbitzaria **domeinu-kontrolatzaile** sustatu behar da.
 - Autentifikazio-eskaerei erantzuten dien zerbitzaria.
 - Erabiltzaileak egiaztatzeaz arduratzen da.
 - Datuak antolatuta eta seguru mantentzen ditu.
 - Domeinu-kontrolatzaile bat baino gehiago egon daiteke domeinu batean.



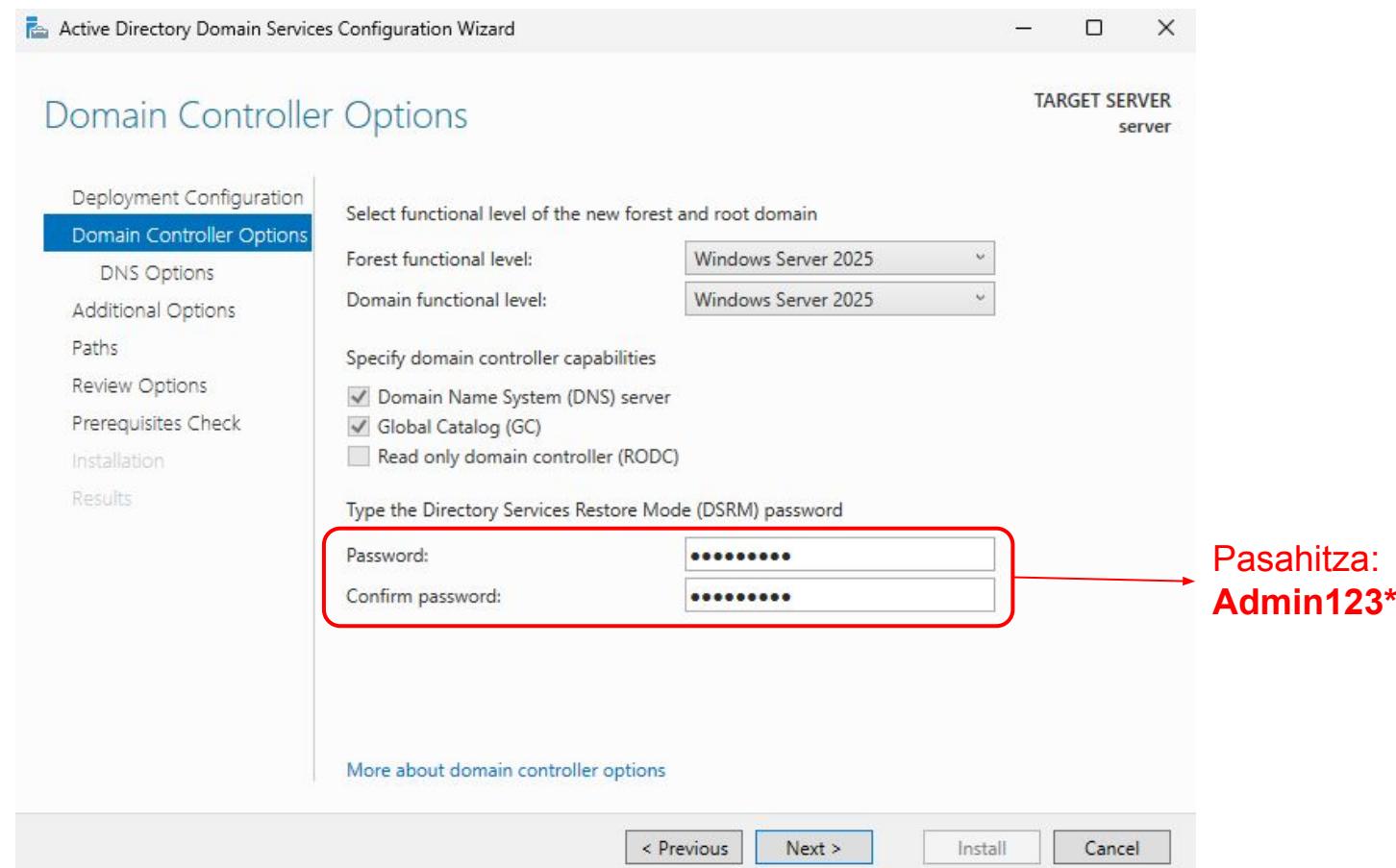
AD - GUI Instalazioa

- Nola ez den aurretik domeinurik muntatu → **Add new forest**
- Sortu nahi den domeinuaren izena idatzi. Guk **empresa.eus** izena emango diogu.

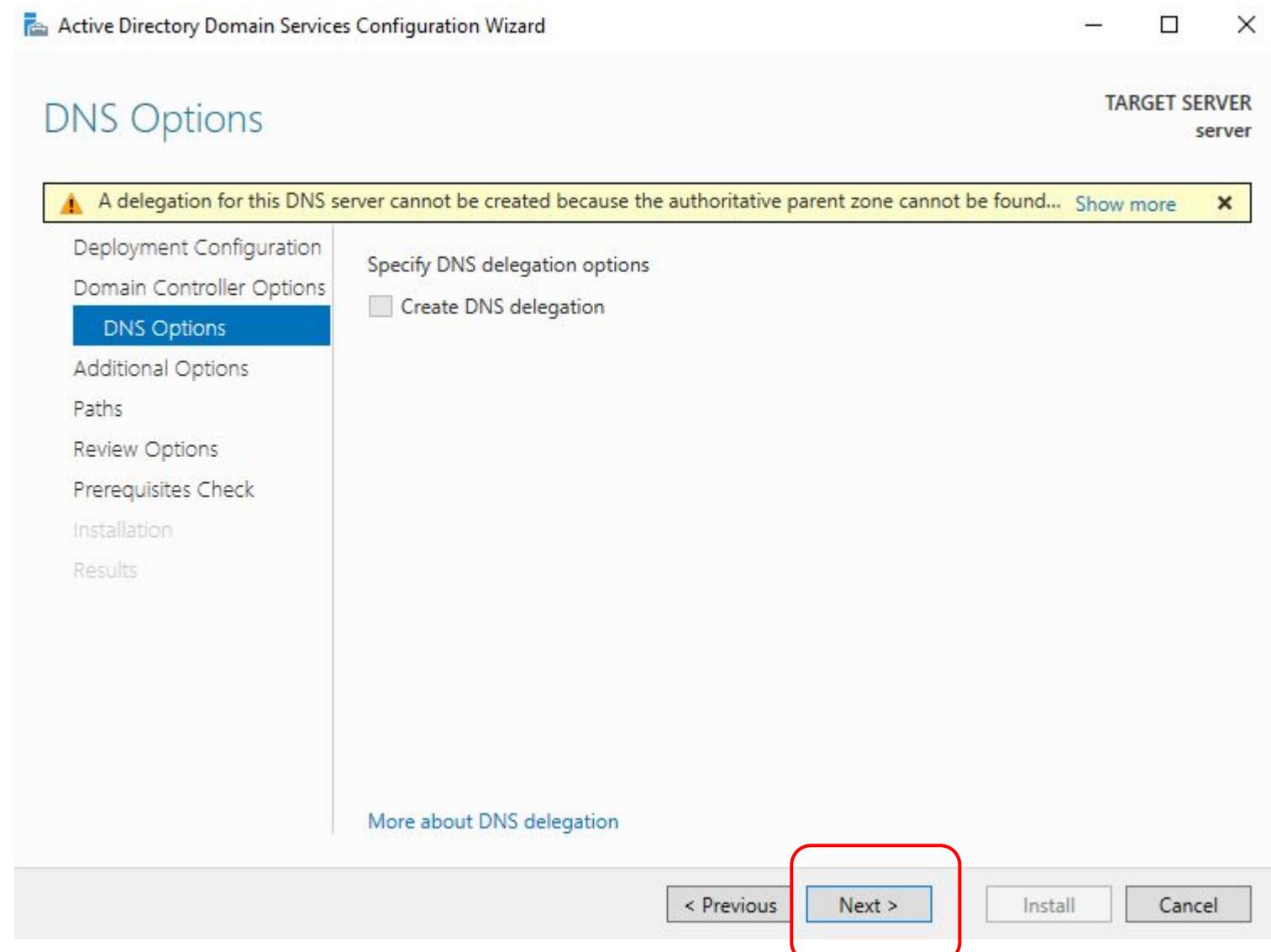


AD - GUI Instalazioa

- **Functional level** → Windows Server-en aurreko bertsioekiko bateragarritasuna.
 - Windows Server-en bertsio zaharrak erabiliko badira domeinu kontrolatzaile gisa.
- **DSRM** → Sistemak huts eginez gero AD-a berrezartzeko pasahitza

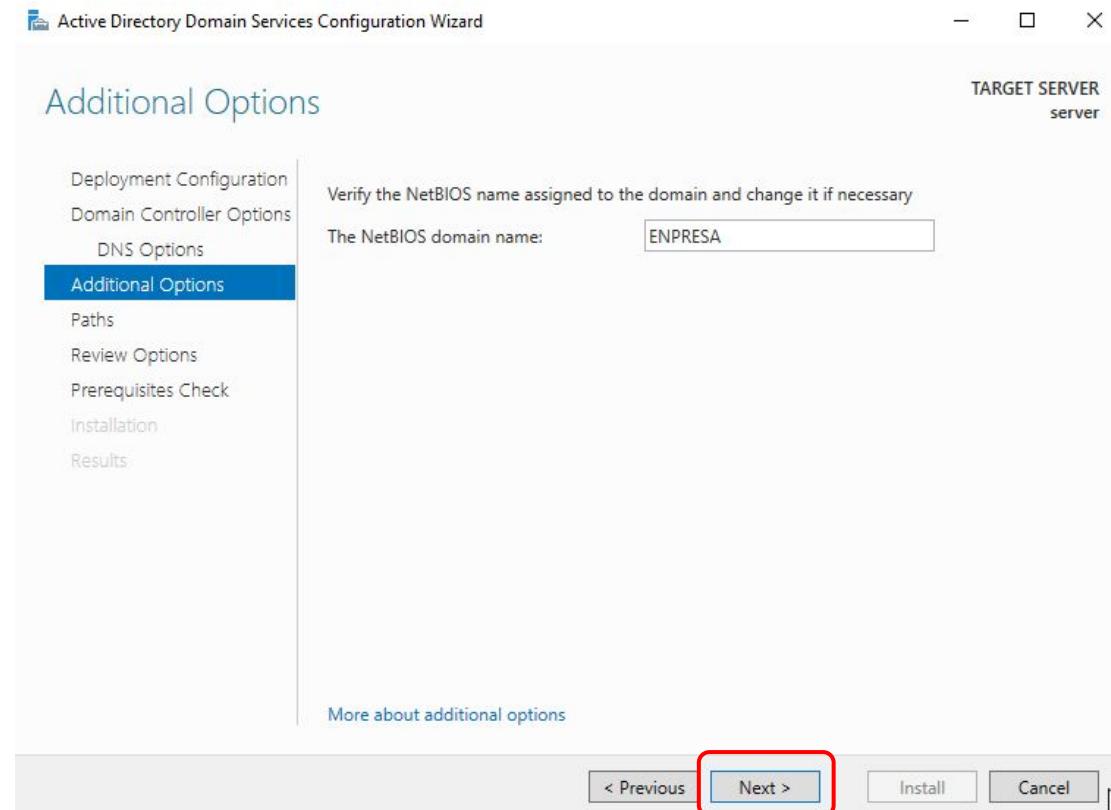


AD - GUI Instalazioa



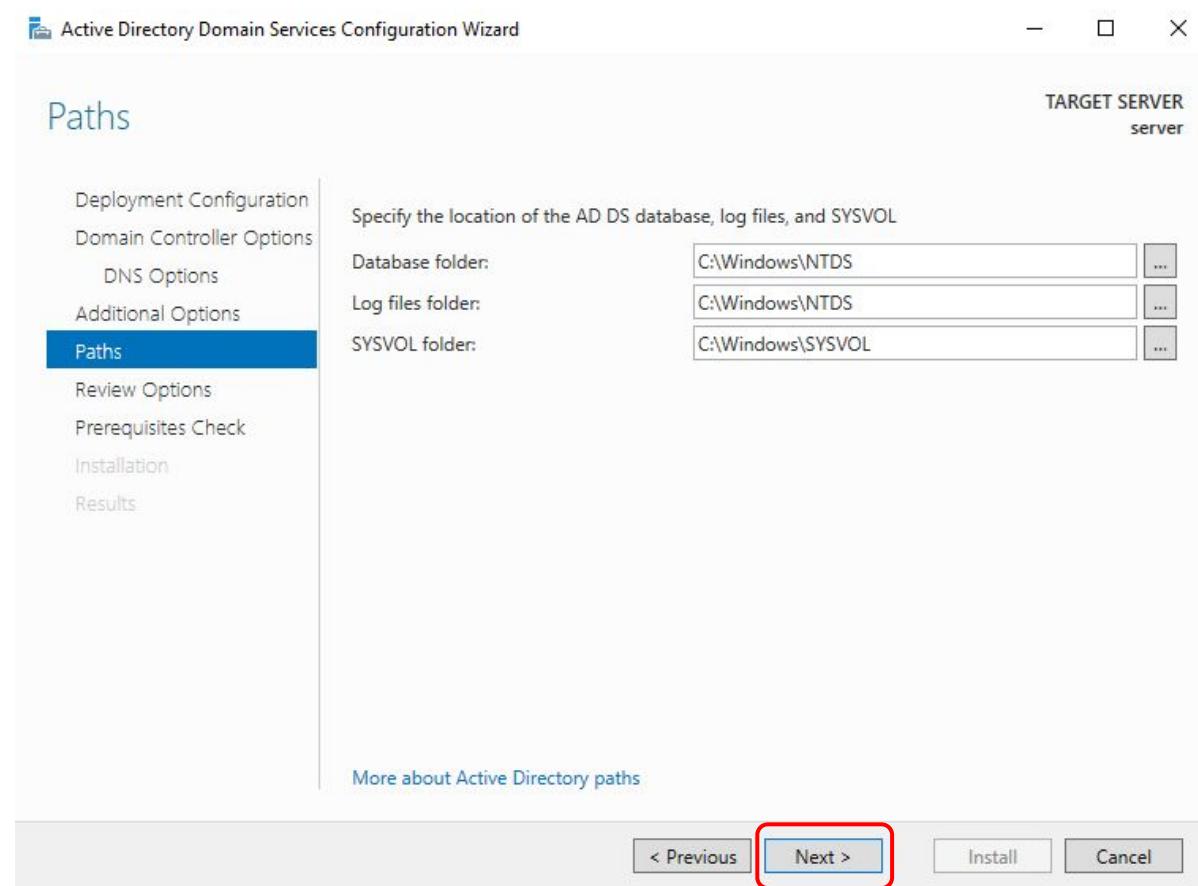
AD - GUI Instalazioa

- **NetBIOS domain name** → Windows 2000 baino lehenagoko bertsioekin bateragarritasuna izateko erabilitako izena.
 - Gehienez 15 karaktere.

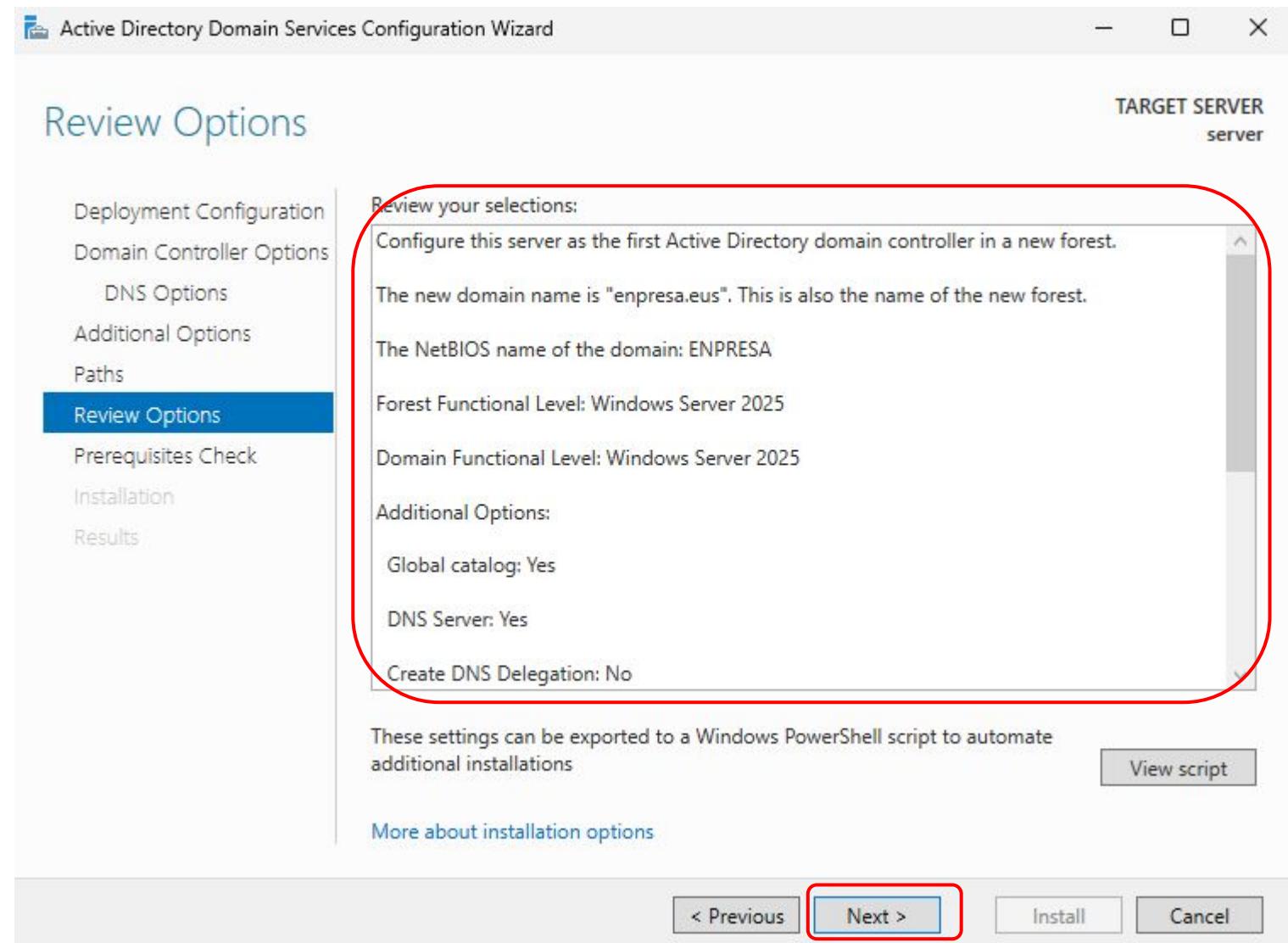


AD - GUI Instalazioa

- AD-aren datu-baseak eta erregistroak instalatzeko direktorioak.



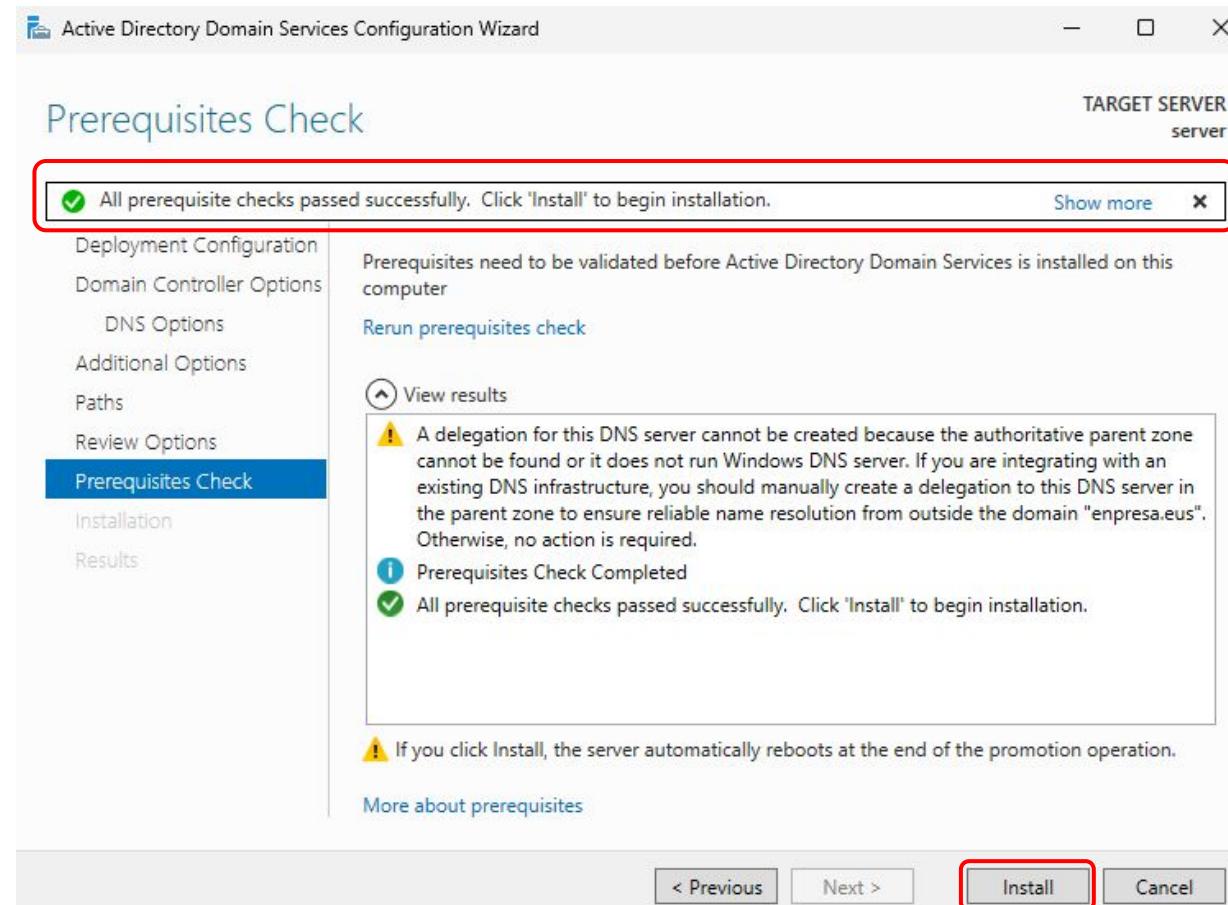
AD - GUI Instalazioa



Errebisatu dena ondo dagoen.

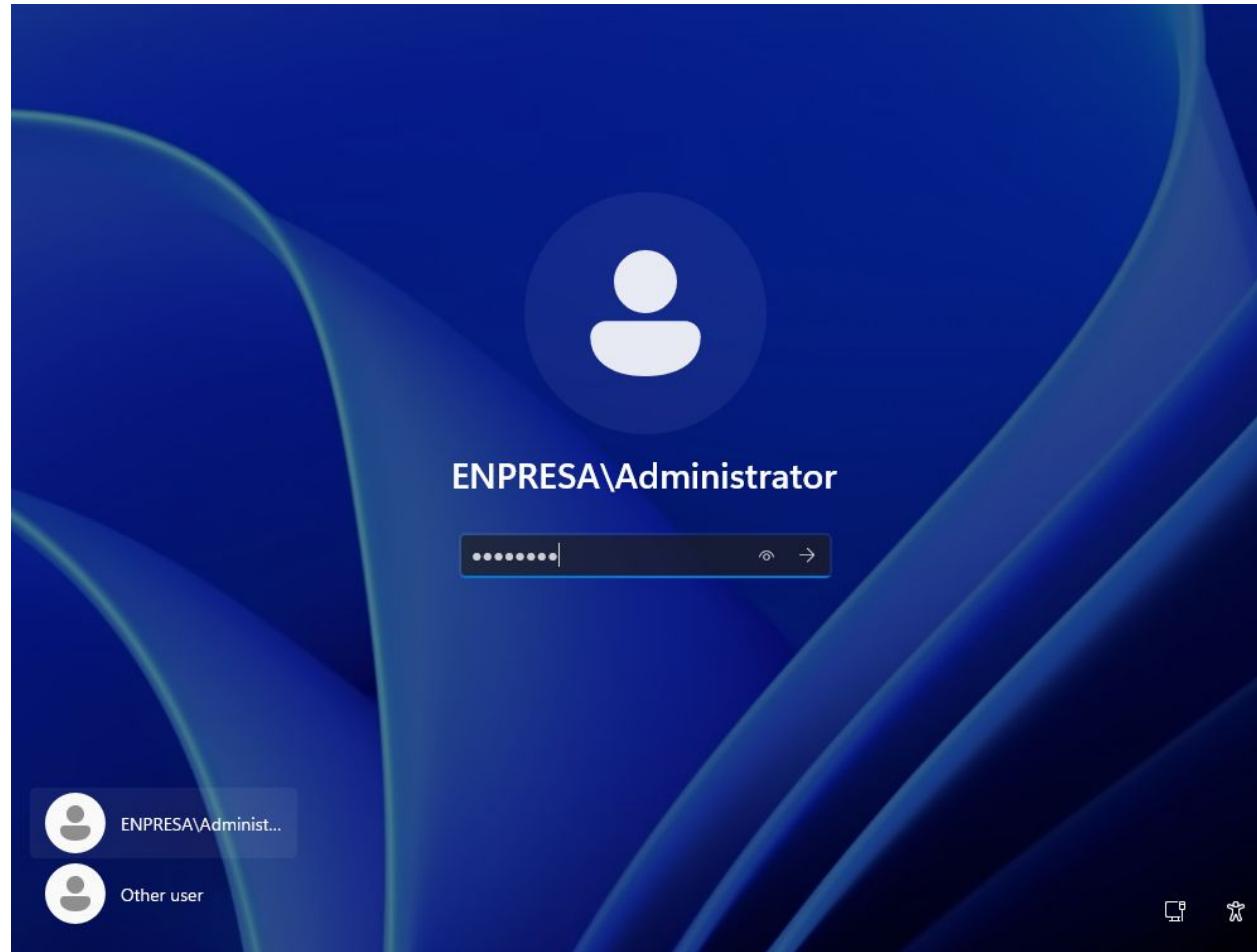
AD - GUI Instalazioa

- Dena ondo dagoela esan behar digu.
- Ondoren, Install sakatu. Instalazio-prozesua amaitzean, zerbitzariak saioa itxiko du.



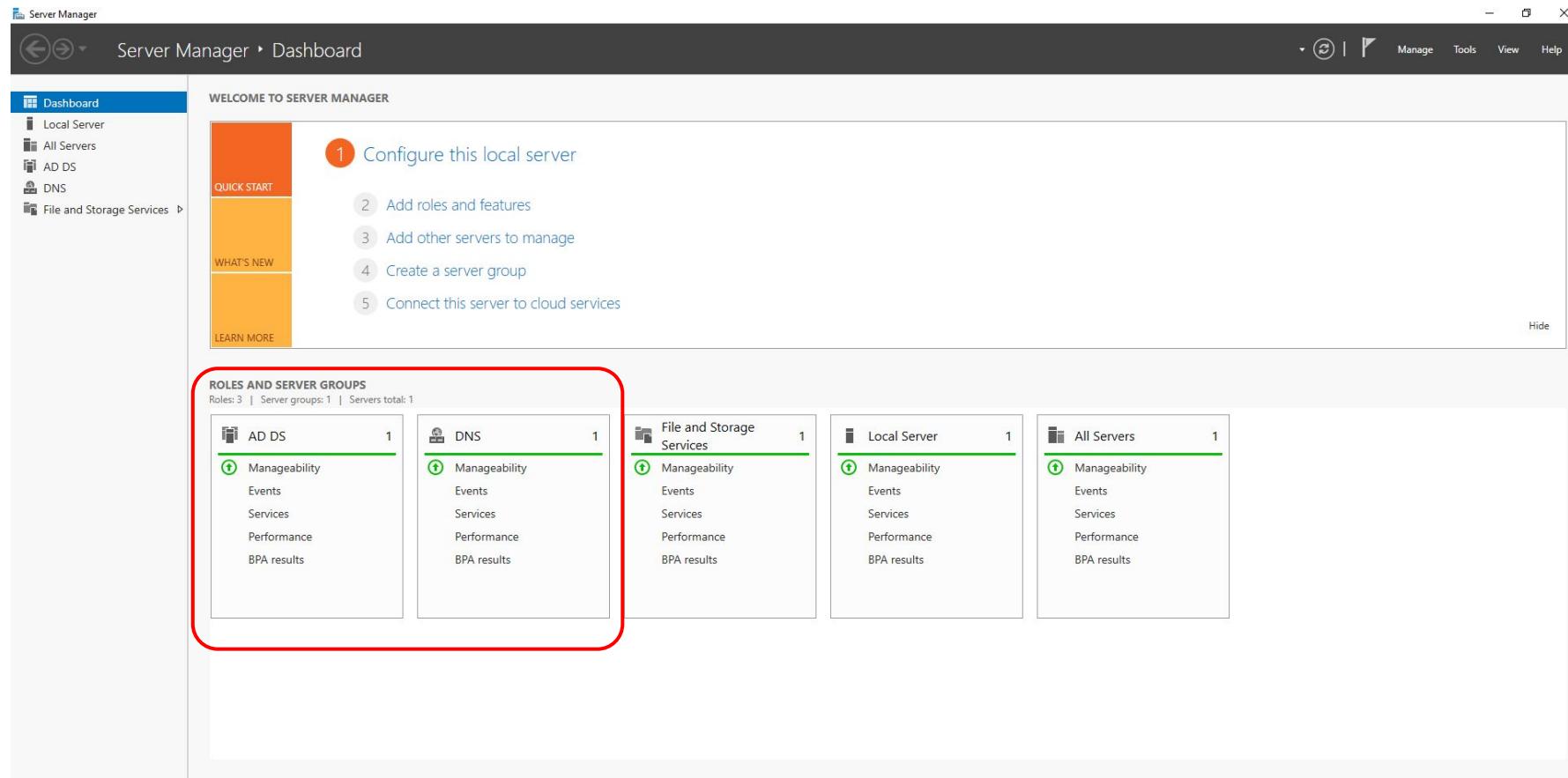
AD - GUI Instalazioa

- Instalazio-prozesua amaitzean, zerbitzariak saioa itxiko du.
- Saioa berriz hastean, erabiltzaile-izena honako formatu honetan aterako da:
Domeinua\Erabiltzailea



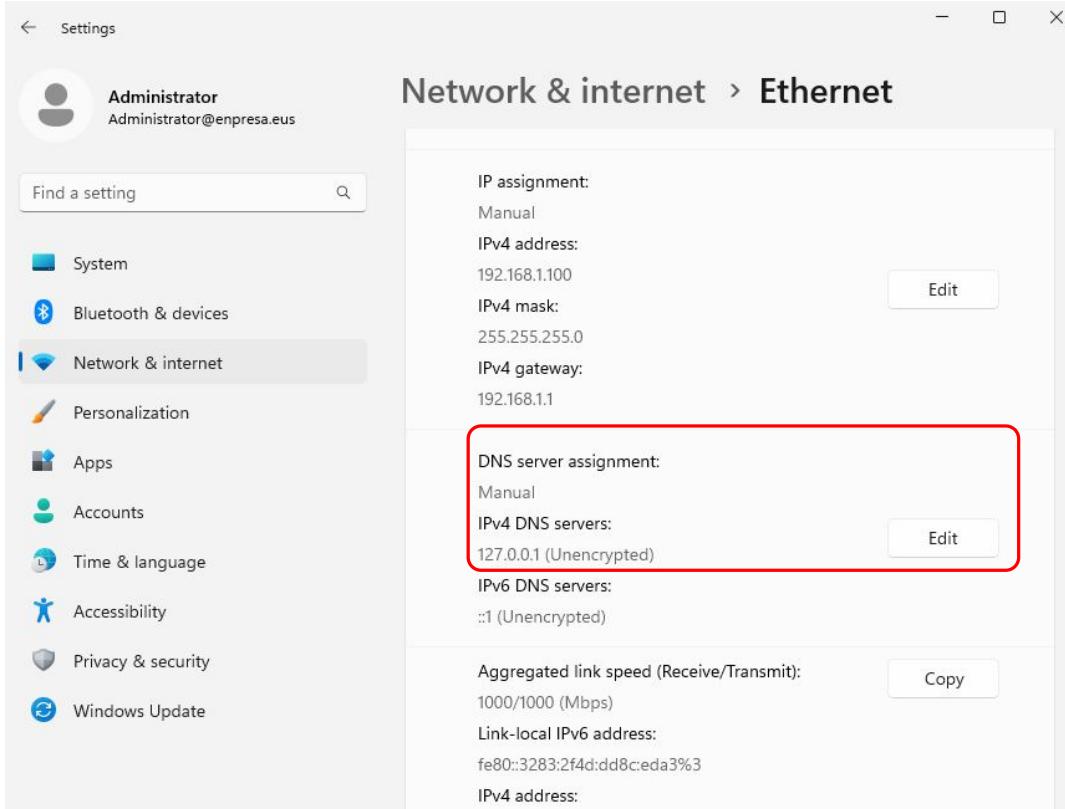
AD - GUI Instalazioa (Egiaztapena 1)

- AD eta DNS zerbitzuak ondo instalatu direla koonprobatzeko, 2 rol berri erantsi izan direla begiratu →**AD DS** eta **DNS**
- Zerbitzaria piztean, denbora bat itxaron behar da rolak berdez agertzeko.



AD - GUI Instalazioa (Egiaztapena 2)

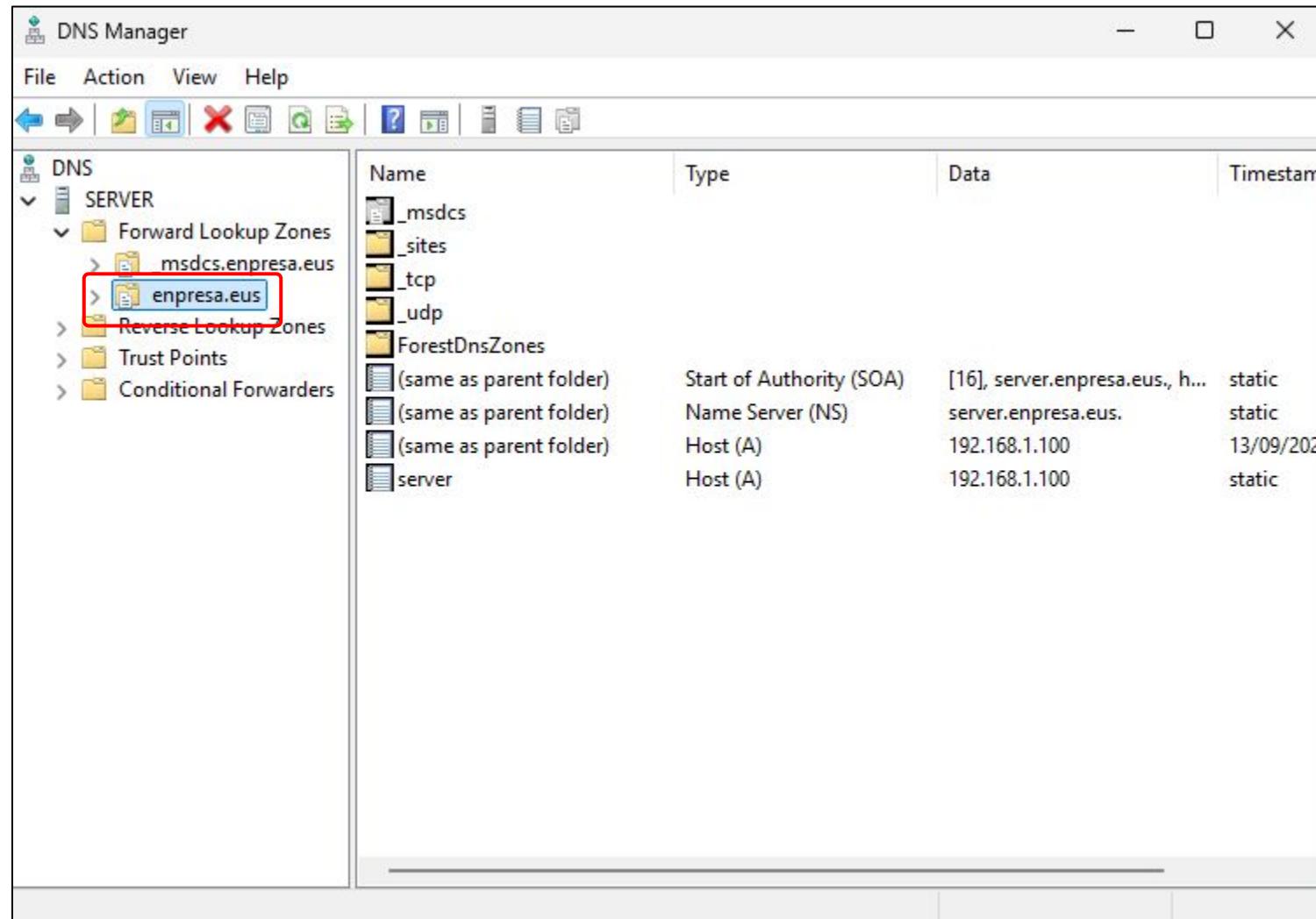
- Sareko txartelaren konfigurazioa irekitzean, DNS gogokoena localhost (**127.0.0.1**) dela konprobatu.



```
Ethernet adapter Ethernet:  
  
Connection-specific DNS Suffix . . . :  
Description . . . . . : Intel(R) PRO/1000 MT Desktop Adapter  
Physical Address. . . . . : 08-00-27-C2-48-AB  
DHCP Enabled. . . . . : No  
Autoconfiguration Enabled . . . . . : Yes  
Link-local IPv6 Address . . . . . : fe80::3283:2f4d:dd8c:eda3%3(PREFERRED)  
IPv4 Address. . . . . : 192.168.1.100(PREFERRED)  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . : 192.168.1.1  
DHCPv6 IAID . . . . . : 101187623  
DHCPv6 Client DUID. . . . . : 00-01-00-01-30-56-55-6B-08-00-27-C2-48-AB  
DNS Servers . . . . . : ::1  
                      127.0.0.1  
NetBIOS over Tcpip. . . . . : Enabled
```

AD - GUI Instalazioa (Egiaztapena 3)

- **DNS manager** zabaltezan gure zerbitzariaren sortu berri dugun domeinua agertu beharko litzateke.



3

AD - PowerShell bidezko instalazioa

AD - PowerShell Instalazioa

3 zerbitzu instalatu behar ditugu.

1. **AD DS (Active Directory Domain Services)**: AD zerbitzua eta konfigurazio herramintak.

```
Add-WindowsFeature -Name "ad-domain-services" -IncludeAllSubFeature -IncludeManagementTools
```

2. **DNS (Domain Name Systems)**: DNS zerbitzua eta konfigurazio herramintak. Beharrezkoa AD-ak ondo funtzionatzeko.

```
Add-WindowsFeature -Name "dns" -IncludeAllSubFeature -IncludeManagementTools
```

3. **GPMC (Group Policy Management Console)**: Talde politikak kudeatzeko zerbitzua eta herraminta.

```
Add-WindowsFeature -Name "gpmc" -IncludeAllSubFeature -IncludeManagementTools
```

AD - PowerShell Instalazioa

AD baso bat sortu (forest)

```
Install-ADDSForest
  -CreateDnsDelegation:$false
  -DatabasePath "c:\windows\NTDS"
  -DomainMode "WinThreshold"
  -DomainName "empresa.eus"
  -SafeModeAdministratorPassword (ConvertTo-SecureString "Admin123*" -AsPlainText -Force)
  -DomainNetbiosName "ENPRESA"
  -ForestMode "WinThreshold"
  -InstallDns:$true
  -LogPath "c:\windows\NTDS"
  -NoRebootOnCompletion:$false
  -SysvolPath "c:\windows\SYSVOL"
  -Force:$true
```

AD - PowerShell Instalazioa

AD zuhaitz bat sortu (tree) aurretik sortutako baso baten:

```
# First, get the necessary credentials for an Enterprise Admin in the existing forest
$credential = Get-Credential

Install-ADDSDomain
    -DomainType Tree
    -NewDomainName "newcorp.com"
    -ParentDomainName "empresa.eus"
    -Credential $credential
    -InstallDns:$true
    -DomainMode "WinThreshold"
    -SafeModeAdministratorPassword (ConvertTo-SecureString "Admin123*" -AsPlainText -Force)
```

AD - PowerShell Instalazioa

AD azpi-domeinu bat sortu (child domain)

```
# First, get the necessary credentials for a Domain Admin in the parent domain
$credential = Get-Credential

Install-ADDSDomain
    -DomainType Child
    -NewDomainName "sales"
    -ParentDomainName "empresa.eus"
    -Credential $credential
    -InstallDns:$true
    -DomainMode "WinThreshold"
    -SafeModeAdministratorPassword (ConvertTo-SecureString "Admin123*" -AsPlainText -Force)
```

AD - PowerShell instalazioa (Egiaztapena 1)

- Egiaztu Active Directory Domain Services (AD DS) exekutatzen ari dela:
 - Status = 'Running'

```
Get-Service -Name NTDS
```

```
PS C:\Users\Administrator> Get-Service -Name NTDS

Status     Name               DisplayName
----      ----              -----
Running    NTDS              Active Directory Domain Services
```

- Egiaztu domeinu-kontrolatzailea eskuragarri dagoela:

```
Test-Connection -ComputerName (Get-AddDomainController).Hostname
```

```
PS C:\Users\Administrator> Test-Connection -ComputerName (Get-AddDomainController).Hostname
```

Source	Destination	IPV4Address	IPV6Address	Bytes	Time(ms)
-----	-----	-----	-----	-----	-----
SERVER	server.enpre...	192.168.1.100	fe80::bd4f:27b7:4423:47e2%2	32	0
SERVER	server.enpre...	192.168.1.100	fe80::bd4f:27b7:4423:47e2%2	32	0
SERVER	server.enpre...	192.168.1.100	fe80::bd4f:27b7:4423:47e2%2	32	0
SERVER	server.enpre...	192.168.1.100	fe80::bd4f:27b7:4423:47e2%2	32	0

AD - PowerShell instalazioa (Egiaztapena 2)

- Egiaztu sare txartelean konfiguratutako DNS zerbitzaria 127.0.0.1 dela:

```
# View network adapters
Get-NetAdapter

# Get network adapter configuration
Get-NetIPConfiguration -InterfaceAlias "YourAdapterName"
```

```
PS C:\Users\Administrator> Get-NetIPConfiguration -InterfaceAlias "Ethernet"

InterfaceAlias      : Ethernet
InterfaceIndex      : 2
InterfaceDescription : Intel(R) PRO/1000 MT Desktop Adapter
NetProfile.Name     : Network 2
IPv4Address         : 192.168.1.100
IPv6DefaultGateway  :
IPv4DefaultGateway  : 192.168.1.1
DNSServer           : ::1
                           127.0.0.1
```

AD - PowerShell instalazioa (Egiaztapena 3)

- Egiaztatu DNS zerbitzaria exekutatzen ari dela:

```
Get-Service -Name DNS
```

```
PS C:\Users\Administrator> Get-Service -Name DNS

Status     Name          DisplayName
-----     --          -----
Running    DNS          DNS Server
```

- Probatu DNS kontsulten ebazpena:

```
Resolve-DnsName -Name empresa.eus -Server (Get-AddDomainController).Hostname
```

```
PS C:\Users\Administrator> Resolve-DnsName -Name empresa.eus -Server (Get-AddDomainController).Hostname

Name                           Type   TTL    Section      IPAddress
----                           --   ---    -----      -----
empresa.eus                     A     600    Answer     192.168.1.100

PS C:\Users\Administrator>
```

Ariketa: Active Directory instalatzen

1. PowerShell erabiliz, egin Active Directory-aren instalazioa.
2. Egin konprobaketak GUI eta PowerShell erabiliz instalazioa ondo egin dela.

Eskerrik asko

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