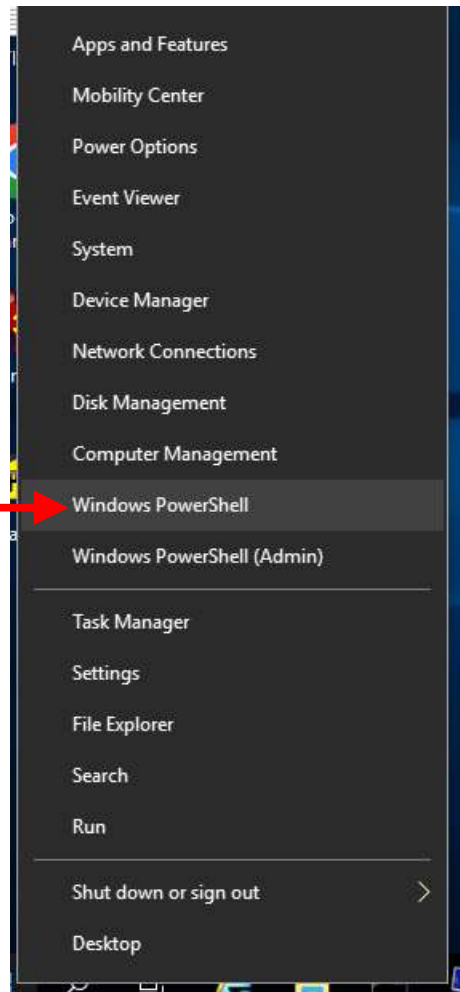


1) Right click on desktop windows start menu and select Powershell



2) ipconfig /all
to check under
the hood

Here we see
DHCP is —————>
enabled so we
know
dynamically
assigned

```
PS C:\Users\Administrator> ipconfig /all

Windows IP Configuration

Host Name . . . . . : WIN-KG868040KOB
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : hsd1.co.comcast.net


Ethernet adapter Ethernet:

Connection-specific DNS Suffix . : hsd1.co.comcast.net
Description . . . . . : Intel(R) PRO/1000 MT Desktop Adapter
Physical Address. . . . . : 08-00-27-B0-65-65
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IPv6 Address. . . . . : 2601:281:d87e:6aa0::56a(Preferred)
Lease Obtained. . . . . : Wednesday, February 14, 2024 8:22:30 AM
Lease Expires . . . . . : Sunday, February 18, 2024 12:49:55 AM
IPv6 Address. . . . . : 2601:281:d87e:6aa0:a066:22c9:f2f1:9f2e(Preferred)
Link-local IPv6 Address . . . . . : fe80::dfdc:64db:3713:56e0%5(Preferred)
IPv4 Address. . . . . : 10.0.0.15(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Thursday, February 15, 2024 10:22:57 AM
Lease Expires . . . . . : Saturday, February 17, 2024 10:22:56 AM
Default Gateway . . . . . : fe80::82da:c2ff:fe91:35d7%5
                          10.0.0.1
DHCP Server . . . . . : 10.0.0.1
DHCPv6 IAID . . . . . : 84410407
DHCPv6 Client DUID. . . . . : 00-01-00-01-2D-3C-C7-8C-08-00-27-B0-65-65
DNS Servers . . . . . : 2001:558:feed::1
                          2001:558:feed::2
                          75.75.75.75
                          75.75.76.76
                          2001:558:feed::1
                          2001:558:feed::2
NetBIOS over Tcpip. . . . . : Enabled
```

3) Next I opted to check my DNS which was being automatically assigned as we see here with an Interface Index of 5. The Interface Index is currently automatically assigned but we can assign this. However, in this instance it is unnecessary. It tells Windows how to prioritize but we only have the one so it isn't necessary.

Input: Get -DnsClientServerAddress

```
PS C:\Users\Administrator> Get-DnsClientServerAddress
```

InterfaceAlias	Interface Index	Address Family	ServerAddresses
Ethernet	5	IPv4	{}
Ethernet	5	IPv6	{2001:558:feed::1, 2001:558:feed::2, 2001:558:feed::1, 2001:558:feed::2}
Loopback Pseudo-Interface 1	1	IPv4	{}
Loopback Pseudo-Interface 1	1	IPv6	{}

To assign we then input: Set -DnsClientServerAddress -InterfaceIndex 5 -ServerAddresses ("75.75.75.75","75.75.75.76")

```
PS C:\Users\Administrator> Set-DnsClientServerAddress -InterfaceIndex 5 -ServerAddresses ("75.75.75.75","75.75.75.76")
PS C:\Users\Administrator>
```

4) Next we will assign a static IP. Prior to this you may want to use arp -a to avoid any potential IP conflicts (reference prior assignments)

Input: New-NetIPAddress -IPAddress 10.0.0.190 -DefaultGateway 10.0.0.1 -PrefixLength 24 -InterfaceIndex (Get-NetAdapter).InterfaceIndex

```
PS C:\Users\Administrator> New-NetIPAddress -IPAddress 10.0.0.190 -DefaultGateway 10.0.0.1 -PrefixLength 24 -InterfaceIndex (Get-NetAdapter).InterfaceIndex

IPAddress      : 10.0.0.190
InterfaceIndex : 5
InterfaceAlias : Ethernet
AddressFamily  : IPv4
Type           : Unicast
PrefixLength   : 24
PrefixOrigin   : Manual
SuffixOrigin   : Manual
AddressState   : Tentative
ValidLifetime  : Infinite ([TimeSpan]::MaxValue)
PreferredLifetime : Infinite ([TimeSpan]::MaxValue)
SkipAsSource   : False
PolicyStore    : ActiveStore

IPAddress      : 10.0.0.190
InterfaceIndex : 5
InterfaceAlias : Ethernet
AddressFamily  : IPv4
Type           : Unicast
PrefixLength   : 24
PrefixOrigin   : Manual
SuffixOrigin   : Manual
AddressState   : Invalid
ValidLifetime  : Infinite ([TimeSpan]::MaxValue)
PreferredLifetime : Infinite ([TimeSpan]::MaxValue)
SkipAsSource   : False
PolicyStore    : PersistentStore
```

5) Lets confirm everything took with ipconfig /all

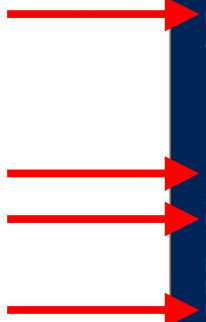
```
PS C:\Users\Administrator> ipconfig /all

Windows IP Configuration

Host Name . . . . . : WIN-KG868040K0B
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

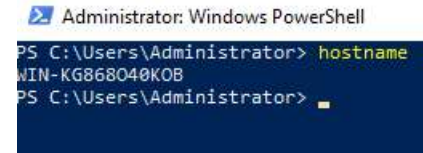
Ethernet adapter Ethernet:

Connection-specific DNS Suffix . :
Description . . . . . : Intel(R) PRO/1000 MT Desktop Adapter
Physical Address. . . . . : 08-00-27-B0-65-65
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
IPv6 Address. . . . . : 2601:281:d87e:6aa0::56a(Preferred)
Lease Obtained. . . . . : Wednesday, February 14, 2024 8:22:30 AM
Lease Expires . . . . . : Sunday, February 18, 2024 12:49:55 AM
IPv6 Address. . . . . : 2601:281:d87e:6aa0:a066:22c9:f2f1:9f2e(Preferred)
Link-local IPv6 Address . . . . . : fe80::dfdc:64db:3713:56e0%5(Preferred)
IPv4 Address. . . . . : 10.0.0.190(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : fe80::82da:c2ff:fe91:35d7%5
                          10.0.0.1
DHCPv6 IAID . . . . . : 84410407
DHCPv6 Client DUID. . . . . : 00-01-00-01-2D-3C-C7-8C-08-00-27-B0-65-65
DNS Servers . . . . . : 2001:558:feed::1
                          2001:558:feed::2
                          75.75.75.75
                          75.75.75.76
                          2001:558:feed::1
                          2001:558:feed::2
```



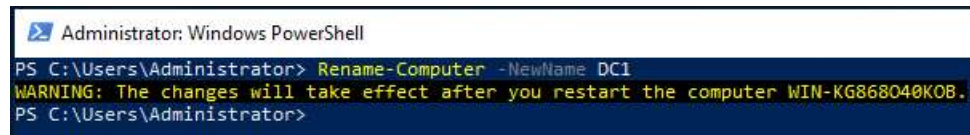
6) Now we should change the hostname for help of organization

We check with the cmdlet: hostname



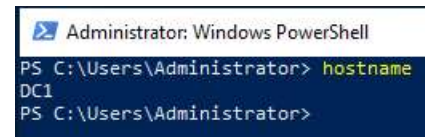
```
Administrator: Windows PowerShell
PS C:\Users\Administrator> hostname
WIN-KG868040KOB
PS C:\Users\Administrator>
```

Then to change input Rename-Computer -NewName DC1



```
Administrator: Windows PowerShell
PS C:\Users\Administrator> Rename-Computer -NewName DC1
WARNING: The changes will take effect after you restart the computer WIN-KG868040KOB.
PS C:\Users\Administrator>
```

It will need to restart to take and then we confirm with inputting hostname one more time



```
Administrator: Windows PowerShell
PS C:\Users\Administrator> hostname
DC1
PS C:\Users\Administrator>
```

7) To install Active Directory we next input

Install-WindowsFeature -name AD-Domain-services -IncludeManagementTools

```
PS C:\Users\Administrator> Install-WindowsFeature -name AD-Domain-services -IncludeManagementTools

Success Restart Needed Exit Code      Feature Result
-----
True     No                Success      {Active Directory Domain Services, Group P...
```

Upon success we then input the following to complete the install of AD

Install-ADDSTForest -DomainName TopLevel.local -DomainNetbiosName TopLevel -InstallDns

Note: TopLevel.local and TopLevel are what I chose to use in this example yours will reflect what you choose based off your requirements/need.

Then you will input the restore password which must be different then your administrator, followed by "A" to continue with install saying yes to all

```
Administrator: Windows PowerShell

PS C:\Users\Administrator> Install-ADDSTForest -DomainName TopLevel.local -DomainNetbiosName TopLevel -InstallDns
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"): A
```


8) The install is now underway and when complete it will restart and update settings

```
Administrator: Windows PowerShell
PS C:\Users\Administrator> Install-ADDSForest -DomainName TopLevel.local -DomainNetbiosName TopLevel -InstallDns
SafeModeAdministratorPassword: *****

Install-ADDSForest

Validating environment and user input
All tests completed successfully
[oooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooooo]
Installing new forest
Checking if Group Policy Management Console needs to be installed...

For more information about this setting, see Knowledge Base article 942564
(http://go.microsoft.com/fwlink/?LinkId=104751).

WARNING: This computer has at least one physical network adapter that does not have static IP address(es) assigned to
its IP Properties. If both IPv4 and IPv6 are enabled for a network adapter, both IPv4 and IPv6 static IP addresses
should be assigned to both IPv4 and IPv6 Properties of the physical network adapter. Such static IP address(es)
assignment should be done to all the physical network adapters for reliable Domain Name System (DNS) operation.

WARNING: A delegation for this DNS server cannot be created because the authoritative parent zone cannot be found or it
does not run Windows DNS server. If you are integrating with an existing DNS infrastructure, you should manually
create a delegation to this DNS server in the parent zone to ensure reliable name resolution from outside the domain
"TopLevel.local". Otherwise, no action is required.

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).

WARNING: This computer has at least one physical network adapter that does not have static IP address(es) assigned to
its IP Properties. If both IPv4 and IPv6 are enabled for a network adapter, both IPv4 and IPv6 static IP addresses
should be assigned to both IPv4 and IPv6 Properties of the physical network adapter. Such static IP address(es)
assignment should be done to all the physical network adapters for reliable Domain Name System (DNS) operation.

WARNING: A delegation for this DNS server cannot be created because the authoritative parent zone cannot be found or it
does not run Windows DNS server. If you are integrating with an existing DNS infrastructure, you should manually
create a delegation to this DNS server in the parent zone to ensure reliable name resolution from outside the domain
"TopLevel.local". Otherwise, no action is required.
```

9) Once complete you should now notice your domain when you go to login

