How To Create a Windows Deployment Server with Microsoft Deployment Tools

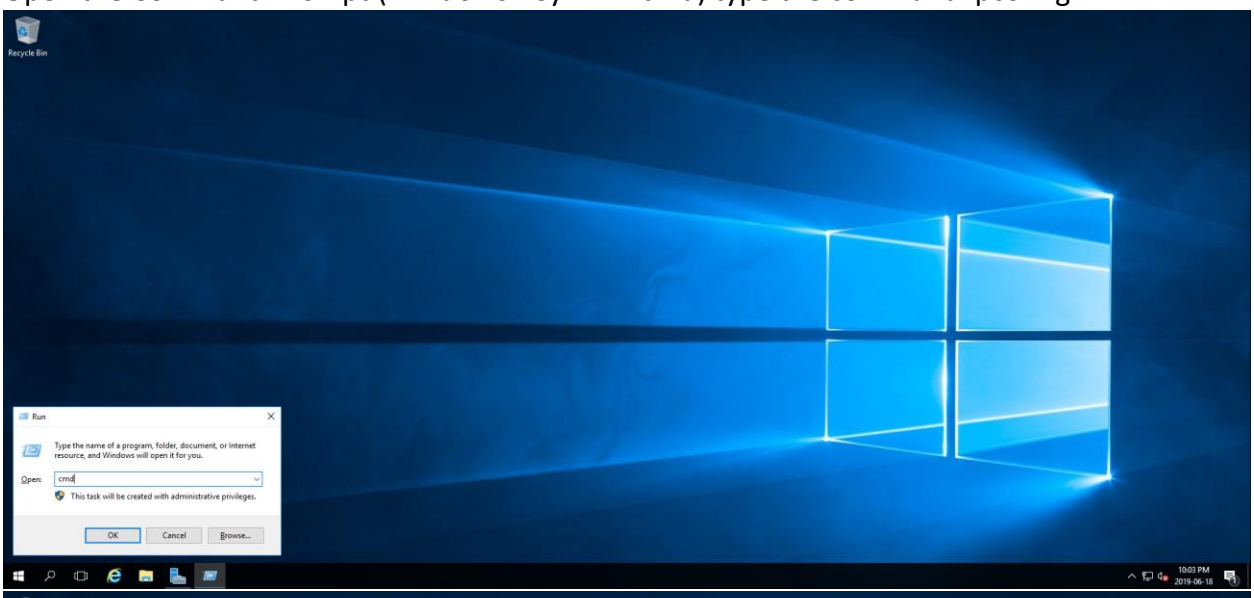
By Justin Mah

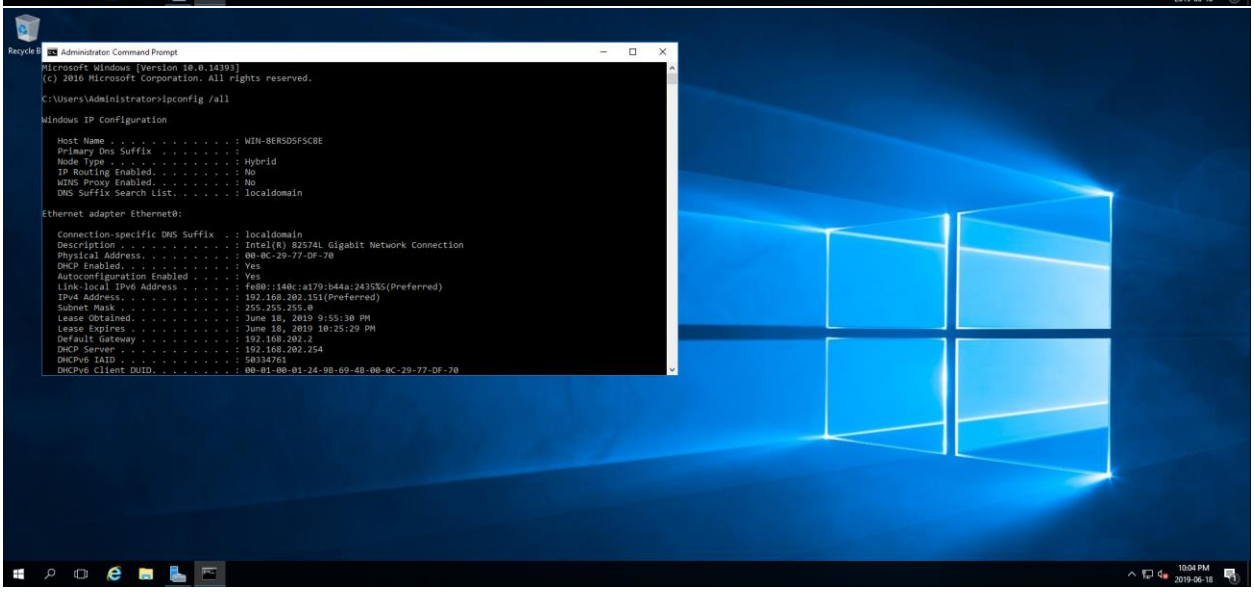
Requirements

- A Domain Controller (if you have not created one please refer to the tutorial “How to Create a Windows Server 2016 Domain Controller”)
- A copy of a Windows Operating System ISO
- Windows 10 Automated Deployment Toolkit and WinPE add-on
- Microsoft Deployment Services

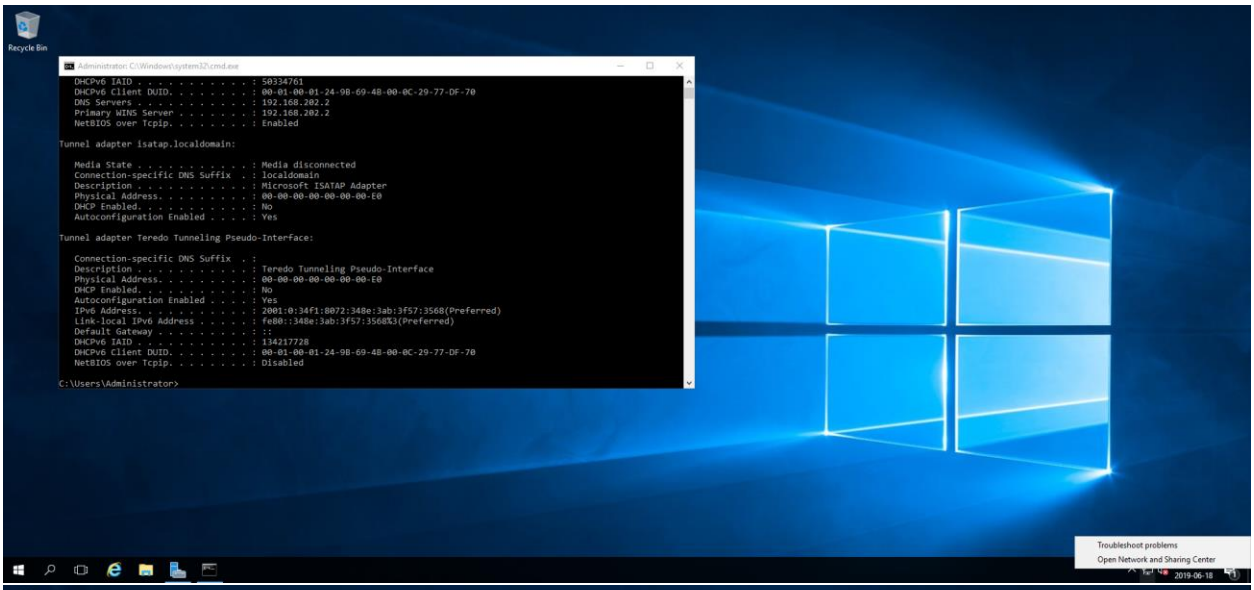
Steps

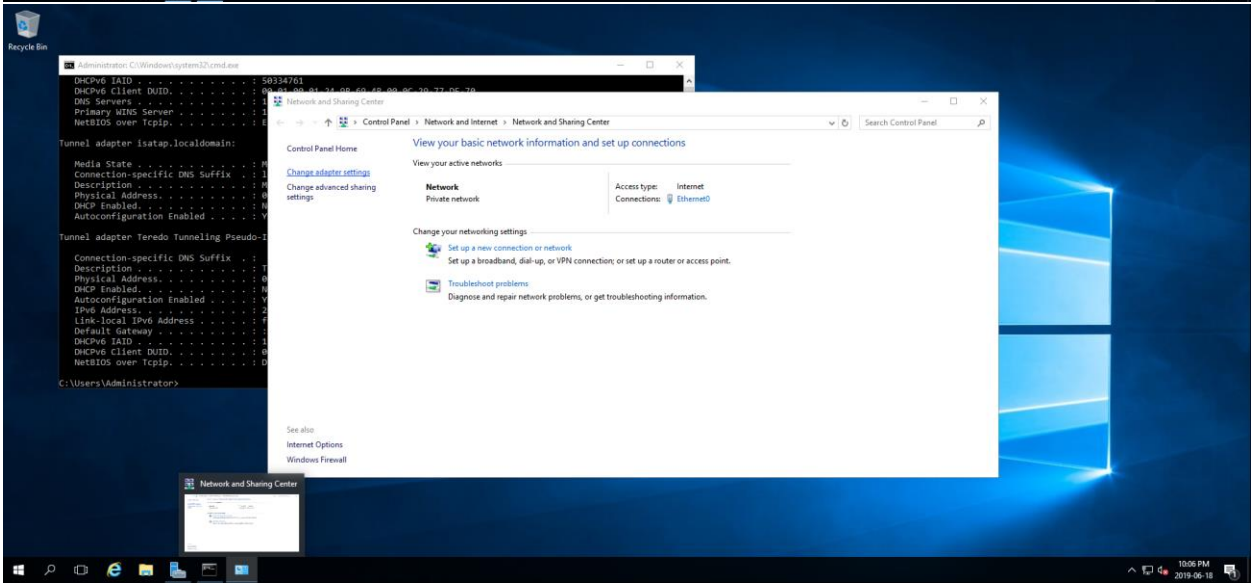
1) Create a virtual machine with the same specifications as you Domain Controller, install Windows Server 2016
2) Open the Command Prompt (Windows Key + R > cmd) type the command ipconfig



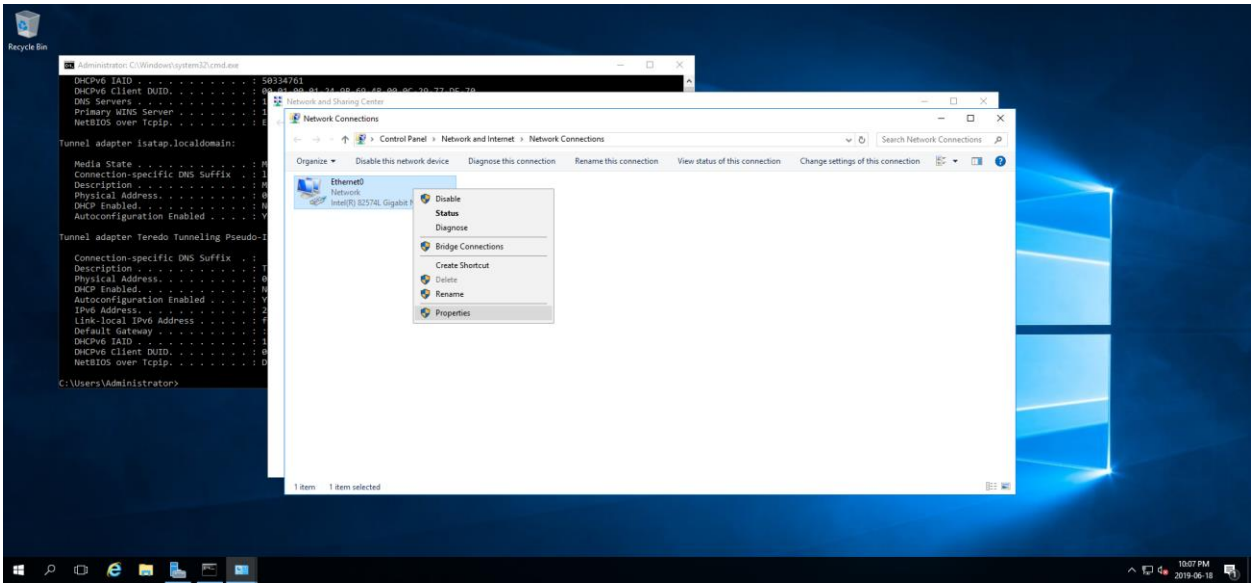


3) Right click the network adapter icon > Network and Sharing Centre > Click “Change Adapter Settings”

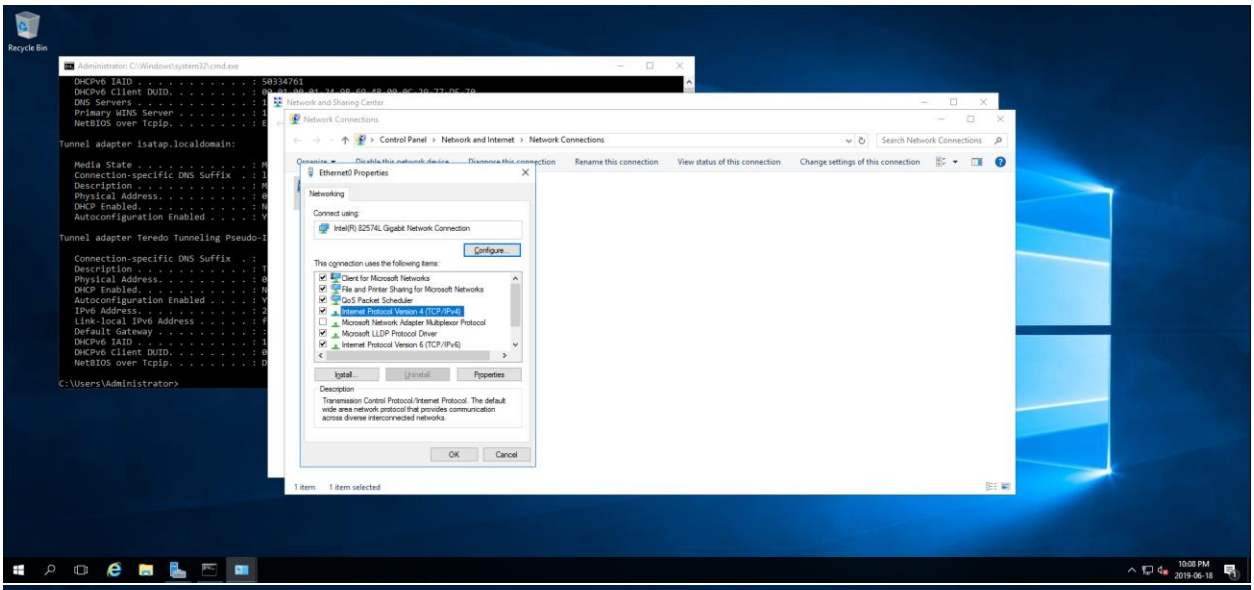

Recycle Bin
Administrator: C:\Windows\system32\cmd.exe
DHCPv6 IAID . . . . . : 50334761
DHCPv6 Client DUID. . . . . : 00-01-00-01-24-98-69-48-00-0C-29-77-DF-70
DNS Servers . . . . . : 192.168.202.2
Primary WINS Server . . . . . : 192.168.202.2
NetBIOS over Tcpip. . . . . : Enabled
Tunnel adapter isatap.localdomain:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : localdomain
Description . . . . . : Microsoft ISATAP Adapter
Physical Address. . . . . : 00-00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Tunnel adapter Teredo Tunneling Pseudo-Interface:
Connection-specific DNS Suffix . :
Description . . . . . : Teredo Tunneling Pseudo-Interface
Physical Address. . . . . : 00-00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
IPv6 Address. . . . . : 2001:0:34f1:8072:348e:3ab:3f57:3568(Preferred)
Link-local IPv6 Address . . . . . : fe80::348e:3ab:3f57:3568%3(Preferred)
Default Gateway . . . . . : ::
DHCPv6 IAID . . . . . : 134217728
DHCPv6 Client DUID. . . . . : 00-01-00-01-24-98-69-48-00-0C-29-77-DF-70
NetBIOS over Tcpip. . . . . : Disabled
C:\Users\Administrator>
Troubleshoot problems
Open Network and Sharing Center
2019-06-18

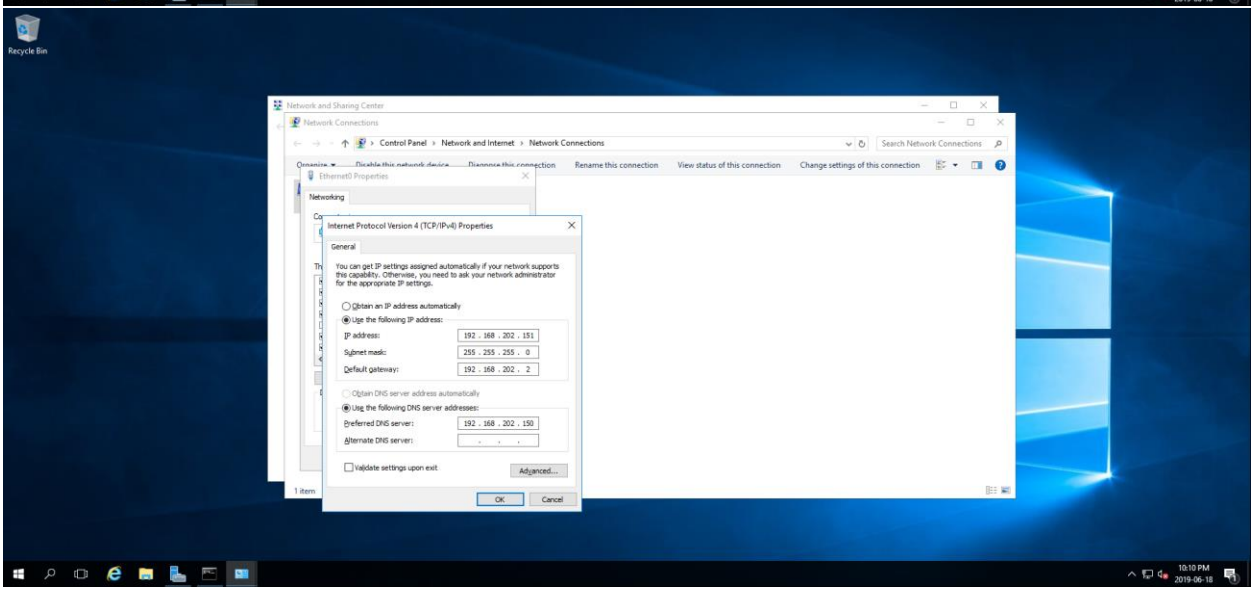

Recycle Bin
Administrator: C:\Windows\system32\cmd.exe
Network and Sharing Center
Control Panel › Network and Internet › Network and Sharing Center
Search Control Panel
Control Panel Home
Change adapter settings
Change advanced sharing settings
View your basic network information and set up connections
View your active networks
Network
Private network
Access type: Internet
Connections: Ethernet0
Change your networking settings
Set up a new connection or network
Set up a broadband, dial-up, or VPN connection; or set up a router or access point.
Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.
See also
Internet Options
Windows Firewall
Network and Sharing Center
10:06 PM
2019-06-18

4) Right click the network adapter “Ethernet0” > Properties



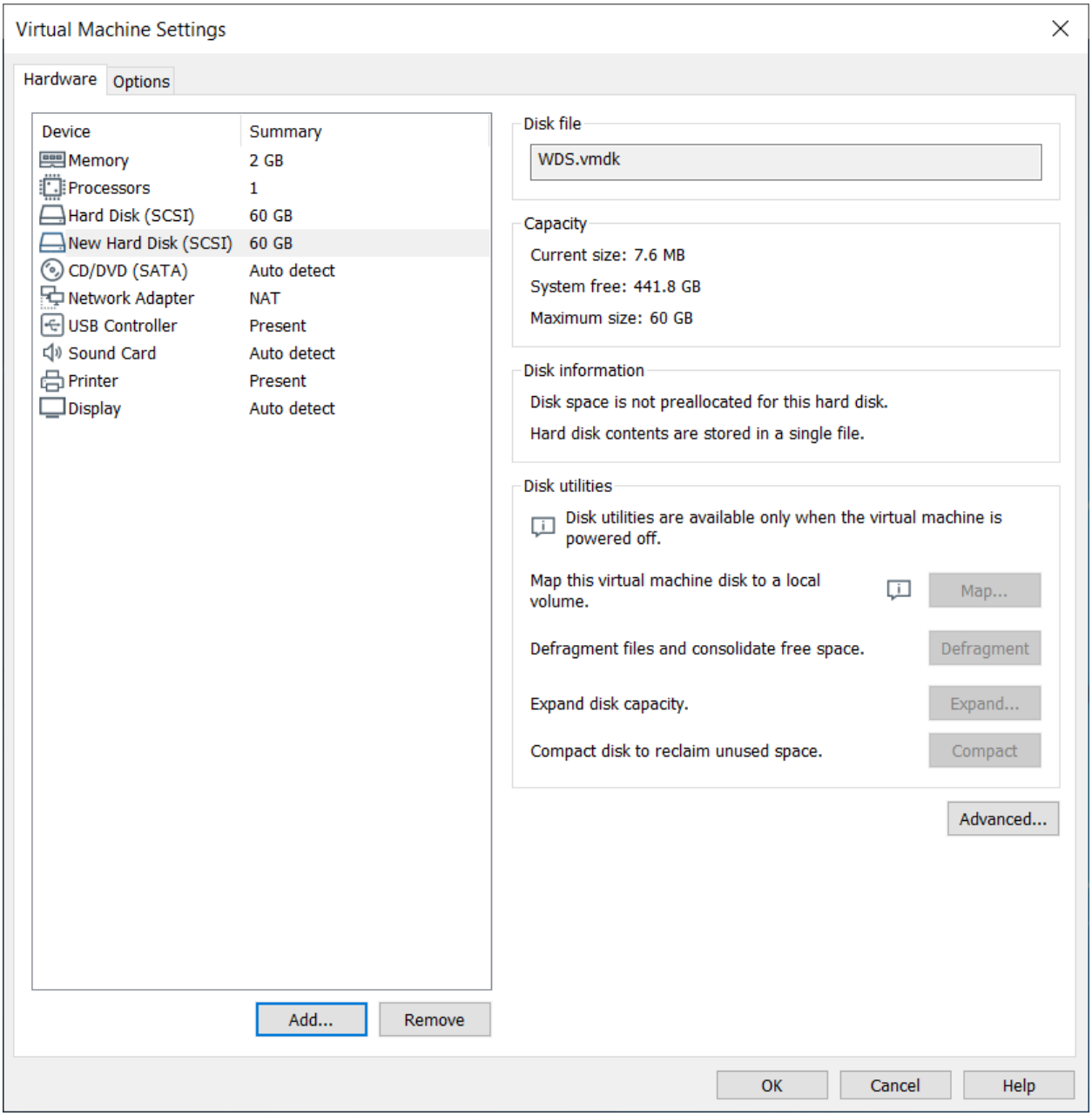
5) Select Internet Protocol Version 4 > Set the IP address, Subnet Mask, and Default Gateway to the network configuration outlined in step 2, set the Primary DNS Server to the IP Address of your Domain Controller





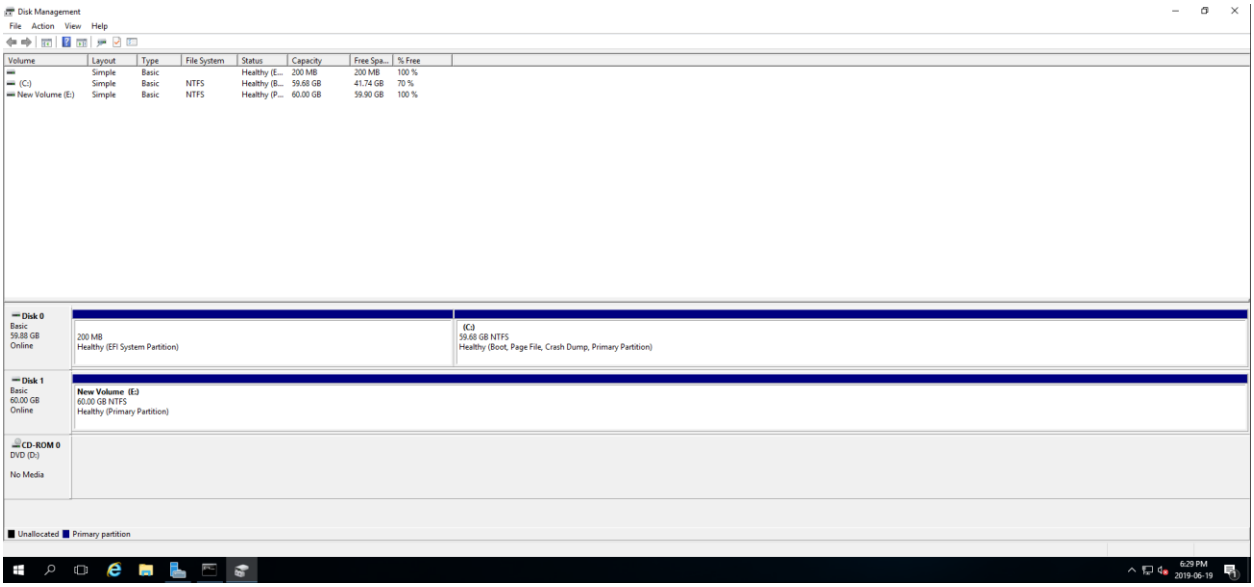
6) Download and install Windows 10 ADK and MDT, accept the defaults.

7) Add a second HDD, which will store the files necessary for deployment

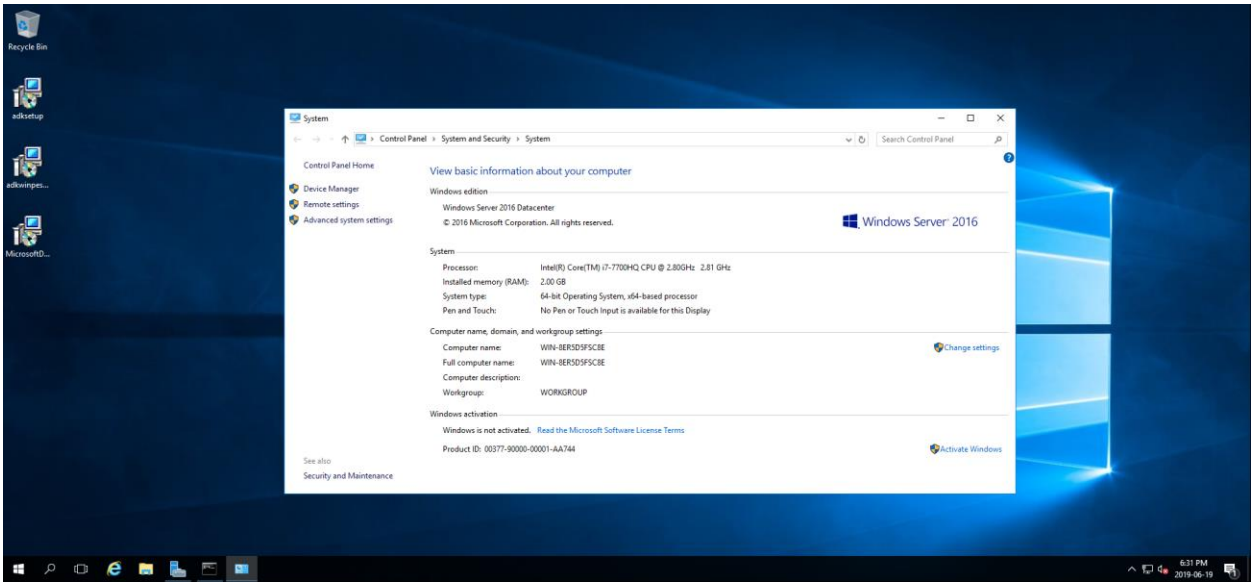


note: Before formatting the drive as a new simple volume you need to bring it online

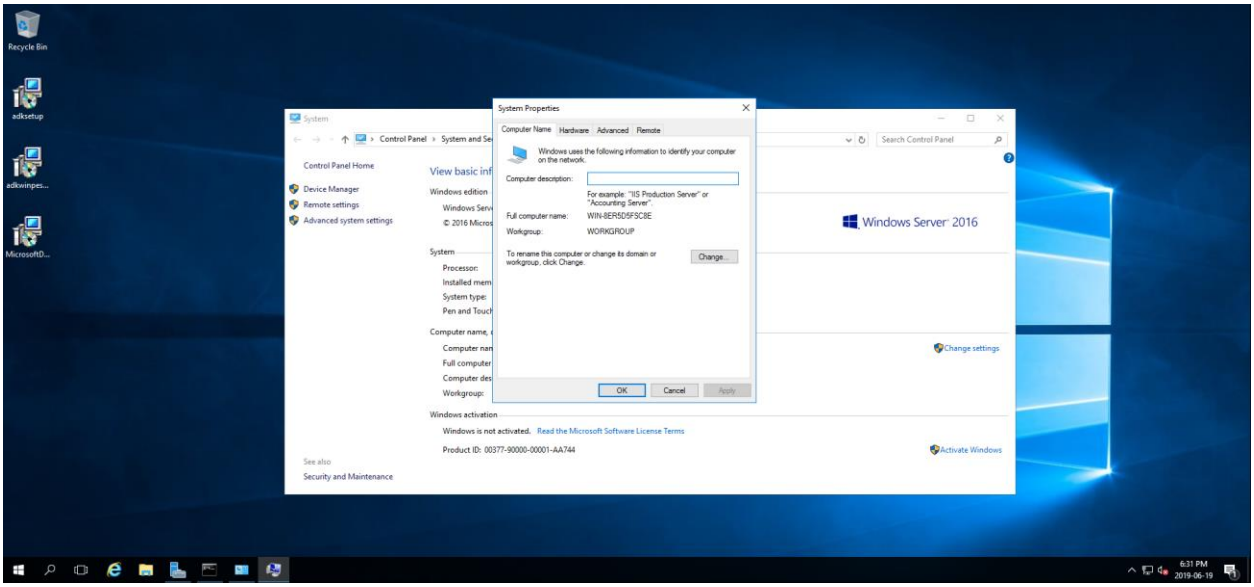
then initialize it as an MBR first



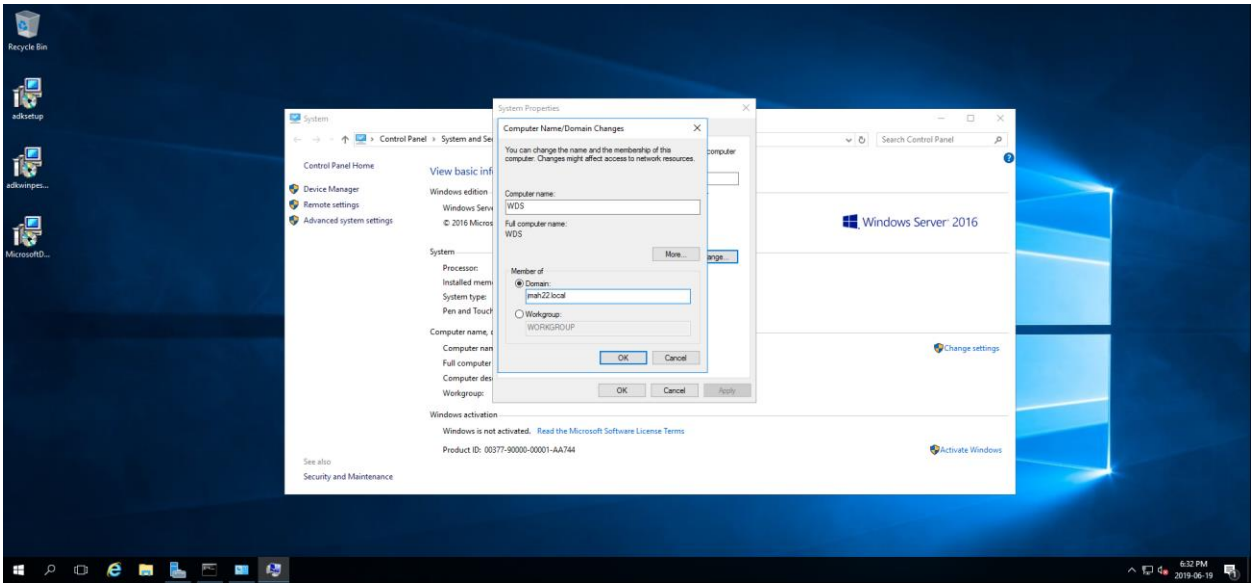
8) Push Windows + Pause | Break, under computer name click change settings



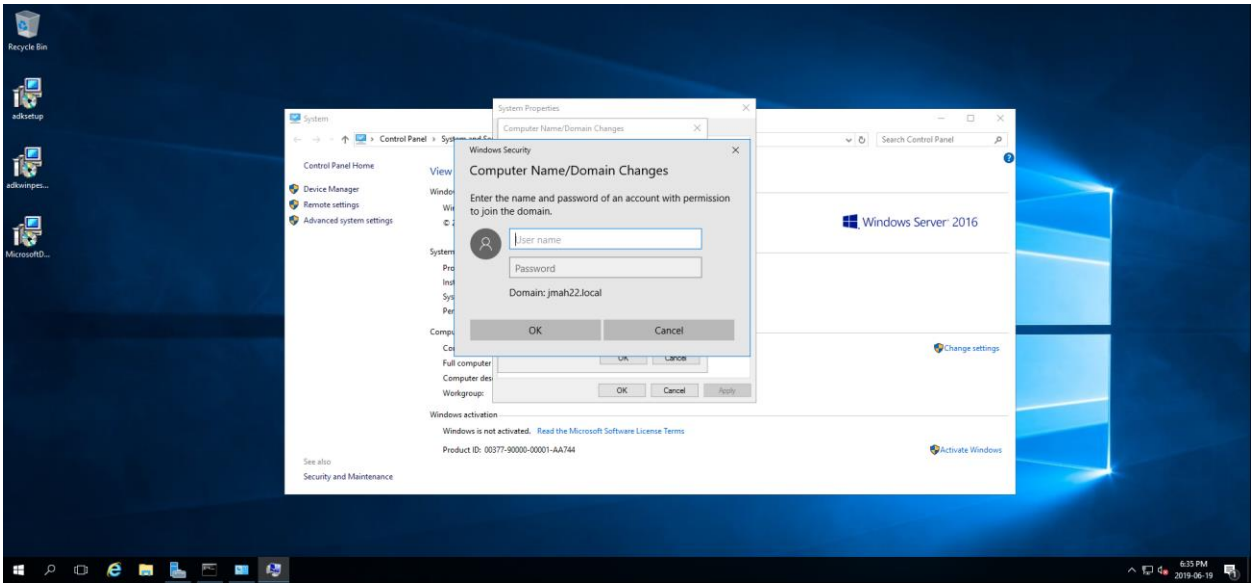
9) Click change



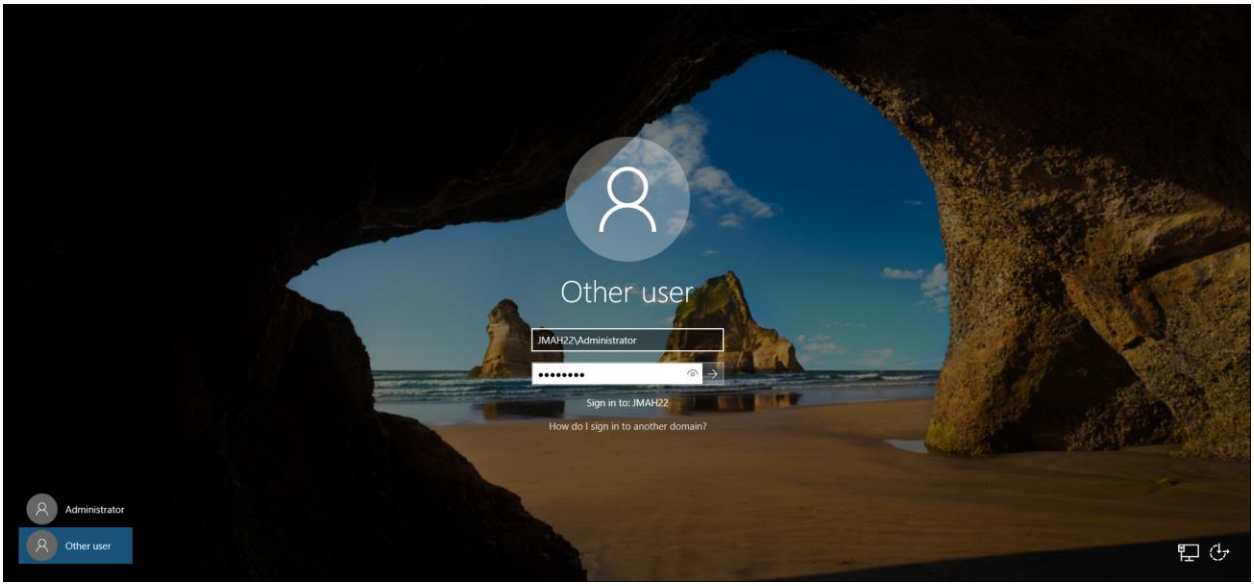
10) Select domain and enter your domain name (As created in How to create a domain controller)



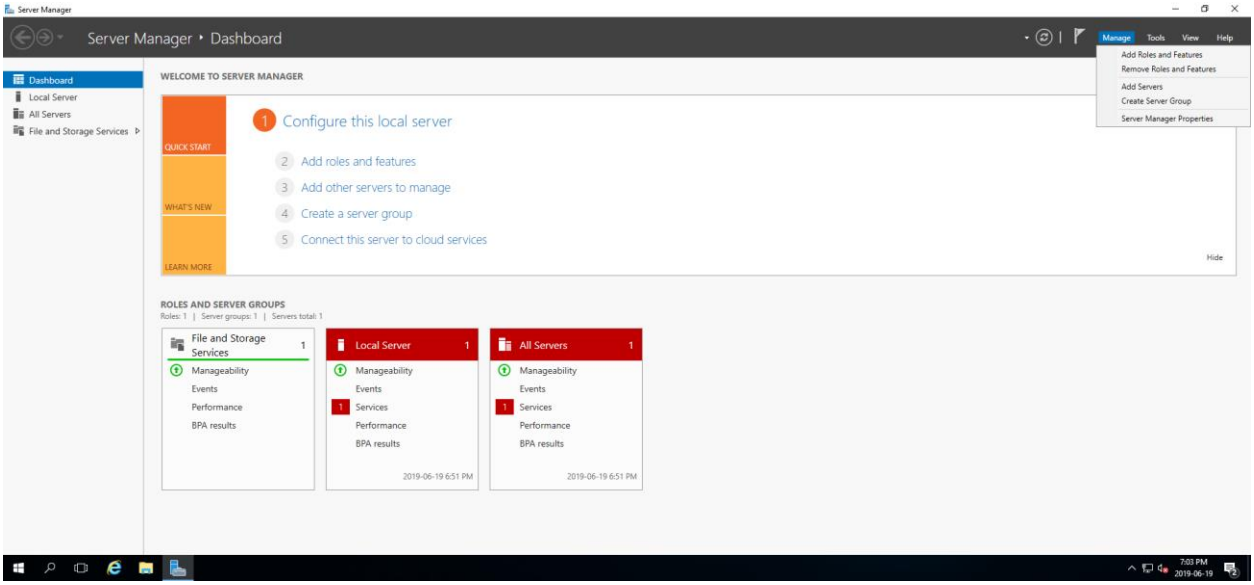
11) Enter the Domain Administrator username and password



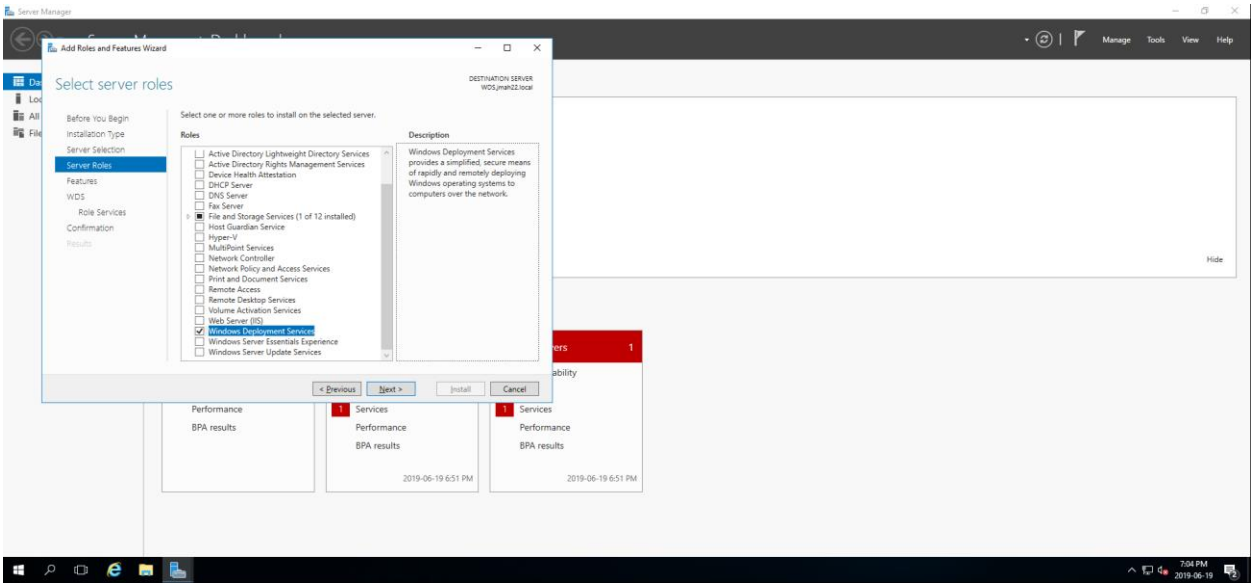
12) Login using the Domain Administrator account



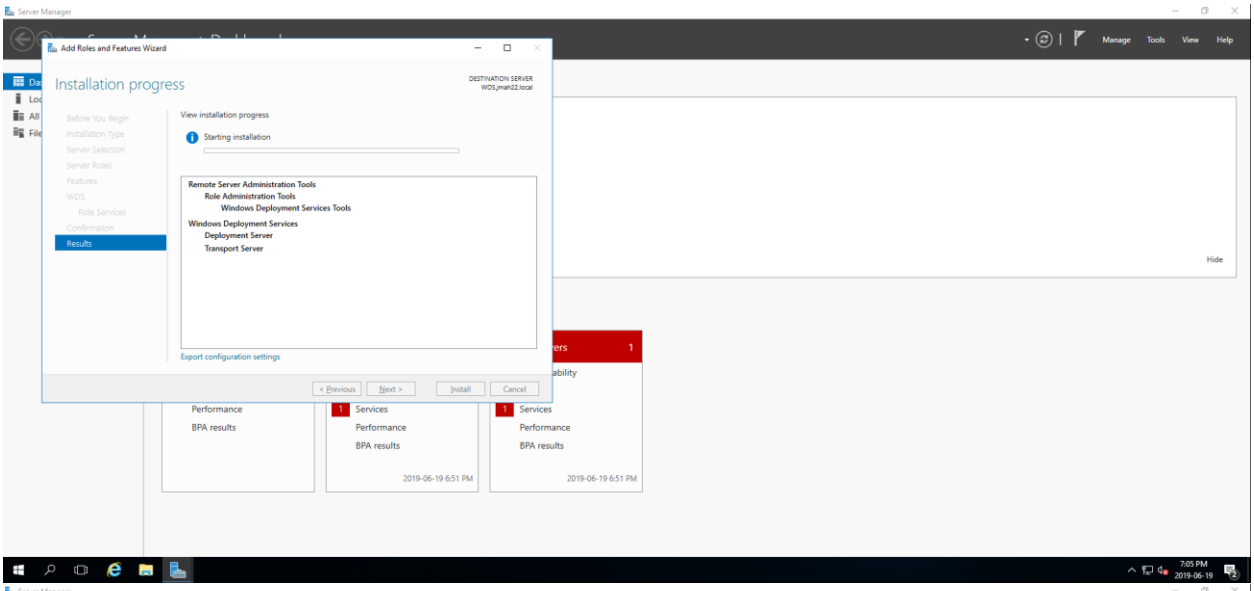
13) Click Manage > Add Roles and Features

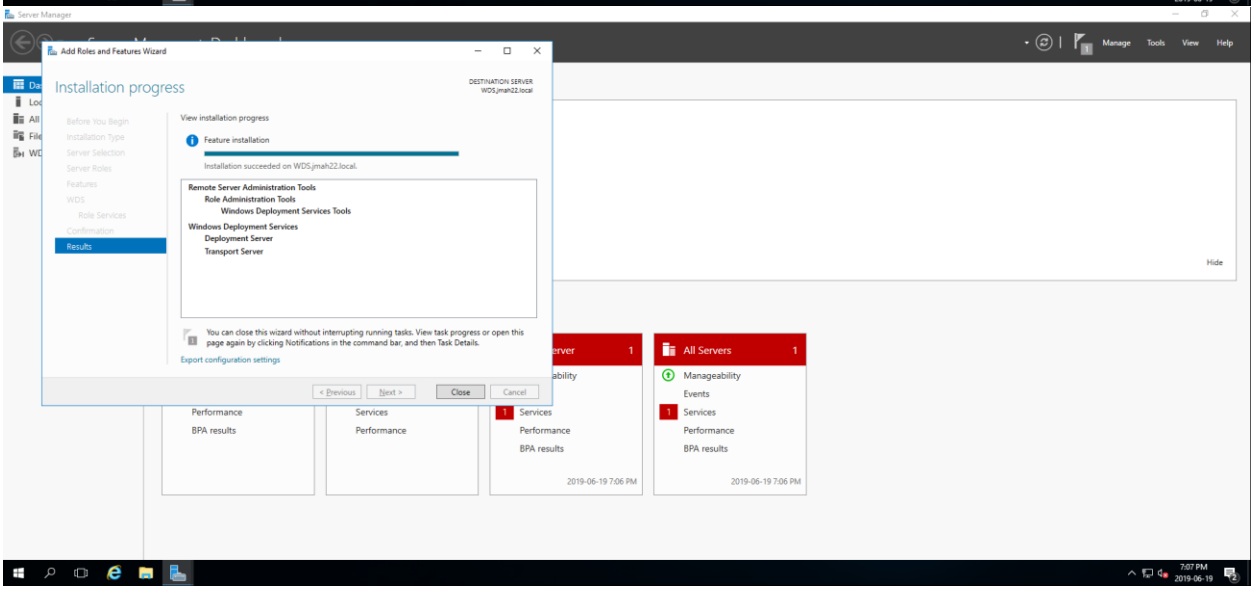


14) Accept defaults > Select Windows Deployment Services at the server roles page > Click add features when prompted

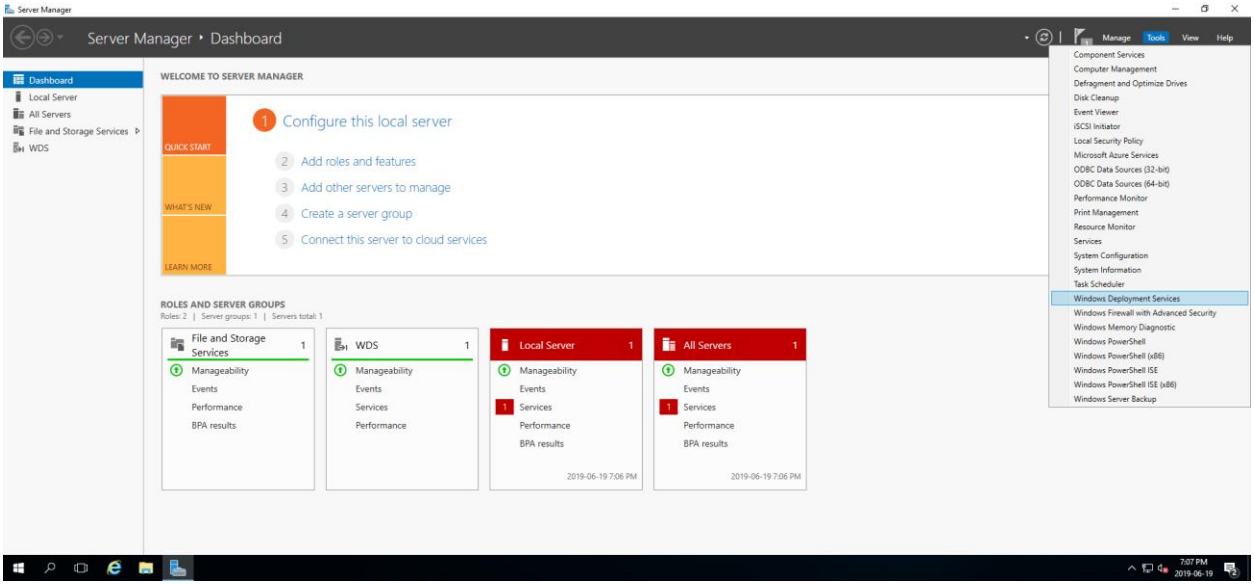


15) Click next 3 times > click install > click closed when completed

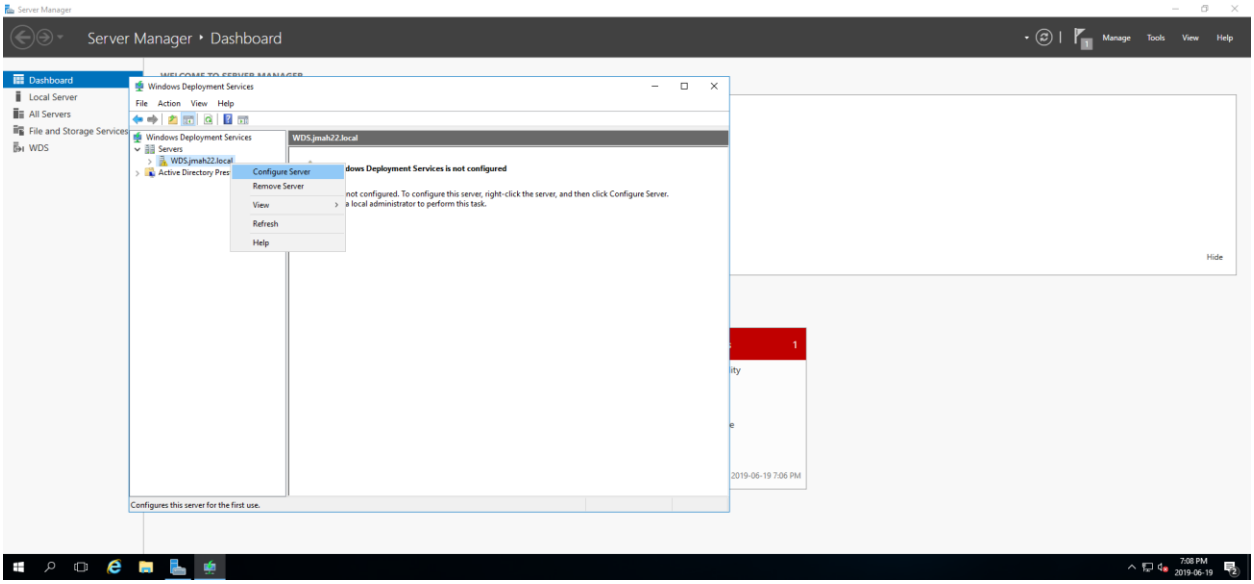




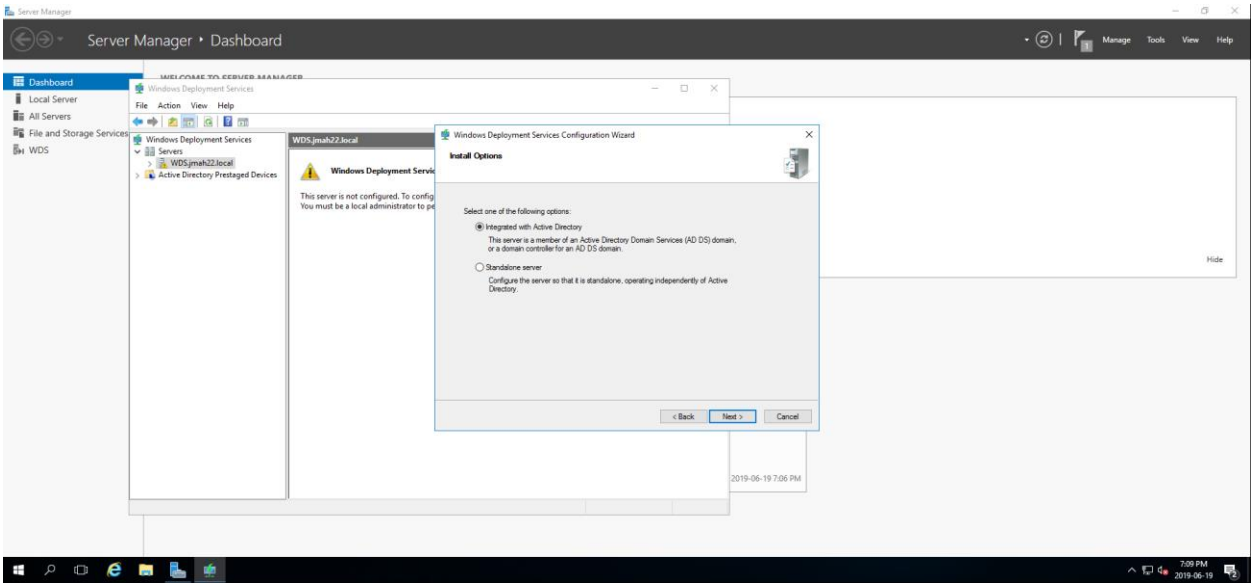
16) Click tools > Windows Deployment Services



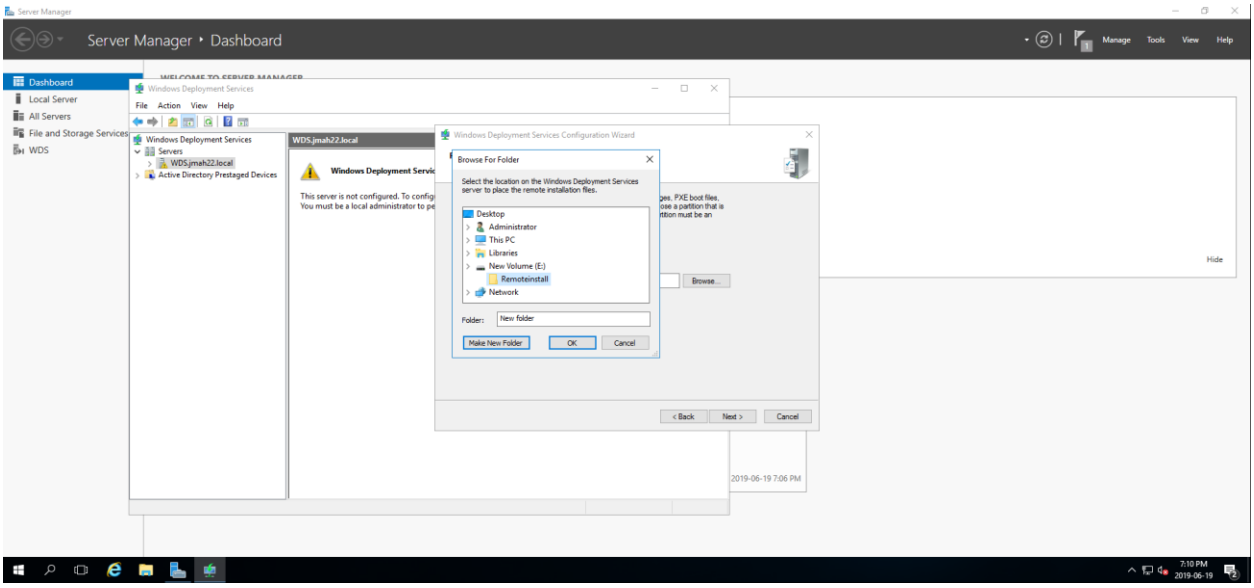
17) Click servers > right-click *server name* > configure server



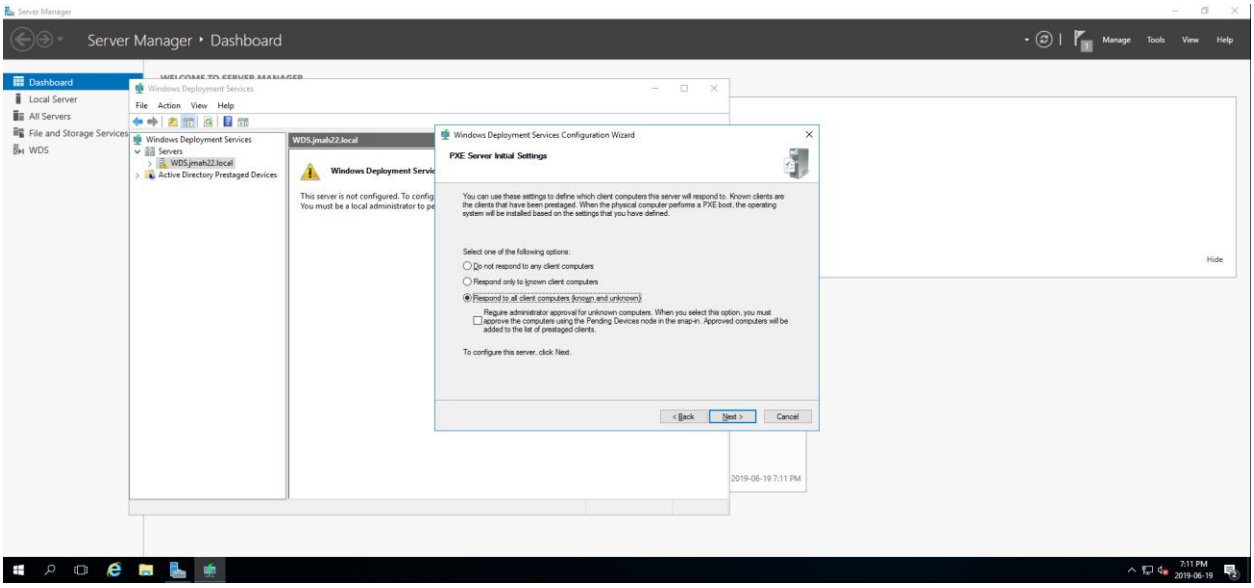
18) Click next > Select “Integrated with Active Directory”



19) Click browse > select the second drive created in step 7 and create a folder to store the remote installation folder

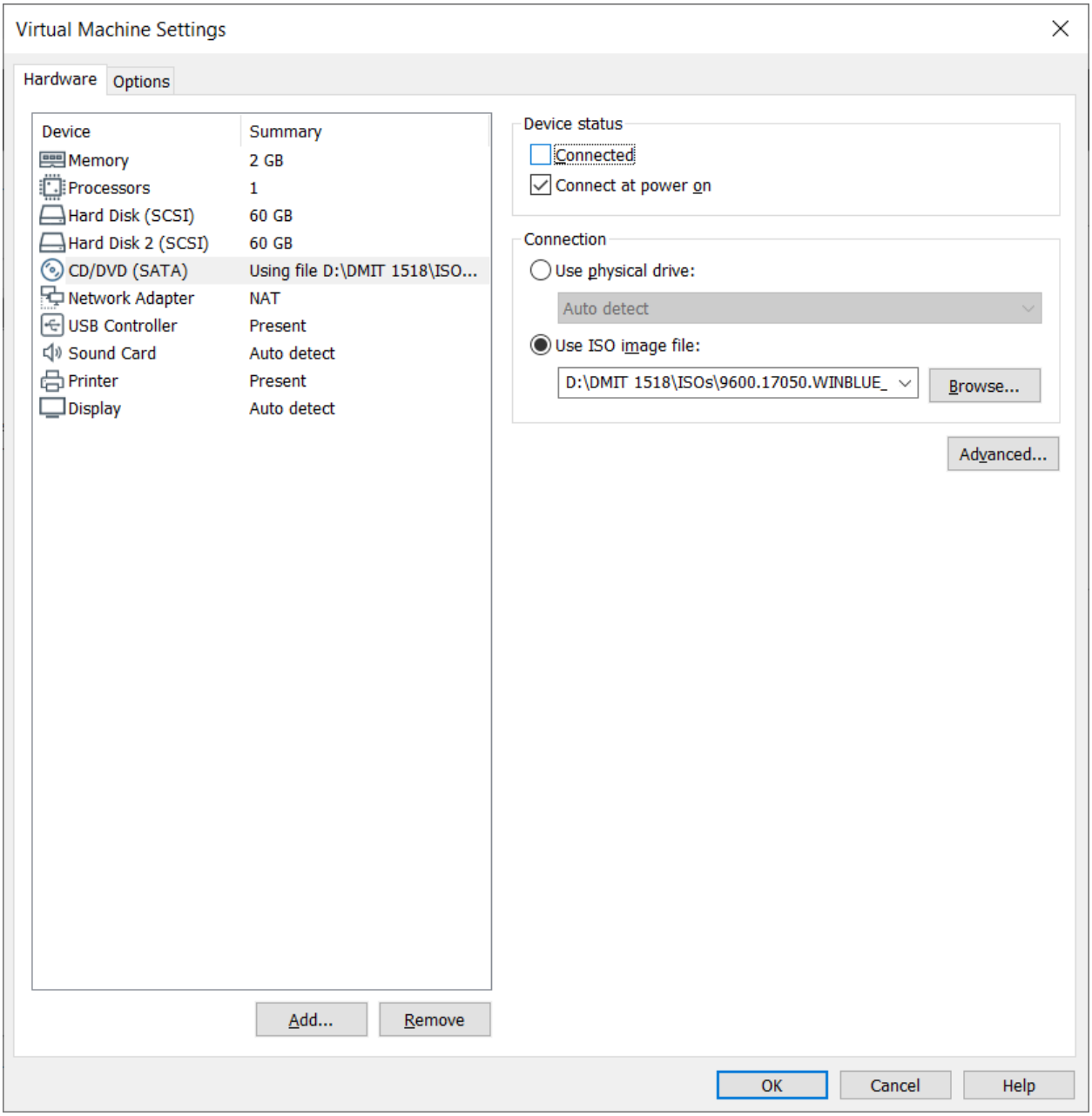


20) Select “Respond to all client computers (known and unknown)” . Leave Require administrator approval box unchecked

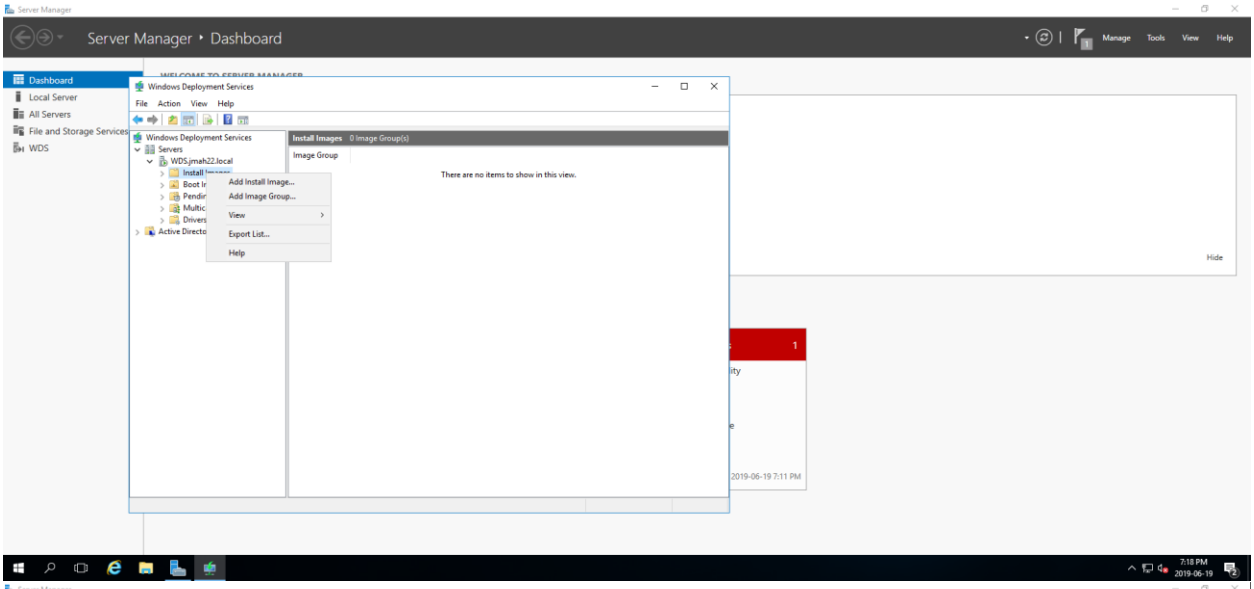


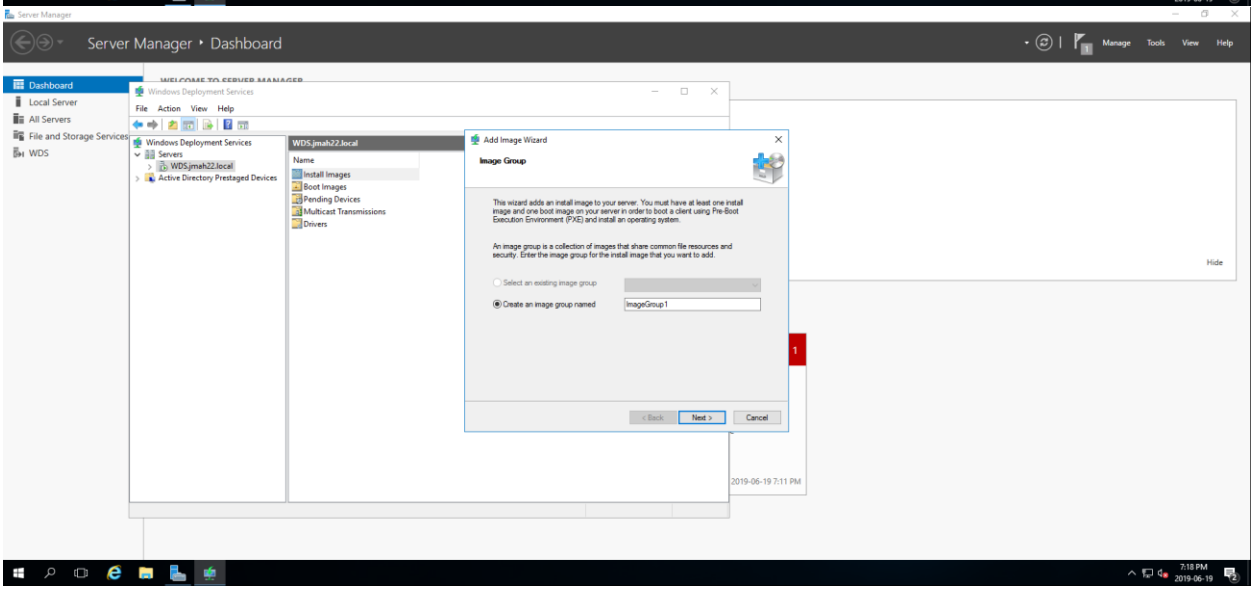
21) Click finish when prompted

22) Attach the installation ISO to your VM

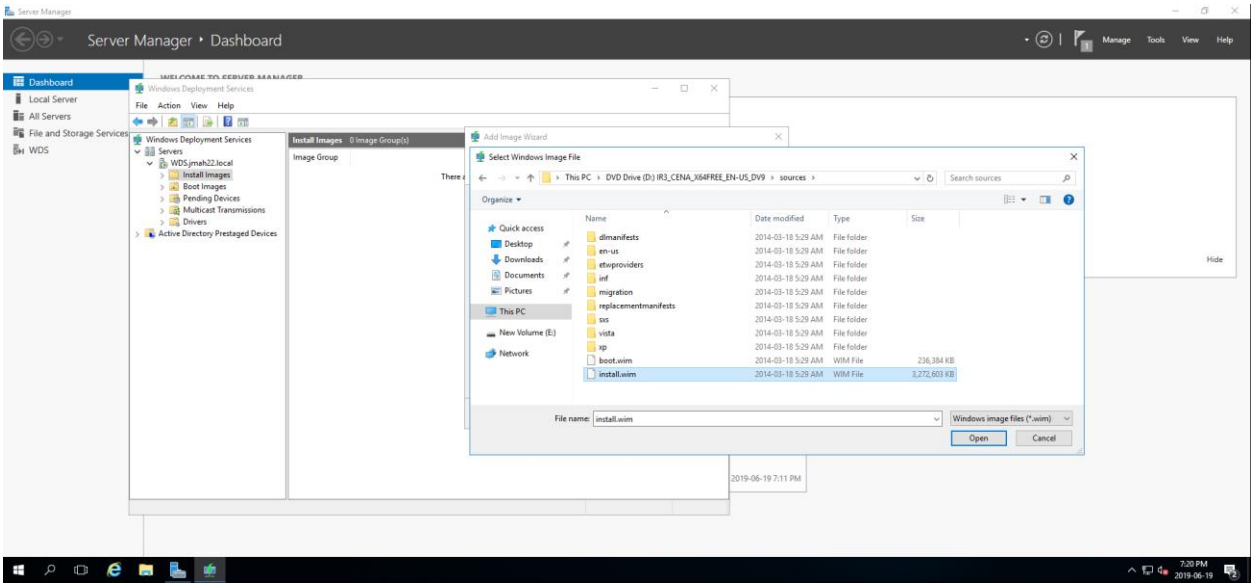


23) Right click install images > Add install image > Name image group

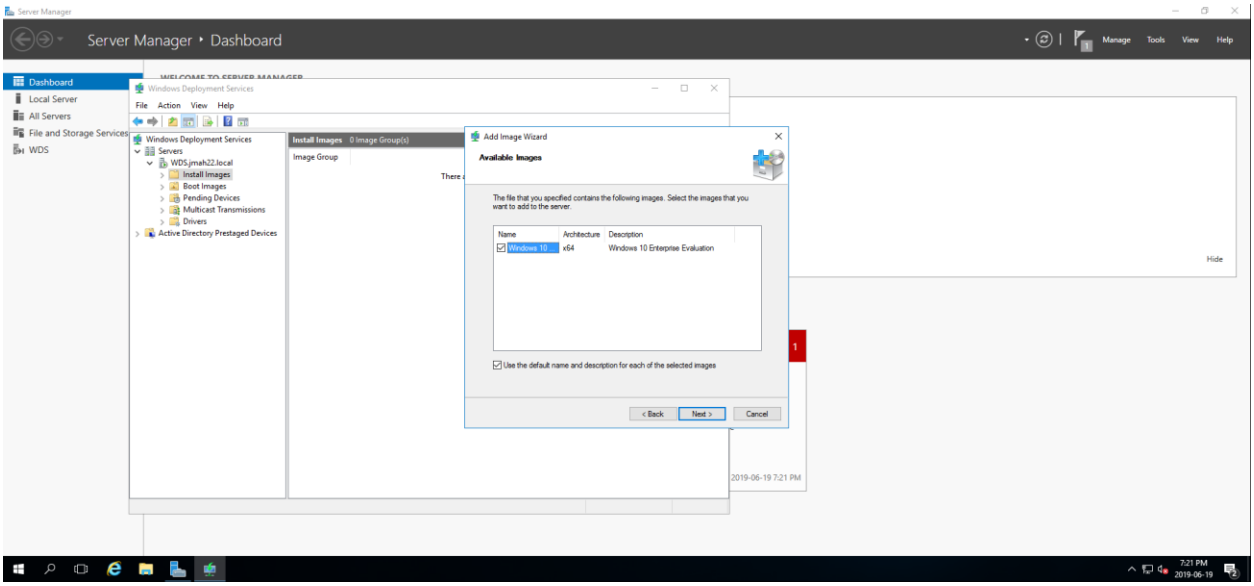




24) Click browse > locate the install.wim file located in the sources folder

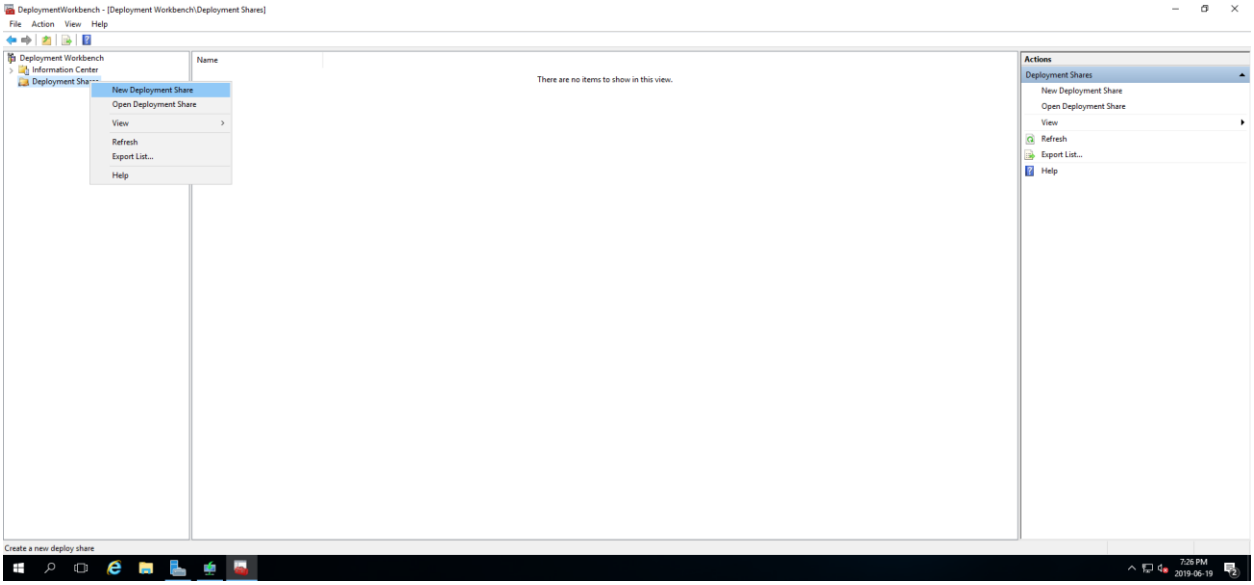


25) Click next 2 times > click finish

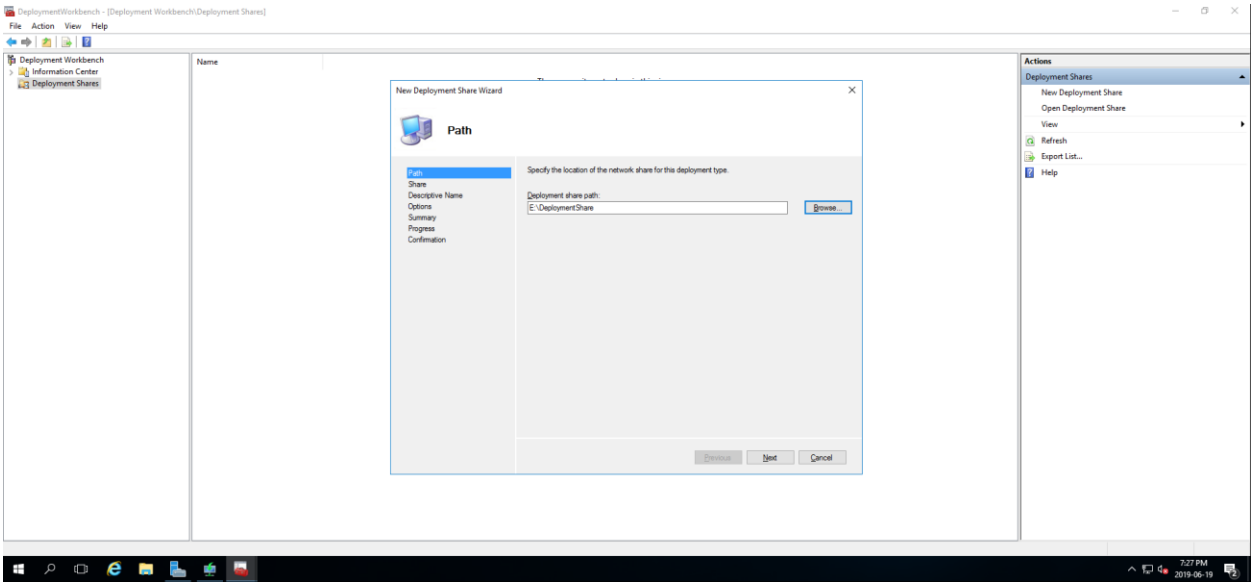


26) Open deployment workbench (under deployment toolkit in the start menu)

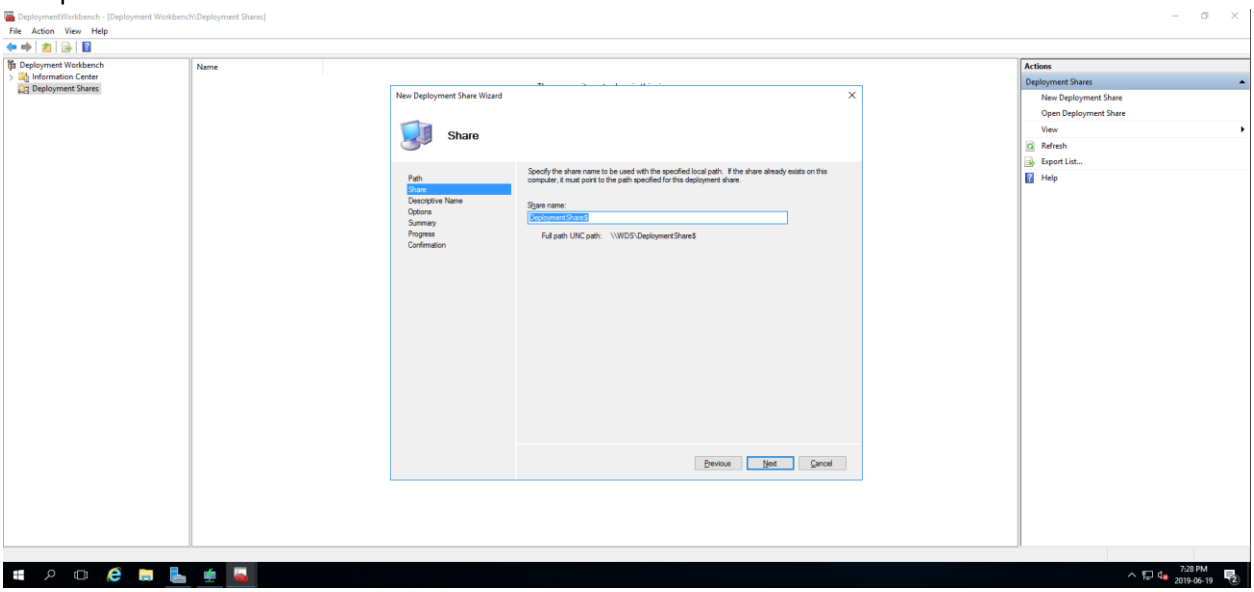
27) Right click deployment shares > New Deployment Share



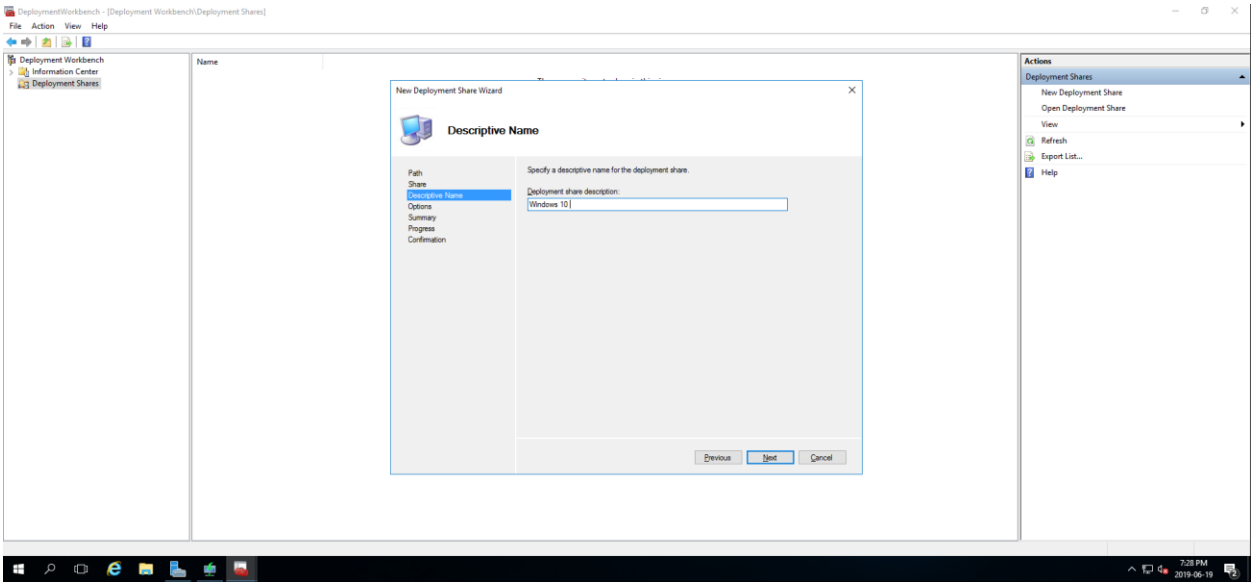
28) Point the deployment share path to the second hard drive



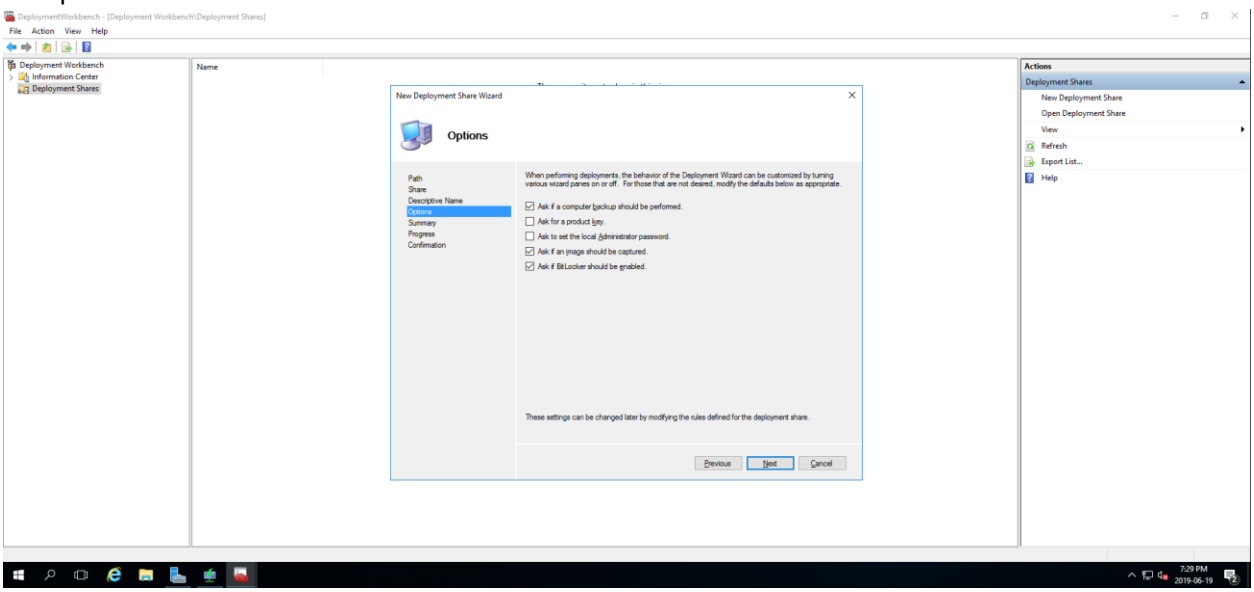
29) Accept default UNC name



30) Give deployment share a descriptive name

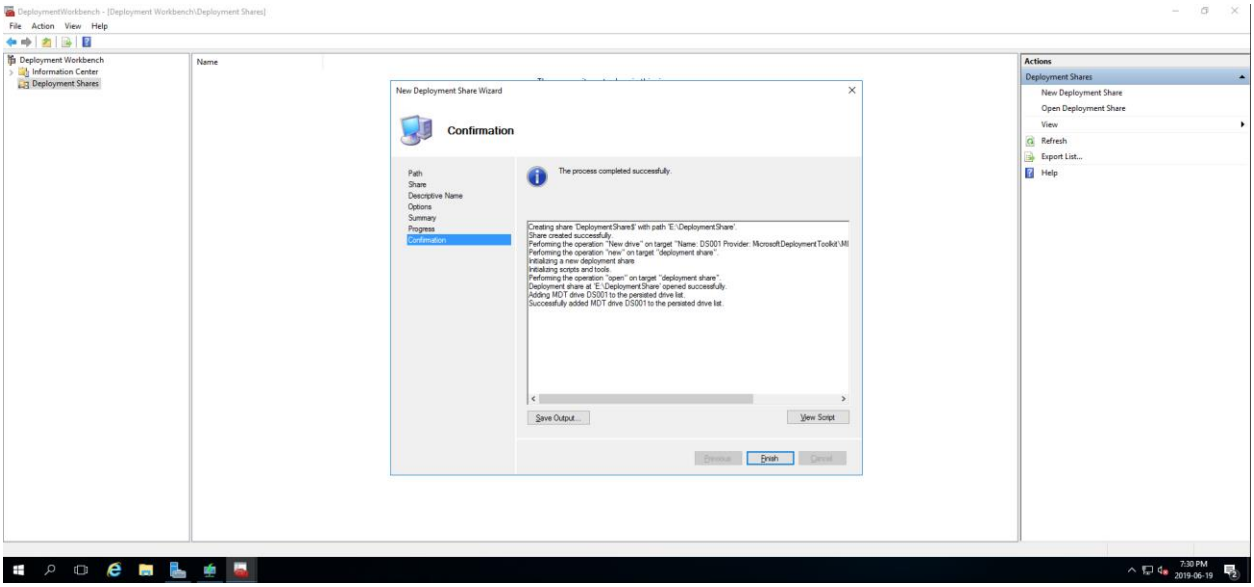


31) Accept defaults



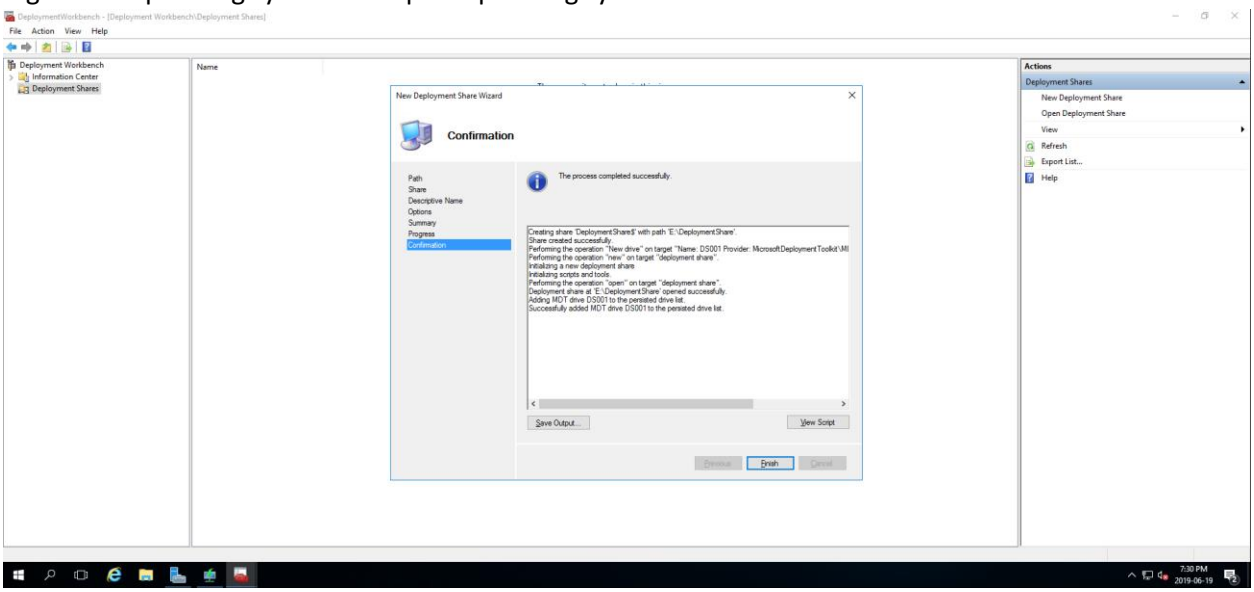
32) Click next 2 times

33) Click finish

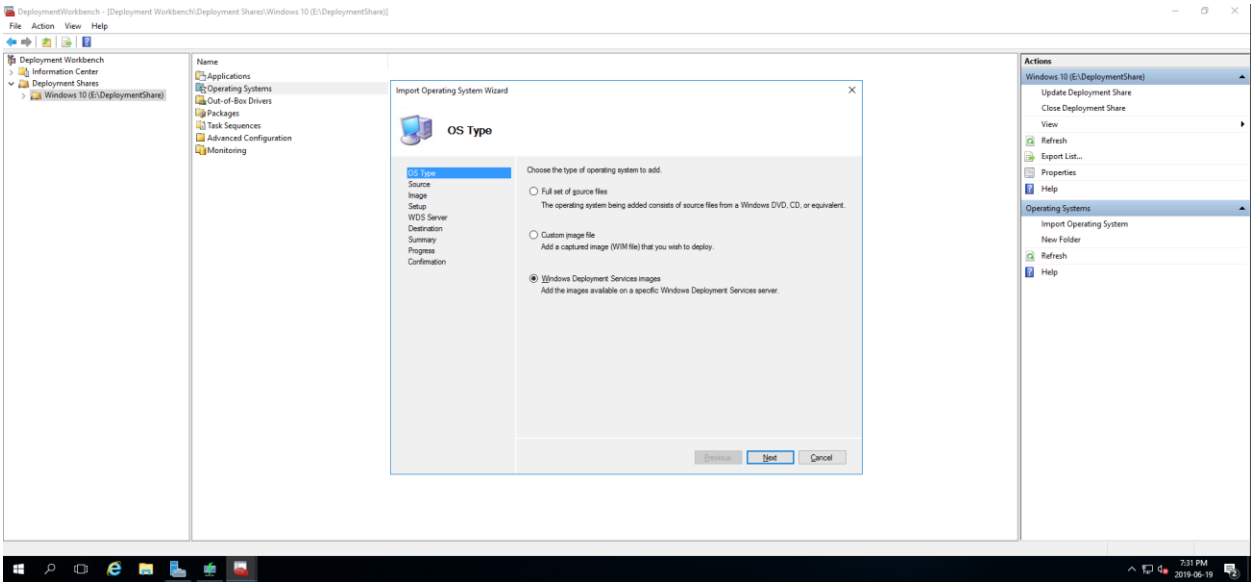


34) Open deployment share

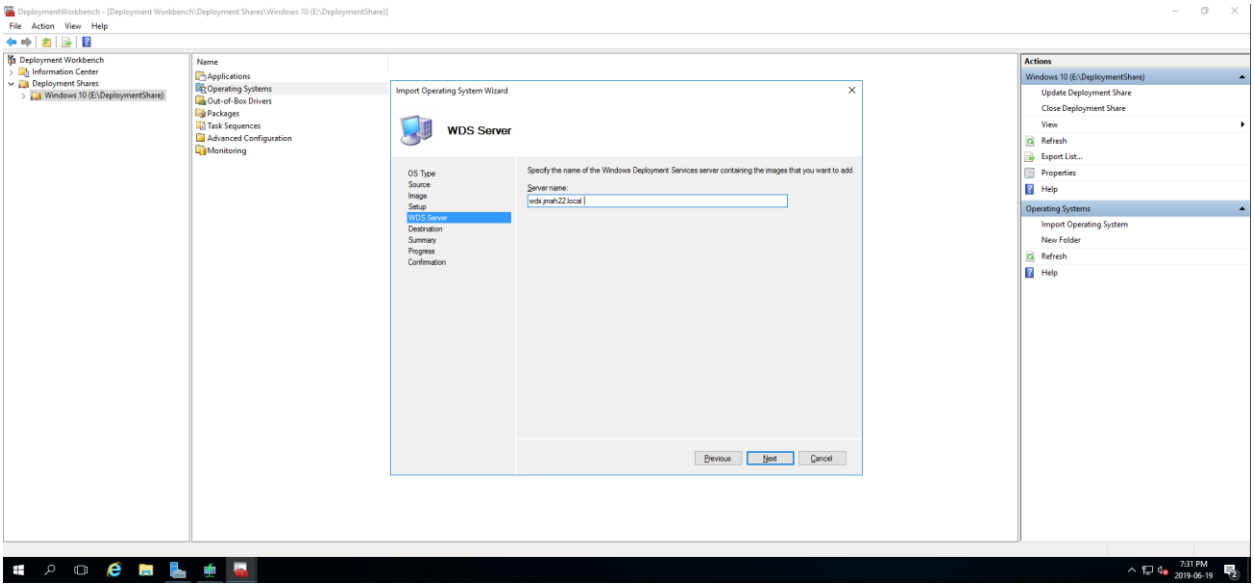
35) Right click operating systems > import operating system



36) Select Windows Deployment Services images

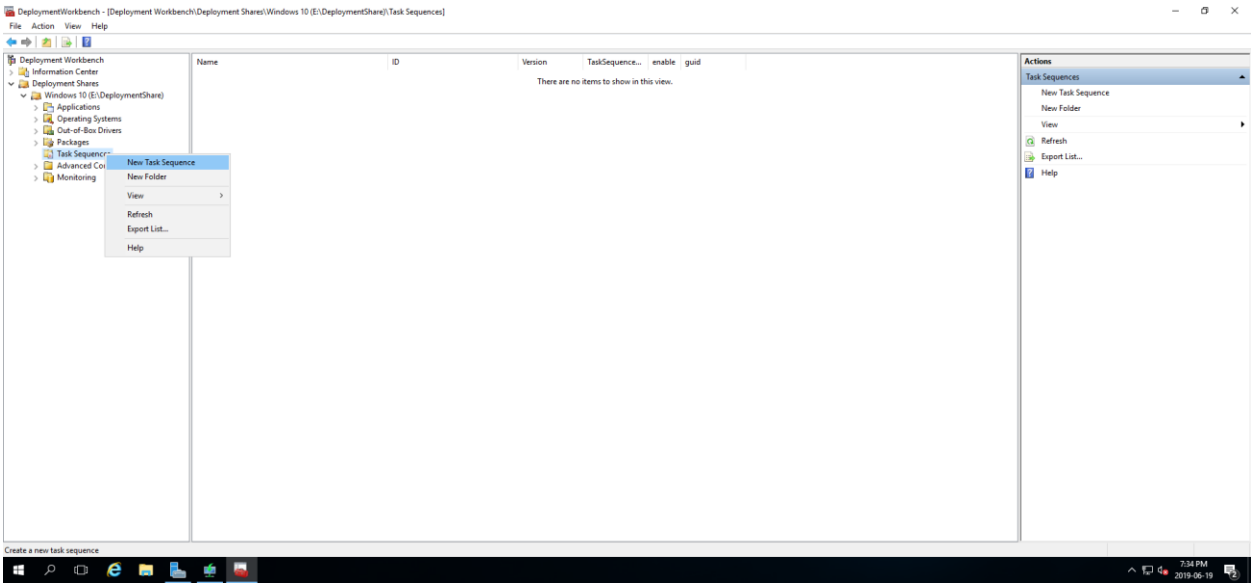


37) Enter deployment server name

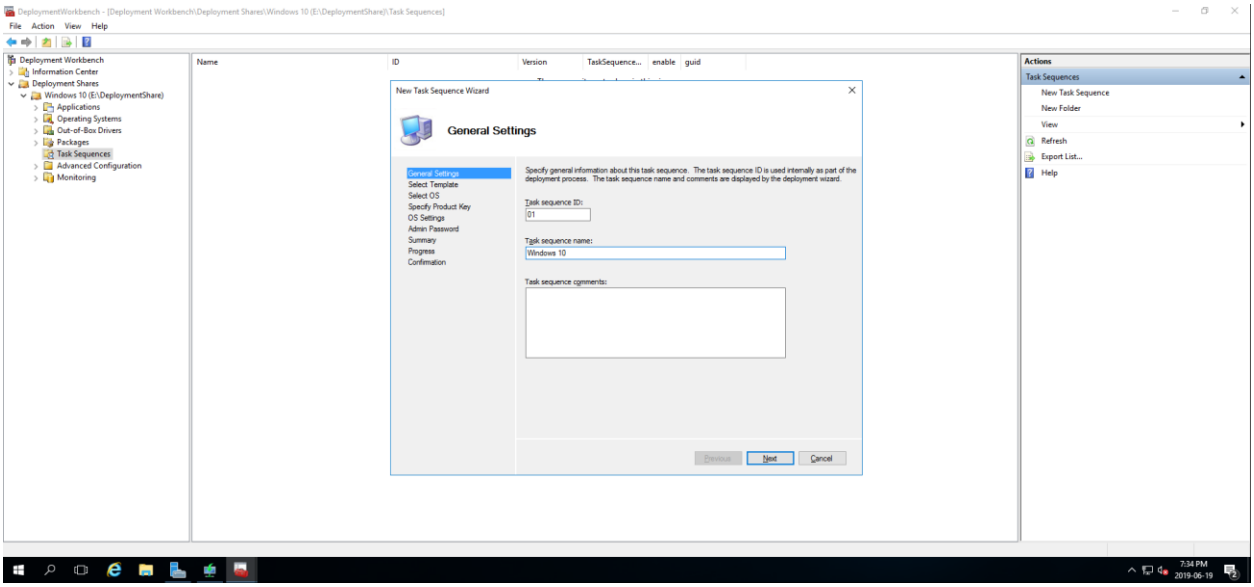


38) click next 2 times > click finish

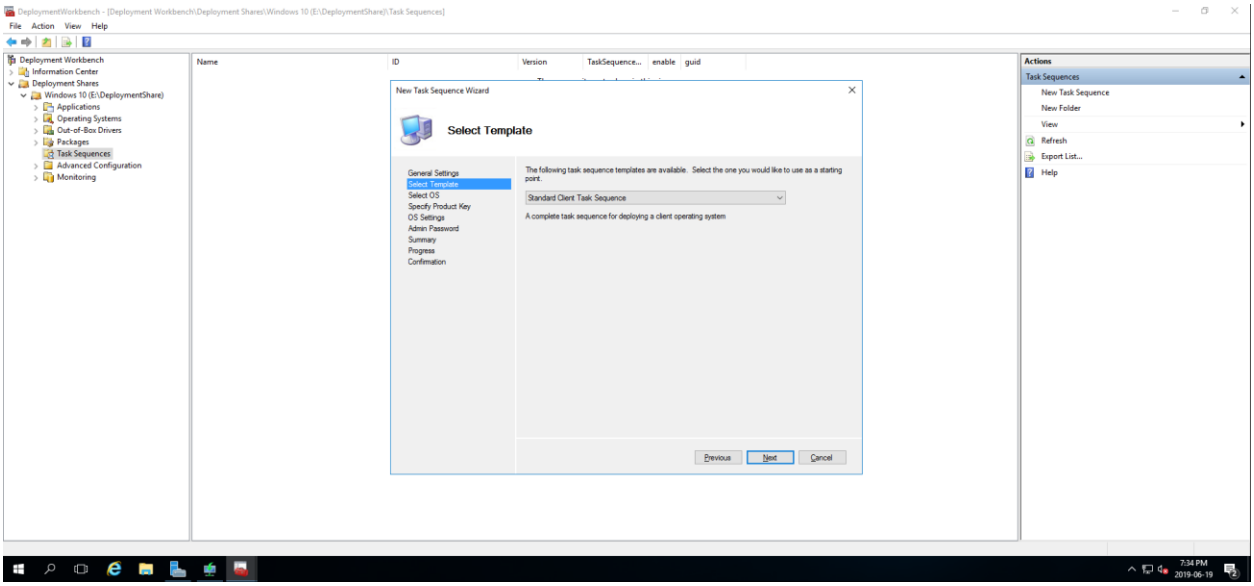
39) right click task sequences > new task sequence



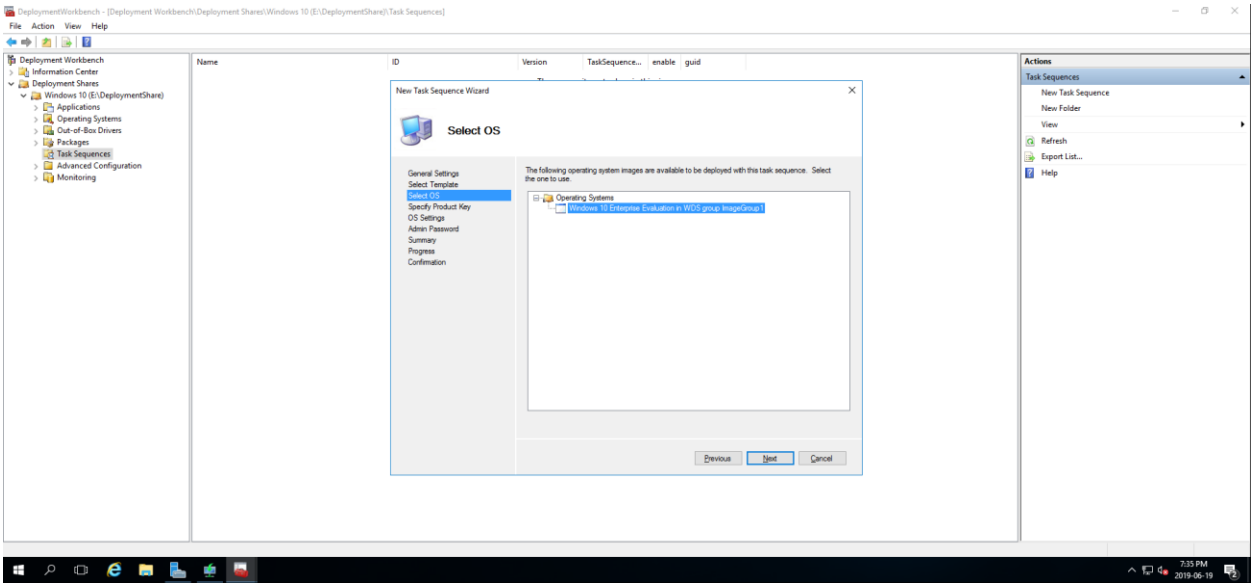
40) Enter a task sequence id and name



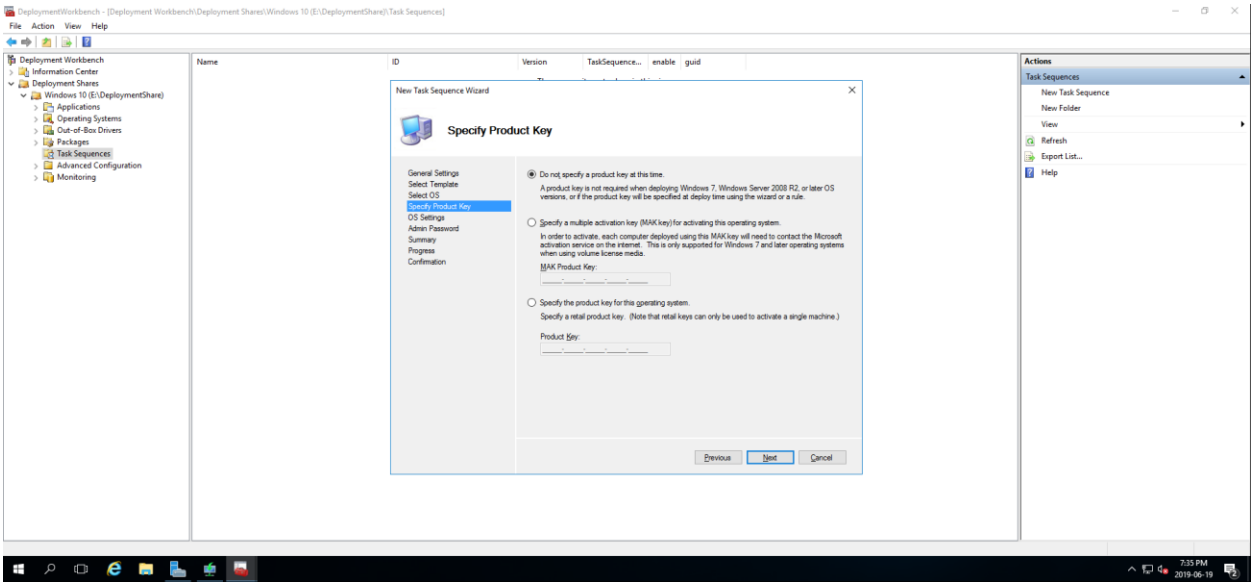
41) Select “standard client task sequence”



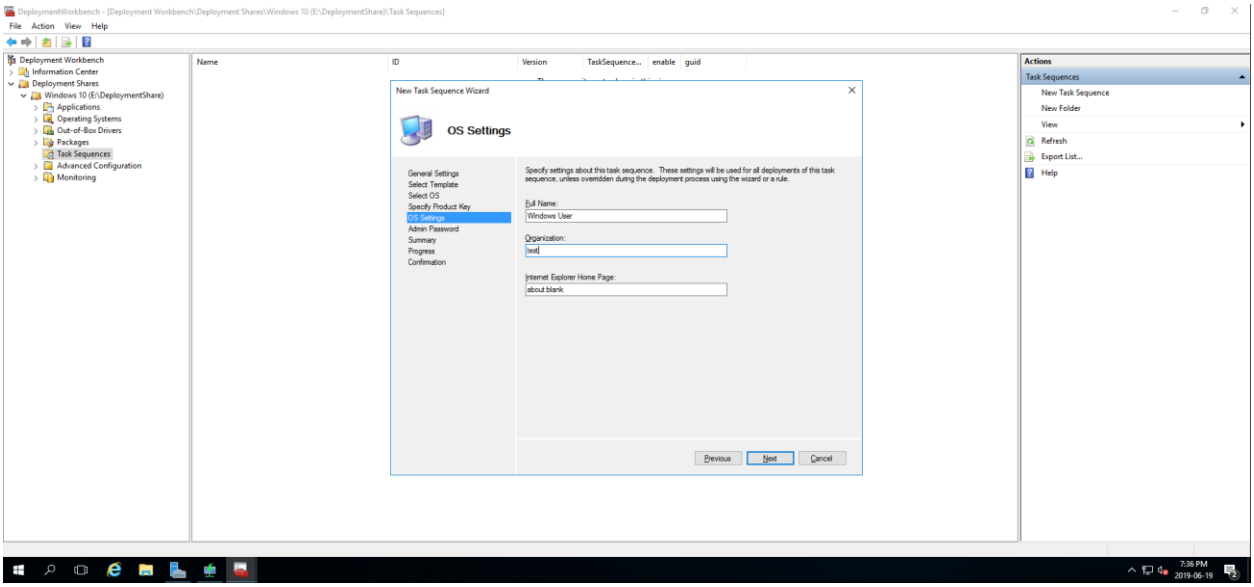
42) Select install image imported in step 24



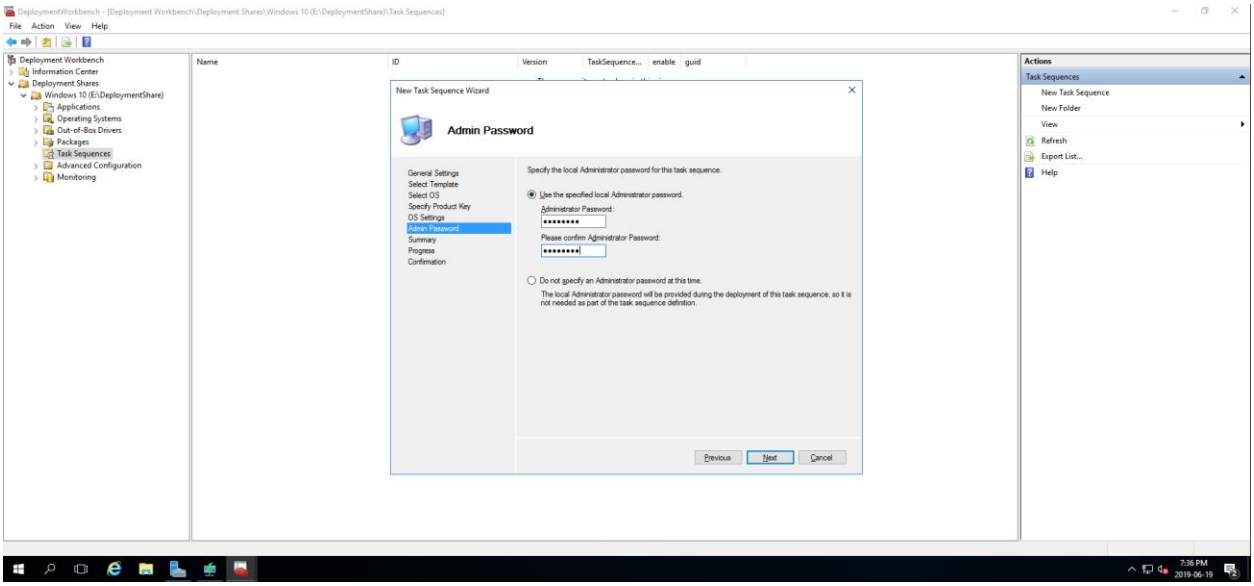
43) Accept defaults



44) Enter an organization name

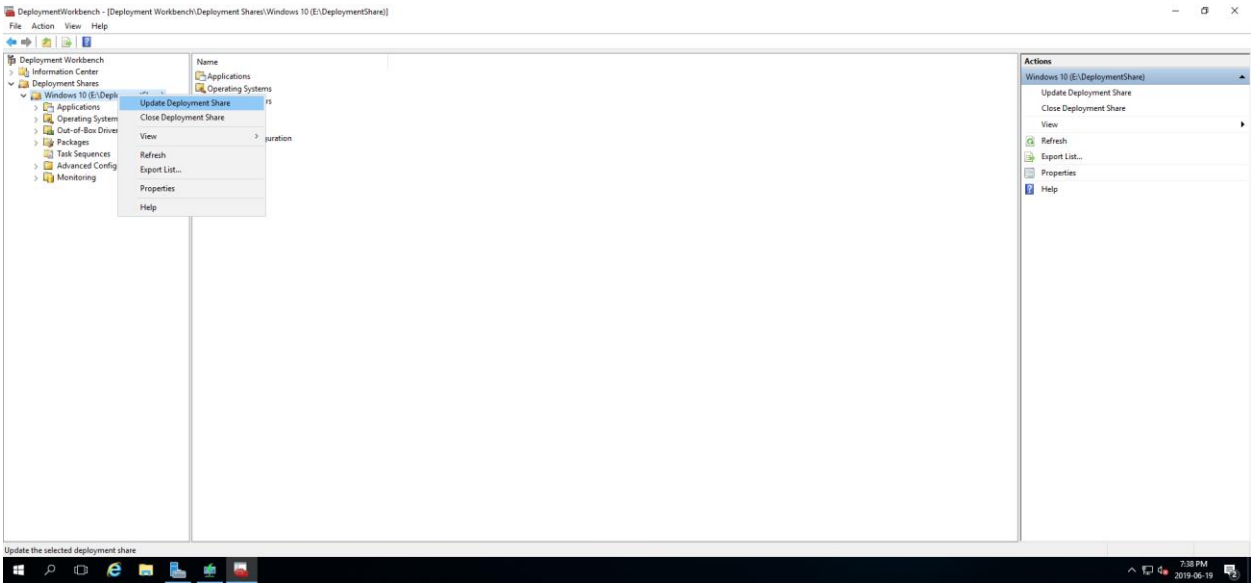


45) Enter an Administrator password

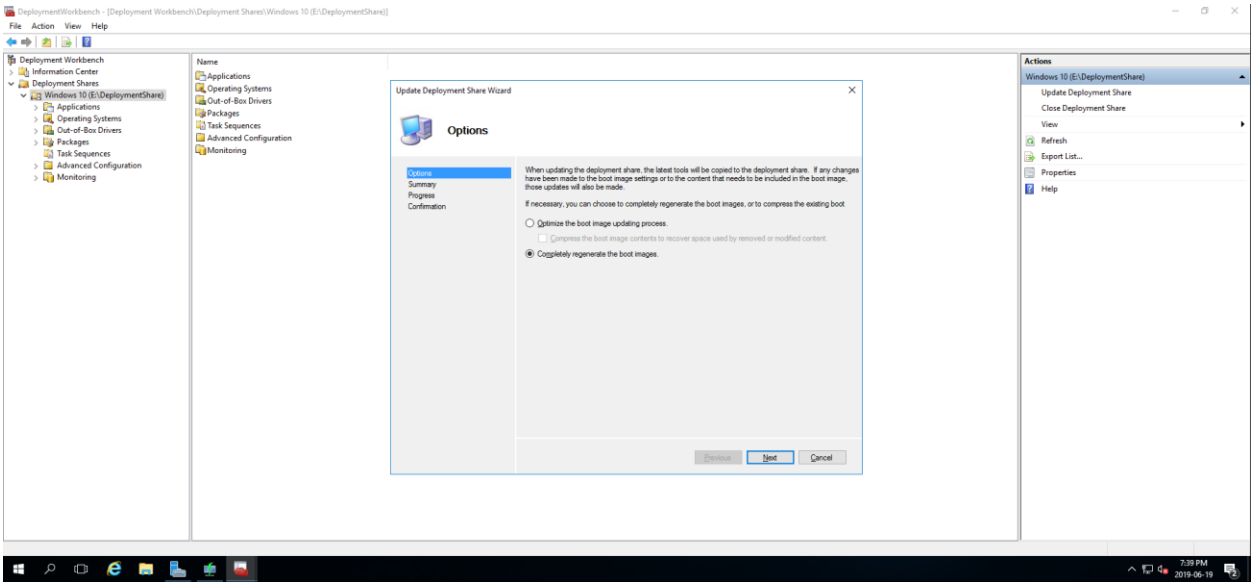


46) Click next 2 times > finish

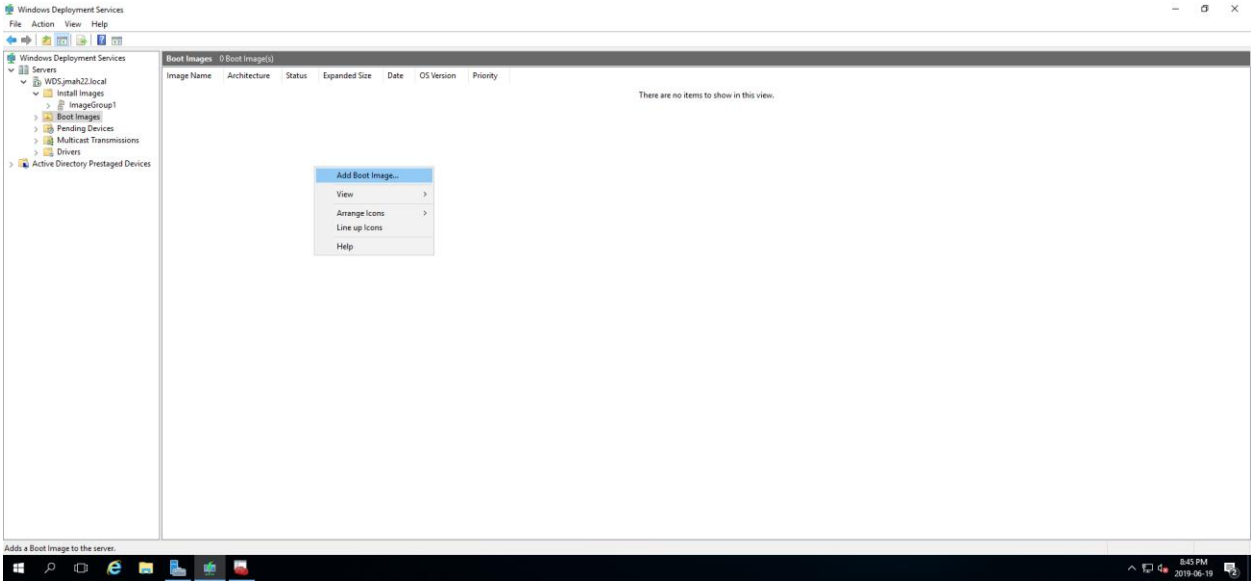
47) Right click *deployment share name* > update deployment share



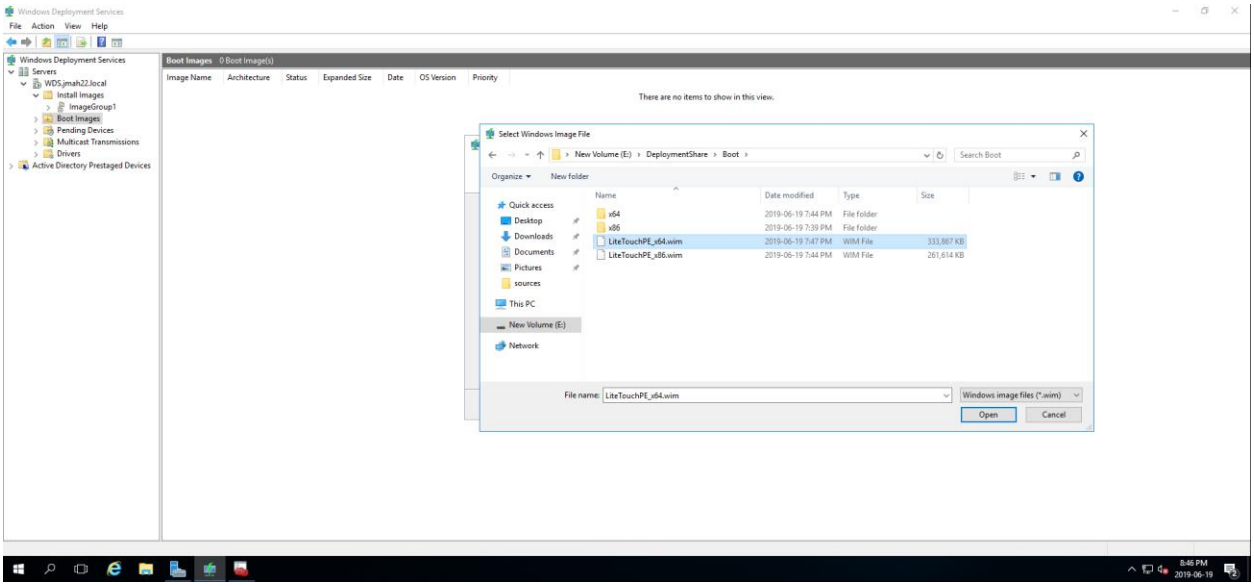
48) Select “completely regenerate boot images” > click next



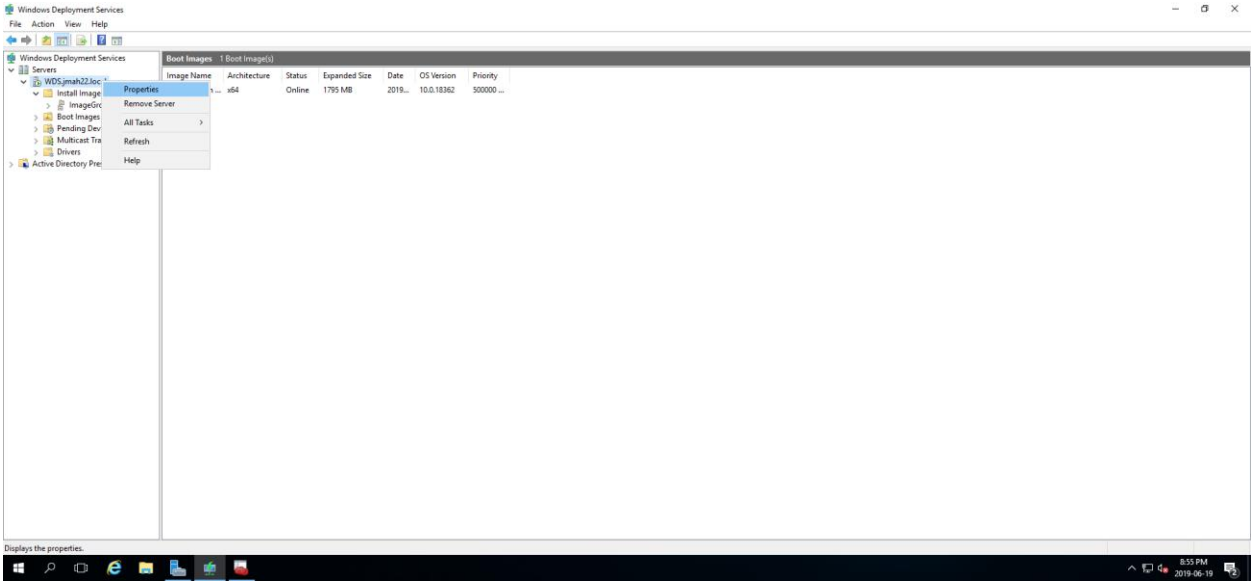
49) On WDS, right click boot images > Add Boot Image



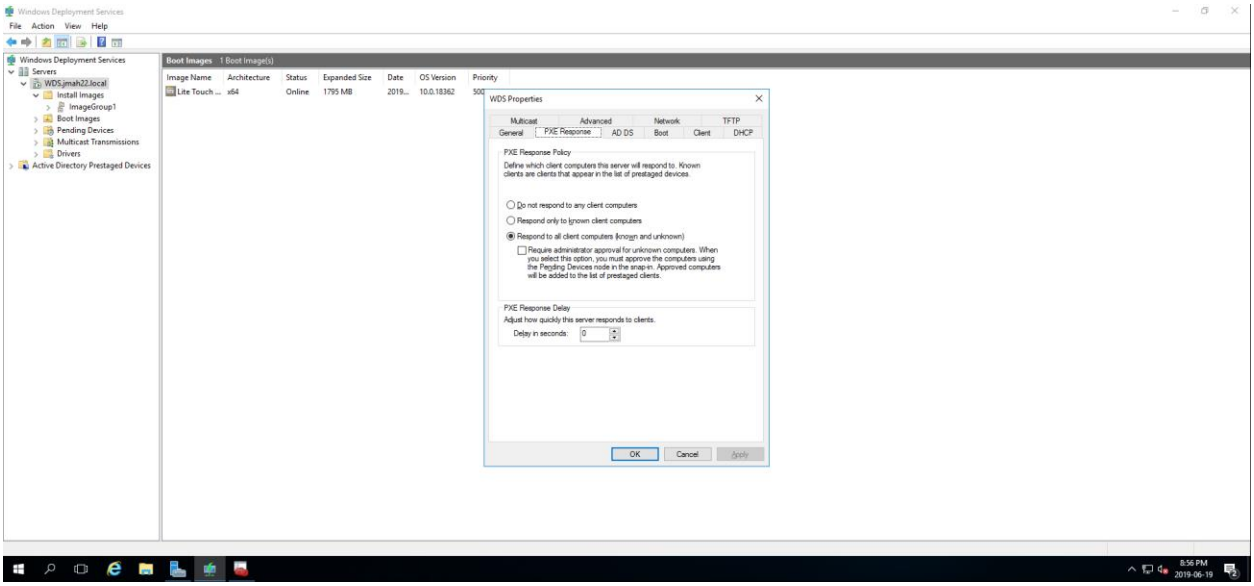
50) Navigate to where the LiteTouchPE_x64.wim file is located, click next 3 times

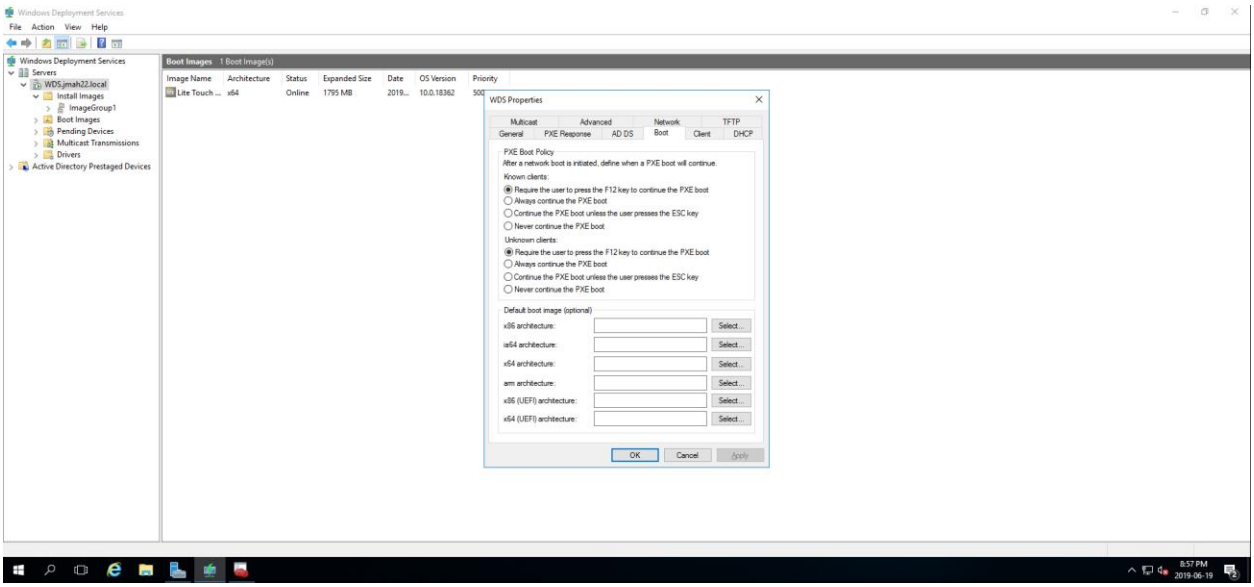


51) Right click *server name* > properties



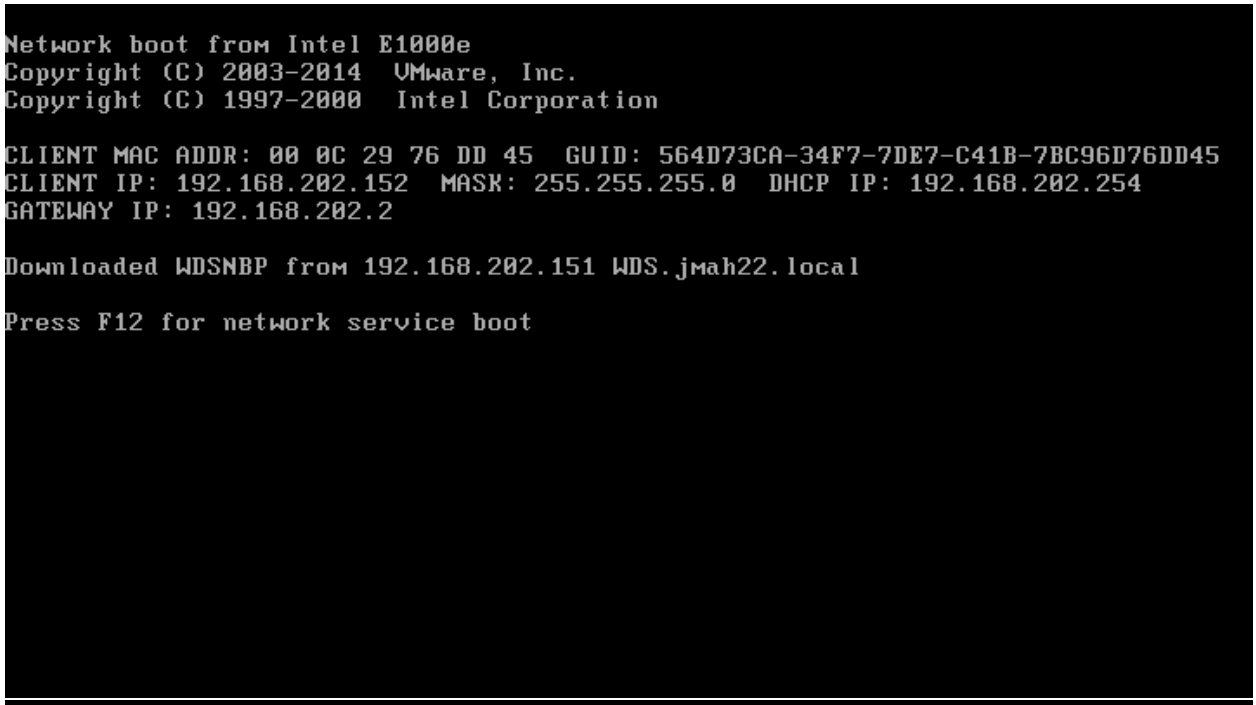
52) Select PXE response, ensure that “Respond to all client computers” is selected

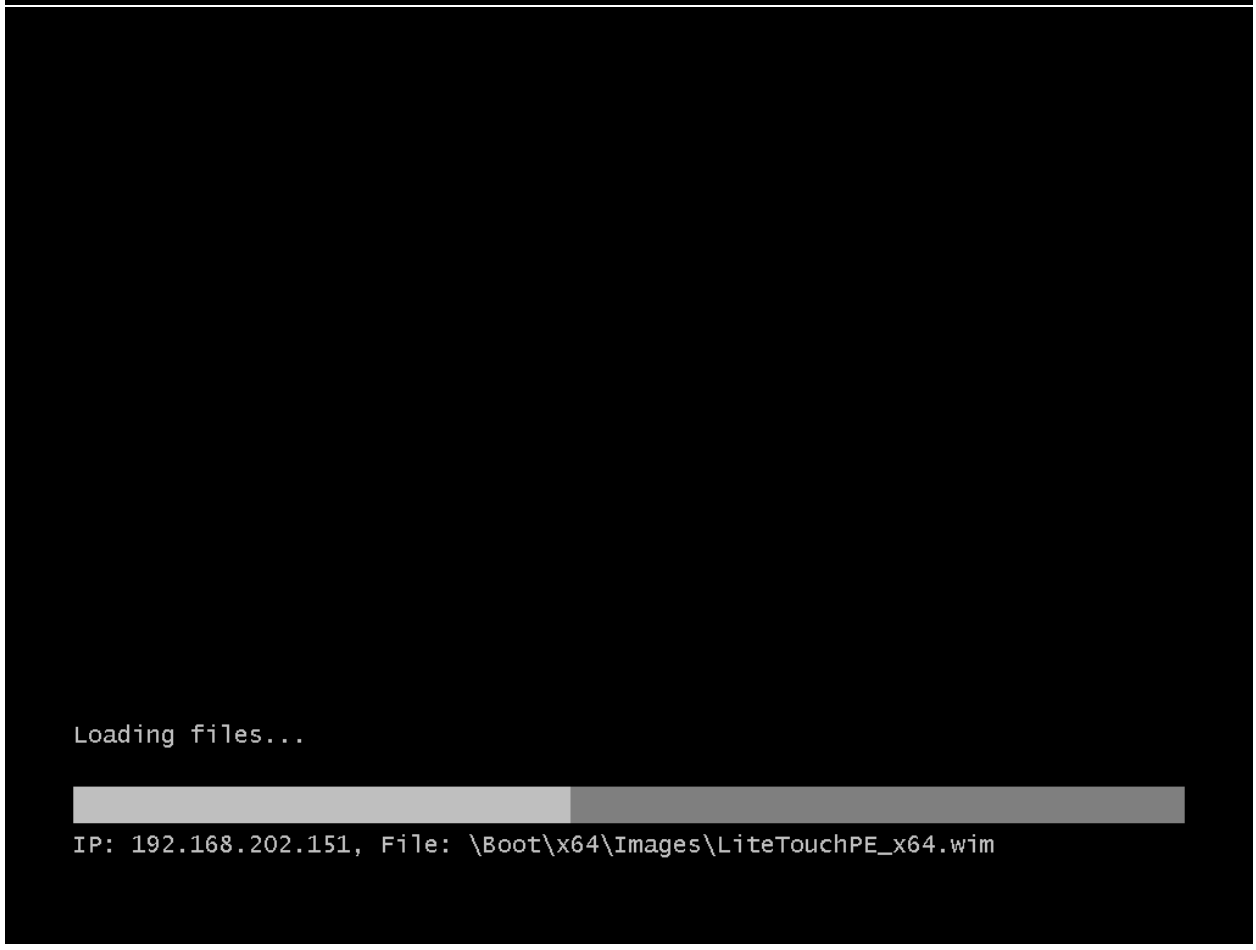




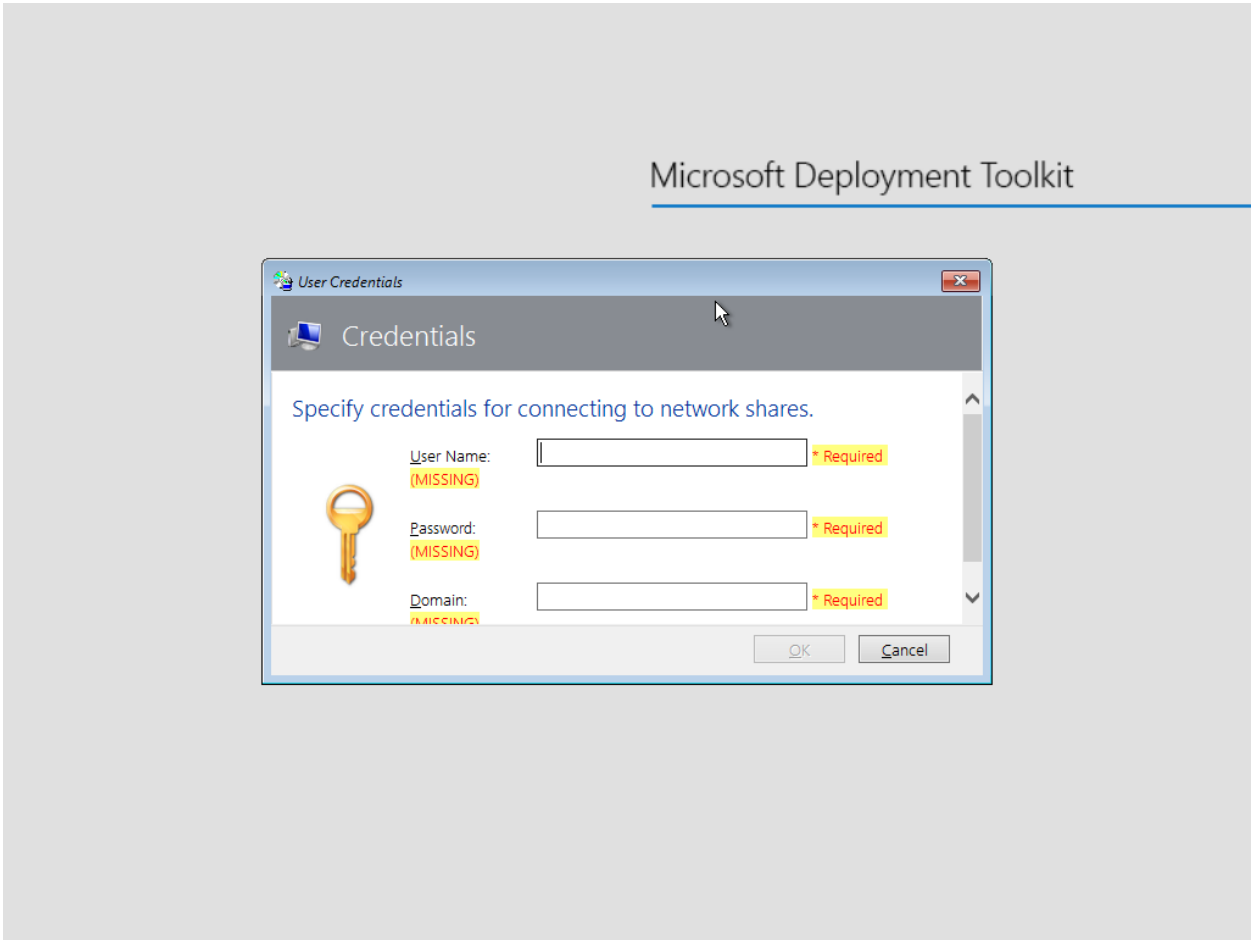
with the PXE options you can force the client computer to perform a PXE boot by default or require the user to push F12 to boot

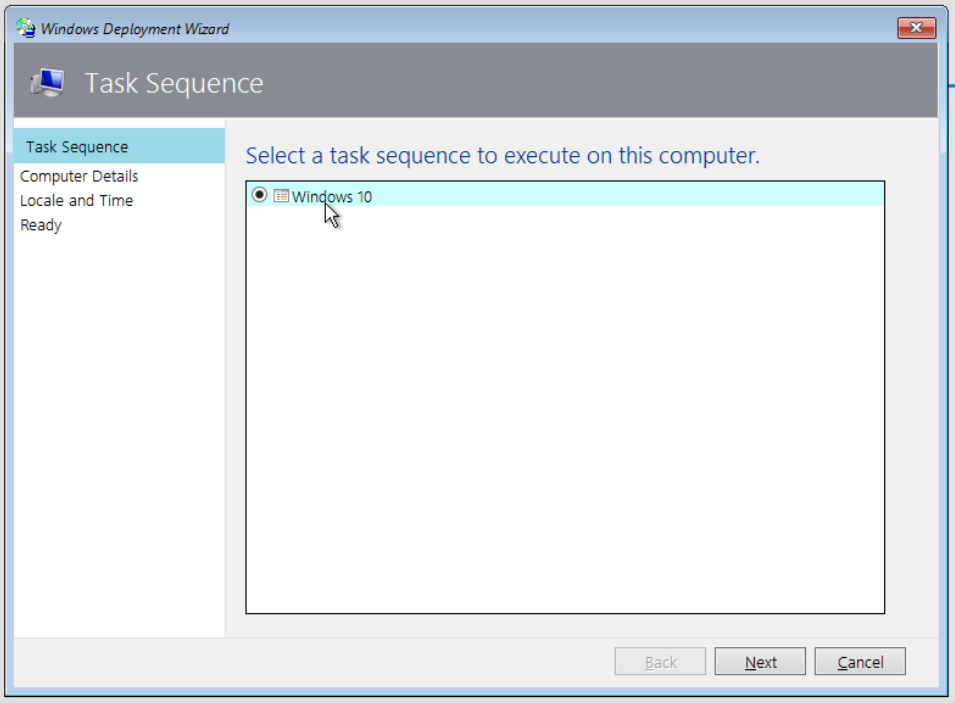
53) On your client machines push F12 to perform a PXE boot

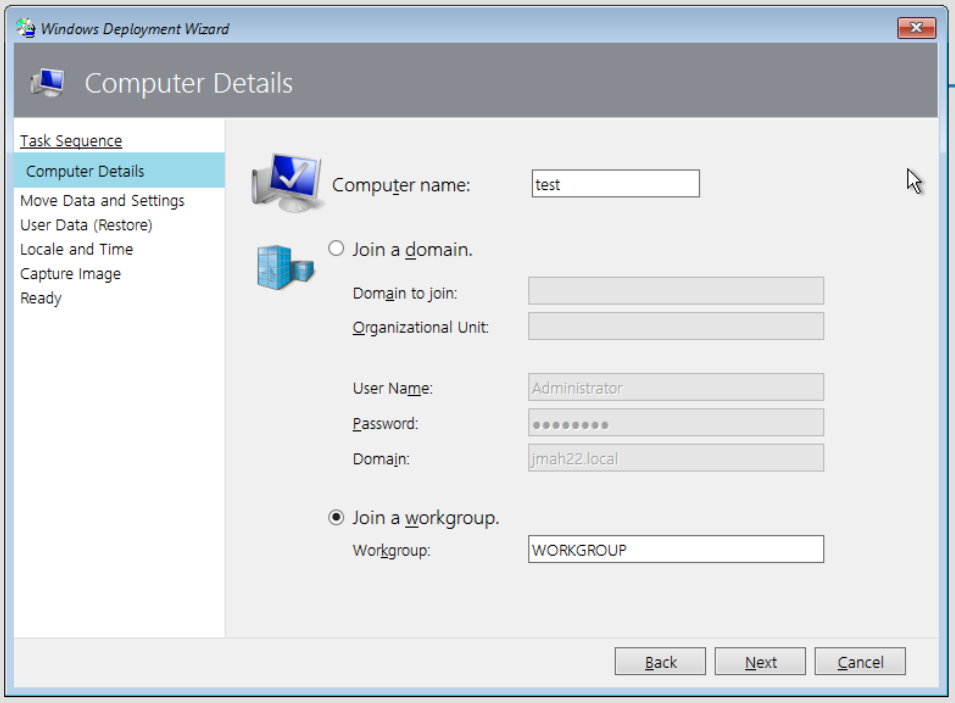


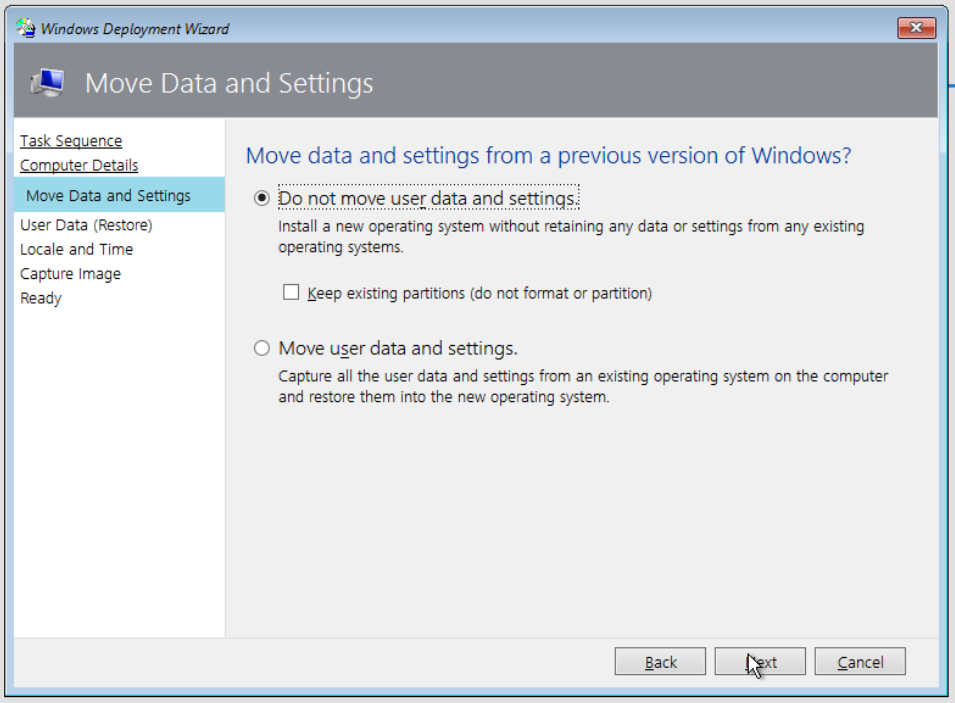


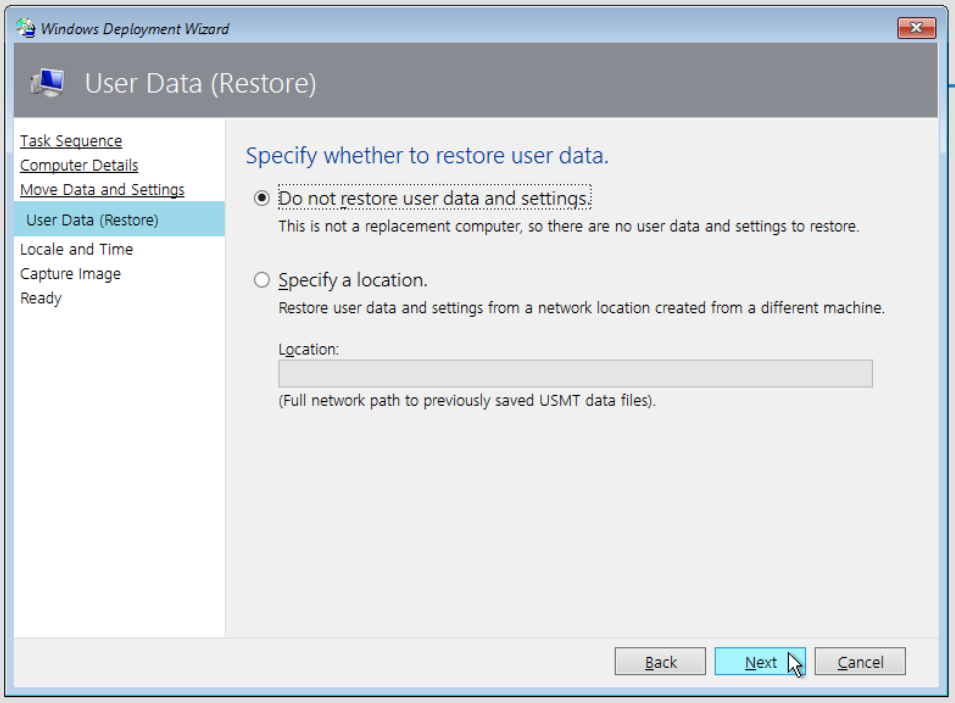
54) Follow the steps to complete the imaging

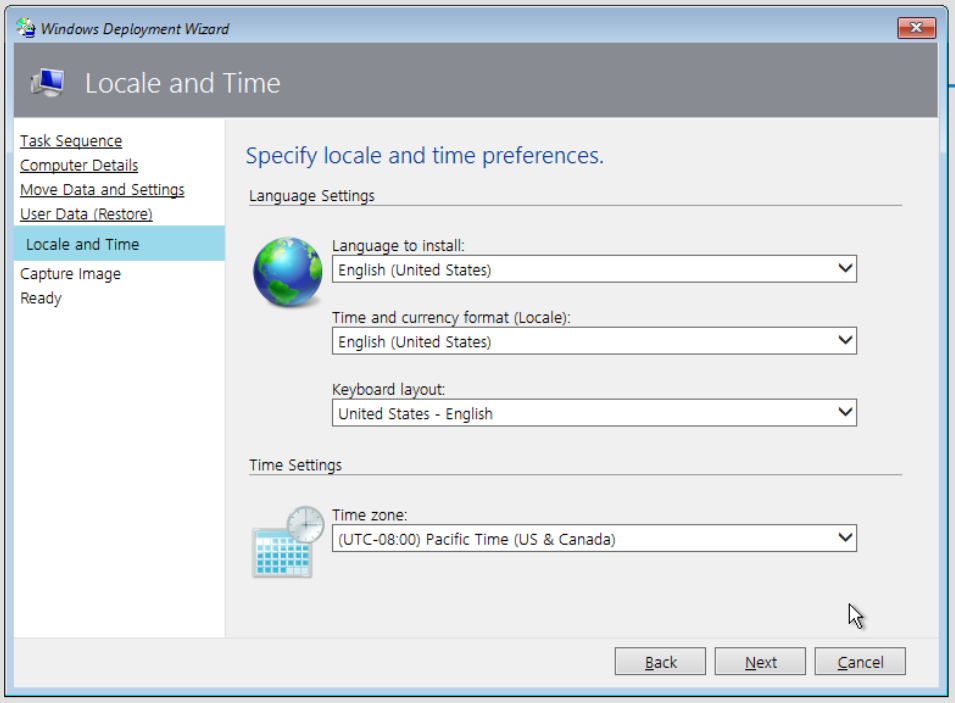


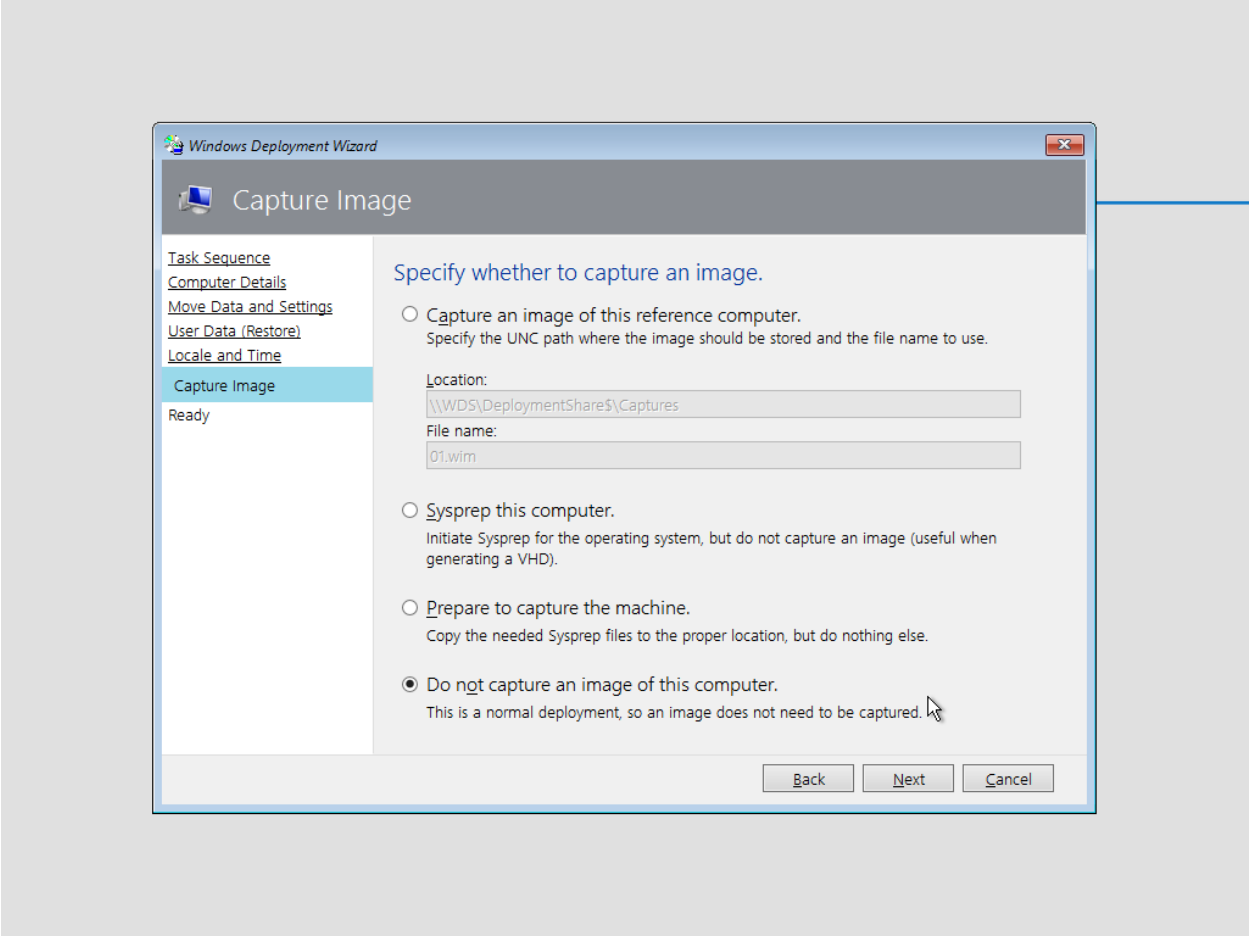

Windows Deployment Wizard
Task Sequence
Task Sequence
Computer Details
Locale and Time
Ready
Select a task sequence to execute on this computer.
Windows 10
Back
Next
Cancel


Windows Deployment Wizard
Computer Details
Task Sequence
Computer Details
Move Data and Settings
User Data (Restore)
Locale and Time
Capture Image
Ready
Computer name:
test
Join a domain.
Domain to join:
Organizational Unit:
User Name:
Administrator
Password:
Domain:
jmah22.local
Join a workgroup.
Workgroup:
WORKGROUP
Back
Next
Cancel


Windows Deployment Wizard
Move Data and Settings
Task Sequence
Computer Details
Move Data and Settings
User Data (Restore)
Locale and Time
Capture Image
Ready
Move data and settings from a previous version of Windows?
Do not move user data and settings.
Install a new operating system without retaining any data or settings from any existing operating systems.
Keep existing partitions (do not format or partition)
Move user data and settings.
Capture all the user data and settings from an existing operating system on the computer and restore them into the new operating system.
Back
Next
Cancel


Windows Deployment Wizard
User Data (Restore)
Task Sequence
Computer Details
Move Data and Settings
User Data (Restore)
Locale and Time
Capture Image
Ready
Specify whether to restore user data.
Do not restore user data and settings.
This is not a replacement computer, so there are no user data and settings to restore.
Specify a location.
Restore user data and settings from a network location created from a different machine.
Location:
(Full network path to previously saved USMT data files).
Back
Next
Cancel


Windows Deployment Wizard
Locale and Time
Task Sequence
Computer Details
Move Data and Settings
User Data (Restore)
Locale and Time
Capture Image
Ready
Specify locale and time preferences.
Language Settings
Language to install:
English (United States)
Time and currency format (Locale):
English (United States)
Keyboard layout:
United States - English
Time Settings
Time zone:
(UTC-08:00) Pacific Time (US & Canada)
Back
Next
Cancel



click begin when ready

Note: the deployment can be automated so there is no user interaction during the imaging process (zero touch deployment)