

Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSB Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSB Embedded 64-bit Waters cLACE16, eLACE16/LND16 Image

This Disk Imaging Procedure is for the configuration of the Waters cLACE16, eLACE16/LND16 Image. No application software is installed in this disk image.

The 667005604RevC Easy Restore Win10 cLACE16, eLACE16 / LND16 Image USB are for the following platforms:

- 186008921 H/W eLACE16 Win 10
- 186008922 H/W cLACE16 Win 10
- 186008940 H/W LND16 Win 10

This model is then incorporated into the following kits:

- 176004115 eLACE16 Win 10
- 176004116 cLACE16 Win 10
- 176004149 LND16 Win 10

The Windows 10 64-bit updates that are in this disk image are listed in Appendix A. The disk imaging process configures some of the network adapter settings. To verify these settings and configure the other settings, use the instructions in section 6 below.

The Windows DVD Maker, Windows Media Center, and Windows Media Player programs (features) have not been installed in this disk image. They have been deselected in **Control Panel | Programs | Uninstall a program | Turn Windows features on or off** by unchecking “Media Features”.

1. Preparing the System

1.1. Saving Data and Settings Before the Imaging Process

- 1.1.1. If the computer to be imaged is currently in use, then it is necessary to back up any customer data on the hard drive before imaging the computer, since all data will be lost from all partitions on the hard drive.
- 1.1.2. Any configuration information such as network settings (i.e. computer name, domain name, TCP/IP address, etc.), Windows user and group names, and application login names should also be recorded so they can be restored onto the newly imaged disk drive.

1.2. Verify Added Network Card

- 1.2.1. The cLACE platform should have a four port Intel(R) Gigabit 4P I350-t adapter network card installed in a PCI Express x4 bus slot. This 4-port network card is used for attaching Ethernet instruments and is bridged to create an Instrument LAN network connection.
- 1.2.2. The eLACE16/LND16 platform does not support any expansion cards it has two ports Intel(R) I210 Gigabit Network on the back of the appliance.

1.3. Prepare System for User Interaction

- 1.3.1. Connect a monitor, keyboard, and mouse to the platform. Connect an AC power cord to the monitor and, if necessary, another to the computer. Power up the monitor. If the system is not already on, power it up also. If it is already on, restart it.

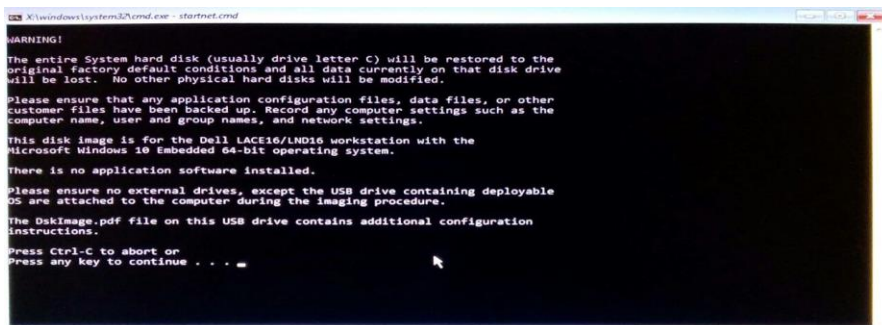
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2. BIOS Settings and Starting the Imaging Process

- 2.1. Restart the system and immediately begin pressing the **<F12>** key repeatedly. The system Enters to the Boot menu, and select the **Change Boot Mode settings** option under **other options** by Pressing **Enter** button on it.
Make sure the **boot mode is set to: UEFI; Secure Boot: OFF**
- 2.2. Save the settings, reboot the PC and immediately begin pressing the **<F12>** key repeatedly.
- 2.3. Select the **BIOS Setup** option under “**Other options**” by Pressing **Enter** button on it.
- 2.4. Click on **Settings->General** Menu, click on **Boot Sequence** to select it. Make sure that **UEFI** is selected under **Boot List Option**.
- 2.5. Click on **Settings->General** Menu, click on **Date/Time** to select it. If the date or time is incorrect, click in the desired field of the date or time and select in the correct value.
- 2.6. Select the **SATA Operation** option under **Settings->System Configuration** Menu and select **AHCI** as SATA Operation.
- 2.7. Select the **Audio** option under **Settings->System Configuration** Menu and uncheck the **Enable Audio** option.
- 2.8. Click on the AC Recovery under **Settings->Power Management** Menu and make sure the **Last Power State** is selected under **AC Recovery**.
- 2.9. Insert the Easy Restore Win10 cLACE16/eLACE16/LND16 USB media into the any of the USB port (USB 2.0 or USB 3.0).
- 2.10. On making any changes the **Apply** button will be enabled and the user can click on the **Apply** button to save the changes and the system will restart.
- 2.11. If no changes are required to be made the user can click on the **Exit** button and then the system will restart.

3. The Imaging Process

- 3.1. When the system restarts, immediately begin pressing the **<F12>** key repeatedly until “**Boot Menu**” screen is displayed. Select the USB image drive under “**UEFI BOOT**” option. If prompted, press any key to boot off the USB.
- 3.2. Next, the Command Prompt window will open and invoke the **WinPE environment**.
- 3.3. The system hardware is then checked that it has a Waters-manufactured platform. If it does not or if it cannot be determined, the appropriate message is displayed and the imaging process is terminated. If the system hardware does have a Waters-manufactured platform, the imaging process continues.
- 3.4. Warning message is displayed in the Command Prompt window about loss of data:



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- 3.5. To stop the procedure press **<Ctrl>C** and then **y <Enter>**. To proceed with imaging, press any key.
- 3.6. Next, the Disk Part utility will run and show the Disk list for the system very similar to the following:

```
X:\windows\system32\cmd.exe - startnet.cmd
There is no application software installed.
Please ensure no external drives, except the USB drive containing deployable
OS are attached to the computer during the imaging procedure.
The DiskImage.pdf file on this USB drive contains additional configuration
instructions.
Press Ctrl-C to abort or
Press any key to continue . . .
Microsoft DiskPart version 10.0.14393.0
Copyright (C) 1999-2013 Microsoft Corporation.
On computer: MININT-QH8A90U

Disk ### Status Size Free Dyn Gpt
-----
Disk 0 Online 447 GB 500 MB *
Disk 1 Online 14 GB 0 B *

Leaving DiskPart...

The disk drive will now be cleaned and partitioned.
To exit now without formatting and imaging the disks, type N or n and press the
[Enter] key.
To format and image the disk drives now, type Y or y and press the [Enter] key.
```

- 3.7. Verify that the size of **Disk 0** is 447 GB and that the status is Online.

Note: If proceeded further, all partitions and data on the Disk will be deleted; new partitions in Disk 0 will be created.

To proceed, type **y** and press the **<Enter>** key; otherwise, type **n** and press the **<Enter>** key.

- 3.8. The user will see messages indicating that Disk 0 is cleaned, converted to GPT, partitioned, and formatted, and that the new partitions on Disk 0 are being created.

```
X:\windows\system32\cmd.exe - startnet.cmd
DiskPart successfully assigned the drive letter or mount point.
DiskPart succeeded in creating the specified partition.
DiskPart succeeded in creating the specified partition.
DiskPart successfully shrunk the volume by: 500 MB
100 percent completed
DiskPart successfully formatted the volume.
DiskPart successfully assigned the drive letter or mount point.

Volume ### Ltr Label Fs Type Size Status Info
-----
Volume 0 W Windows NTFS Partition 446 GB Healthy
Volume 1 S SYSTEM FAT32 Partition 260 MB Healthy Hidden
Volume 2 D 667005604RE FAT32 Removable 14 GB Healthy

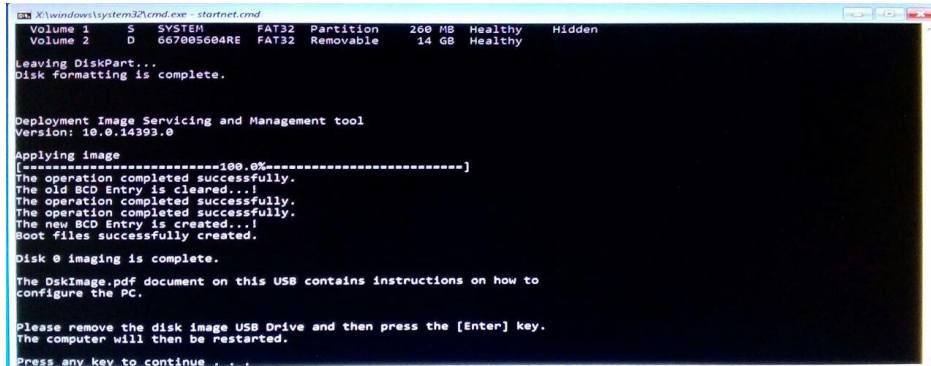
Leaving DiskPart...
Disk formatting is complete.

Deployment Image Servicing and Management tool
Version: 10.0.14393.0
Applying image
== 4.0% 1
```

- 3.9. The progress will be updated as the imaging takes place.

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- 3.10. When instructed, remove the Easy Restore Win10 cLACE16/eLACE16/LND16 Image USB from the system USB port and then press any key. The system will restart.



```
X:\windows\system32\cmd.exe - startnet.cmd
Volume 1  S  SYSTEM  FAT32  Partition  260 MB  Healthy  Hidden
Volume 2  D  G67005604RE  FAT32  Removable  14 GB  Healthy
Leaving DiskPart...
Disk formatting is complete.

Deployment Image Servicing and Management tool
Version: 10.0.14393.0

Applying image
[=====100.0%=====]
The operation completed successfully.
The old BCD Entry is cleared...!
The operation completed successfully.
The operation completed successfully.
The new BCD Entry is created...!
Boot files successfully created.

Disk 0 imaging is complete.

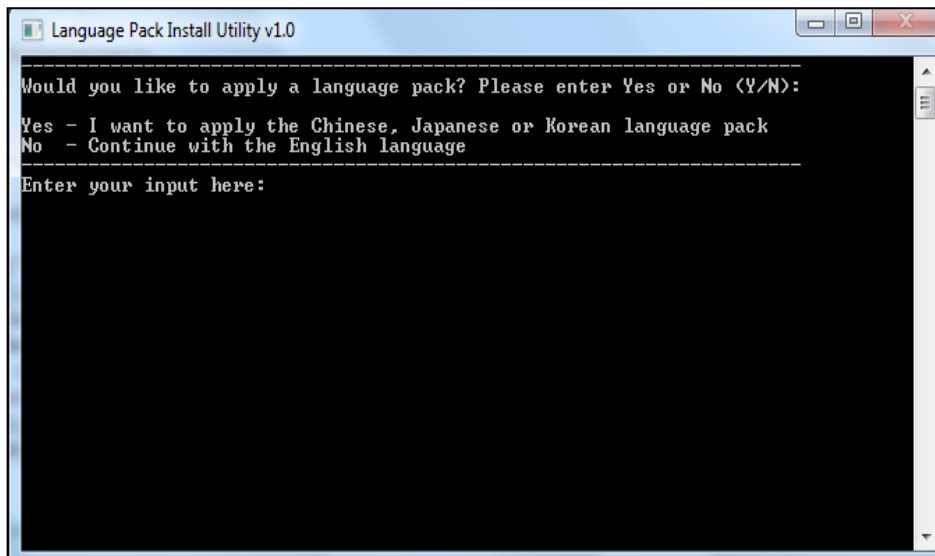
The DskImage.pdf document on this USB contains instructions on how to
configure the PC.

Please remove the disk image USB Drive and then press the [Enter] key.
The computer will then be restarted.

Press any key to continue . . .
```

4. Post-Imaging Initialization and Configuring System Settings

- 4.1. The Windows 10 Automated Setup will run when the system restarts.
- 4.2. The system goes for auto logon into the Waters account followed by running the post Installation scripts.
- 4.3. During the time of running the post scripts, initially the non-present devices will be removed (as the image is intended to support multiple platforms) followed by which the user will be prompted for choosing the language to be applied. User can continue with the English language by selecting the No option by pressing "N" or "n" and **<Enter>** key. Other languages such as Chinese, Japanese and Korean can also be applied by selecting the Yes option by pressing "Y" or "y" and **<Enter>** key...

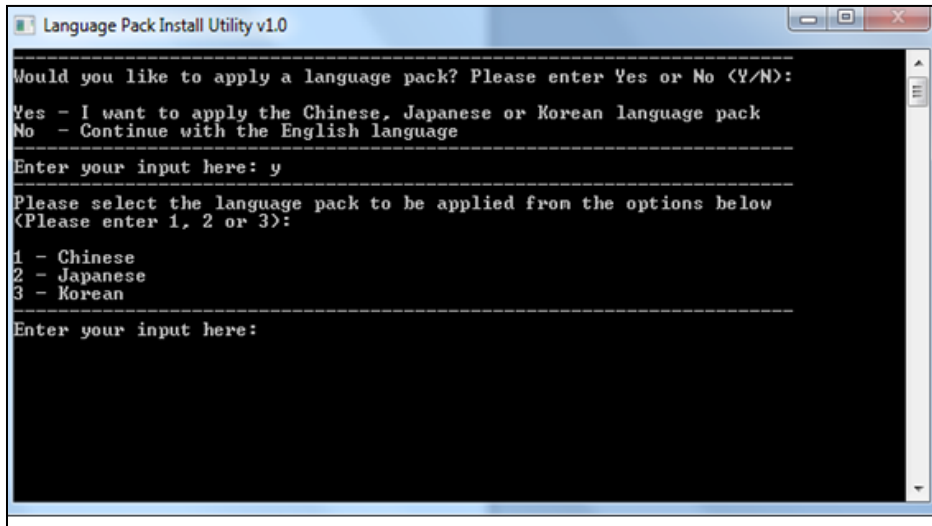


```
Language Pack Install Utility v1.0

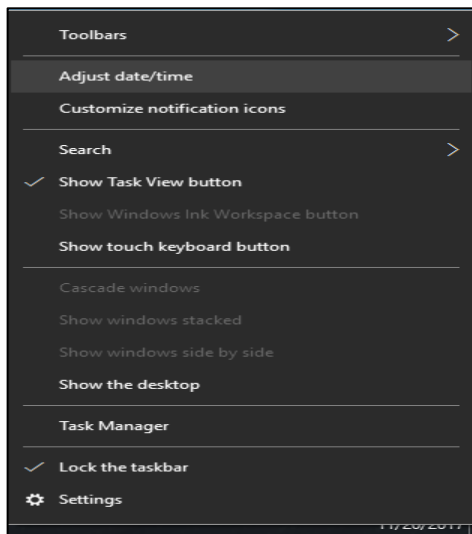
-----
Would you like to apply a language pack? Please enter Yes or No (Y/N):
Yes - I want to apply the Chinese, Japanese or Korean language pack
No  - Continue with the English language
-----
Enter your input here:
```

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- 4.4. The user is provided with the options for selecting the particular language and it can be applied by pressing 1 for Chinese, 2 for Japanese and 3 for Korean followed by "Enter".

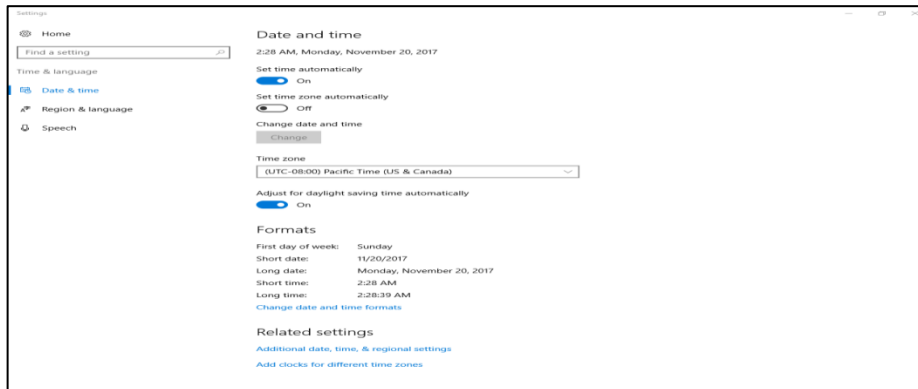


- 4.5. The system inherently restarts by running the sysprep automatically. After restart the system ends up in **<Ctrl><Alt><Delete>** screen.
- 4.6. At the logon screen press **<Ctrl><Alt><Delete>** to log on, type in **Administrator** for the "User name", **Dell Serial Number** for the Password, and then click on the right arrow icon or press the **<Enter>** key.
- Note:** There is also a **Waters** user account which has **Dell Serial Number** for the password.
The disk image sets the computer name to "**L16-Dell Serial Number**".
- 4.7. The user can notice the change in the applied language in Display, System locale and also at the Log on screen.
- 4.8. Right click on the time in the lower right corner of the taskbar and select "**Adjust date/time**"

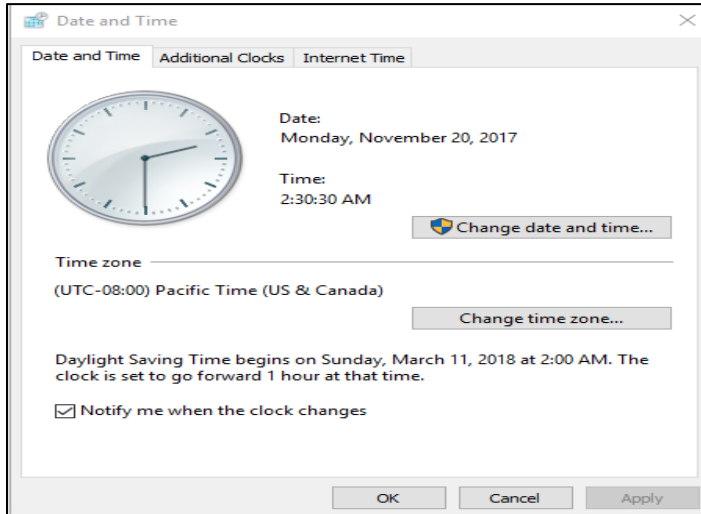


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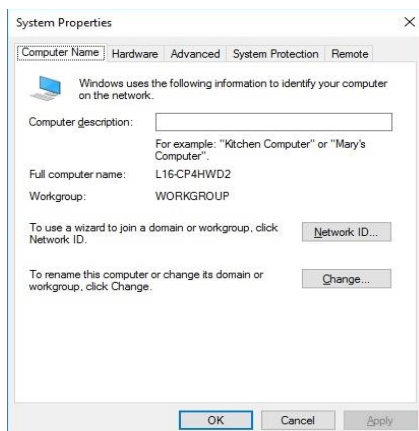
- 4.9. Verify that the time zone is set correctly. If necessary, select a time zone by clicking on the drop down menu for Time zone and update it.



- 4.10. Verify that the date and time are correct. If necessary, click the “Control Panel>Clock, Language, and Region>Set the time and date” button and update them. Click the OK button.

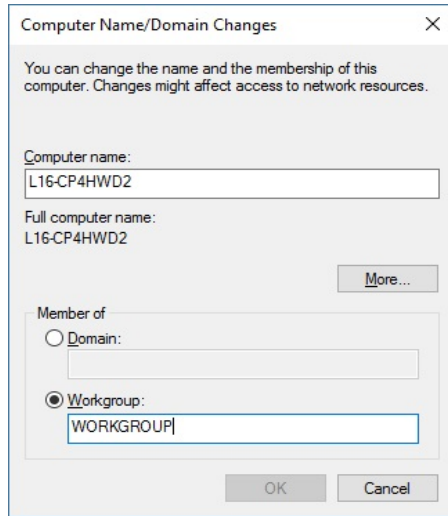


- 4.11. If the user needs to rename the computer, right-click on the **This PC** icon and select **Properties**. Click “**Advanced system settings**”. Click on the “**Computer Name**” tab. Click the **Change** button.

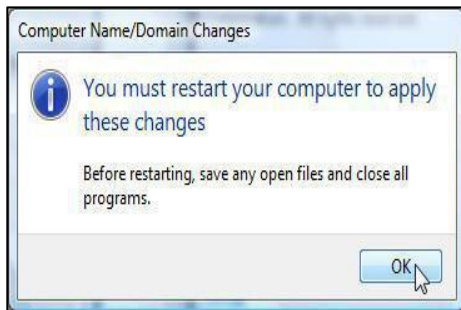


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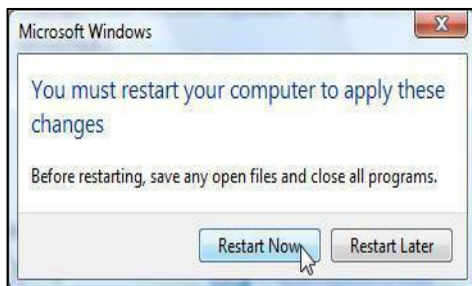
- 4.12. The computer name is initially set to “**L16-Dell Serial Number**”. If required, type a new name into the “Computer name” text box. Click the **OK** button.



- 4.13. Click the **OK** button at the “Computer Name/Domain Changes” dialog box.



- 4.14. Back at the “System Properties” window, click the **OK** button. Click the **Restart Now** button in the dialog box.



- 4.15. The system will restart. Again at the logon screen press **<Ctrl><Alt><Delete>** to log on, type in **administrator** for the “User name”, **DELL Serial Number** for the Password, and then click on the right arrow icon or press the **<Enter>** key.

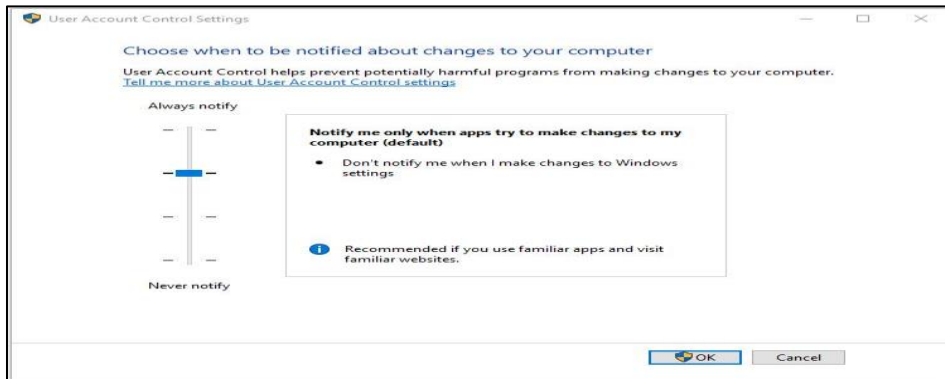
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5. Verifying/Configuring Windows Security Settings

5.1 Click **Start | Control Panel** and under “**System and Security**” click on “**Review your computer’s status**”.



5.2 Click on “**Change User Account Control settings**” near the top of the left pane. The 3rd setting from the bottom “Notify me only when apps try to make changes to my computer (default)” should already be selected. If user needs to have a different protection level, then drag the UAC settings selection bar to the desired setting and click the **OK** button.

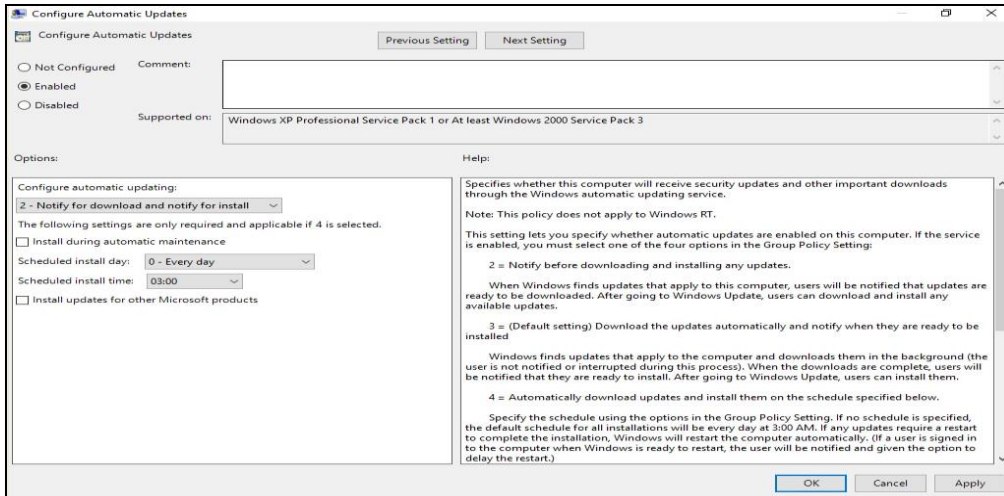


5.3 If the user chooses any of the other 3 settings, it is better to restart the computer to turn on User Account Control, but user doesn’t have to do that now. Click the red **X** button in the upper right corner of the Action Center to exit from it.

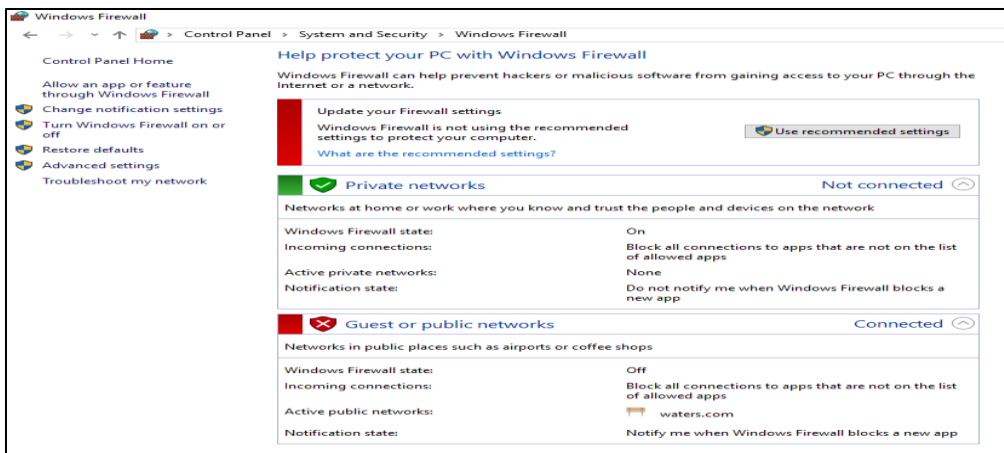
5.4 Click on **Start** button, type `gpedit.msc` in the search box and press **Enter**. Navigate to “Computer Configuration| Administrative Templates| Windows Components| Windows Update”. Double click on “Configure Automatic Updates”. Verify that the **Enabled** button is selected and under **Configure Automatic Updating** option the “**2-Notify for download and notify for install**” option is selected.

Note: If not configured, please follow the above steps for configuring windows update.

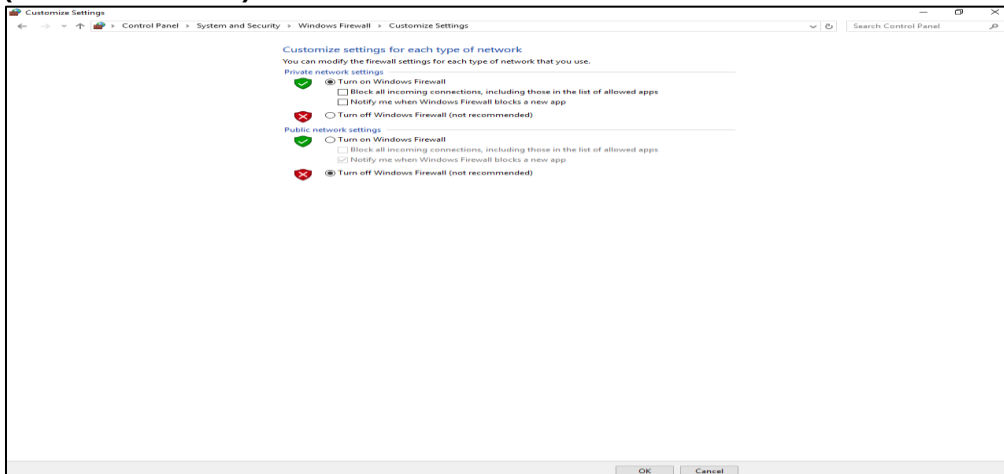
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5.5 To check the Windows Firewall settings, go to **Control Panel | System and Security | Check Firewall status** and then click on **Turn Windows Firewall on or off**.



5.6 For the “**Private network settings**”, make sure that the **Turn on Windows Firewall** radio button is selected. For the “**Public network settings**”, make sure that the **Turn off Windows Firewall (not recommended)** radio button is selected. Click the **OK** button.



5.7 At the Windows Firewall window, click the red **X** button in the upper right corner to close it.

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6. Verifying/Configuring the Network Connections

For verifying/configuring the network connections on cLACE16 please refer section 6.1 and for eLACE16/LND16 refer section 6.2.

6.1. For cLACE16 (embedded PC 5000):

NOTE: The disk imaging process should configure some of the network adapter settings. These settings should be verified using the instructions in this section. Only make the changes to the network adapter settings as necessary to match the final results of what is shown in this section.

There are a total of 6 RJ45 ports on the back of the platform, depending on the particular model of platform that is used for the computer's network interfaces. Two of these RJ45 port(s) that are located on the motherboard are used for connection to the corporate LAN connections; these should (collectively) be labeled "NETWORK". While the other four of these RJ45 ports are part of an add-on card plugged into the computer bus, which are to be used for connecting to instruments, if any, and should collectively be labeled "Instrument LAN".

The Device Names for the adapters are as follows:

"Network" : Intel(R) Ethernet Connection (2) I219-LM
Intel(R) I210 Gigabit Network Connection

"Instrument LAN" : Intel(R) Gigabit 4P I350-t Adapter
Intel(R) Gigabit 4P I350-t Adapter #2
Intel(R) Gigabit 4P I350-t Adapter #3
Intel(R) Gigabit 4P I350-t Adapter #4

In Windows 10's "Network Connections", the Name for each adapter is either "Corporate LAN x" or "Local Area Connection x" where x is usually a single-digit number, e.g. 1, 2... and the Network Bridge will be termed as "Instrument LAN".

The Device Names for the adapters are as follows:

"Corporate LAN x": Intel(R) Ethernet Connection (2) I219-LM
Intel(R) I210 Gigabit Network Connection

"Instrument LAN" : Intel(R) Gigabit 4P I350-t Adapter
Intel(R) Gigabit 4P I350-t Adapter #2
Intel(R) Gigabit 4P I350-t Adapter #3
Intel(R) Gigabit 4P I350-t Adapter #4
Microsoft Network Adapter Multiplexor Driver

The imaging process should have done the following with regard to naming network connections:

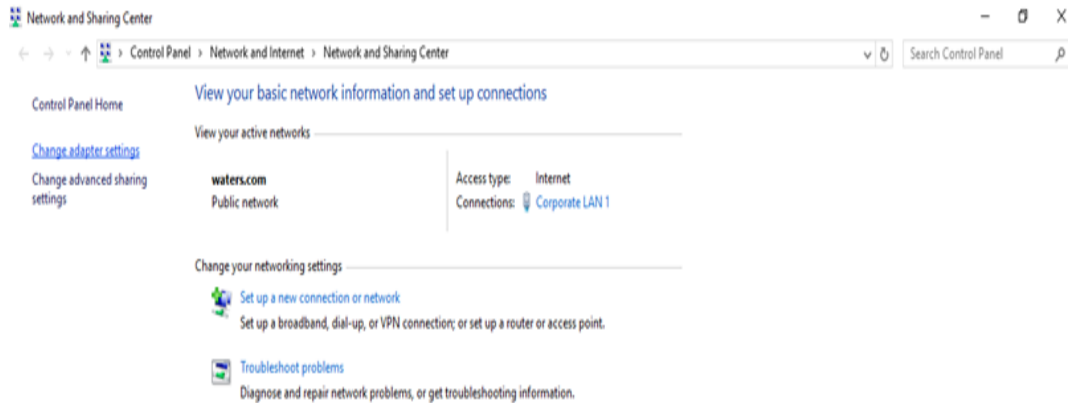
- Renamed the "Network" name for Intel(R) Ethernet Connection (2) I219-LM to "Corporate LAN 1" and Intel(R) I210 Gigabit Network Connection to "Corporate LAN 2"
- Renamed the "Instrument LAN" names to "**Local Area Connection 1**", "**Local Area Connection 2**", "**Local Area Connection 3**" and "**Local Area Connection 4**"
- Bridged the 4 **Intel(R) Gigabit 4P I350-t Adapter** network ports.
- Renamed the "Network Bridge" name to "**Instrument LAN**"

In case, if the imaging process failed to update the Network settings as mentioned above please follow the steps mentioned below from 6.1.1 to 6.1.17 to achieve the same.

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6.1.1. Right click the **Network** icon on the taskbar and select “**Open Network and Sharing Center**”.

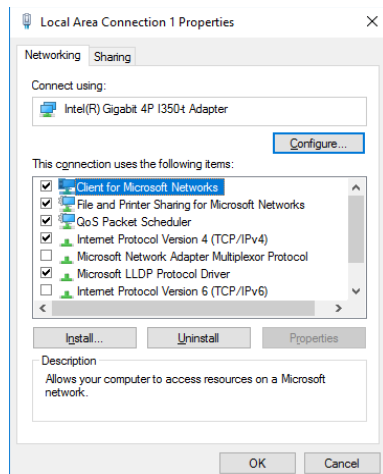
6.1.2. Select “Change adapter settings” on the left side.



6.1.3. As necessary, click on each network connection entry, click the **Rename this connection** button that should then appear, and rename the network connection so that the network connection list looks just like the following:

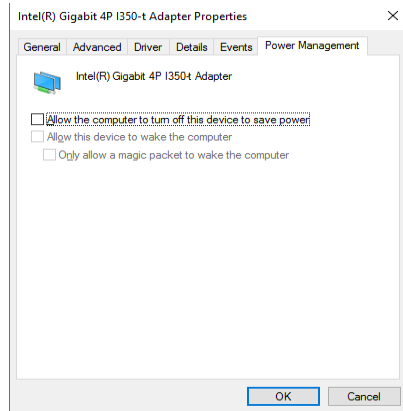


6.1.4. For each of “**Corporate LAN 1**”, “**Corporate LAN 2**”, “**Local Area Connection 1**”, **Local Area Connection 2**, **Local Area Connection 3**” and “**Local Area Connection 4**” do the following: Right-click on the entry, select Properties, make sure the “**Internet Protocol Version 6 (TCP/IPv6)**” checkbox is unchecked, and then click on the **Configure...** button.

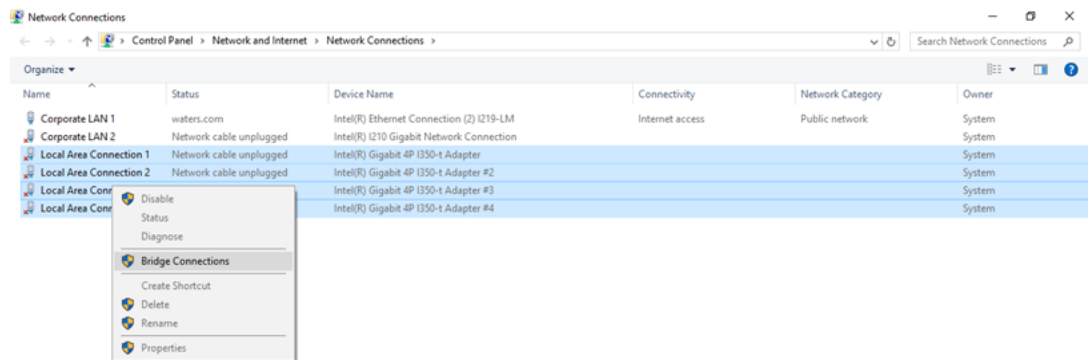


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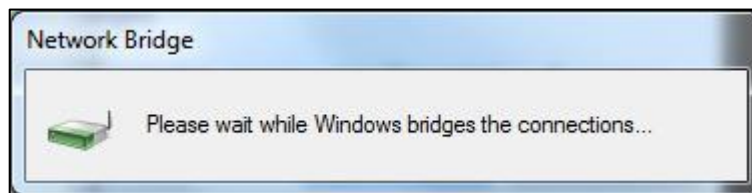
6.1.5. Click the “Power Management” tab. Make sure the “Allow the computer to turn off this device to save power” checkbox is unchecked, and then click the OK button.



6.1.6. In the “Network Connections” window, <Ctrl>click on “Local Area Connection 1”, “Local Area Connection 2”, “Local Area Connection 3” and “Local Area Connection 4” so that all 4 network connections are highlighted. Right-click anywhere on the highlighted group and select **Bridge Connections**.

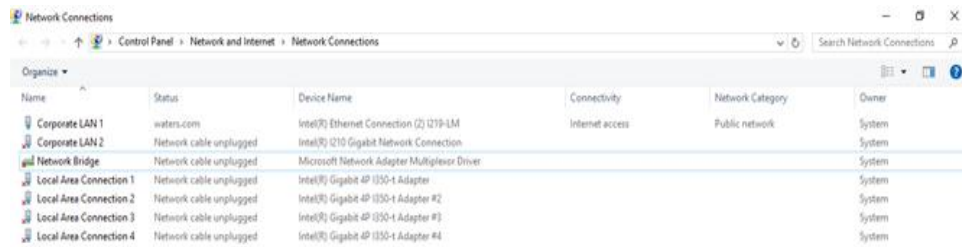


6.1.7. A “Network Bridge” window should appear for several seconds while Windows bridges the network connections.

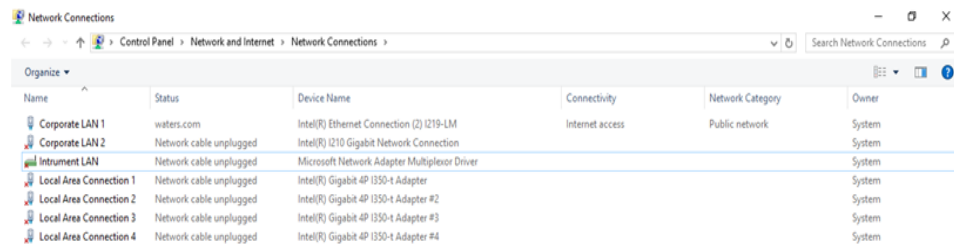


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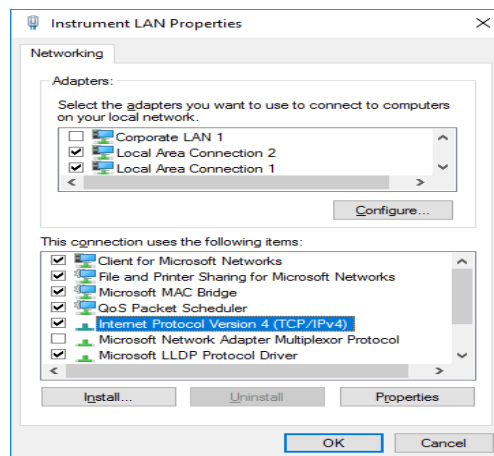
6.1.8.A new “Network Bridge” entry should appear in the network connection list.



6.1.9. Click on the “Network Bridge” entry, click the **Rename this connection** button that should then appear, and rename that network connection to “Instrument LAN”.

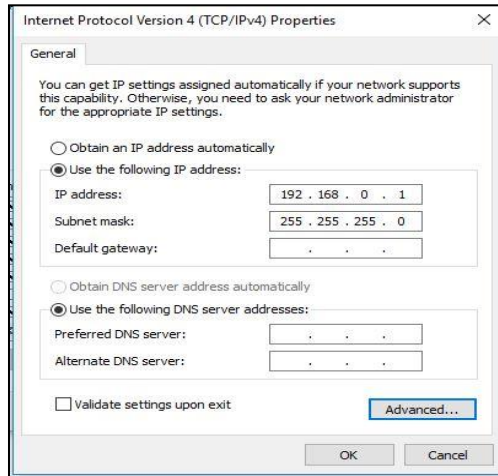


6.1.10. Right-click on **Instrument LAN**, select **Properties** again, uncheck the “**Internet Protocol Version 6 (TCP/IPv6)**” checkbox, select “**Internet Protocol Version 4 (TCP/IPv4)**”, and click the **Properties** button.

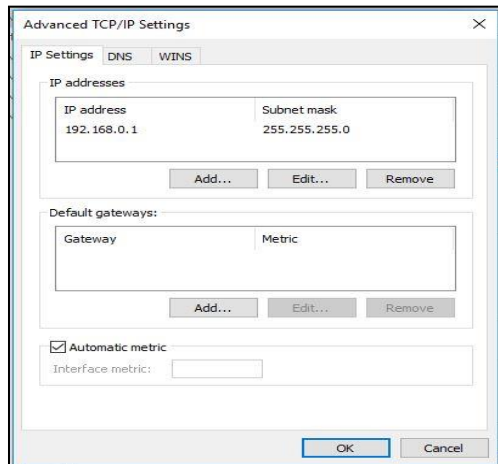


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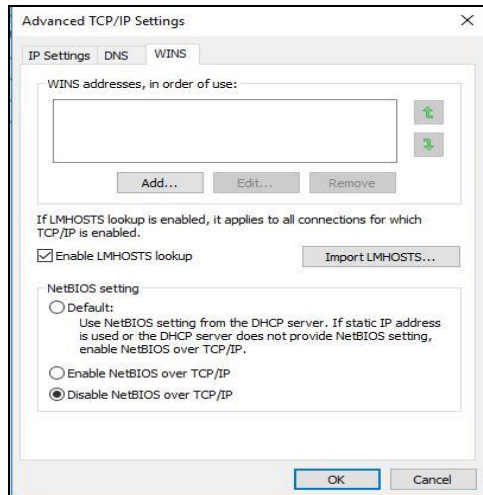
- 6.1.11. Click the **“Use the following IP address:”** radio button, type in **192.168.0.1** for the **“IP address”**, press the **<Tab>** key, and the **“Subnet mask”** of **255.255.255.0** should appear. Click the **Advanced...** button.



- 6.1.12. Click on the **WINS** tab.

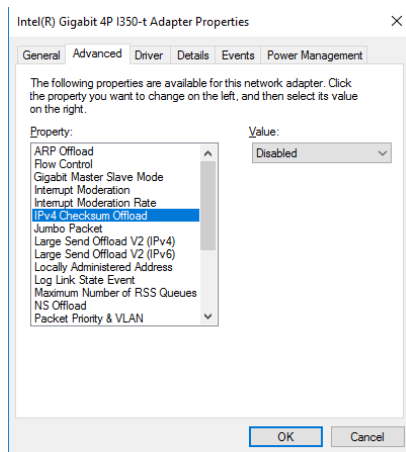


- 6.1.13. Click the **“Disable NetBIOS over TCP/IP”** radio button, and then click the **OK** button.

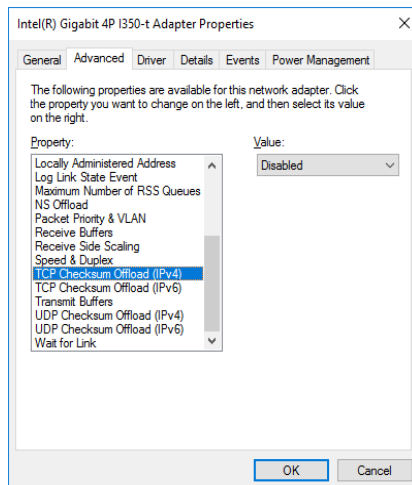


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- 6.1.14. Back at the "Internet Protocol Version 4 (TCP/IPv4) Properties" window, click the **OK** button. Back at the "Instrument LAN Properties" window, click the **Close** button.
- 6.1.15. To configure the TCP/IP protocol for the corporate network LAN, consult the network administrator for instructions. The TCP/IP protocol is set by default to get its TCP/IP address from a DHCP server on the network.
 - 6.1.15.1. If it is necessary to use static IP addressing and/or to select the preferred DNS server, user needs to take help of the network administrator.
- 6.1.16. For just the bridged i350-t network connections, make the following changes to the interface advanced configurations (Configure-> Advanced tab);
Please note: the below settings needs to done for all the network ports that are part of the bridge, even though the below example is for only 1 port. Else bridging may not work as expected.
 - IPv4 Checksum Offload setting to "Disabled."

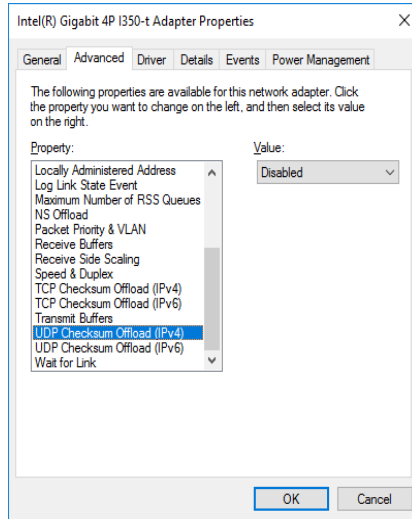


- TCP Checksum Offload (IPv4) setting to "Disabled."



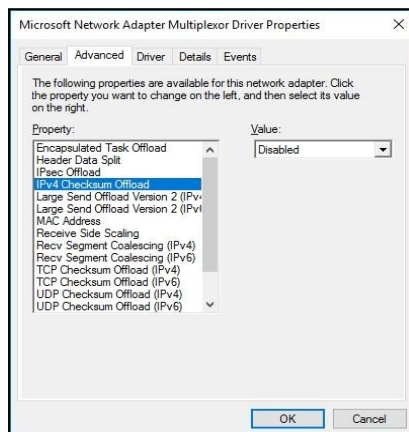
Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSB Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

- UDP Checksum Offload (IPv4) setting to "Disabled."

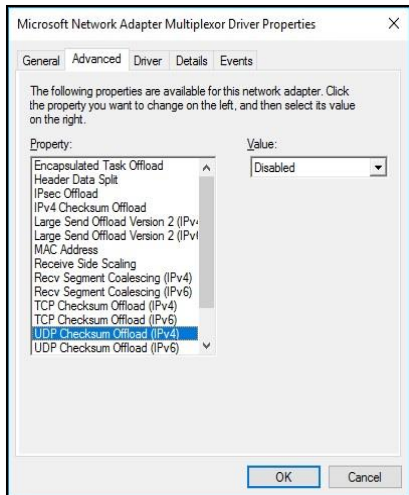
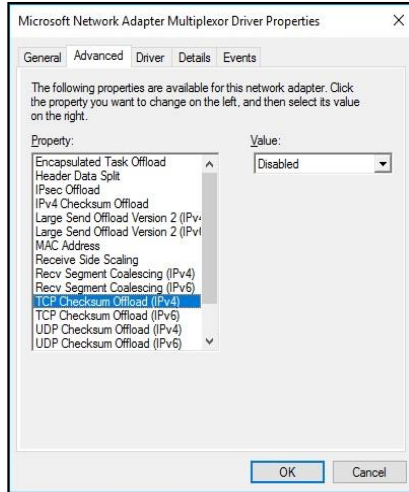


6.1.17. In Device Manager, make the following modifications to the Microsoft Network Adapter Multiplexor Driver (Properties -> Advanced):

- IPv4 Checksum Offload setting to "Disabled."
- TCP Checksum Offload (IPv4) setting to "Disabled."
- UDP Checksum Offload (IPv4) setting to "Disabled."



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6.2. For eLACE16/LND16 (embedded PC 3000):

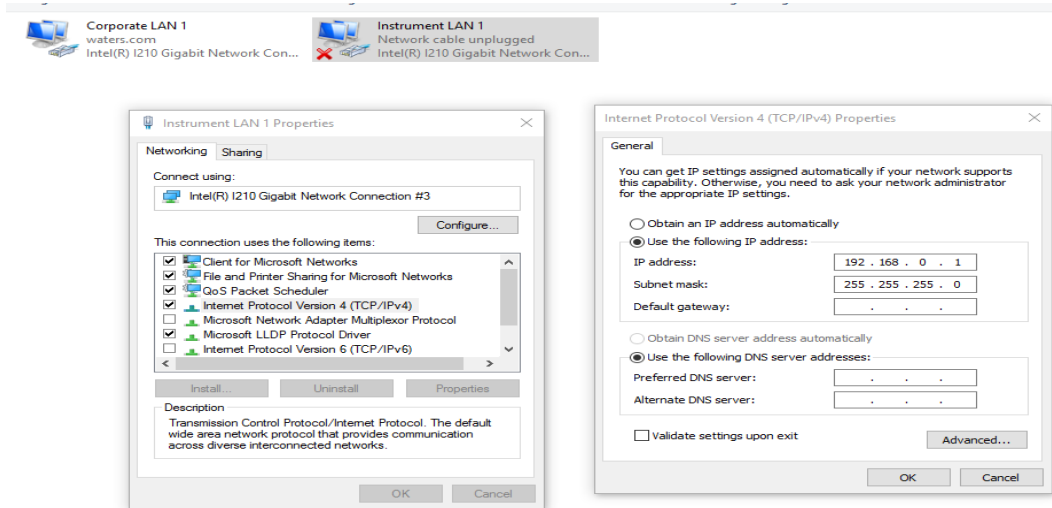
The imaging process renames the network name for I210 Gigabit connections to “Corporate LAN 1” and “Instrument LAN 1”.

Name	Status	Device Name
 Corporate LAN 1	waters.com	Intel(R) I210 Gigabit Network Connection #2
 Instrument LAN 1	Network cable unplugged	Intel(R) I210 Gigabit Network Connection #3

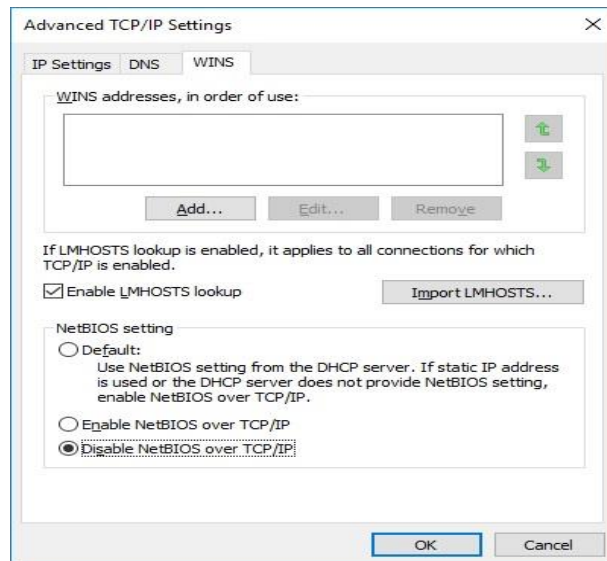
Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSB Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

The user has to manually configure the network connections

- a) For the “Instrument LAN 1” network connection, select TCP/IPv4, set the IP address to 192.168.0.1 and subnet mask to 255.255.255.0.

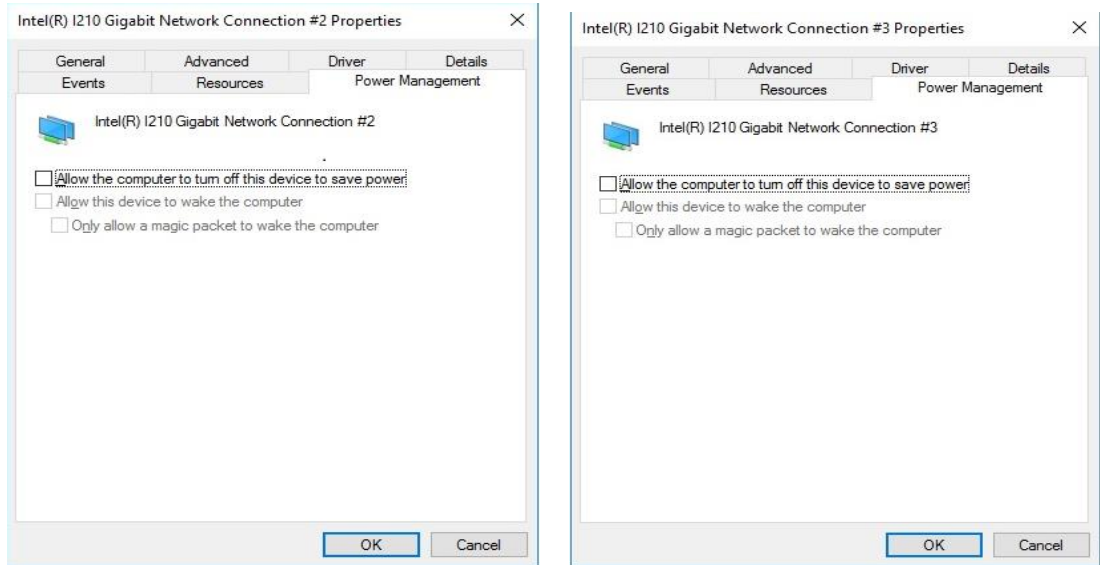


- b) In the “WINS” tab of “Advanced TCP/IP settings” window, under ‘NetBIOS setting’ set the option to “Disable NetBIOS over TCP/IP”.

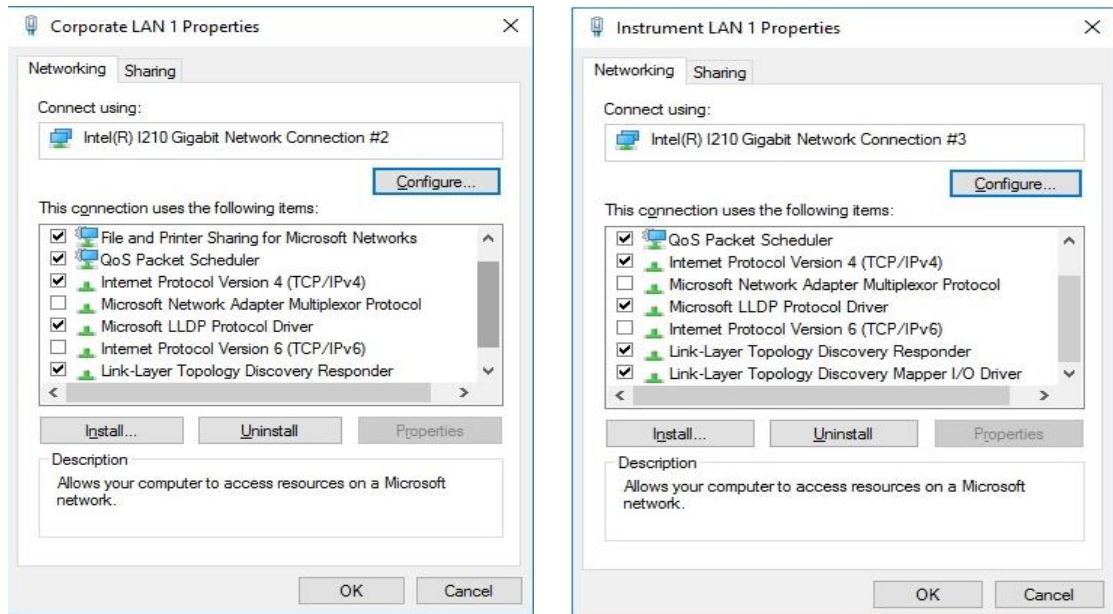


Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSC Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

- c) For each network adapter, click on Configure, click the **“Power Management”** tab. Make sure the **“Allow the computer to turn off this device to save power”** checkbox is unchecked, and then click the OK button.



- d) For each network adapter, select **Properties** again, uncheck the **“Internet Protocol Version 6 (TCP/IPv6)”** checkbox.

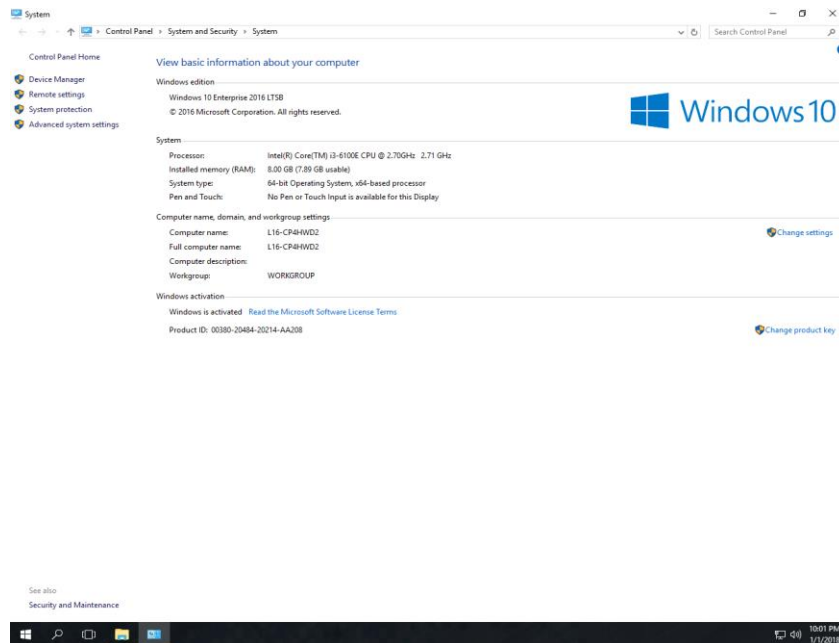


The eLACE16/LND16 PC uses the Instrument LAN 1 port for the instrument communication.

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7. Activating Windows

- 7.1. Make sure that the system has access to the Internet, usually by plugging a live network LAN connection cable into the onboard connector in the back of the system.
- 7.2. In case the Windows is not activated then right-click the This PC icon and select Properties. In the “Windows activation” section near the bottom, click on the message “xx days until automatic activation. Activate Windows now”.
- 7.3. In the “Windows Activation” window, click the Activate Windows online now option.
- 7.4. Type in the product key that is on the Microsoft license sticker on the side of the Appliance. The dashes between the five 5-character groups will be automatically inserted as the user types. Click the Next button.
- 7.5. Windows should contact the Microsoft website over the Internet and activate Windows.
- 7.6. When the activation is completed, the “Activation was successful” message should appear. Click on the Close button.
- 7.7. Back at the System Properties screen; verify that the message “Windows is activated” is present in the “Windows activation” section near the bottom.

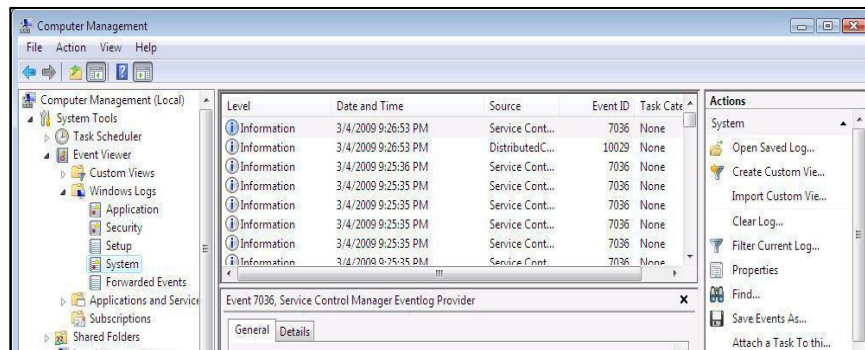


Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSC Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

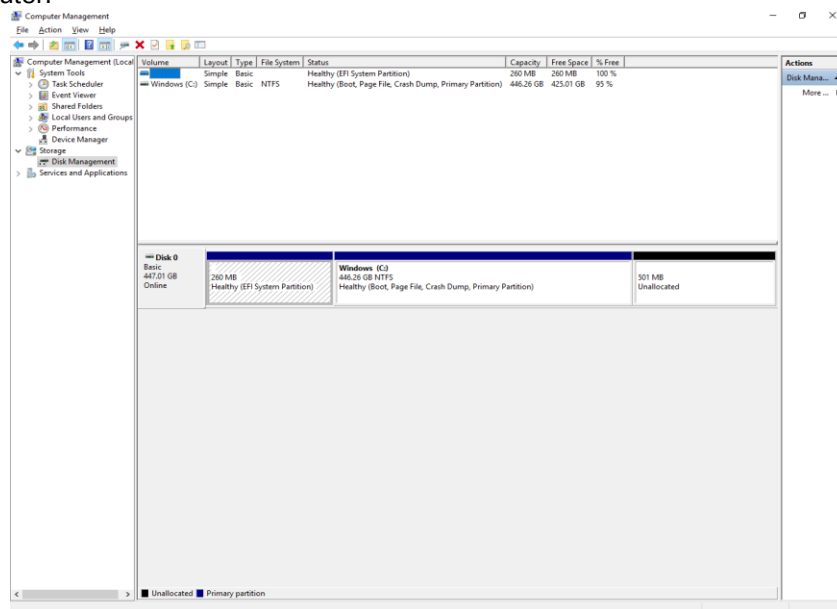
8. Checking the System Integrity

- 8.1. Right click on "This PC" icon and select "Manage".
- 8.2. At the left side of the "Computer Management" window, double-click on Event Viewer and then on Windows Logs to expand them. Under Windows Logs, click System. Verify that there are no error messages listed in the level column immediately after the image deployment, except for Time Service ID 34, User Profile Service ID 1533, SuperFetch ID 7023, DistributedCOM error 10010, DistributedCOM error 10016, SNMP ID 1500 error, Service Control Manager ID 7023/7024, volmgr ID 46, EVENT ID 215, Event ID 56 and VSS ID 8193 error messages. These are errors that may appear due to the sequence of updates and can be cleared.

Note: If there is another computer on the network with the same name, then netbt ID 4321 and Server ID 2505 errors will occur.



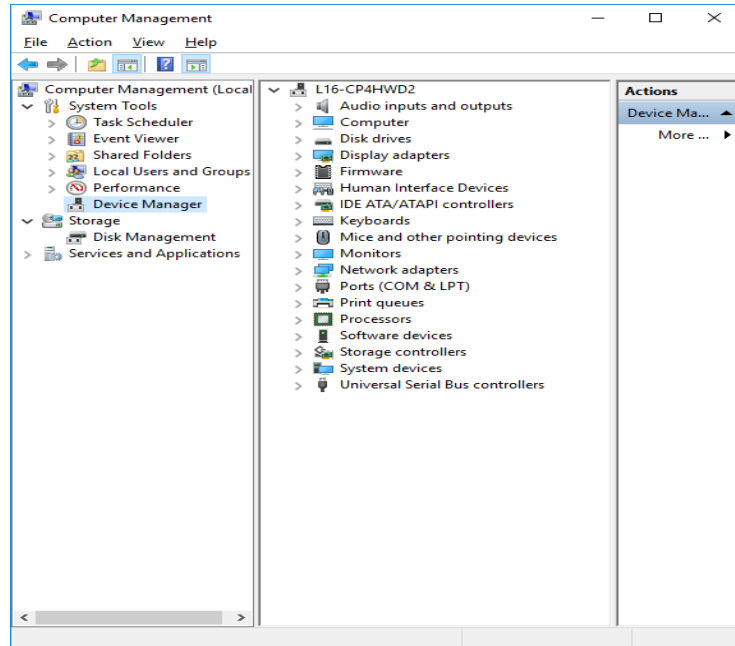
- 8.3. On the left side, click Application. Verify that there are no error messages listed in the level column immediately after the image deployment, except for ESENT ID 215 (Windows Mail not enabled) and/or VSS ID 8193 error messages. These are errors that may appear due to the sequence of updates and can be cleared.
- 8.4. On the left side, click Disk Management. There will be only 1 physical hard disk drive in the computer.



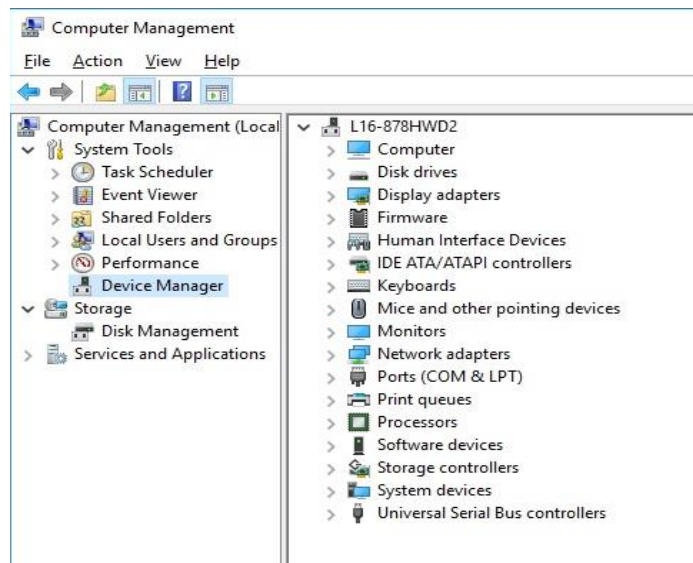
Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSC Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

- 8.5. On the left side, click Device Manager. Verify that there are no yellow or red warning messages. Please refer section 8.5.1 for cLACE16 and section 8.5.2 for eLACE16/LND16.

8.5.1 for cLACE16 PC



8.5.2. For eLACE16/LND16 PC

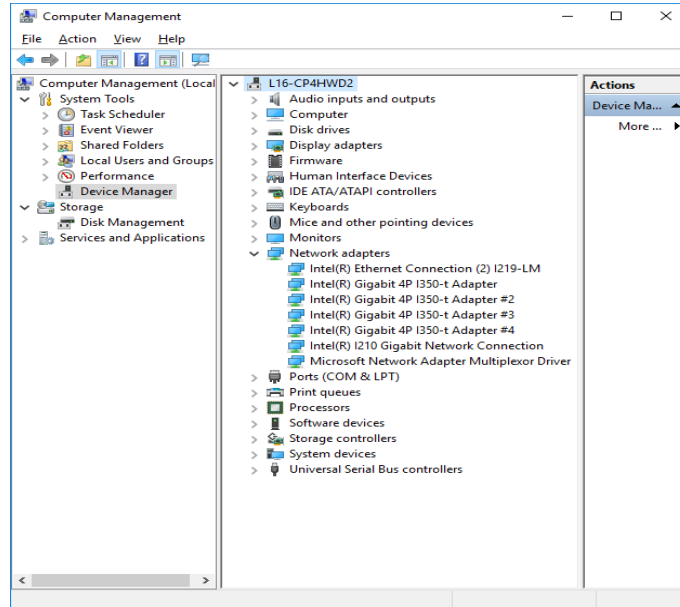


Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSC Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

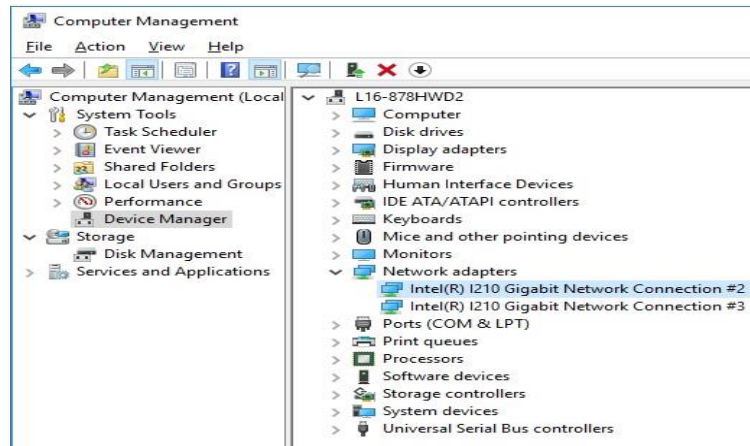
8.6. Expand the “Network adapters” in Device Manager

Please refer section 8.6.1 for cLACE16 and section 8.6.2 for eLACE16/LND16.

- 8.6.1. For cLACE16 PC, verify that the Intel (R) Ethernet Connection (2) I219-LM, Intel (R) I210 Gigabit Network Connection, 4 Intel (R) Gigabit 4P I350-t Adapter ports and the Microsoft Network Adapter Multiplexor Driver are listed as shown below.

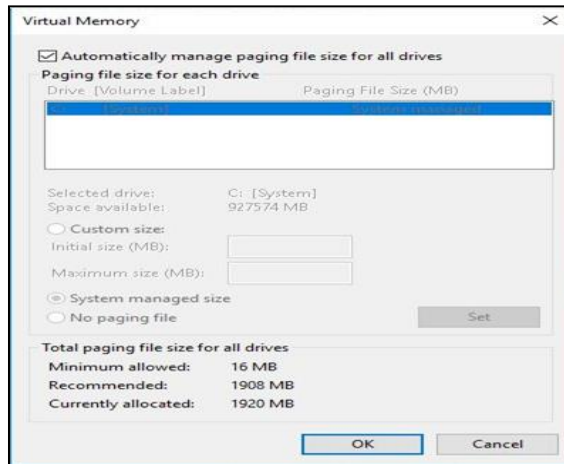


- 8.6.2. For eLACE16/LND16 PC, verify that the two Intel (R) I210 Gigabit Network Connection ports are listed as shown below.



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- 8.7. When finished, click the red **X** button at the upper right corner to close the “Computer Management” window.
- 8.8. To verify that Windows 10 is automatically managing the paging file size for the available drive, right-click on “This PC” icon and select “Properties”. Click “Advanced system settings” on the left side and select the “Advanced” tab. Click the “Settings...” button in the “Performance” section and select the “Advanced” tab. Click the “Change...” button. The “Virtual Memory” window should display the “Automatically manage paging file size for all drives” option as checked.



This setting is used to increase the performance of the system. When finished, click the **X** buttons at the upper right corners of the windows to close them.

NOTE: Since the Windows 10 operating system and most likely the paging file are on the System drive (usually drive letter C), a lack of available space on that drive could greatly impair the overall system performance. Therefore it is very important to move and/or clean generated data off the System drive on a regular basis especially if the drive comes close to being full.

- 8.9. The imaging procedure is finished.

Appendix A – Microsoft Windows 10 Embedded Enterprise 64-bit Updates Installed on this Disk Image

The following Windows updates are in the Microsoft Windows 10 Embedded Enterprise 64-bit Easy Restore USB for the cLACE16/eLACE16/LND16 Image

English	Japanese	Korean	Simplified Chinese
KB3186568	KB3186568	KB3186568	KB3186568
KB4033631	KB4033631	KB4033631	KB4033631
KB4049065	KB4049065	KB4049065	KB4049065
KB4049411	KB4049411	KB4049411	KB4049411
KB4054507	KB4054507	KB4054507	KB4054507
KB4053577	KB4053577	KB4053577	KB4053577
KB4053579	KB4053579	KB4053579	KB4053579

Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSC Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

Appendix B – Recovery via the F8 Advanced Boot Options menu

Please note: The below screenshots are with respect to English language repair Window screens.

The disk image supports System Recovery via the F8 Advanced Boot Options menu.

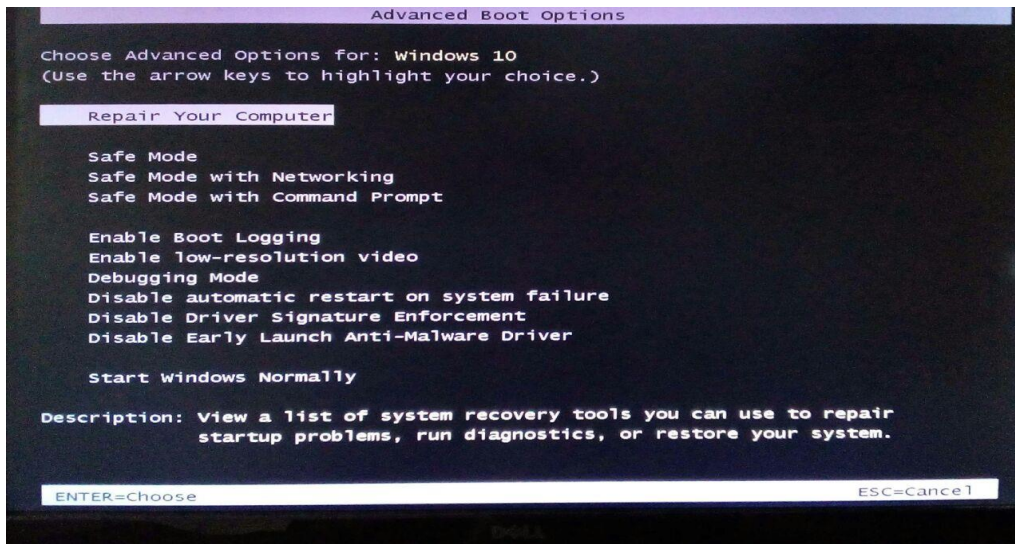
If the user has problems booting into Windows 10, immediately start pressing the **F8** key repeatedly as the system starts.

If the Windows Logo appears then the user needs to start again.

The Advanced Boot Options screen should then appear.

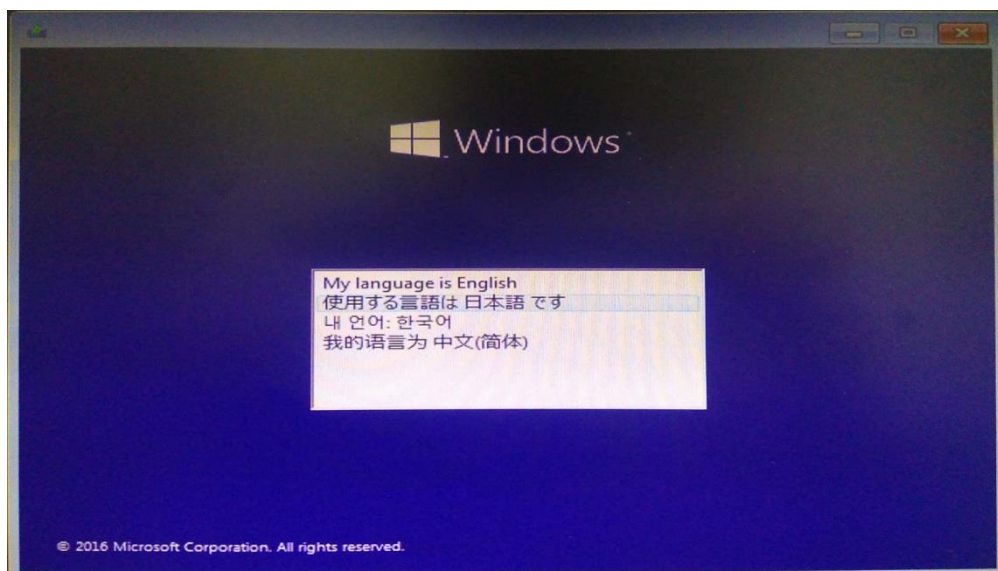
If only the Operating system is listed, then press F8 to get the Advanced Options screen.

The screen displays a menu of diagnostic startup options. The first entry is **Repair your Computer**.



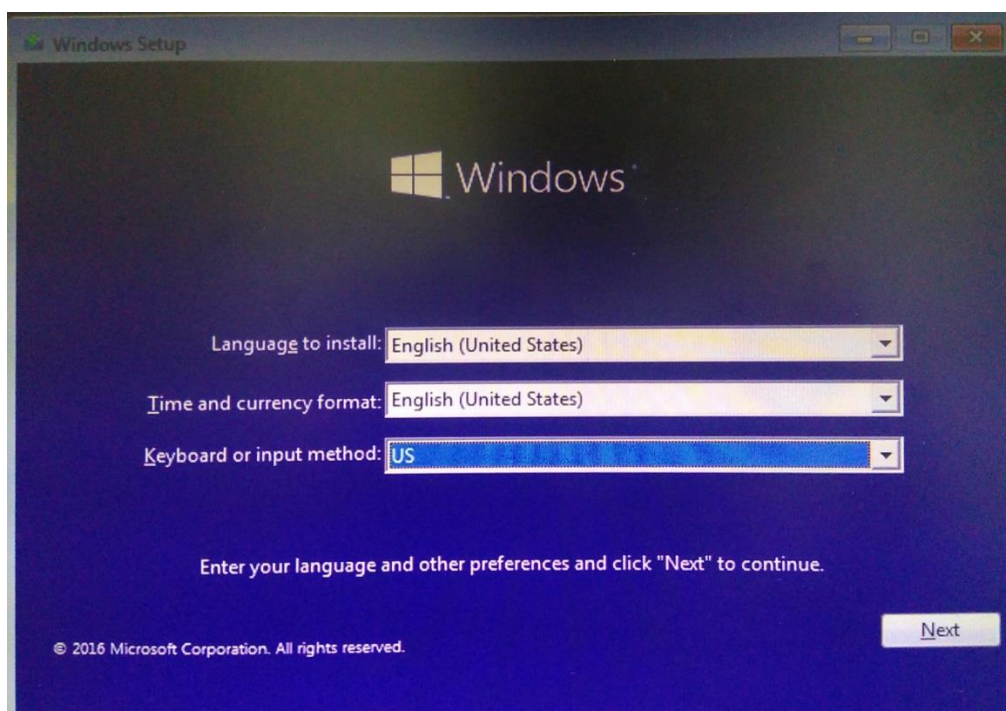
Upon selecting the “Repair your Computer” option in the previous screen, the user is prompted with an option of selecting the language as shown in the figure below. The listed languages are English, Chinese, Japanese and Korean through which repair operation can be performed. User can select the appropriate language, to execute the repair operation.

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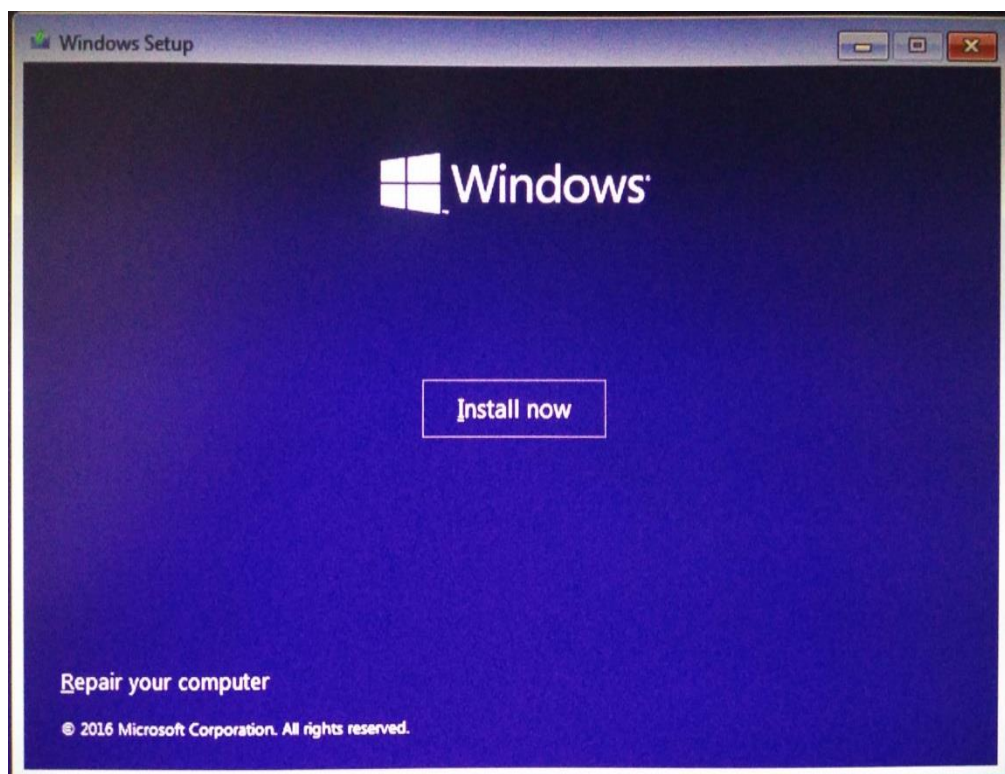
Select the language from the list.

The below figures illustrates the repair procedure upon selecting the English language.

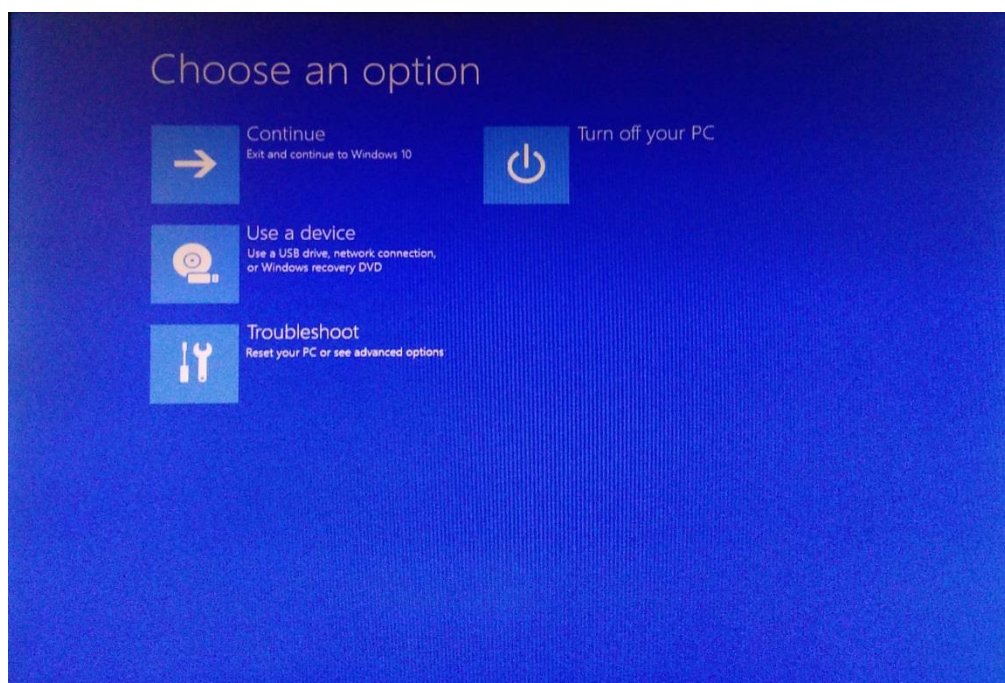


Click on **Next** button.

Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSC Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

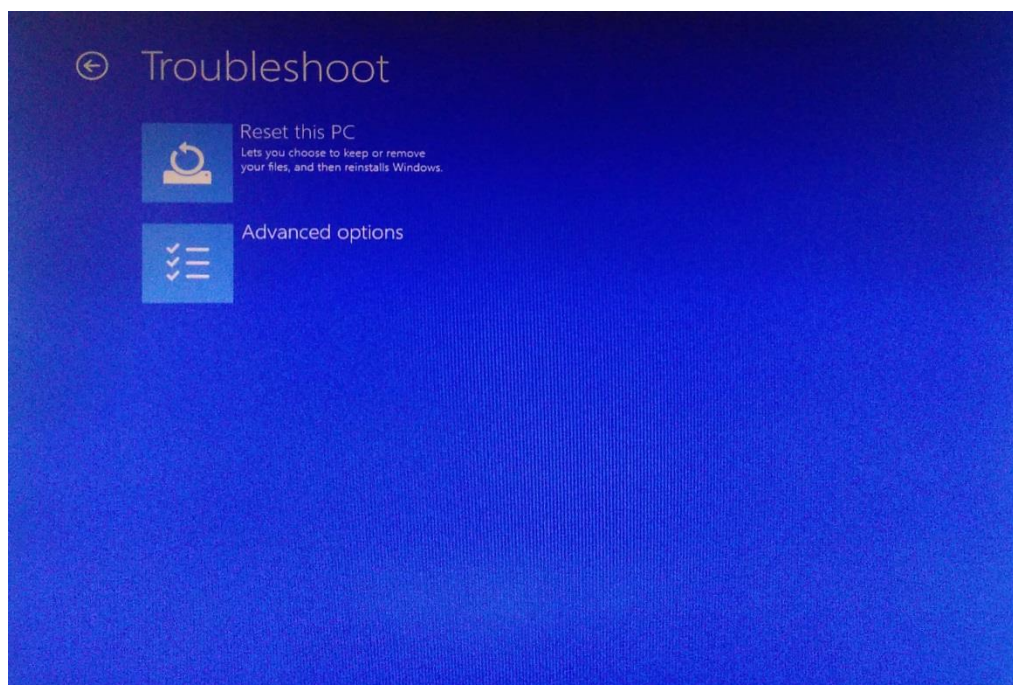


Select **"Repair your Computer"** option.

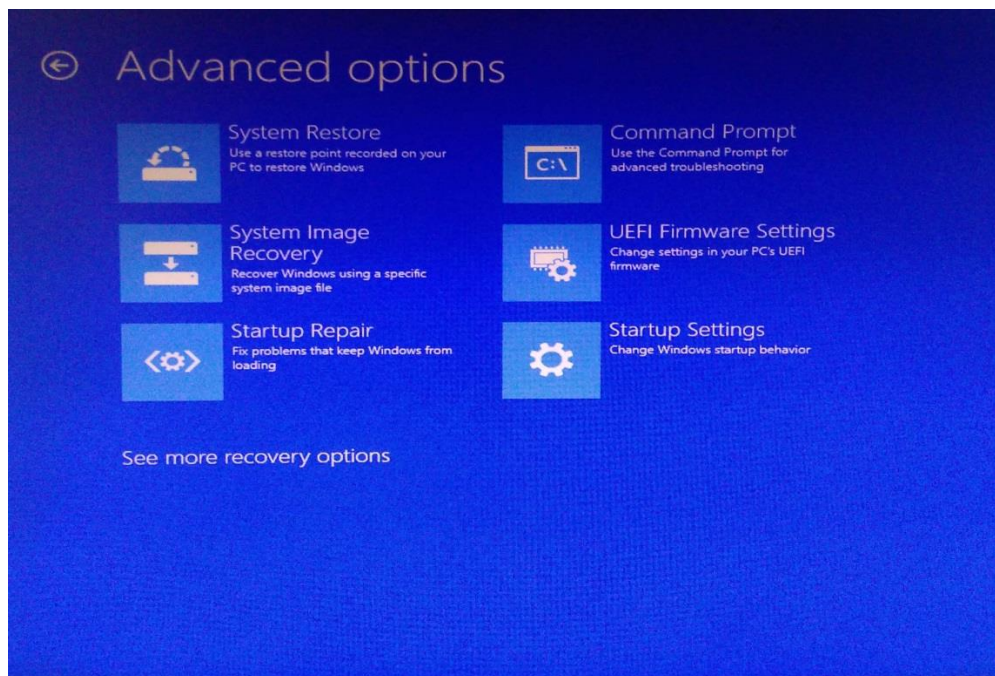


Select **Troubleshoot** option.

Disk Imaging Procedure for the Windows 10 Enterprise 2016 LTSC Embedded 64-bit Waters Empower/UNIFI cLACE16, eLACE16/LND16 Image

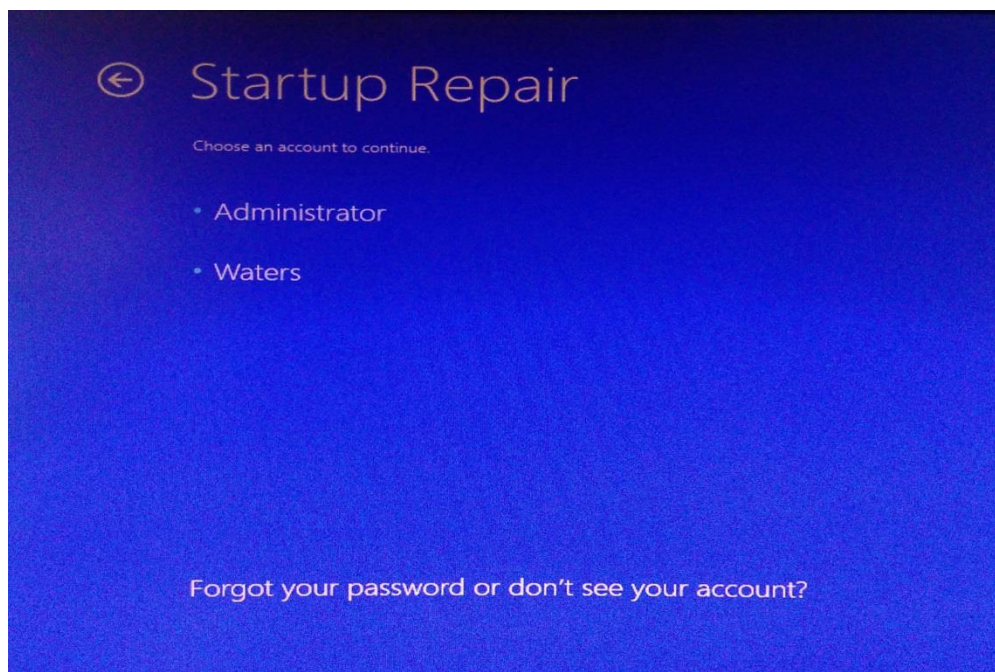


Select **Advanced Options**.

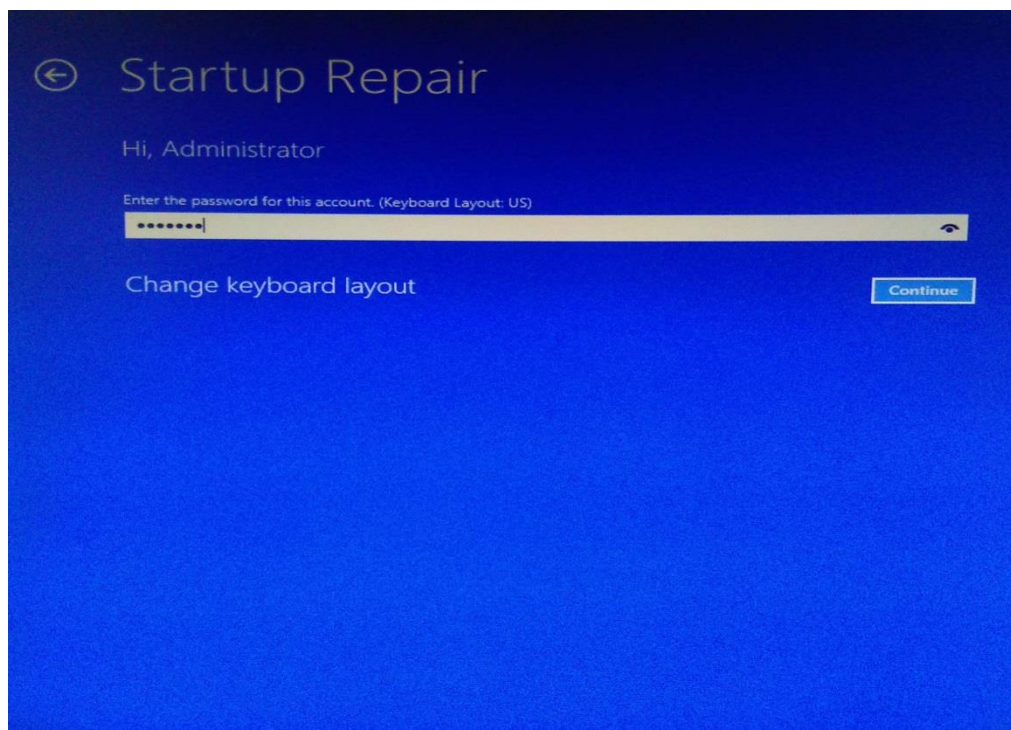


Select **Startup Repair** option.

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Select any account.



Enter the password for the selected account. Click on Continue.
This will start the repair and the system will diagnose the issues and attempt repairs.