Windows Server

Installation Guide

PICO PC®

MNHO-043
MNHO-048
MNHO-073

Contents

Installing Windows Server 2012 R2

1.   Pre-requisites

Before proceeding to the installation, the intended user should know that in order to install Windows Server 2012 R2 on mini PC the following steps should be followed:

- Windows 2012 R2 licensed or evaluation version.
- Windows 2012 R2 evaluation version can be downloaded from Microsoft website
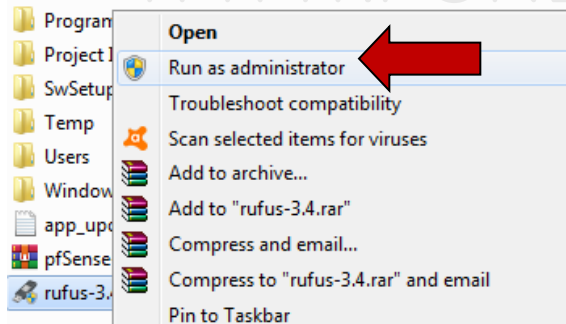 https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2012-r2

- USB flash drive 2.0 or 3.0
- Size 8 GB (minimum)
- Utility that helps create boot-able USBs for example, PowerISO or Rufus etc.
- Once you have downloaded the Windows Server 2012 R2 image make sure to verify the integrity of the downloaded file.

2. Preparing for installation

- The installation image file downloaded previously must be transferred to the USB flash drive. The usual copying of image directly to the drive is not the answer.
- Appropriate utility is required to make the flash drive bootable.
- We'll be using Rufus which is a free utility to make bootable USB flash drives. You can also use other utilities as well.

3. Writing the Image

- If you haven't downloaded Rufus utility to make the USB flash drive bootable then you can download from https://rufus.ie
- Make sure the USB flash drive is blank and formatted as once the image is written all previous contents will be deleted.
- Run the program as administrator.
- Once you plug in the USB flash drive you will find that it has been detected by Rufus straightaway as shown:

- Now click on the "select" button and specify the Windows Server 2012 image file on the client PC.

- Once done you will find the Windows Server 2012 R2 image file name in the "boot selection" section.
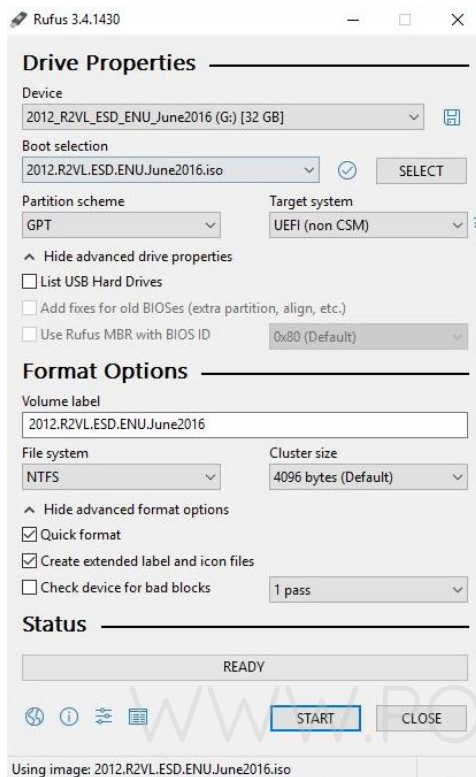
- Now select the "File System" as "NTFS".
- Once underway it will show the status of the process in the form of progress bar with percentage. It will only take a minute or two to complete the process.
- Once the process is completed you are now ready to go.

4. Installation

- Once you have plugged in the USB flash drive in one of the two ports in the back of the mini PC then simply power it up.
- Once you see the "Winston Marriot logo" then simply press **Delete** key on keyboard to access **BIOS**.
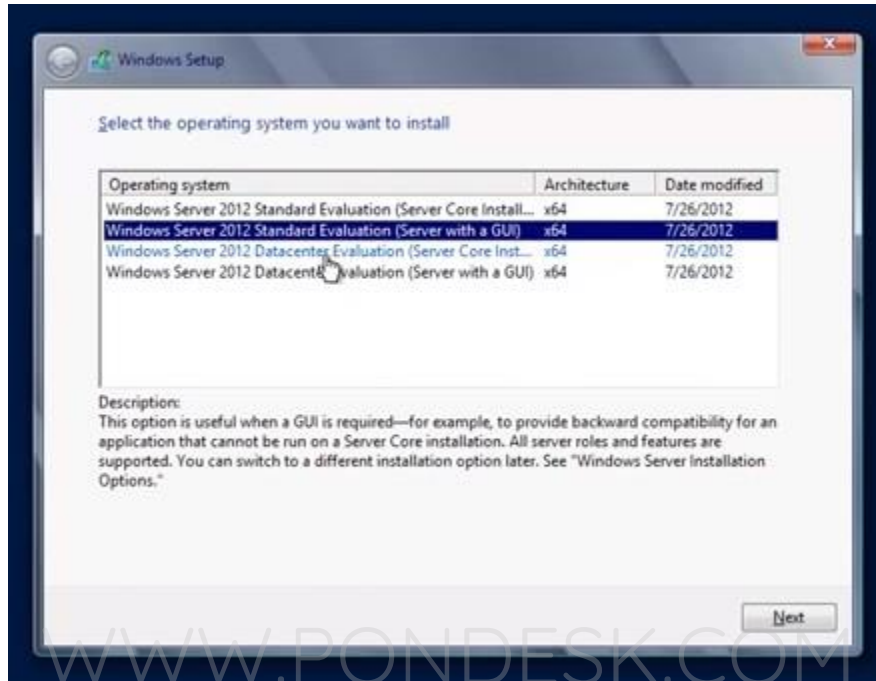- In BIOS select the boot type as "UEFI and Legacy" then boot with USB flash drive.

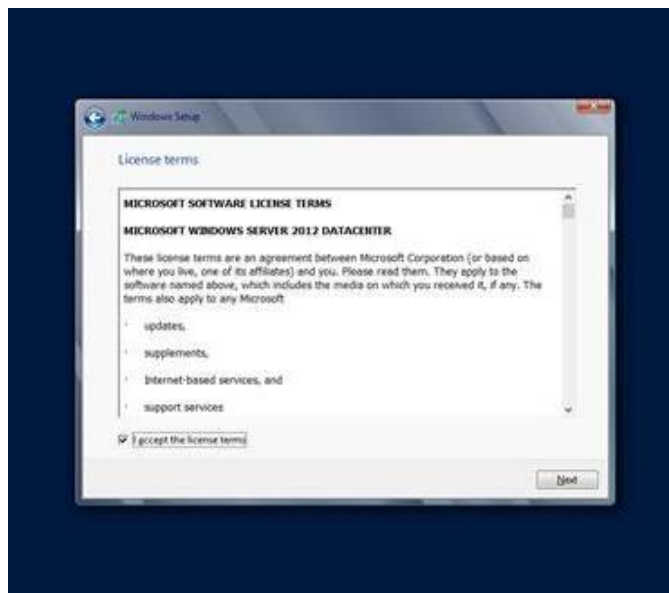- You will be presented with the installation wizard. Select "Language" and click "Next".
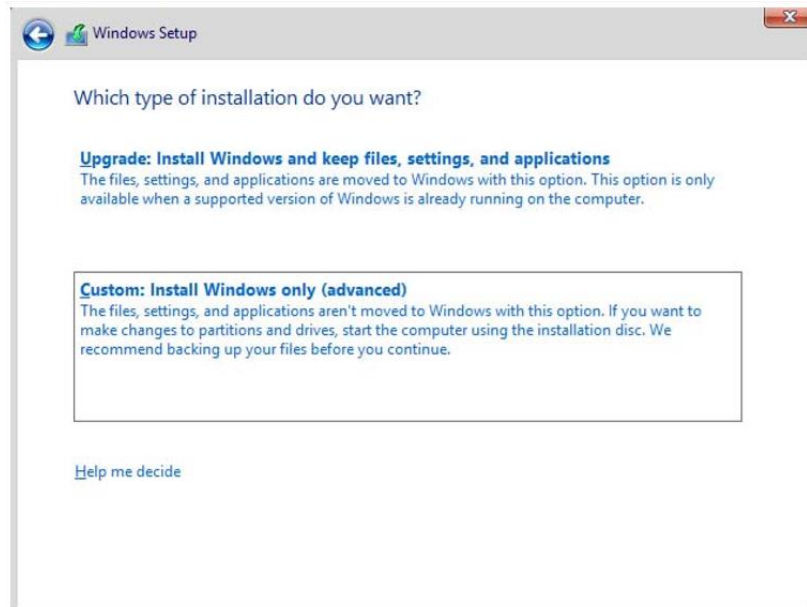

- Now select "Next".

- Now select the version you wish to install. We'll be installing the "Windows Server 2012 R2 Standard Edition with GUI" as this is the most popular version and select "Next".
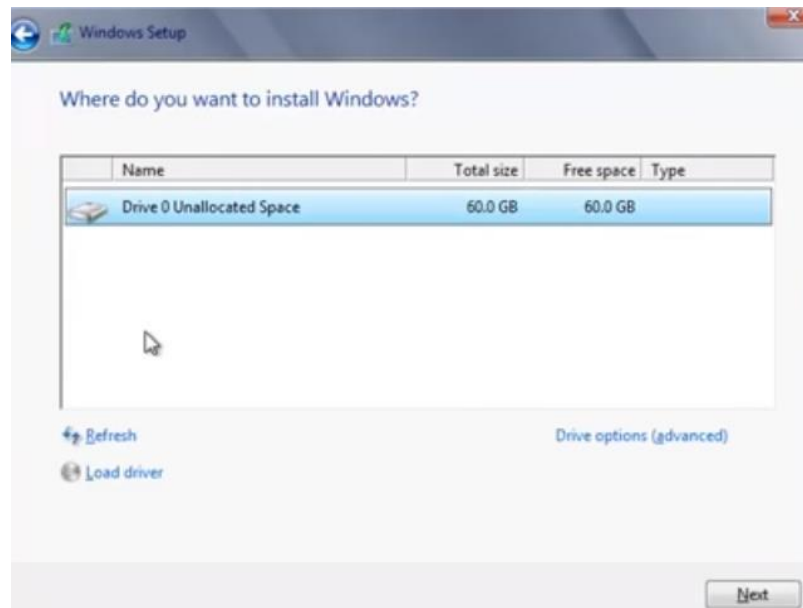

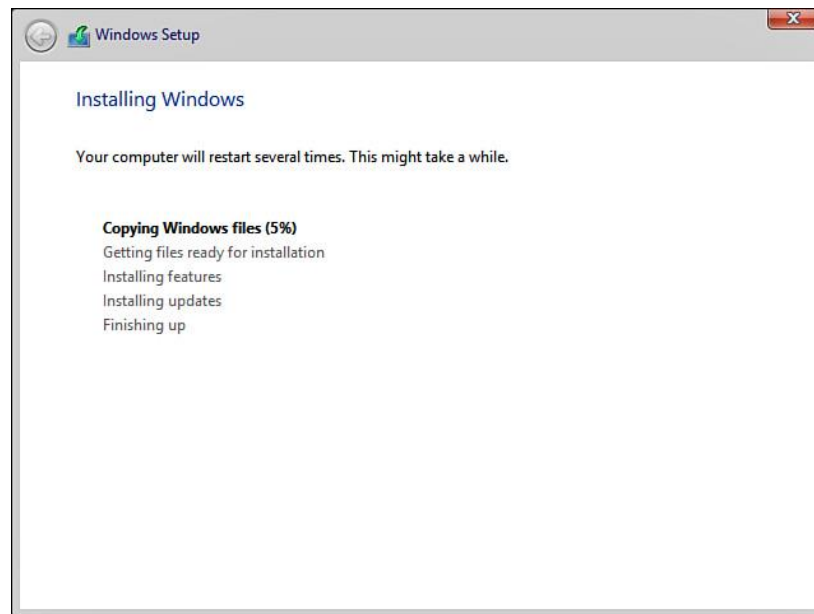- Agree to the "terms and conditions" select "Next".

- Now On the next screen there will be two options for the installation. Select "Custom: Install Windows only (advanced)".

- You will be presented with choosing a partition for the installation. Microsoft recommends to have at least 60 GB space available.

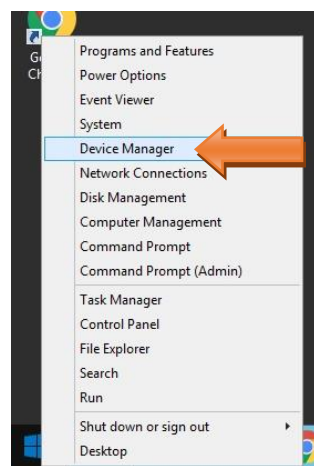- Select the appropriate partition and continue with the installation.

- You will be prompted to specify the administrator password and should be a well secured one as per Microsoft's guidelines.

- Once the settings have been finalized you will be asked to enter the newly setup password.

- Once you are logged you will be presented with the Server Manager.

- Now we need to install the drivers for the ethernet ports. Since there are four ethernet ports we'll have to install the drivers for all four separately.
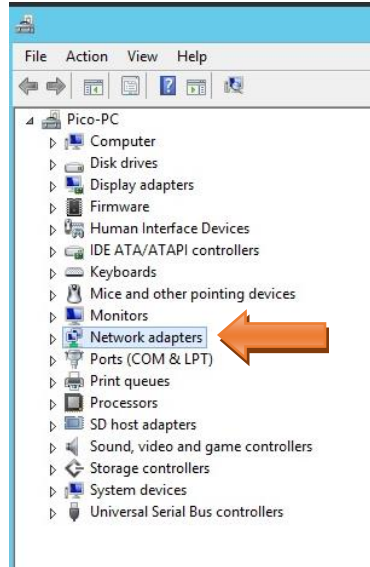
5. Installing Ethernet Drivers

The Pico PC has 4 Gigabit Intel I211-AT Ethernet Ports. We'll be installing them one by one. The drivers can be downloaded from PONDESK website's download section of the product page. The drivers set is different for Windows Server 2012 R2 as compared to others.

- The drivers for the ethernet ports are located in the Pro1000\NDIS64 folder.

- These drivers will work for both Windows Server 2012 R2 and Windows Server 2008 R2.

- Before installing the drivers there are a few commands which you need to run in DOS with Admin rights.

  A. bcdedit -set loadoptions DISABLE_INTEGRITY_CHECKS
  B. bcdedit -set TESTSIGNING ON

- Now you need to reboot the PICO PC.

- If you get a message saying "boot options could not be changed because of secure boot" then no need to worry simply go into the BIOS and disable Secure Boot". This will do the trick.

- In order to start simply go to "Device Manager" and look for Network Adapters. Right click on the Ethernet Adapter and select "Update Driver".

- Now you need to specify where the drivers are located and, in this case, they are located in the Windows Server 2012 R2\Pro1000\Winx64\NDIS64 folder.

- It will take a couple of moments to install the drivers. During the driver installation simply click "Install this driver software anyway" to the following message and you are done. You will need to do the same for other three ethernet ports. There is nothing to worry about as the drivers are legitimate and have been modified to work for both Windows Server 2008 R2 and 2012 R2.
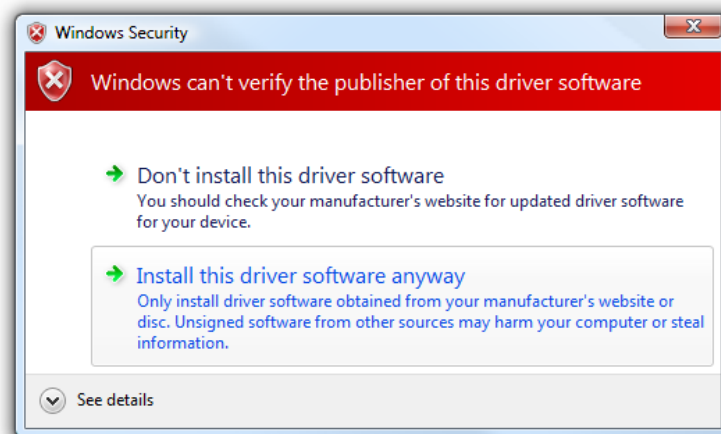
- Once you are done installing the drivers for all four adapters then you need to again access DOS with Admin rights and run the following commands to turn off the test mode. You are all set.

  A. bcdedit -set loadoptions ENABLE_INTEGRITY_CHECKS
  B. bcdedit -set TESTSIGNING OFF

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Installing Windows Server 2019

1. Pre-requisites

Before proceeding to the installation, the intended user should know that in order to install Windows Server 2019 on mini PC the following steps should be followed:

- Windows 2019 licensed or evaluation version.
- Windows 2019 evaluation version can be downloaded from Microsoft website https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2019
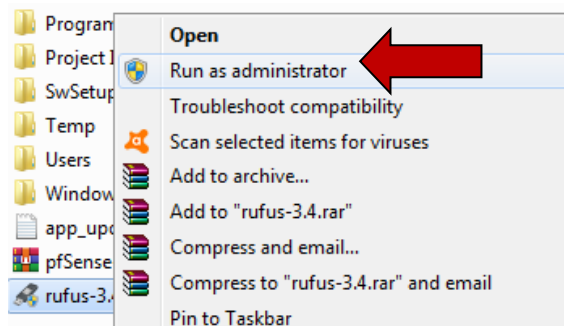

- USB flash drive 2.0 or 3.0
- Size 8 GB (minimum)
- Utility that helps create boot-able USBs for example, PowerISO or Rufus etc.
- Once you have downloaded the Windows Server 2012 R2 image make sure to verify the integrity of the downloaded file.

2. Preparing for installation

- The installation image file downloaded previously must be transferred to the USB flash drive. The usual copying of image directly to the drive is not the answer.
- Appropriate utility is required to make the flash drive bootable.
- We'll be using Rufus which is a free utility to make bootable USB flash drives. You can also use other utilities as well.

3. Writing the Image

- If you haven't downloaded Rufus utility to make the USB flash drive bootable then you can download from https://rufus.ie
- Make sure the USB flash drive is blank and formatted as once the image is written all previous contents will be deleted.
- Run the program as administrator.
- Once you plug in the USB flash drive you will find that it has been detected by Rufus straightaway as shown:

- Now click on the "select" button and specify the Windows Server 2019 image file on the client PC.

- Once done you will find the Windows Server 2019 image file name in the "boot selection" section.
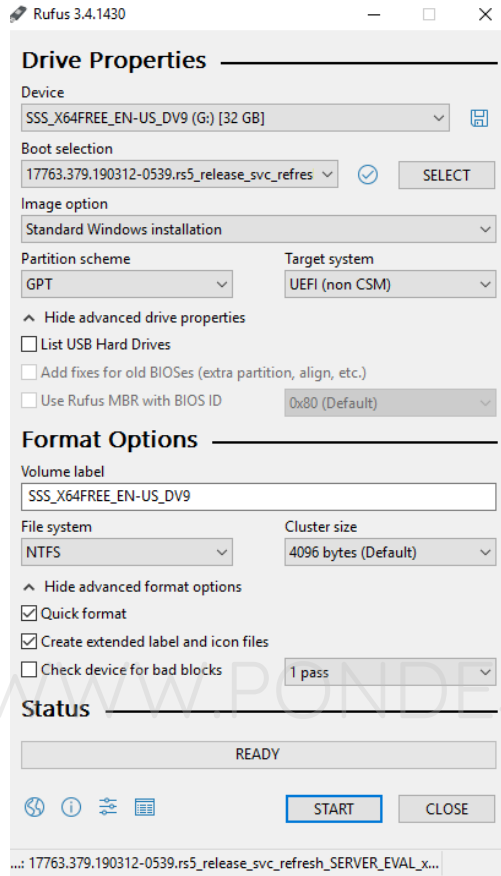

- Now select the "File System" as "NTFS".
- Once underway it will show the status of the process in the form of progress bar with percentage. It will only take a minute or two to complete the process.
- Once the process is completed you are now ready to go.

4. Installation

- Once you have plugged in the USB flash drive in one of the two ports in the back of the mini PC then simply power it up.
- Once you see the "Winston Marriot logo" then simply press **Delete** key on keyboard to access **BIOS**.
- In BIOS select the boot type as "UEFI and Legacy" from security section then boot with USB flash drive.
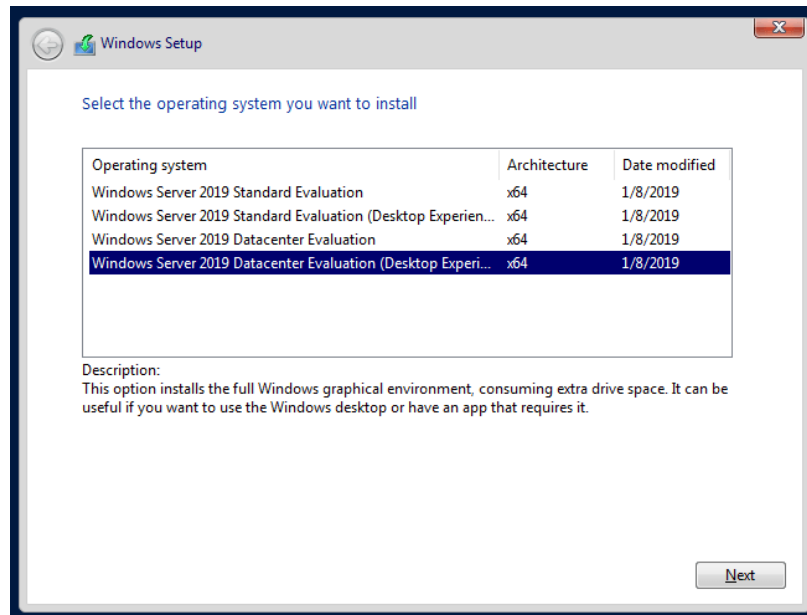
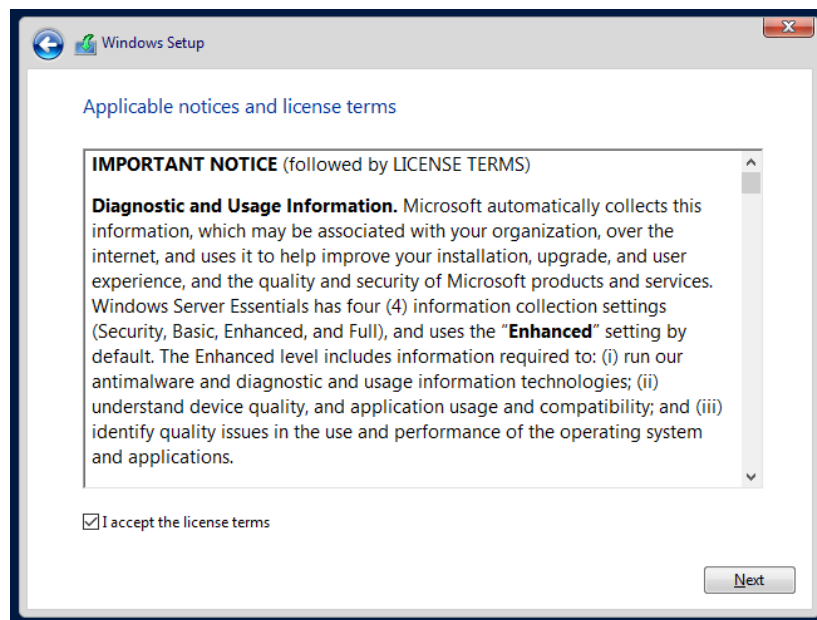▪ You will be presented with the installation wizard. Select "Language" and click "Next".
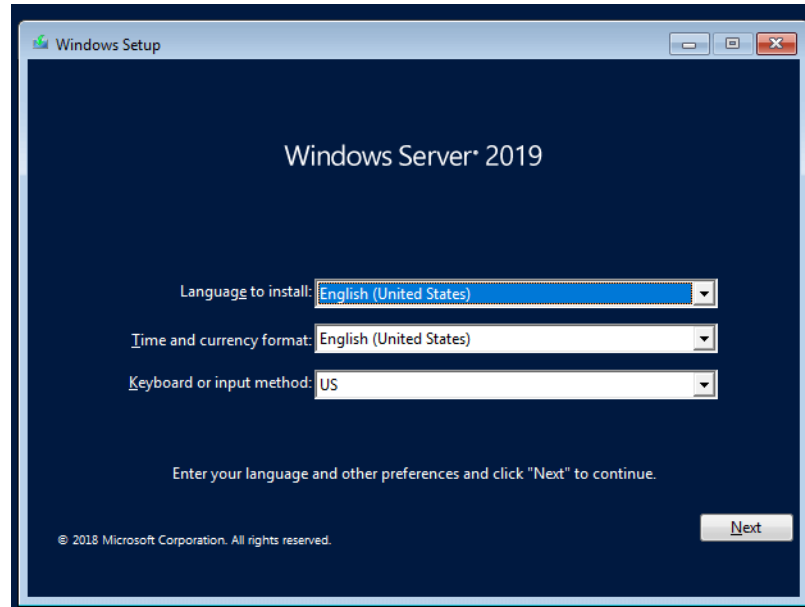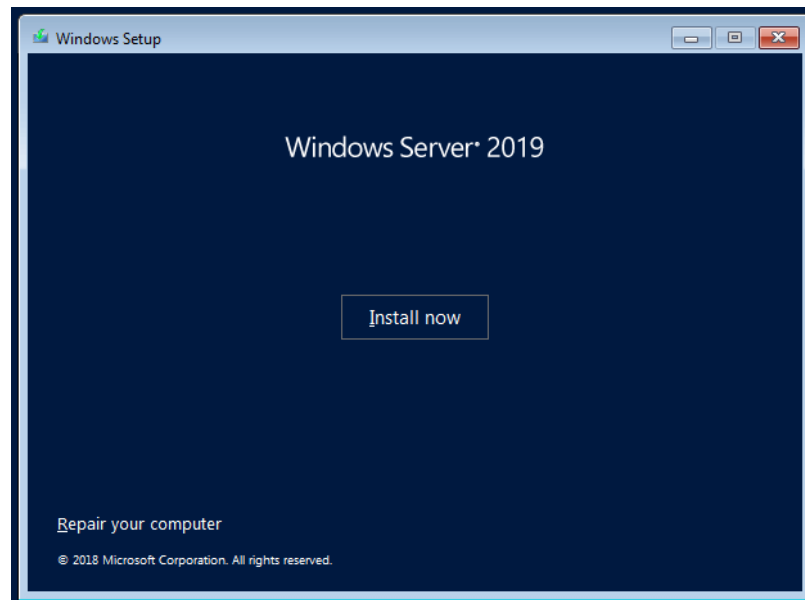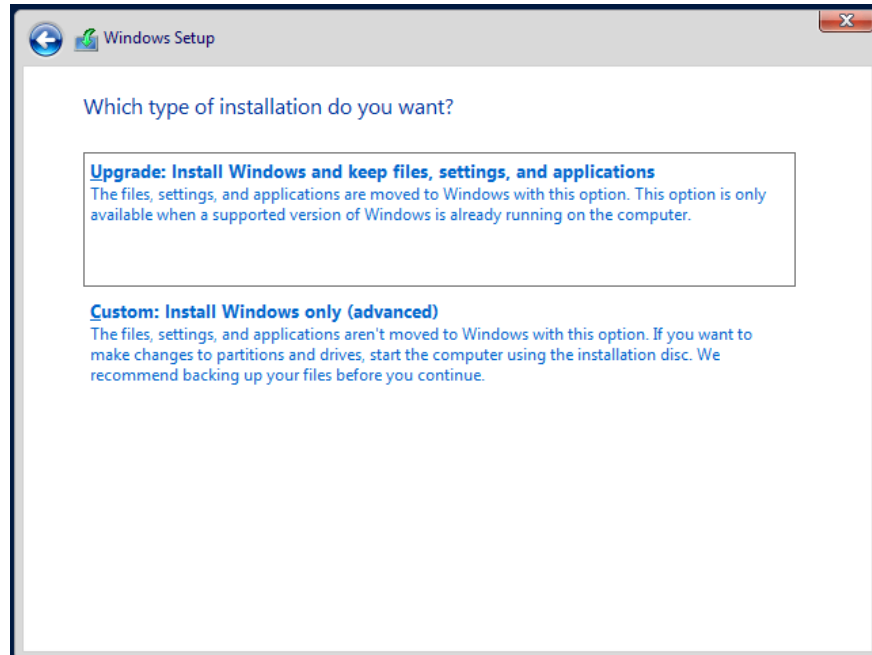

▪ Now select "Next".

- Now select the version you wish to install. We'll be installing the "Windows Server 2019 Standard Evaluation with Desktop Experience".
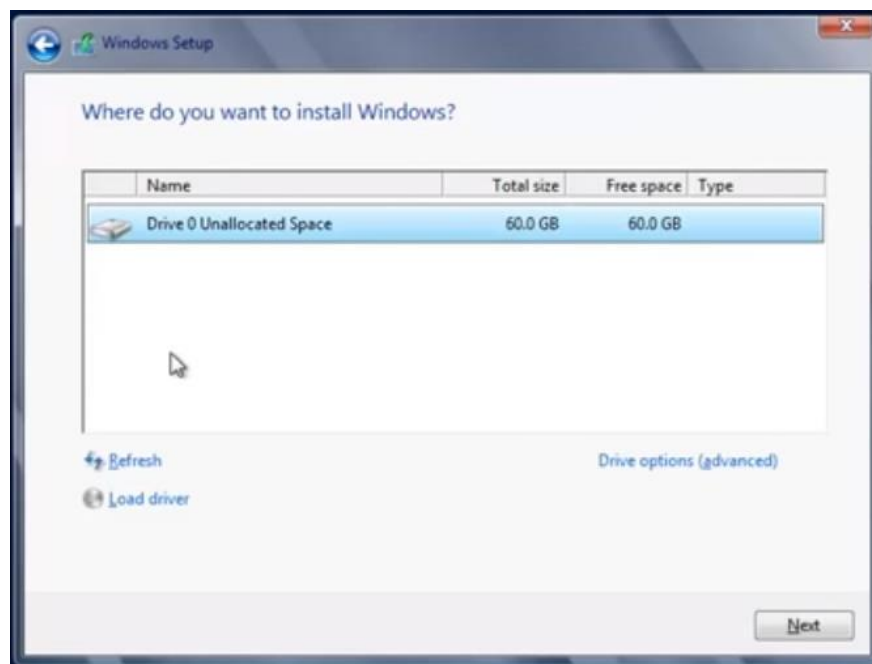

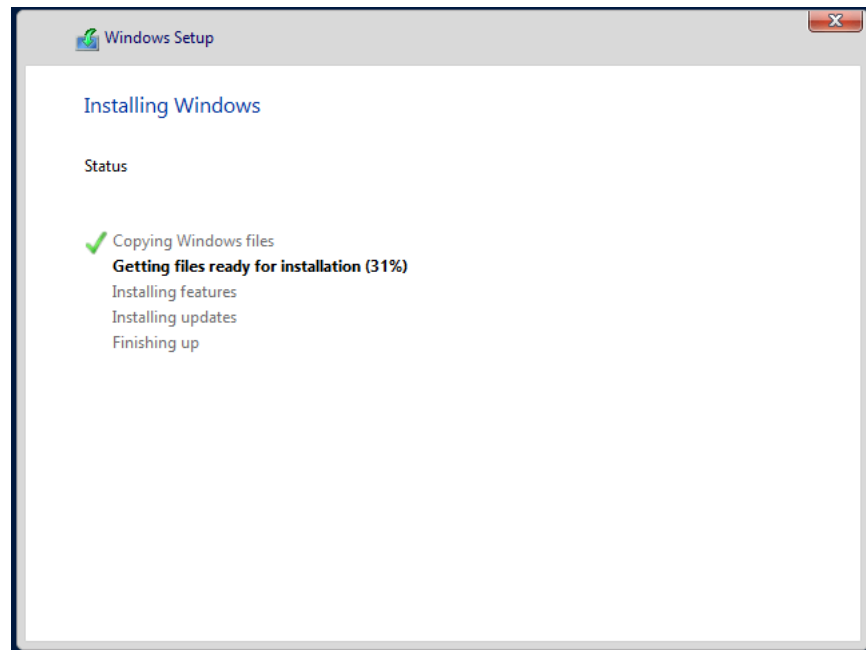- Agree to the "terms and conditions" select "Next".

- Now On the next screen there will be two options for the installation. Select "Custom: Install Windows only (advanced)".

- You will be presented with choosing a partition for the installation. Microsoft recommends to have at least 60 GB space available.

- Select the appropriate partition and continue with the installation.

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5. Installing Ethernet Drivers

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- The drivers for the ethernet ports are located in the Pro1000\NDIS64 folder.

- These drivers will also work for both Windows Server 2019, Windows Server 2016 and Windows Server 2008 R2.

- Before installing the drivers there are a few commands which you need to run in Power Shell with Admin rights as DOS is no longer available in Windows Server 2019.

  C. bcdedit -set loadoptions DISABLE_INTEGRITY_CHECKS
  D. bcdedit -set TESTSIGNING ON

- Now you need to reboot the PICO PC.

- If you get a message saying "boot options could not be changed because of secure boot" then no need to worry simply go into the BIOS and disable Secure Boot". This will do the trick.

- In order to start simply go to "Device Manager" and look for Network Adapters. Right click on the Ethernet Adapter and select "Update Driver".

- Now you need to specify where the drivers are located and, in this case, they are located in the Windows Server 2012 R2\Pro1000\Winx64\NDIS64 folder.

- It will take a couple of moments to install the drivers. During the driver installation simply click "Install this driver software anyway" to the following message and you are done. You will need to do the same for other three ethernet ports. There is nothing to worry about as the drivers are legitimate and have been modified to work for Windows Server 2008 R2, 2012 R2, 2016 and 2019.
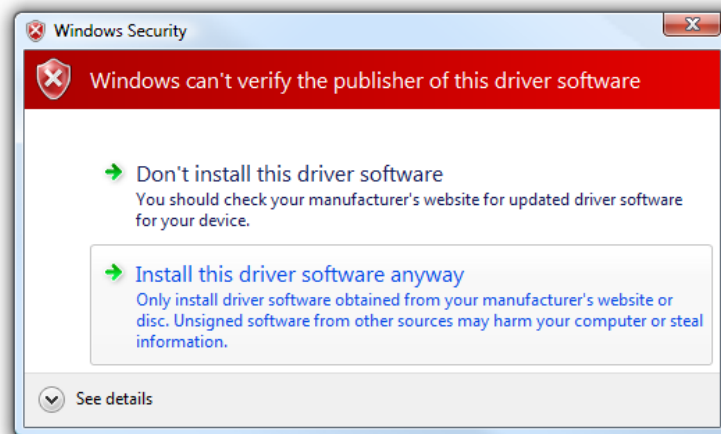
- Once you are done installing the drivers for all four adapters then you need to again access DOS with Admin rights and run the following commands to turn off the test mode. You are all set.

  C. bcdedit -set loadoptions ENABLE_INTEGRITY_CHECKS
  D. bcdedit -set TESTSIGNING OFF

NOTE: The method of installation for Windows Server 2008 R2 and Windows Server 2016 is identical as explained above.

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THANK YOU

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