



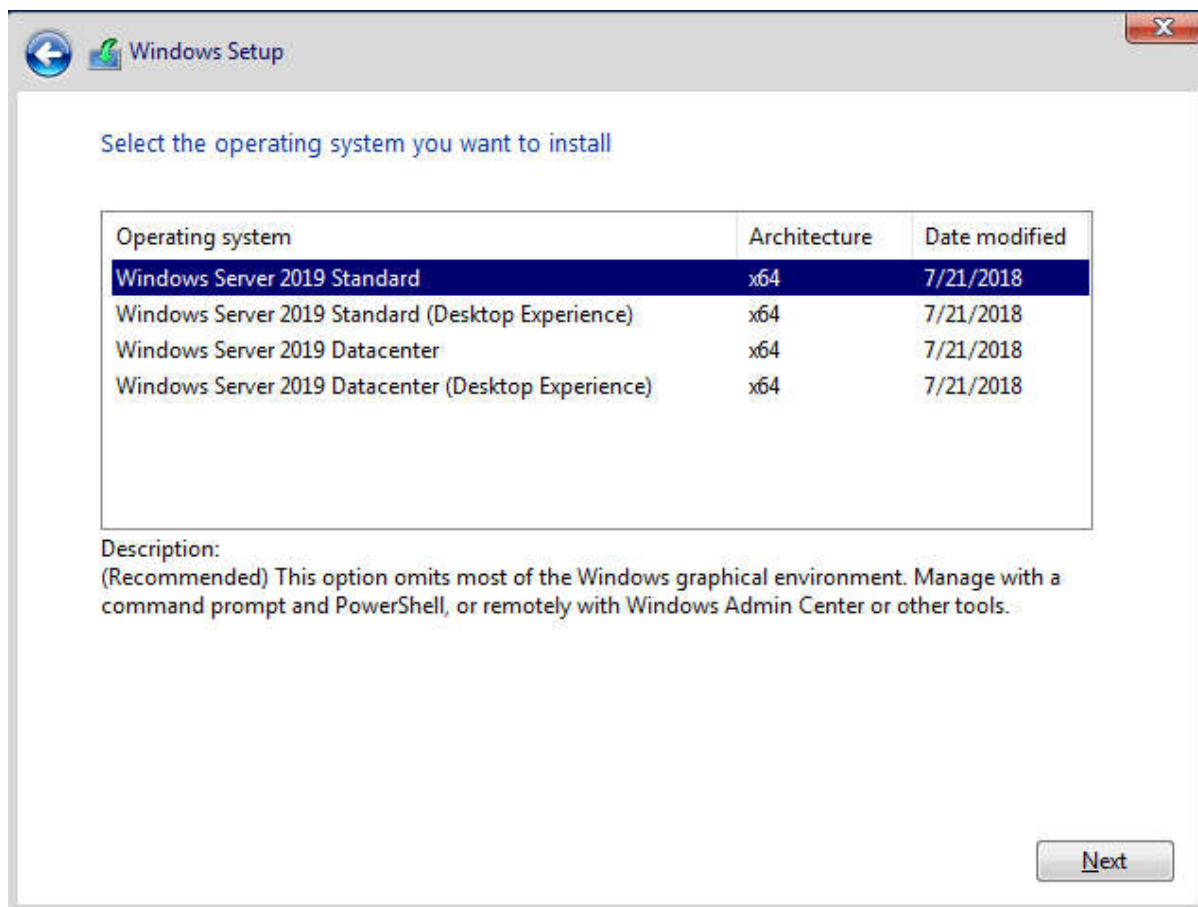
Step by Step Installation of Active Directory on Windows Server 2019 Core

I have recently started using windows server core version not only to save space it is also use very low memory to run my domain controllers.

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To explore Server 2019 further, we will try to run Active Directory services with Server 2019 Core edition. For the Installation of Server 2019 Core check out [this link](#) (select the version shown in the below figure).



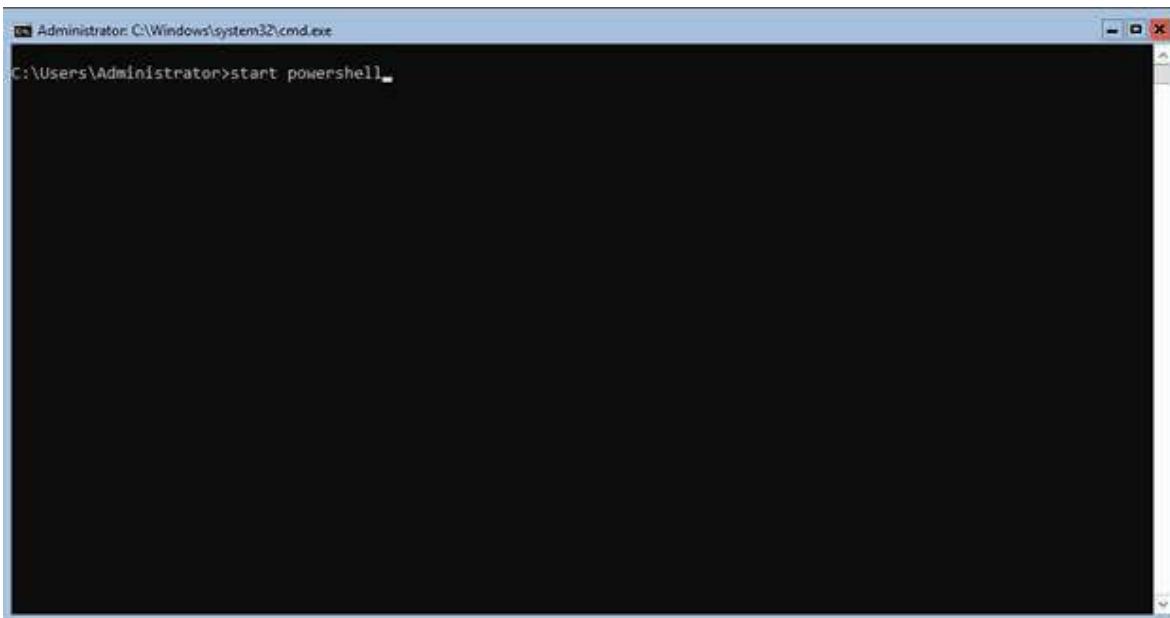


To install Active Directory, we need to set our Server as per the recommendation of Microsoft for AD.

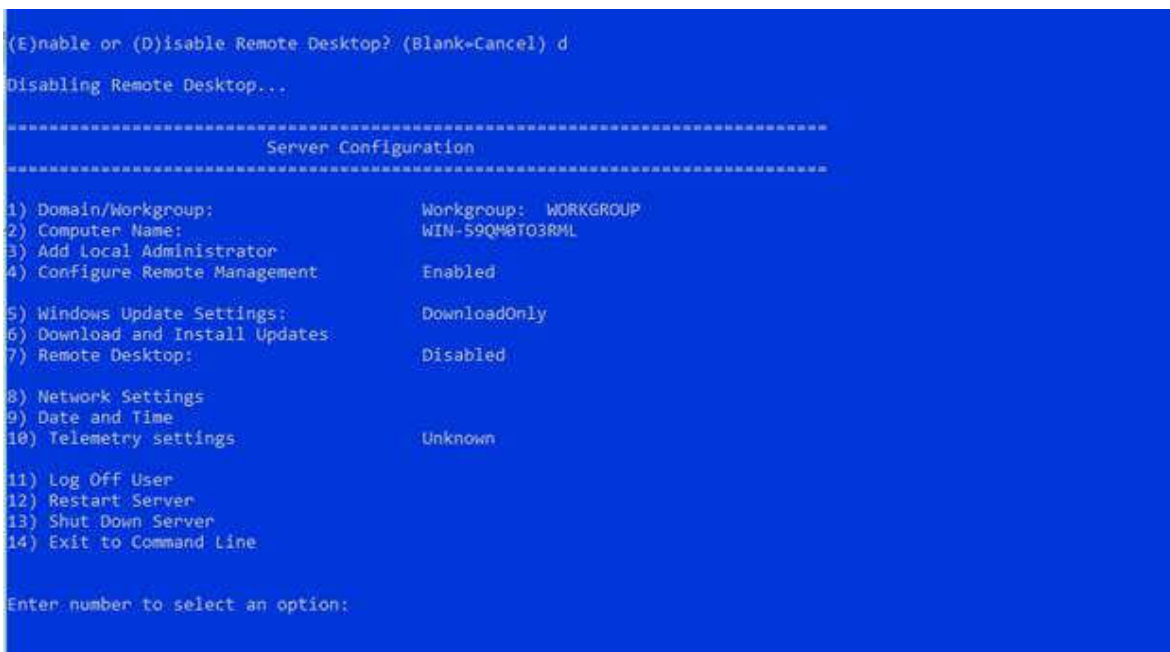
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- Static IP
- Date and Time

This will make sure that everything is set as per the recommendation. Once your server is ready, open the command prompt and type *start PowerShell*



Then, you need to run the *sconfig* command. This gives you the system details.





The next step will be to set the static IP for the system.

By opening PowerShell, type the following commands.

Get-NetAdapter

This will give the name of the adapter which we will use as the interface alias.

```
$ipaddress = "10.0.64.2"
```

```
$dnsaddress = "127.0.0.1"
```

```
New-NetIPAddress -InterfaceAlias Ethernet -IPAddress $ipaddress -AddressFamily IPv4 -PrefixLength 24
```

```
C:\Users\Administrator> $ipaddress = "10.0.64.2"
C:\Users\Administrator> $dnsaddress = "127.0.0.1"
C:\Users\Administrator> New-NetIPAddress -InterfaceAlias Ethernet -IPAddress $ipaddress -AddressFamily IPv4 -PrefixLength 24
```

Update DNS

```
Set-DnsClientServerAddress -InterfaceAlias Ethernet -ServerAddresses $dnsaddress
```

```
PS C:\Users\Administrator\Documents> Set-DnsClientServerAddress -InterfaceAlias Ethernet -ServerAddresses $dnsaddress
```

Once done, restart the server.

Now, let us set the time zone. For that, type the following commands in PowerShell.

Get-timezone

```
Set-TimeZone -Id "Eastern Standard Time"
```

```
[tmad]: PS C:\Users\Administrator\Documents> get-timezone

Id                : Pacific Standard Time
DisplayName        : (UTC-08:00) Pacific Time (US & Canada)
StandardName       : Pacific Standard Time
DaylightName       : Pacific Daylight Time
BaseUtcOffset      : -08:00:00
SupportsDaylightSavingTime : True

[tmad]: PS C:\Users\Administrator\Documents> Set-TimeZone -Id "Eastern Standard Time"
The time zone name 'IdEastern Standard Time' was not found on the local computer.
+ CategoryInfo          : InvalidArgument: (Name:String) [Set-TimeZone], TimeZoneNotFoundException
+ FullyQualifiedErrorId : TimeZoneNotFound,Microsoft.PowerShell.Commands.SetTimeZoneCommand

[tmad]: PS C:\Users\Administrator\Documents> Set-TimeZone -Id "Eastern Standard Time"
[tmad]: PS C:\Users\Administrator\Documents> get-timezone

Id                : Eastern Standard Time
DisplayName        : (UTC-05:00) Eastern Time (US & Canada)
StandardName       : Eastern Standard Time
DaylightName       : Eastern Daylight Time
BaseUtcOffset      : -05:00:00
SupportsDaylightSavingTime : True
```



We can do the installation in two ways here.

- Windows Admin Center (this will help you to install roles and

Using Windows Admin Center

For Windows Admin Center, we need to set up and add a server ([Follow Link](#)).

Once the server is connected to Windows Admin Center, you need to connect the server.



A screenshot of the Windows Admin Center interface showing a list of connected servers. The table has columns for Name, Type, Last Connected, and Managing As. Three servers are listed: '10' (Windows PC), 'tmad' (Server), and 'www.7you18ff.net' (Server). The 'tmad' server is selected.

Name	Type	Last Connected	Managing As
10	Windows PC	Never	KB/Kunal
tmad	Server	8/6/2019 10:41:11 PM	administrator
www.7you18ff.net	Server	8/6/2019 5:37:09 PM	KB/Kunal

Once the server is connected, you will find the overview of the system utilization page.



On the left side tools, you have to select Roles & features. Now you can select whichever role you need to install and click Install.



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+ install - remove		
Name	State	Type
✓ Roles	1 of 80 installed	
> Active Directory Certificate Services	0 of 6 installed	Role
active directory lightweight directory services	available	role
> Active Directory Rights Management Services	0 of 2 installed	Role
Device Health Attestation	Available	Role
DHCP Server	Available	Role

Details - Active Directory Domain Services (1 Selected)

Description

Active Directory Domain Services (AD DS) stores information about objects on the network and makes this information available to users and network administrators. AD DS uses domain controllers to give network users access to permitted resources anywhere on the network through a single logon process.

This will start checking dependencies

Install Roles and Features

Calculating dependencies

Yes

No

It will give you a list of the roles you are going to install.



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AD DS and AD LDS Tools

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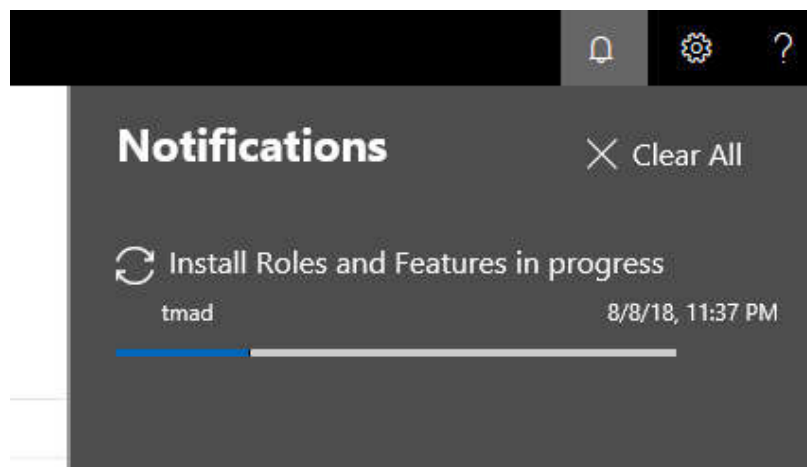
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☐ Reboot the server automatically, if required
Continue installation?

Yes

No

You will find a notification window with a progress update there.



Using PowerShell

PowerShell Command to start creating Domain Controller

Get-WindowsFeature AD-Domain-Service | Install-WindowsFeature

```
PS C:\Users\Administrator>
PS C:\Users\Administrator> Get-WindowsFeature AD-Domain-Service | Install-WindowsFeature
```

Import-Module ADDSDeployment

Install-ADDSForest

```
PS C:\Users\Administrator>
PS C:\Users\Administrator> Get-WindowsFeature AD-Domain-Service | Install-WindowsFeature
```




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```
PS C:\Users\Administrator> Import-Module ADDSDeployment
PS C:\Users\Administrator> Install-ADFSForest

cmdlet Install-ADFSForest at command pipeline position 1
Supply values for the following parameters:
DomainName: teammicro.dom
SafeModeAdministratorPassword: *****
```

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```
[Y] Yes [N] Yes to All [A] No [L] No to All [S] Suspend [?] Help (default is "Y"):
```

This will ask you for the Domain Name and SafeMode password. Make sure you write this down in a safe place. It will be very useful in case of disaster recovery.

You can select Y or A as an answer to the question.

While installation is going on you will see some warning.

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install-ADFSForest

Validating environment and user input
Verifying prerequisites for domain controller operation.
[ ] True [ ] No [ ] NoChangeNeeded [ ]

PS C:\Users\Administrator> Import-Module ADDSDeployment
PS C:\Users\Administrator> Install-ADFSForest

cmdlet Install-ADFSForest at command pipeline position 1
Supply values for the following parameters:
DomainName: teammicro.dom
SafeModeAdministratorPassword: *****
Confirm SafeModeAdministratorPassword: *****

The target server will be configured as a domain controller and restarted when this operation is complete.
Do you want to continue with this operation?
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "Y"): y
WARNING: Windows Server 2019 domain controllers have a default for the security setting named "Allow cryptography
algorithms compatible with Windows NT 4.0" that prevents weaker cryptography algorithms when establishing security
channel sessions.
For more information about this setting, see Knowledge Base article 942564
(http://go.microsoft.com/fwlink/?LinkId=104751).
```

Once everything is done the server will reboot automatically.

Once a server is ready we will create a new Admin user which helps admin to do day to day work.

```
New-ADUser -Name "Helpdesk" -GivenName Help -Surname Desk -SamAccountName Helpdesk
- UserPrincipalName Helpdesk@teammicro.dom
```

To verify the user details:

```
Get-ADUser Helpdesk
```



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> New-ADUser -Name "Helpdesk" -GivenName Help -Surname Desk
ipalName Helpdesk@teammicro.dom
PS C:\Users\Administrator> Get-ADUser
```

```
Get-ADUser : Error parsing query: '?' Error Message: 'syntax error' at position: '1'.
At line:1 char:1
+ Get-ADUser
+ ~~~~~
+ CategoryInfo          : ParserError: (:) [Get-ADUser], ADFilterParsingException
+ FullyQualifiedErrorId : ActiveDirectoryCmdlet:Microsoft.ActiveDirectory.Management.ADFilterParsingException,Microsoft.ActiveDirectory.Management.Commands.GetADUser

PS C:\Users\Administrator> Get-ADUser Helpdesk

DistinguishedName : CN=Helpdesk,CN=Users,DC=teammicro,DC=dom
Enabled           : False
GivenName        : Help
Name             : Helpdesk
ObjectClass      : user
ObjectGUID       : bb87158e-beb1-46c1-baf4-94261203d357
SamAccountName   : Helpdesk
SID              : S-1-5-21-3721937744-1341734537-3773984513-1103
Surname          : Desk
UserPrincipalName : Helpdesk@teammicro.dom
```

You will find the user is not active yet. Before enabling the user, set the password for that user.

Command to set password:

Set-ADAccountPassword 'CN=Helpdesk,CN=users,DC=Teammicro,DC=Dom' -Reset -NewPassword (ConvertTo-SecureString -AsPlainText "Test@123" -Force)

```
PS C:\Users\Administrator> Set-ADAccountPassword 'CN=Helpdesk,CN=users,DC=Teammicro,DC=Dom' -Reset -NewPassword (Convert
To-SecureString -AsPlainText "Test@123" -Force)
PS C:\Users\Administrator> _
```

Enable the AD user

Enable-ADAccount -Identity Helpdesk

```
PS C:\Users\Administrator> Enable-ADAccount -Identity Helpdesk
PS C:\Users\Administrator> _
```

Add the user to Domain Admins group

Add-ADGroupMember 'Domain Admins' Helpdesk

```
PS C:\Users\Administrator> Add-ADGroupMember 'Domain Admins' Helpdesk
PS C:\Users\Administrator> _
```

Now it will configure over Active Directory and be ready for use.



```
1) Domain/Workgroup: Domain: teammicro.dom
2) Computer Name: TMAD
3) Add Local Administrator
4) Configure Remote Management Enabled
```

```
7) Remote Desktop: Enabled (all clients)
8) Network Settings
9) Date and Time
10) Telemetry settings Unknown
11) Windows Activation
12) Log Off User
13) Restart Server
14) Shut Down Server
15) Exit to Command Line

Enter number to select an option: █
```

We have covered installation of Active Directory on server 2019 core.

I hope this will help you and save you time when you create your own AD services.

Feel free to ask any questions.

Thank you for reading.

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Step By Step Installation Of Windows Server 2019 Standard

Windows Server 2019 Preview Build 17692 Available for IT personnel to explore. Today we will install Windows Server 2019 Standard on Hyper-V. As Microsoft has only issued this for insider preview only will use system requirements as per windows server 2016.

Active Directory

Installation Of Active Directory On Windows Server

Server

Windows Server 2019 Core



Krunal Barot *TOP 1000*

Microsoft Certified Server Administrator with 12+ years of experience as Infrastructure and Server Administrator. Experience with virtualization, Backup, and disaster system. Hand-on experience working with a different p... [Read more](#)

<https://www.c-sharpcorner.com/members/krunal-barot2>

833

222.2k



Type your comment here and press Enter Key (Minimum 10 cha.

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Hi, the command Import-Module ADDSDeplyoment give me a error, impossibile to find a module...its' normal?

[Francesco Baldassarri](#)

Oct 29, 2019

1874 2 0

0 1 Reply



Try Get-WindowsFeature AD-Domain-Service | Install-WindowsFeature -name AD-Domain-Services -IncludeManagementTools

[Krunal Barot](#)

Oct 30, 2019

833 1.5k 222.2k

1



Appreciate the article and time time it took to write it up. One bit of feedback. The steps appear to be missing: Get-WindowsFeature AD-Domain-Service | Install-WindowsFeature -IncludeManagementTools. When I tried to import the ad module it was unable to find it without including the -IncludeManagmentTools

[David Smith](#)

Feb 23, 2019

1871 5 0

1 1 Reply



Thank you for pointing out the error.

[Krunal Barot](#)

Oct 30, 2019

833 1.5k 222.2k

0



Thanks for the tutorial! Quick question, why use powershell to set IP and Time zone instead of sconfig?

[Rob Taylor-Shaw](#)

Jan 02, 2019

1874 2 0

1 1 Reply



for basic system setting like System name, IP, Domain join, Date and time setting you can always use Sconfig. here I am using core server as its better to start using command or powershell. its easier that way as well. appreciate your question.

[Krunal Barot](#)

Jan 03, 2019

833 1.5k 222.2k

0



Thanks for sharing

[Hadshana Kamalanathan](#)

Aug 16, 2018

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2 1 Reply



Thank you...

[Krunal Barot](#)

Aug 19, 2018

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