V2406C Windows Software User's Manual

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V2406C Windows Software User's Manual

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System Initialization

In this chapter, we describe how to initialize the system settings on the V2406C computer when you boot up the computer for the first time. When users turn on their Windows PCs for the first time, they will see the Windows Out of Box Experience (OOBE). OOBE consists of a series of screens that require customers to accept the license agreement, connect to the internet, log in with, or sign up for a Microsoft Account, and share information with the OEM.

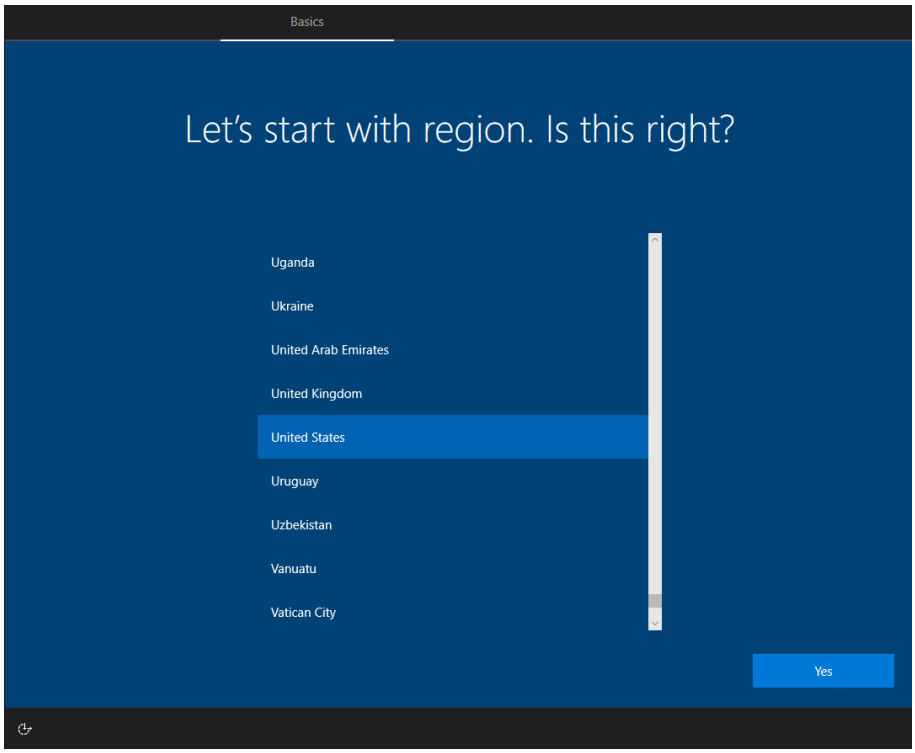
The following topics are covered in this chapter:

- **Initializing User Settings**
- **Initializing System**

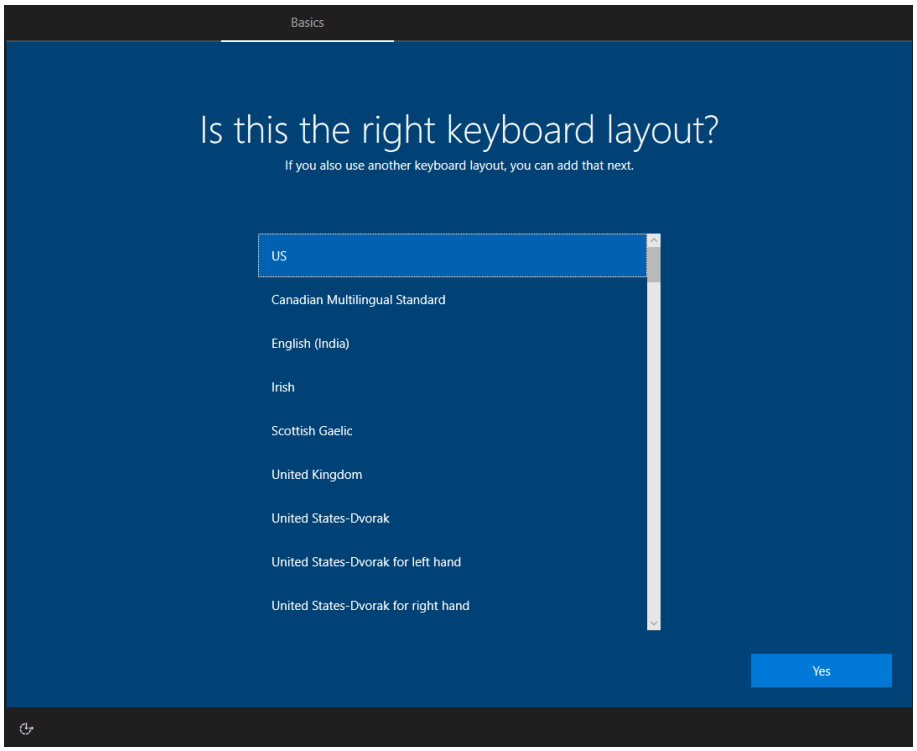
Initializing User Settings

The following is a non-exhaustive list of screens the user may see during OOBE, in order:

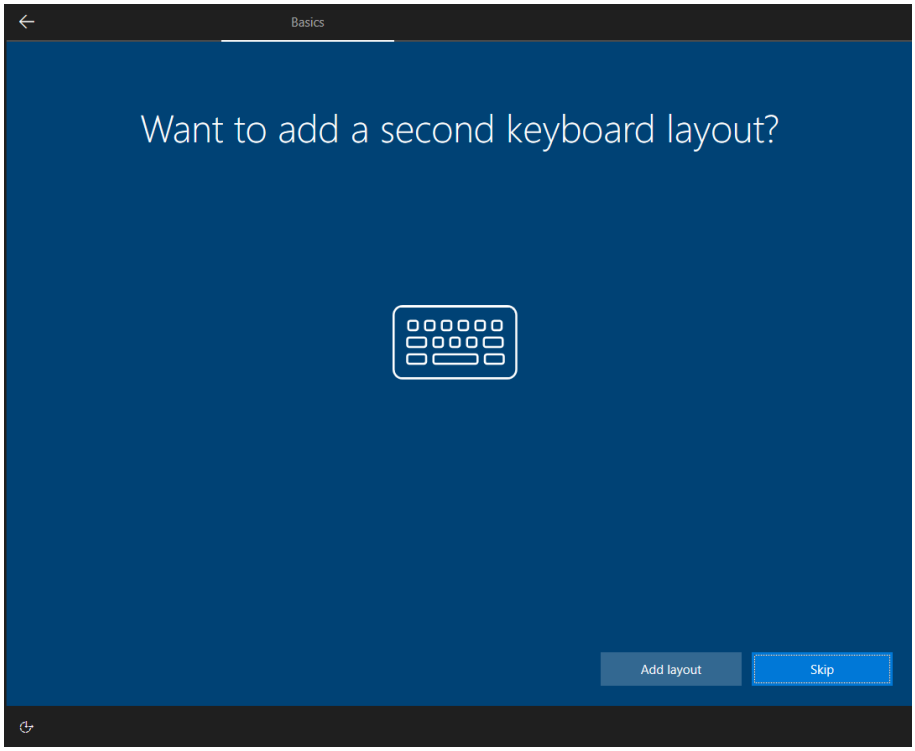
1. Select a region.



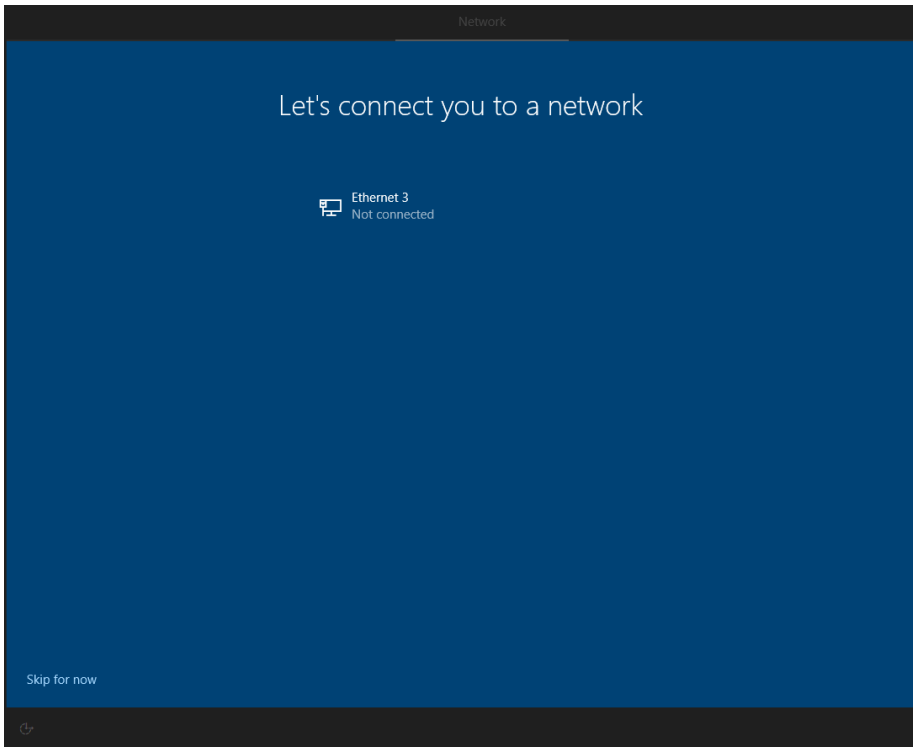
2. Select a keyboard.

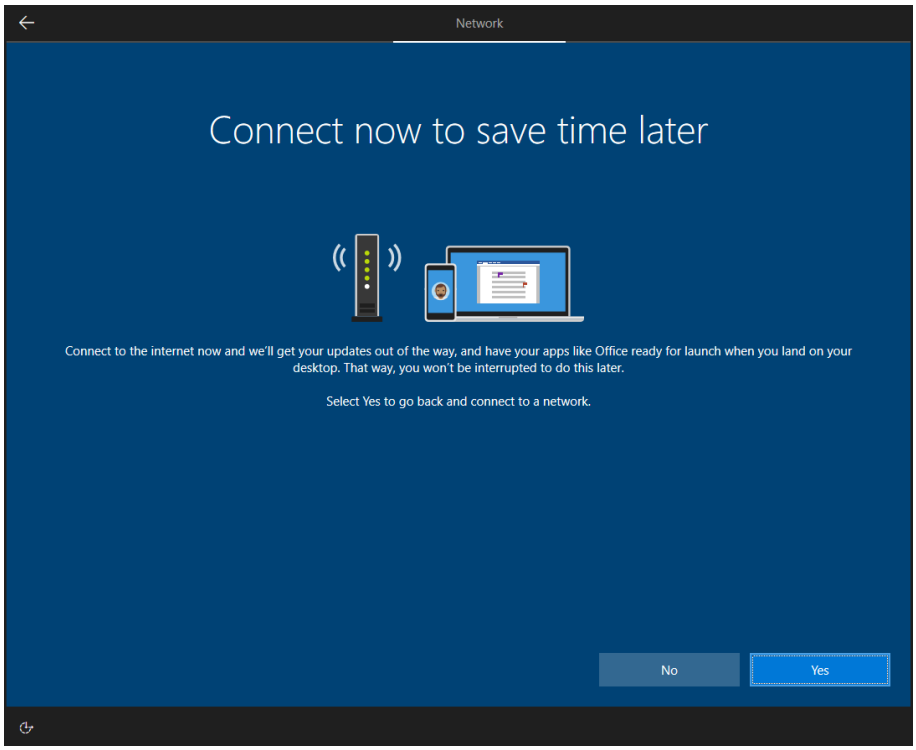


3. Select a second keyboard.

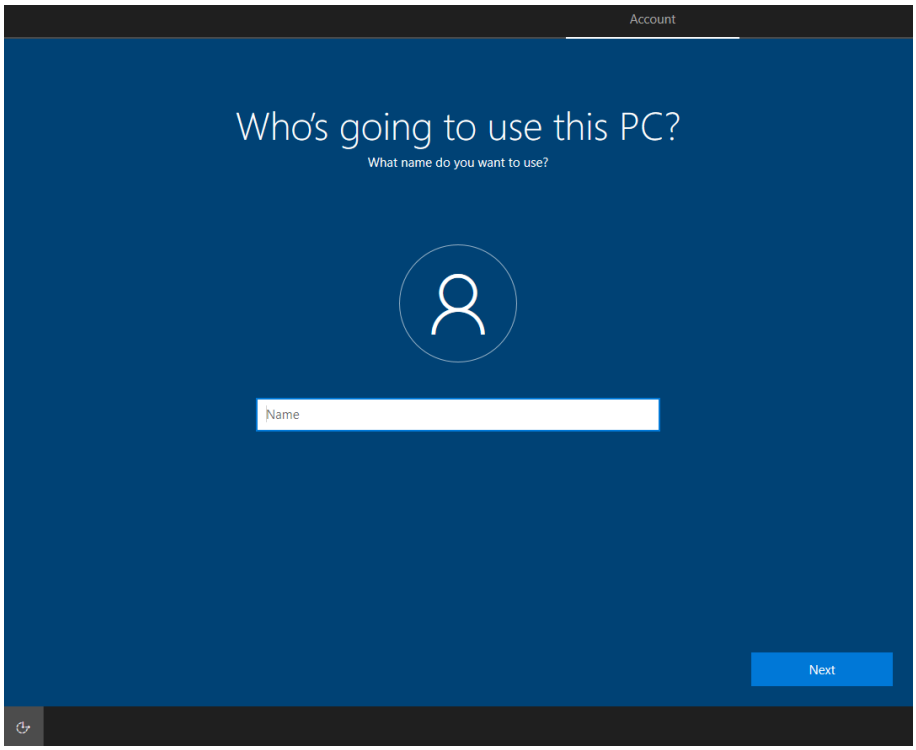


4. Connect to a network.

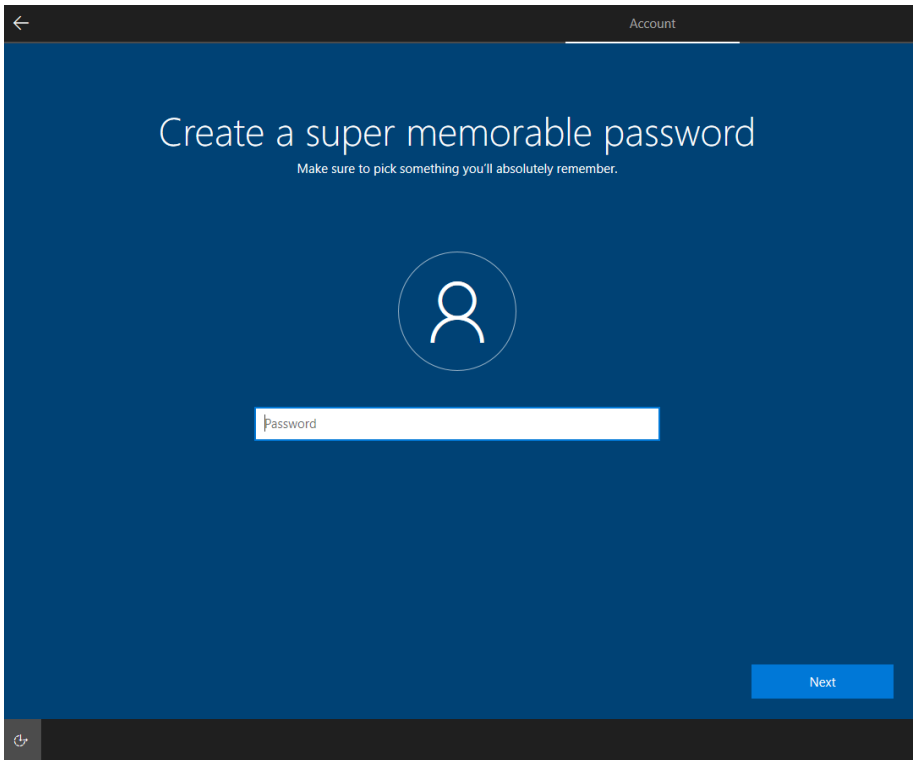




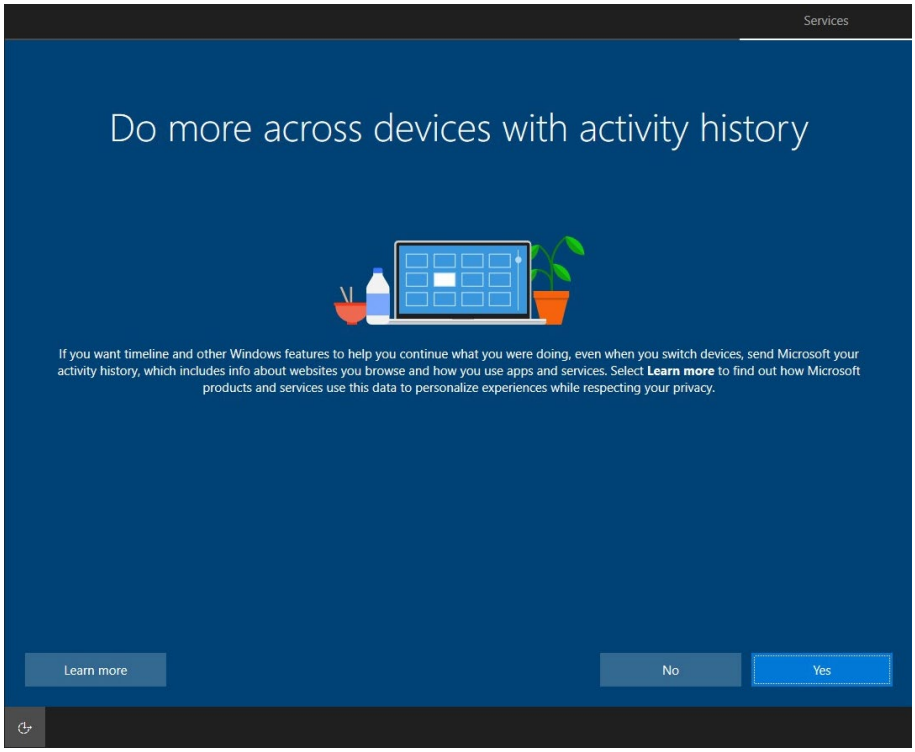
5. Sign in to, or create, a local account or Microsoft account (MSA).



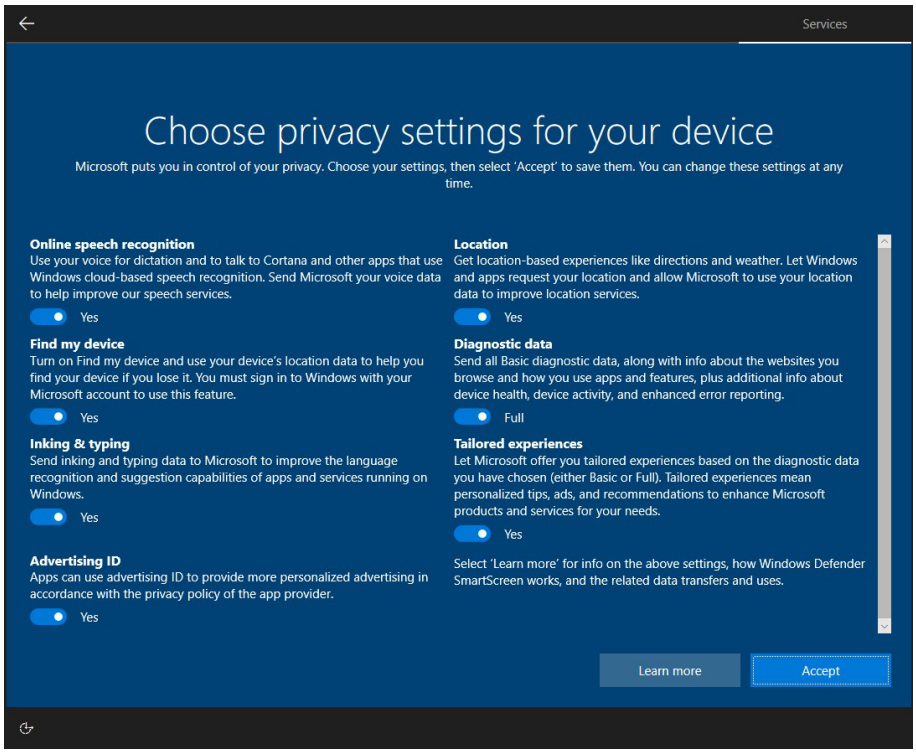
6. Create a password.



7. Do more across device with activity history.



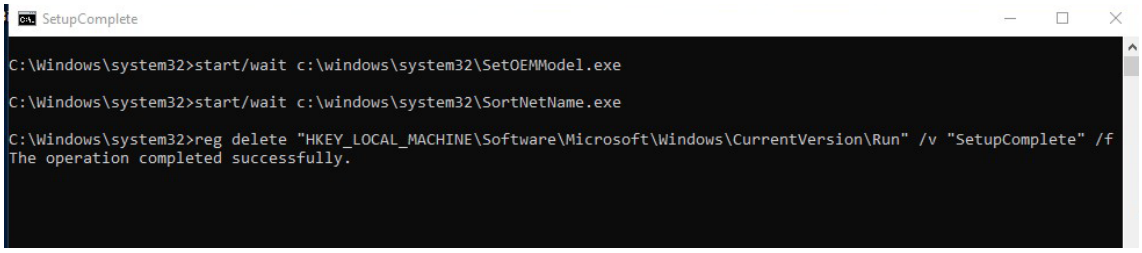
8. Choose privacy settings.



Initializing System

1. When users sign in into the system first time. Windows Command Processor will run and show the message **Do you want to allow this app to make changes to your device?** Click **Yes**.

2. Wait until the process is complete.



3. After the process completes, system initialization is completed.

2

BitLocker

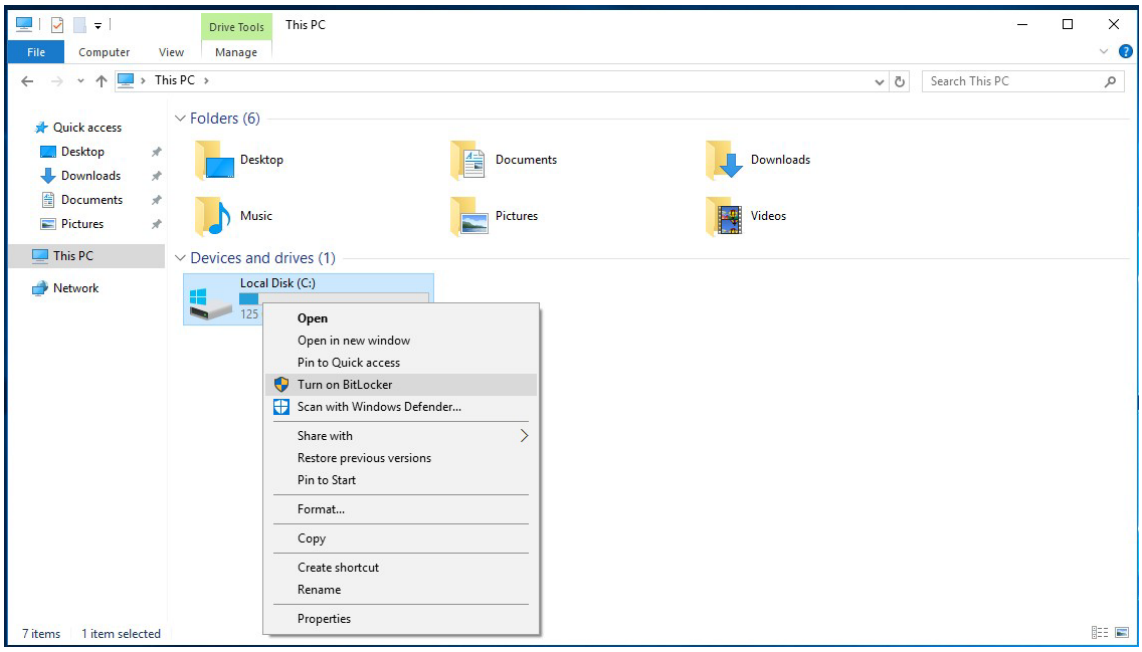
This chapter describes the BitLocker setup process.

The following topics are covered in this chapter:

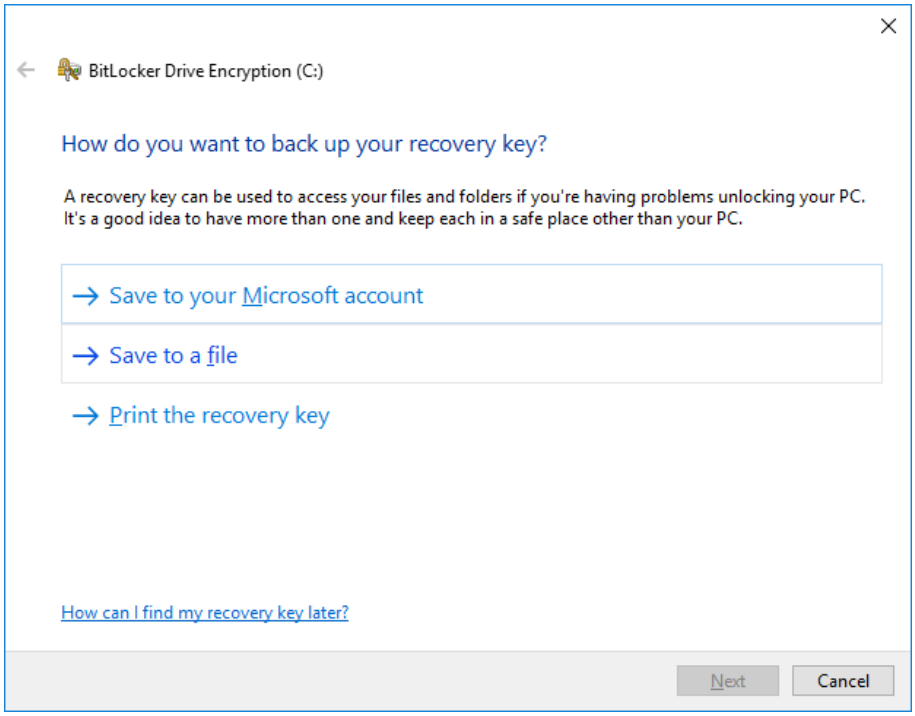
- **Enabling the BitLocker**
- **Disabling the BitLocker**

Enabling the BitLocker

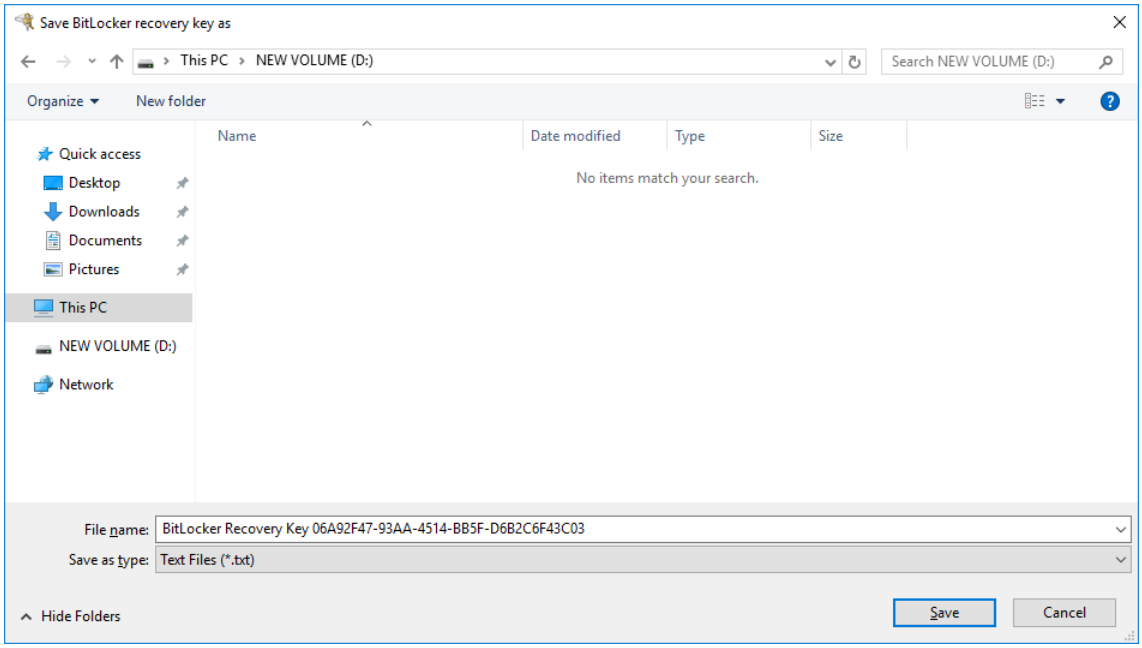
1. Right-click the drive and select the **Turn on BitLocker** option.



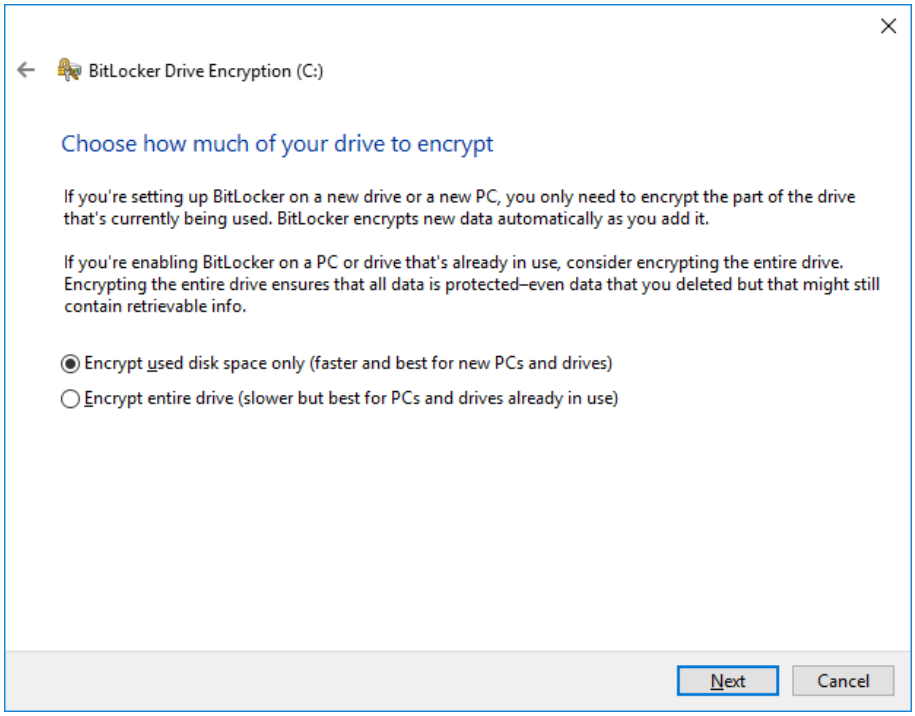
2. Select an option to back up the recovery key. For example, select **Save to a file**.

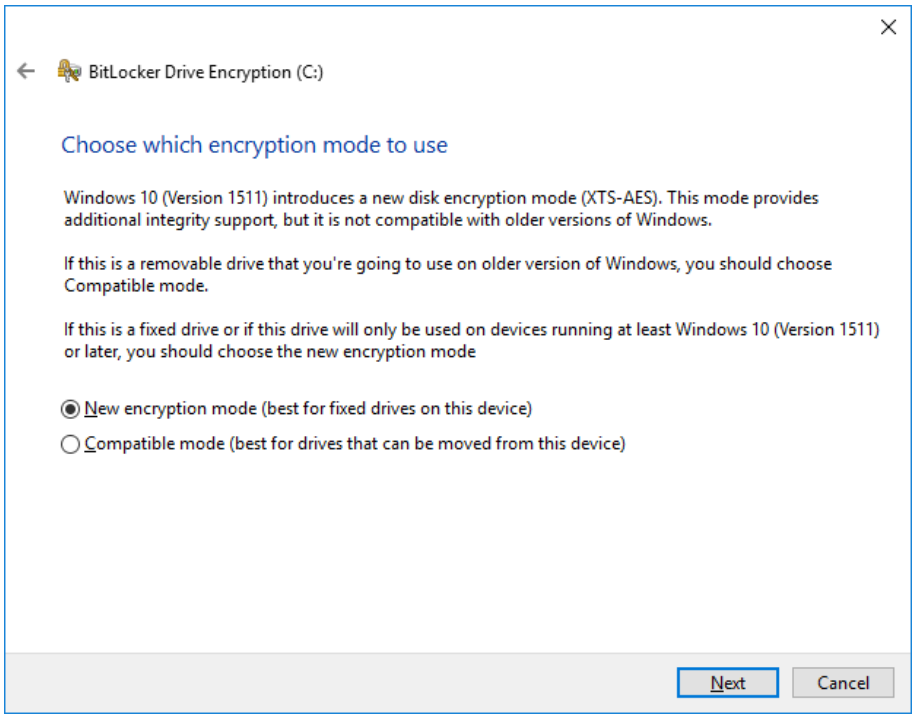


3. Select the path to store the file in.

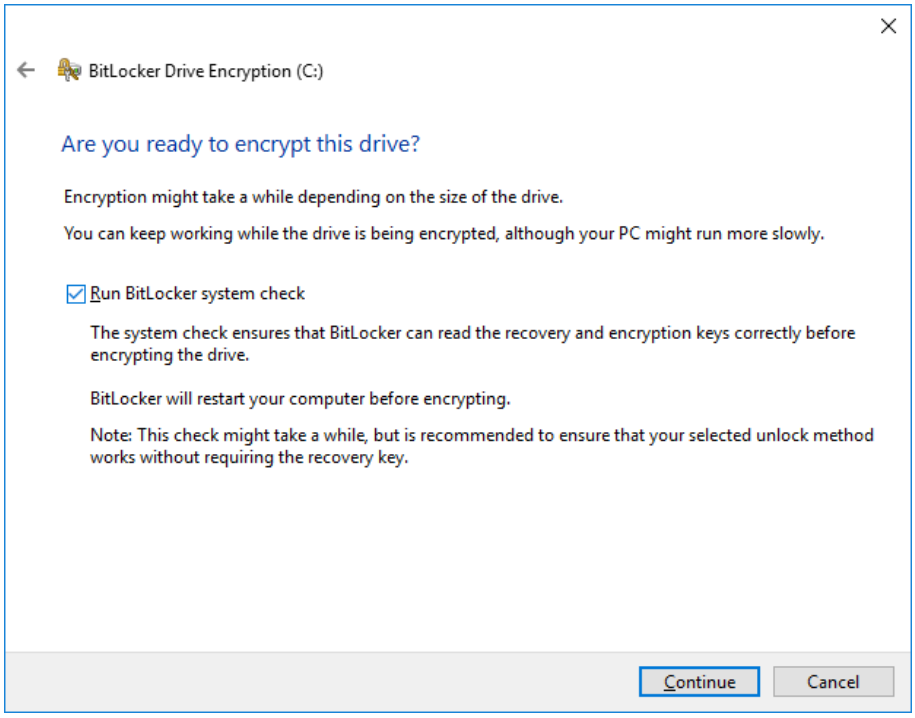


4. Follow the onscreen instructions to specify the drive encryption options.





5. Click **Continue**.

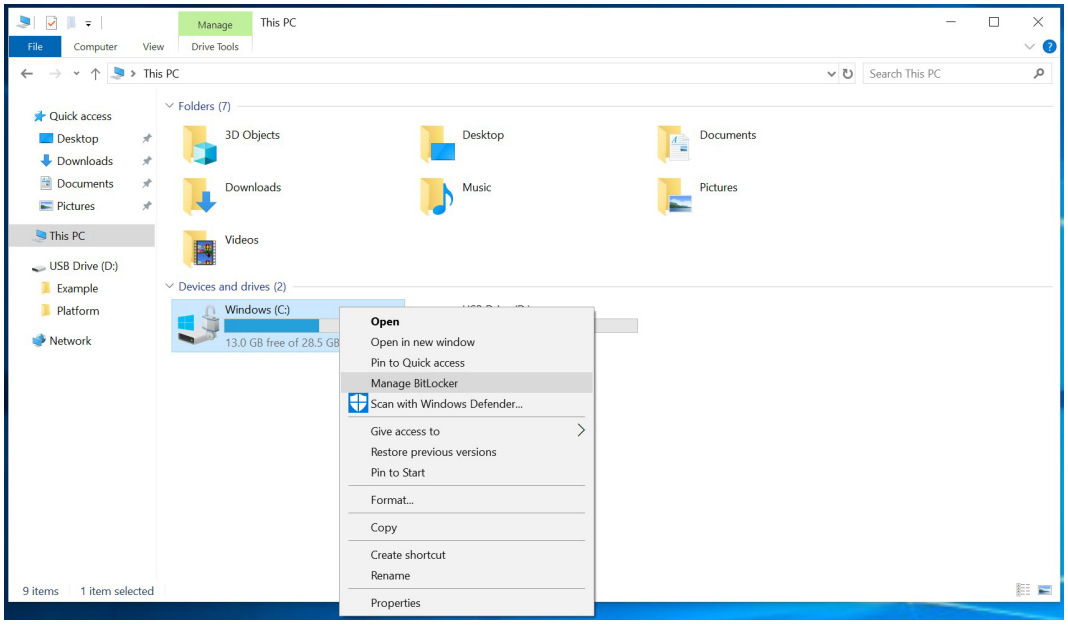


6. Restart computer.

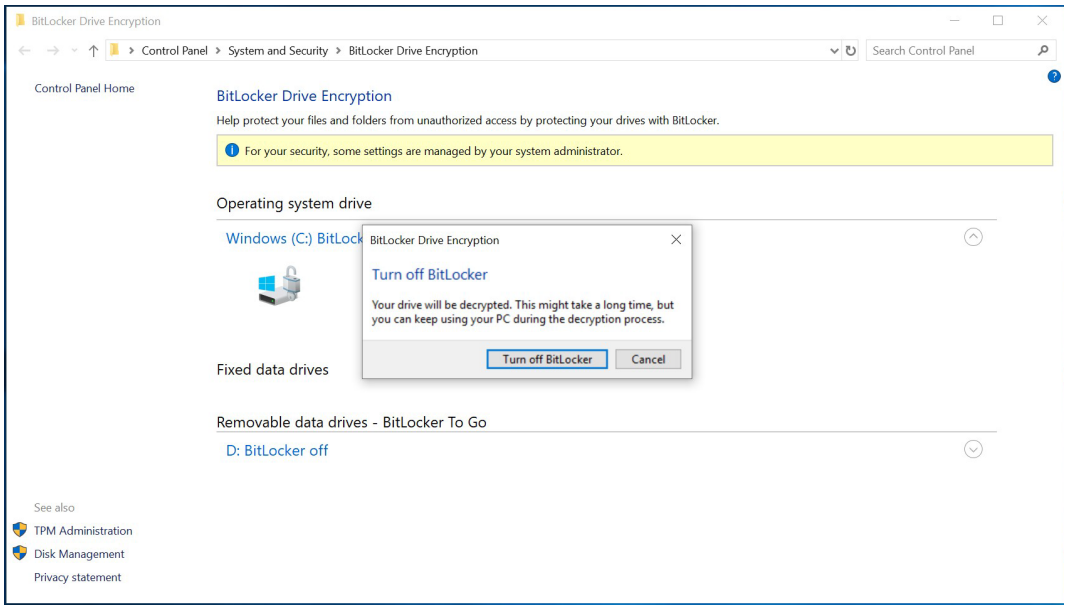
7. Wait for the encryption process to complete and click **Close**.

Disabling the BitLocker

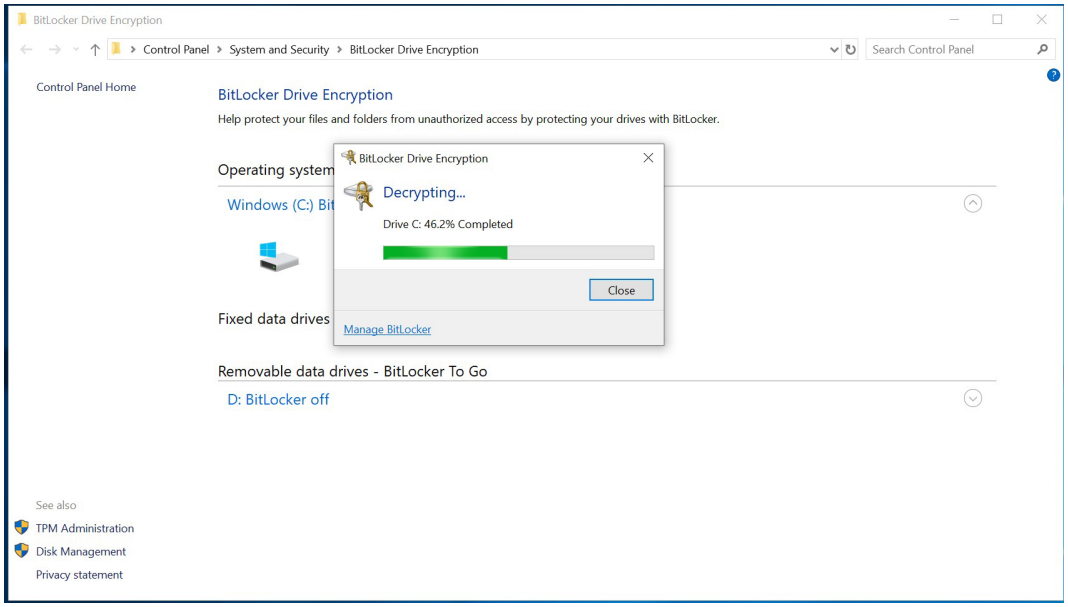
1. Right-click the drive and select the **Turn off BitLocker** option.

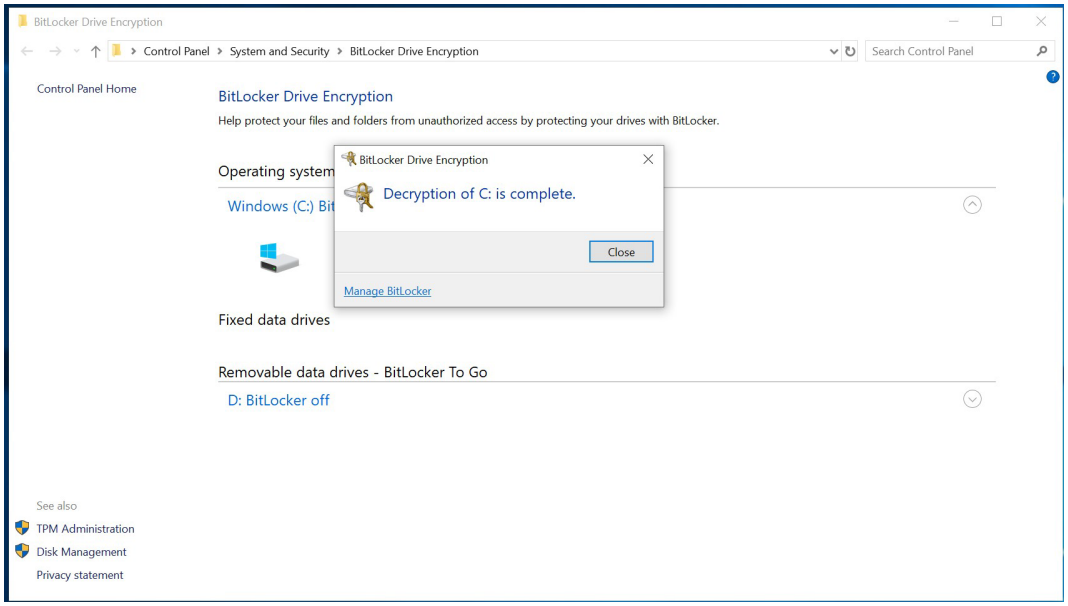


2. Click on the Turn off BitLocker link.

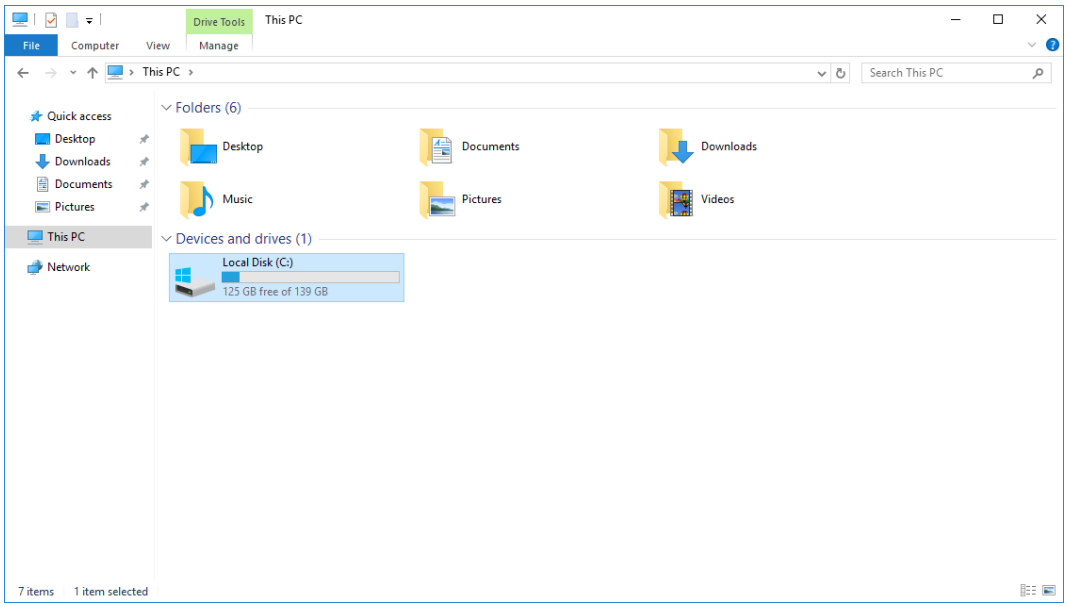


3. Wait for the decryption process to complete and click Close to exit the program.





4. Check the disk status after decryption process completely.



3

Configure RAID

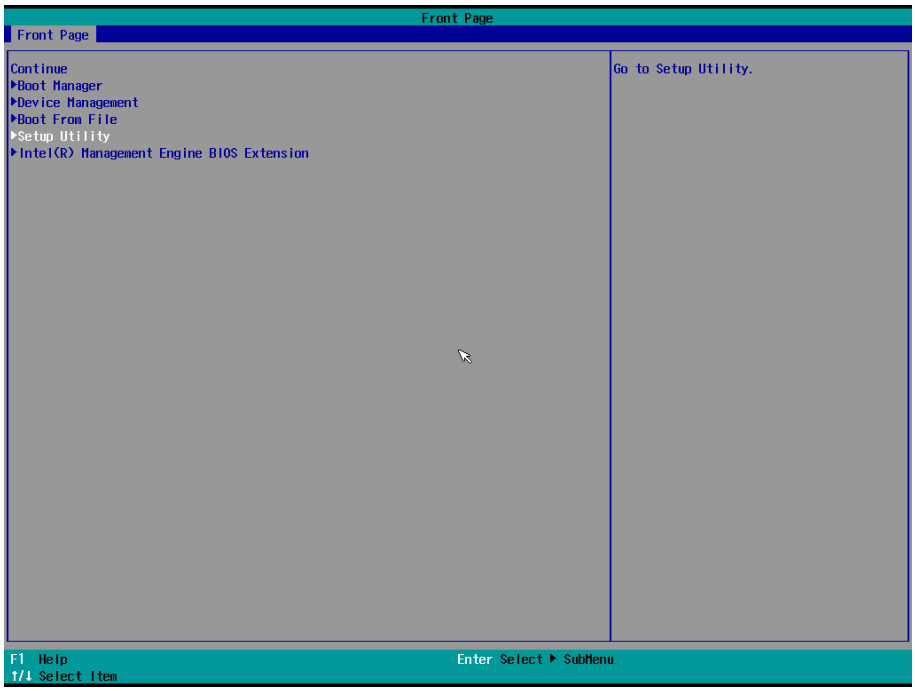
This chapter describes the setup process for RAID.

The following topics are covered in this chapter:

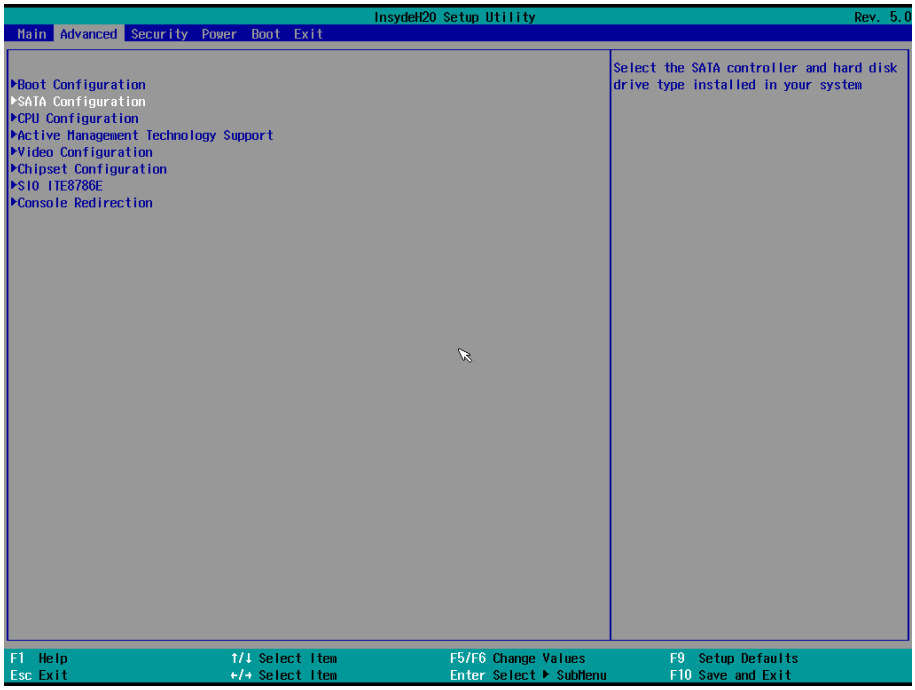
- **Changing the RAID Mode**
- **Creating a RAID Disk From BIOS**
- **Replacing the Disk**
- **Removing a RAID Volume From the BIOS**

Changing the RAID Mode

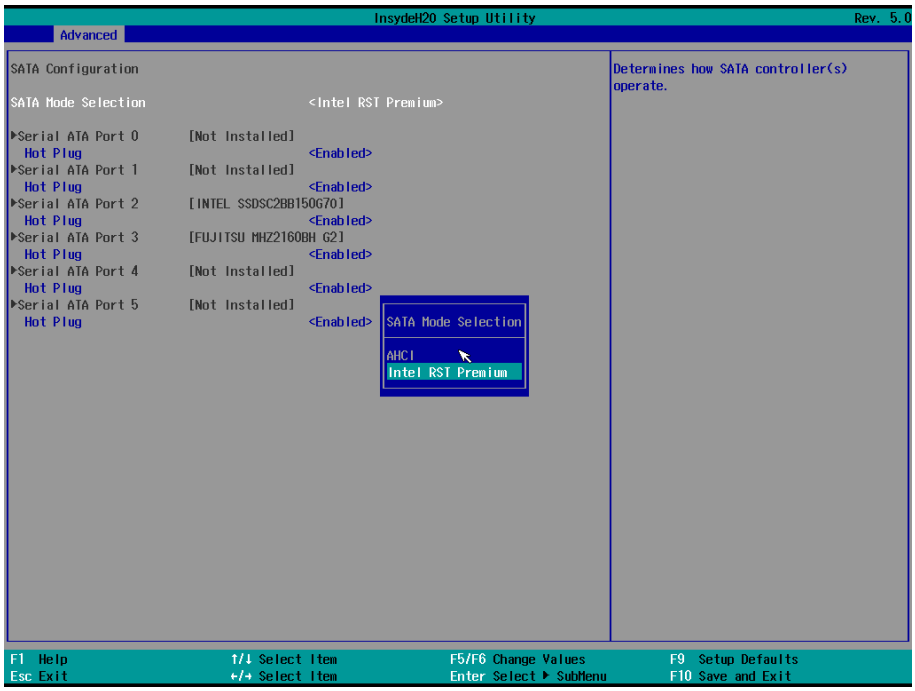
1. Power on the computer and press **F2** to enter the BIOS menu.
2. Select the **Setup Utility** option.



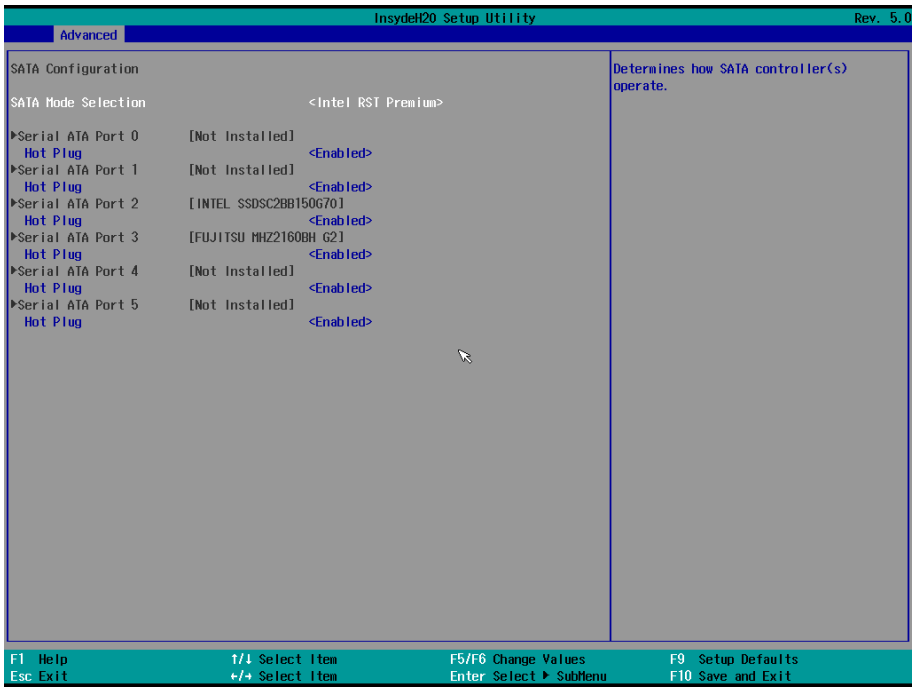
3. Select the **SATA Configuration** option.



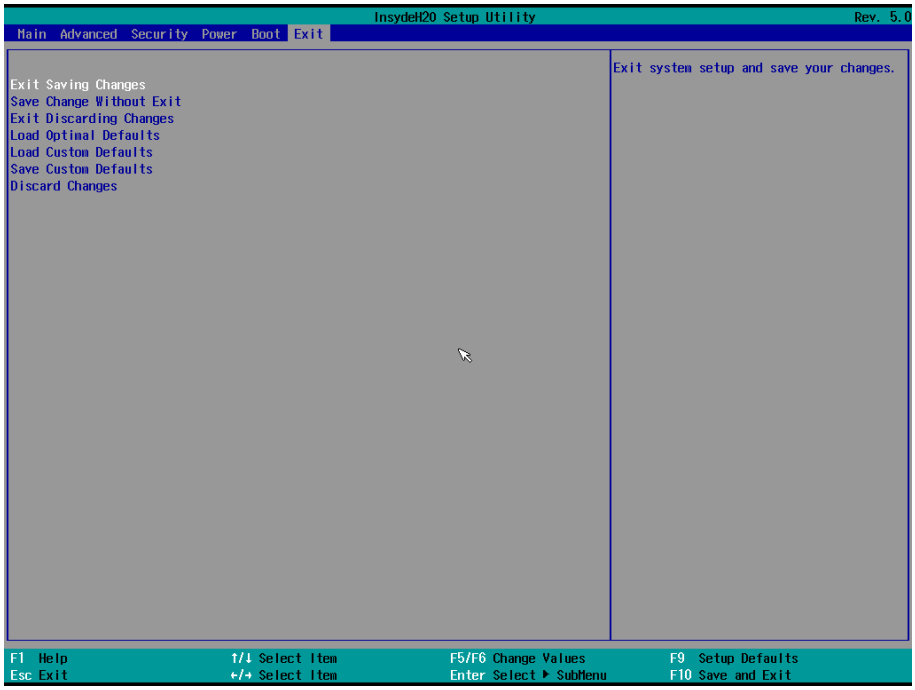
4. Select the **SATA Mode Selection** followed by the Intel RST Premium option and then enable Hot Plug function on each port.



5. Press **F10** to save the settings and then press **ESC** to return to the main page.

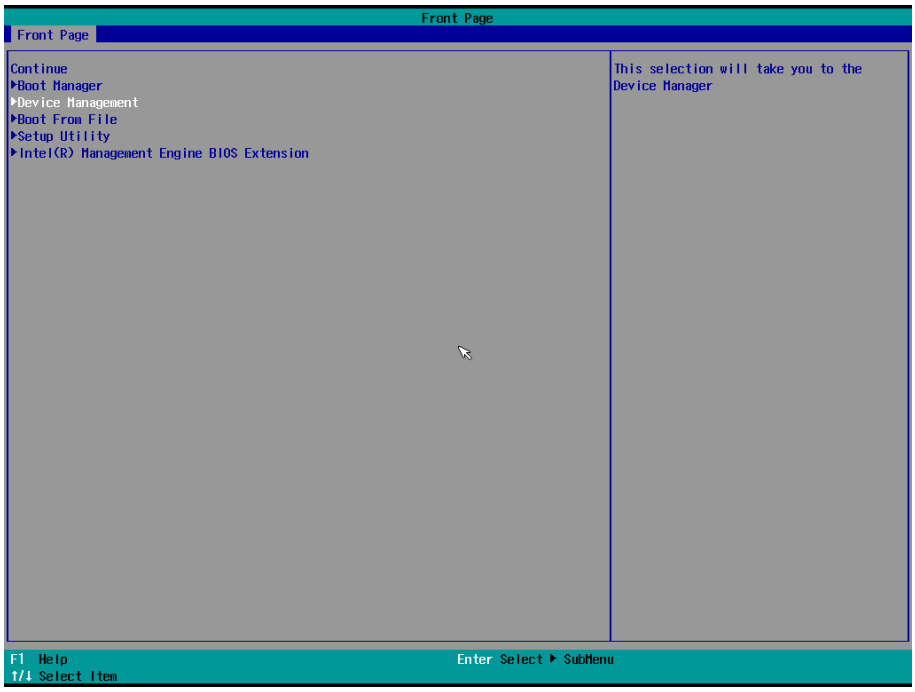


6. Select **Exit Saving Changes**, and select **Yes** to save the settings.

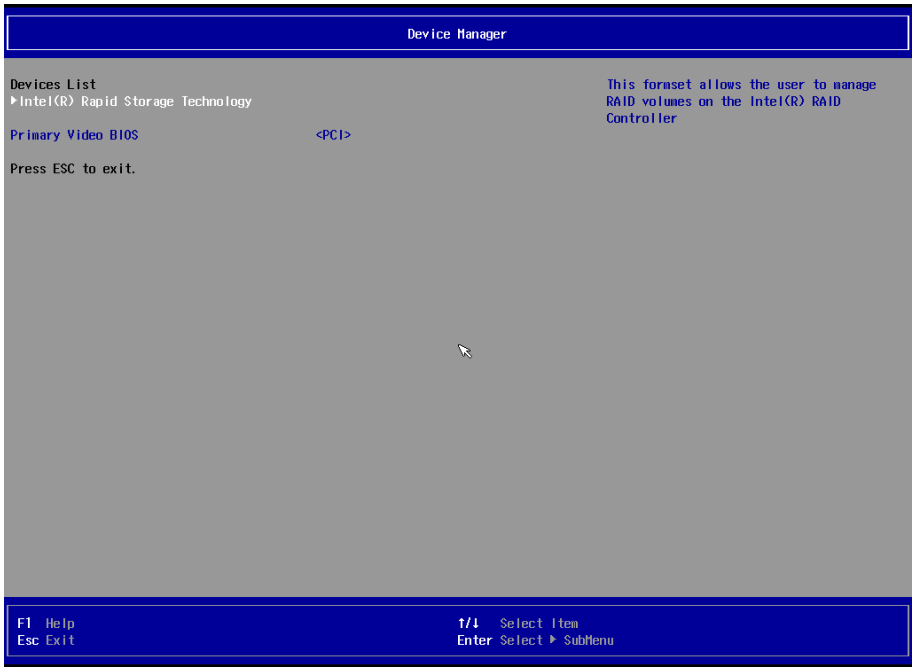


Creating a RAID Disk From BIOS

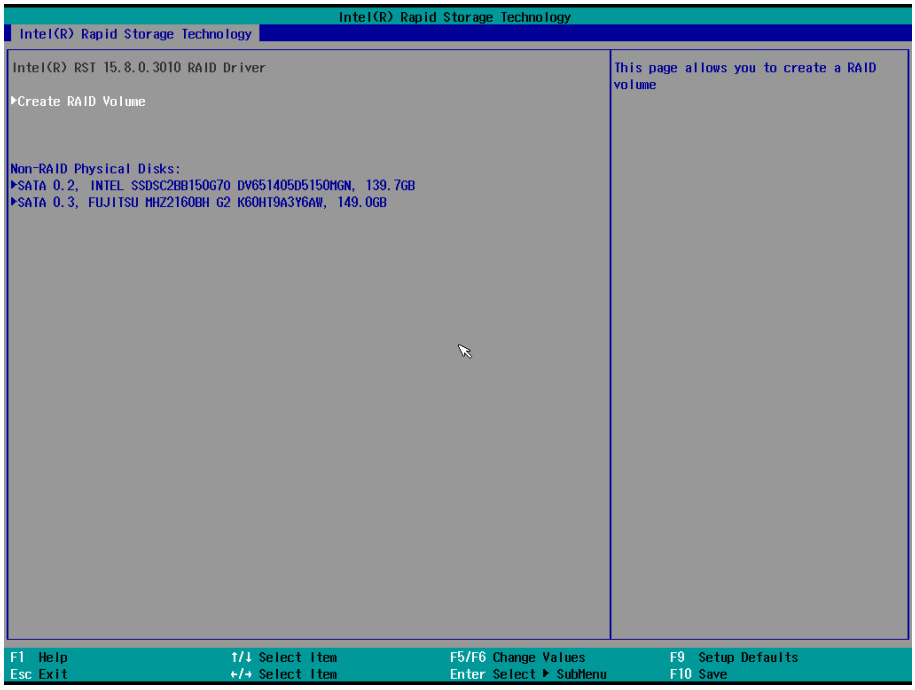
1. Power on the computer and press **F2** to enter the BIOS menu.
2. Select the **Device Management** option.



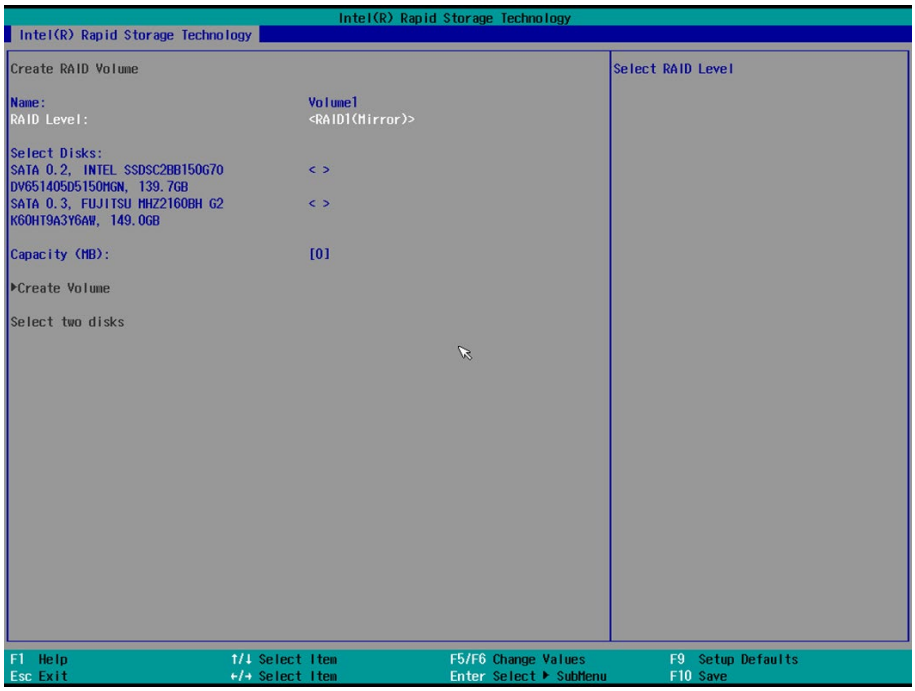
3. Select the **Intel® Rapid Storage Technology** option.



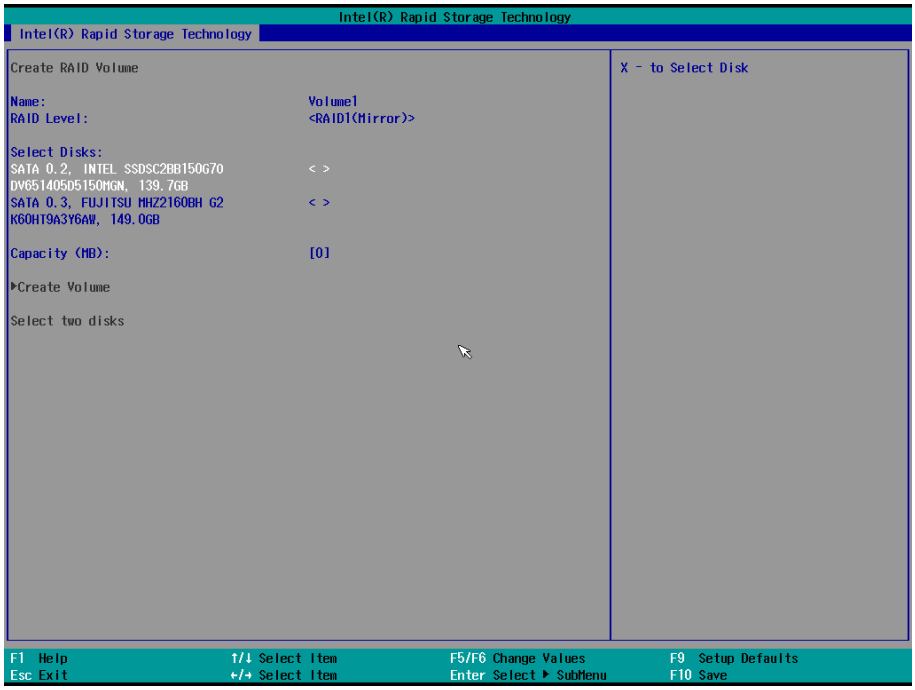
4. Select the **Create RAID Volume** option.



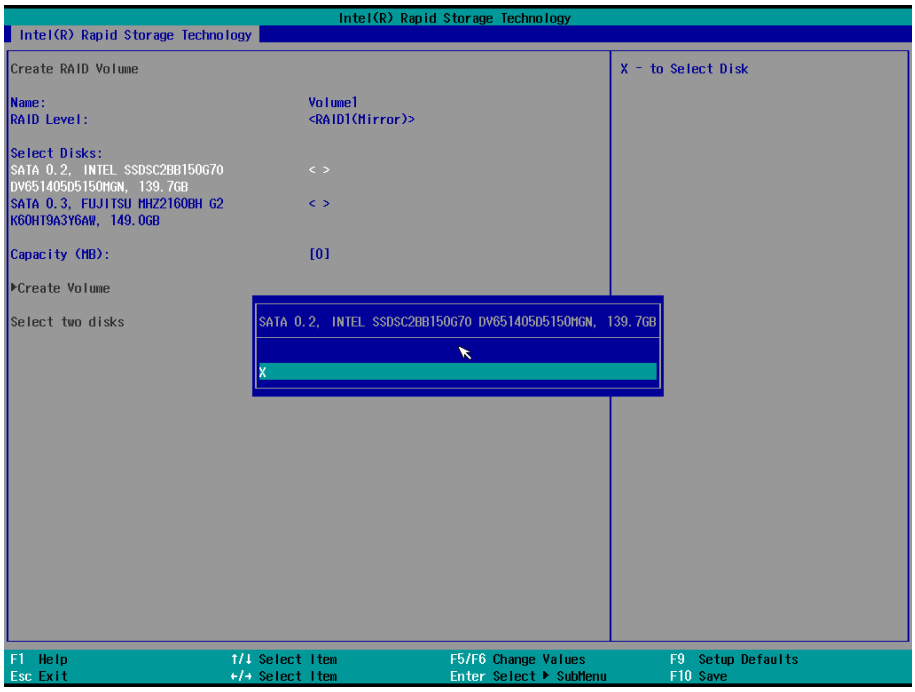
5. Select the **RAID Level** option and then press **Enter** to select the raid level. For example, RAID1(Mirror).



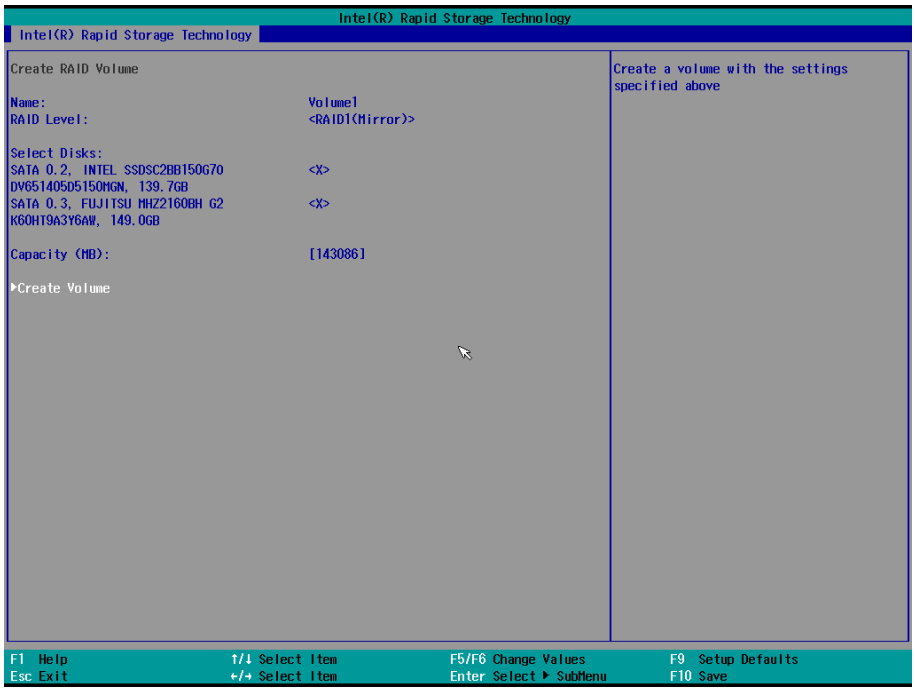
6. Select the disk and then press **Enter**.

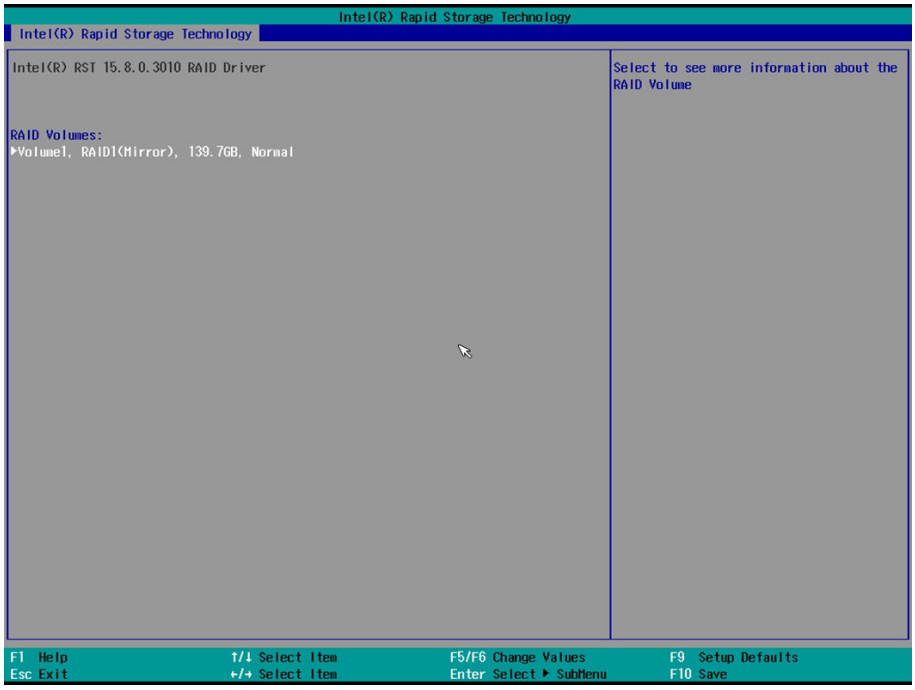


7. Select X and then press **Enter** to select the disks.



8. Select the **Create Volume** option.

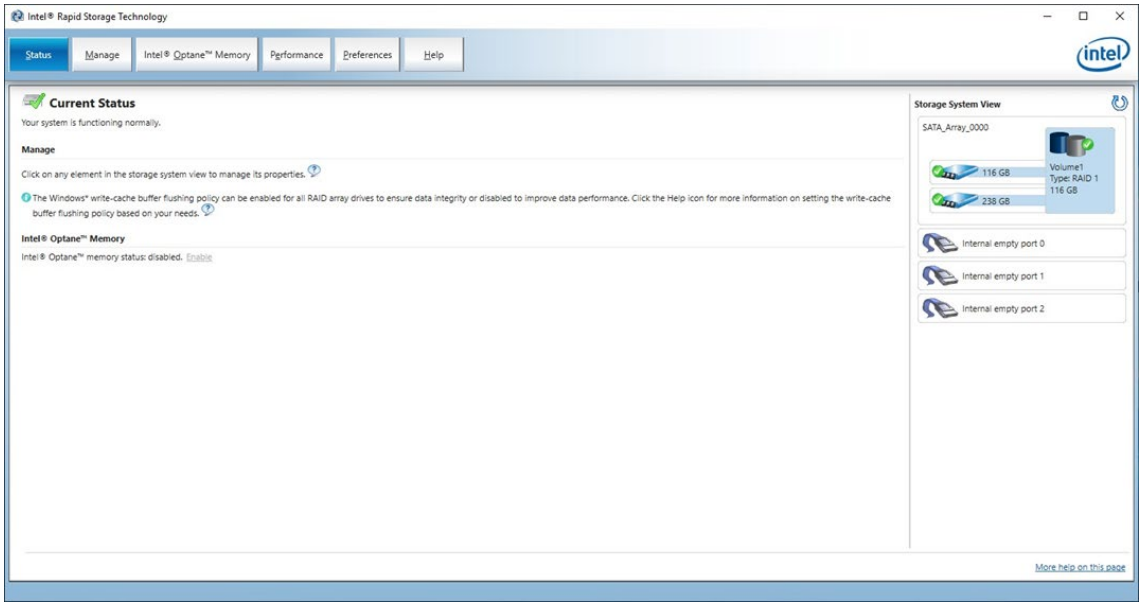


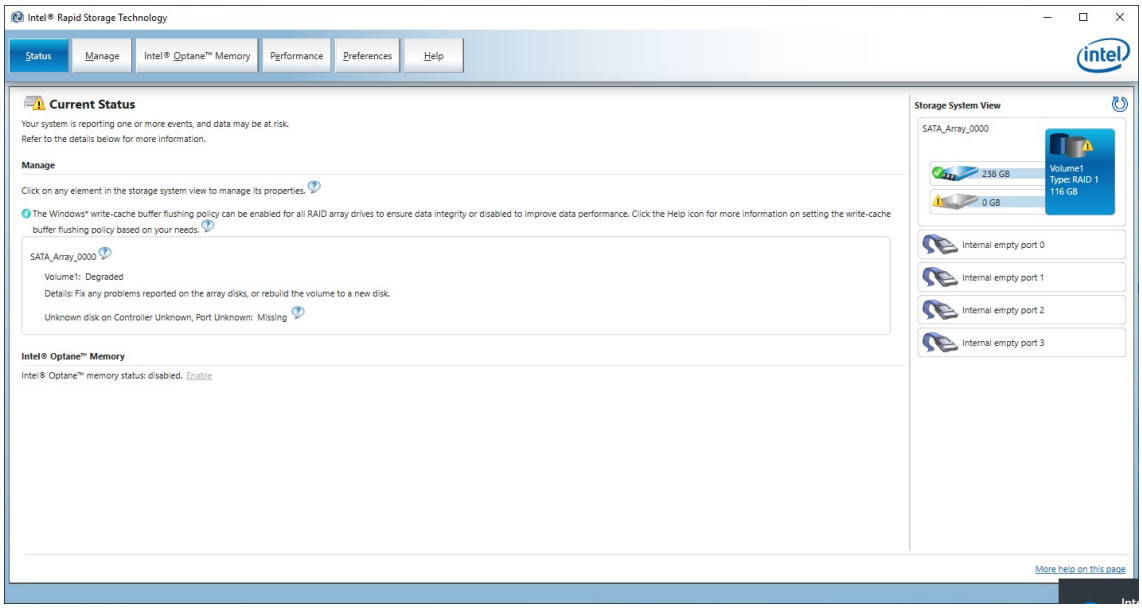


9. Press **F10** to save the settings.

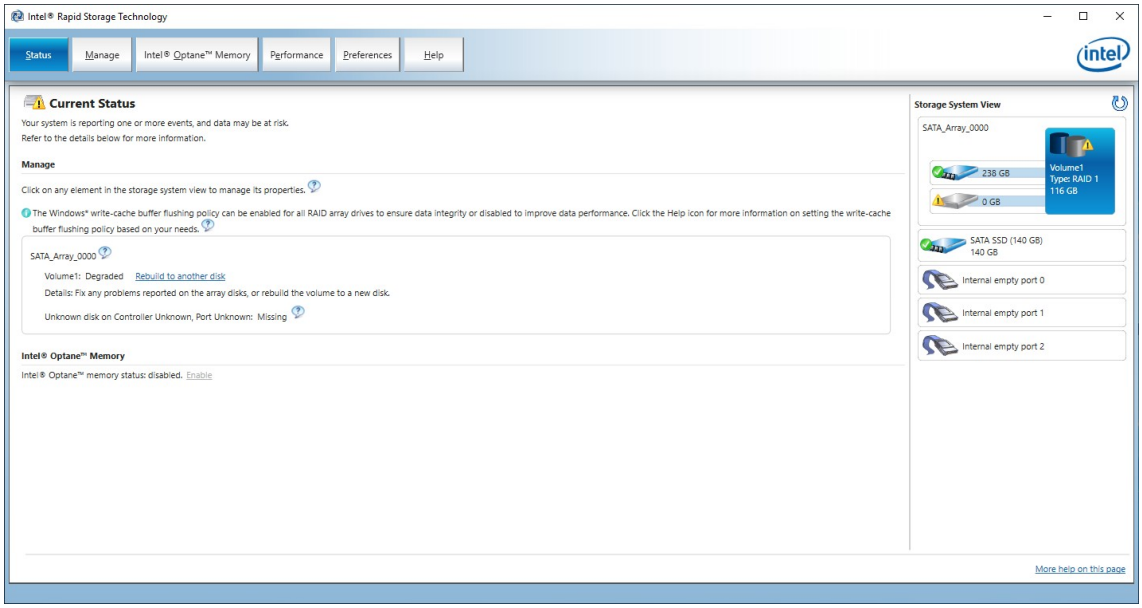
Replacing the Disk

1. Unplug the current SSD.

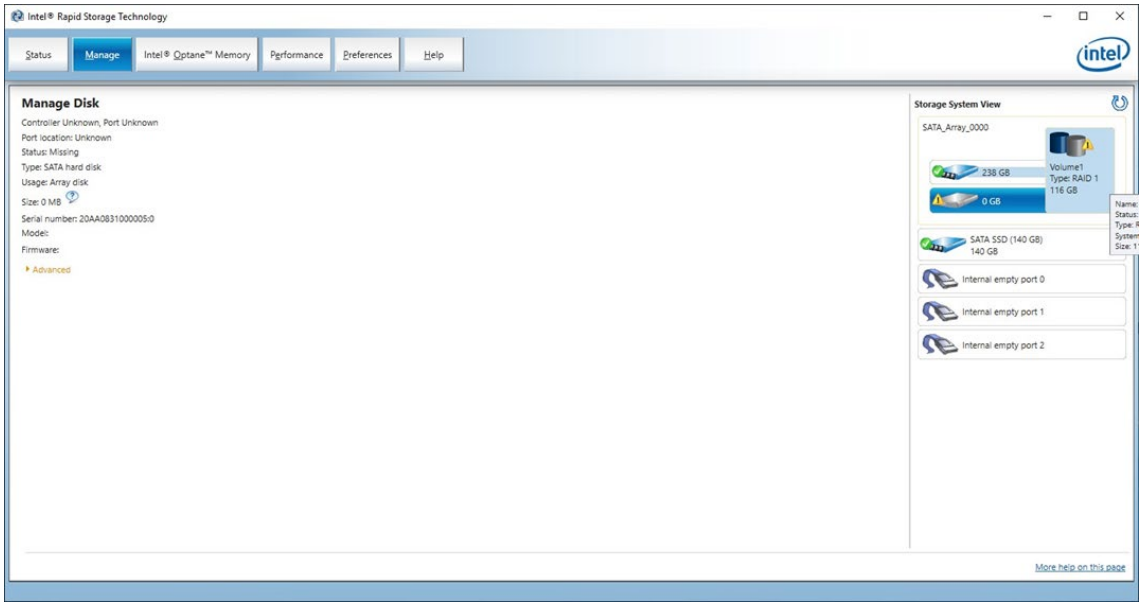




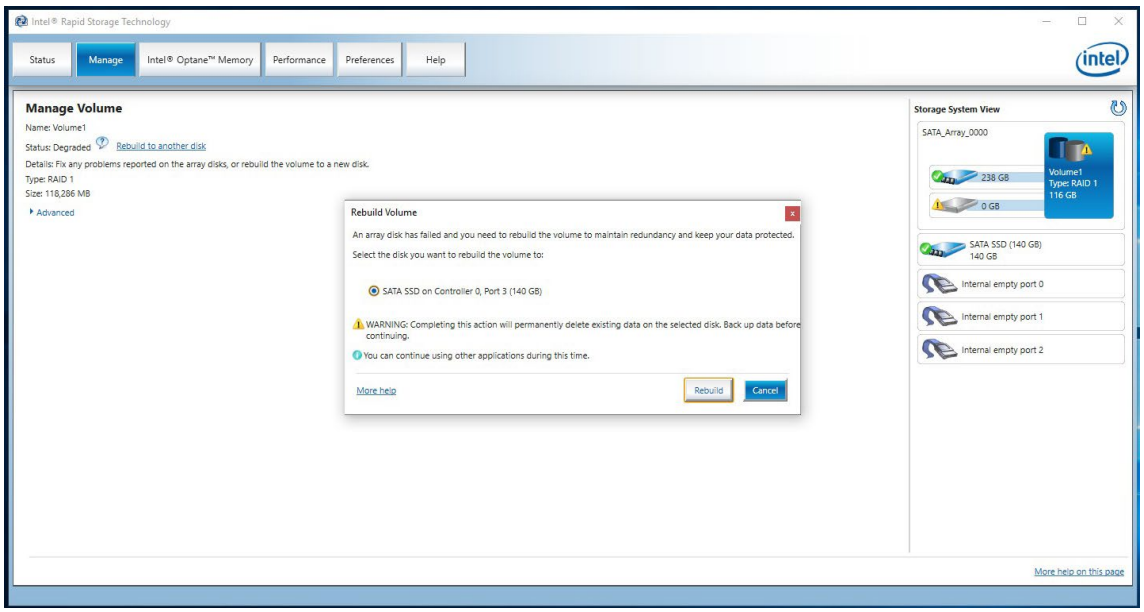
2. Install the new SSD.



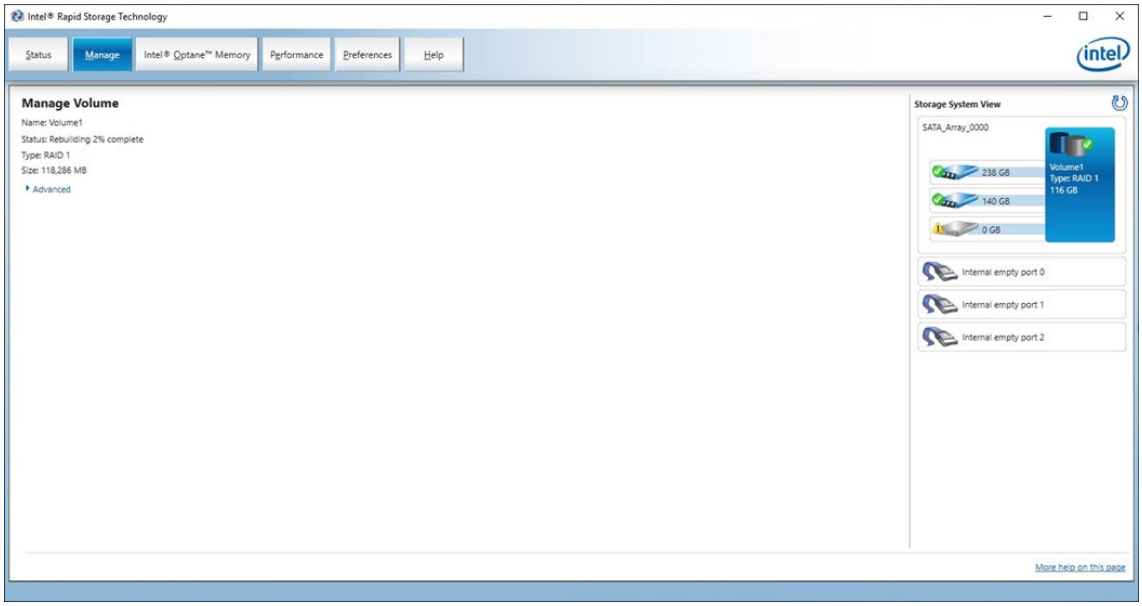
3. Open the **Manage** tab.

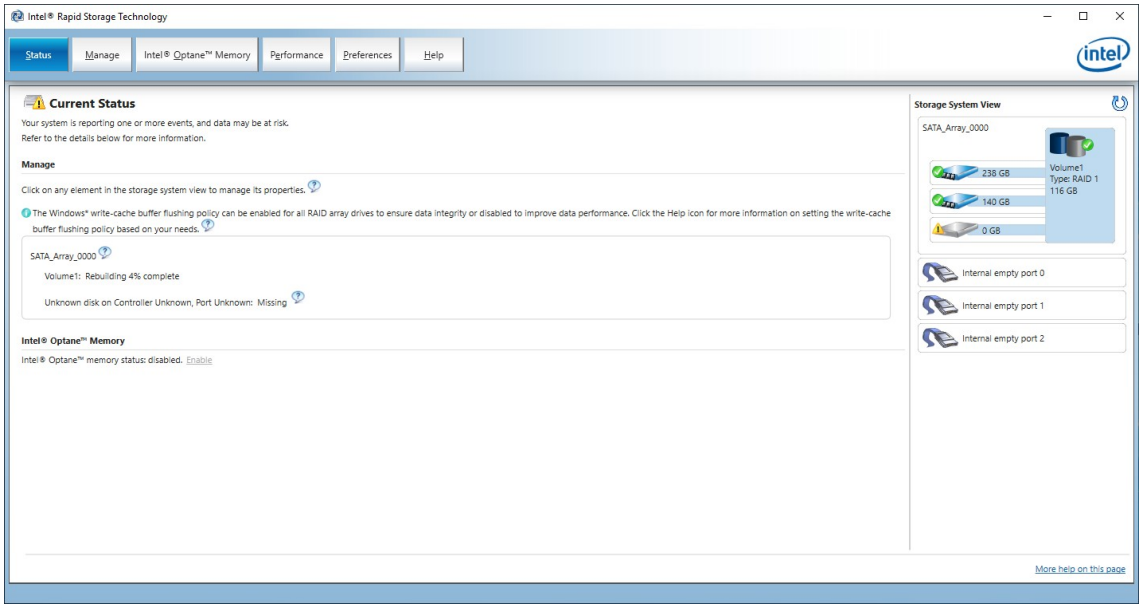


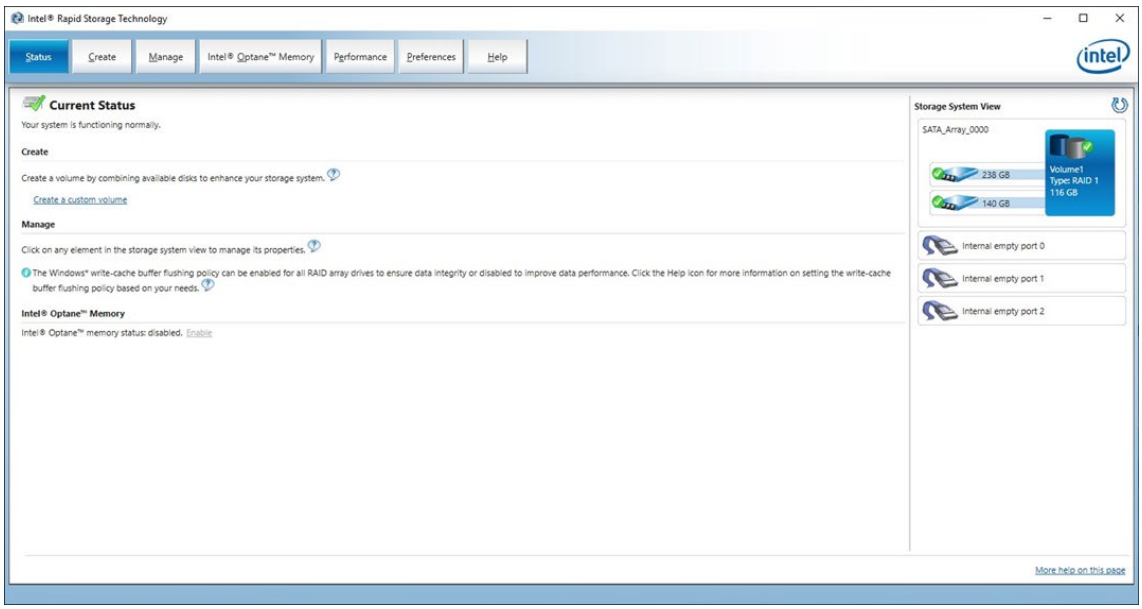
4. Select the new SSD and then click **Rebuild**.



5. Wait for the rebuild process to complete.

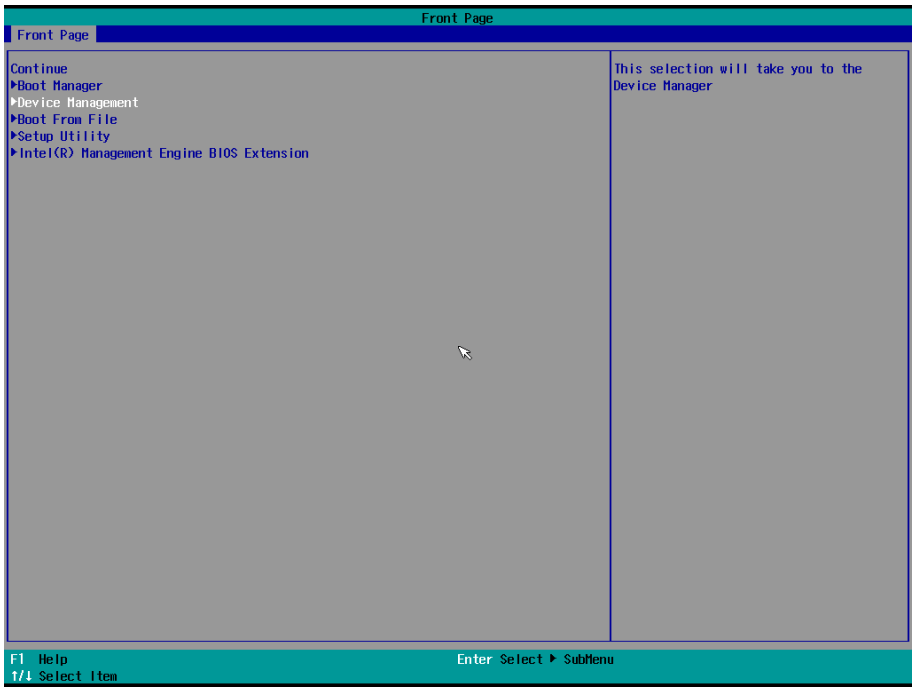






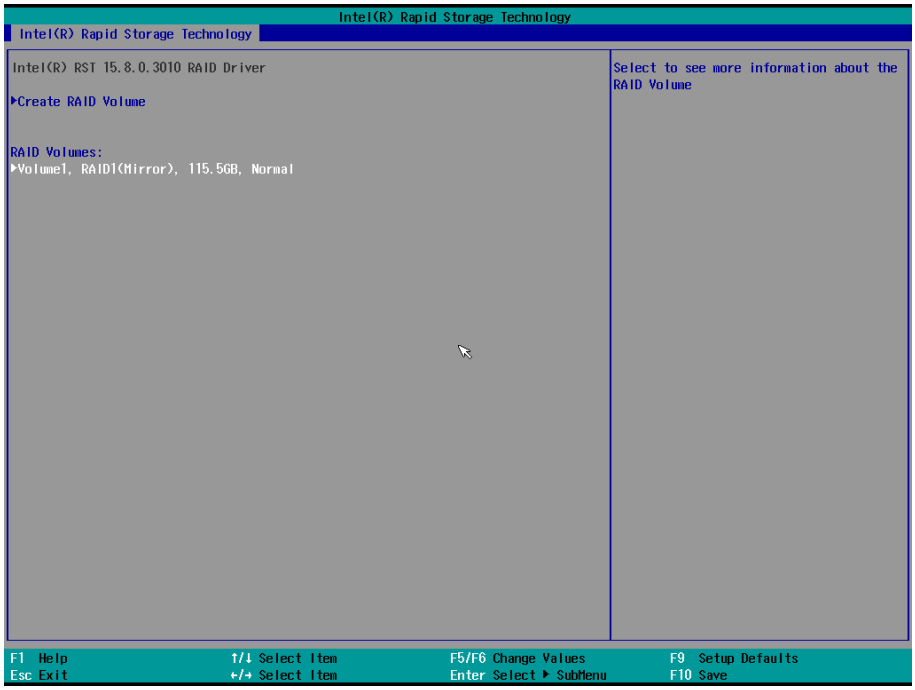
Removing a RAID Volume From the BIOS

1. Power on the computer and press **F2** to enter BIOS menu.
2. Select the **Device Management** option.

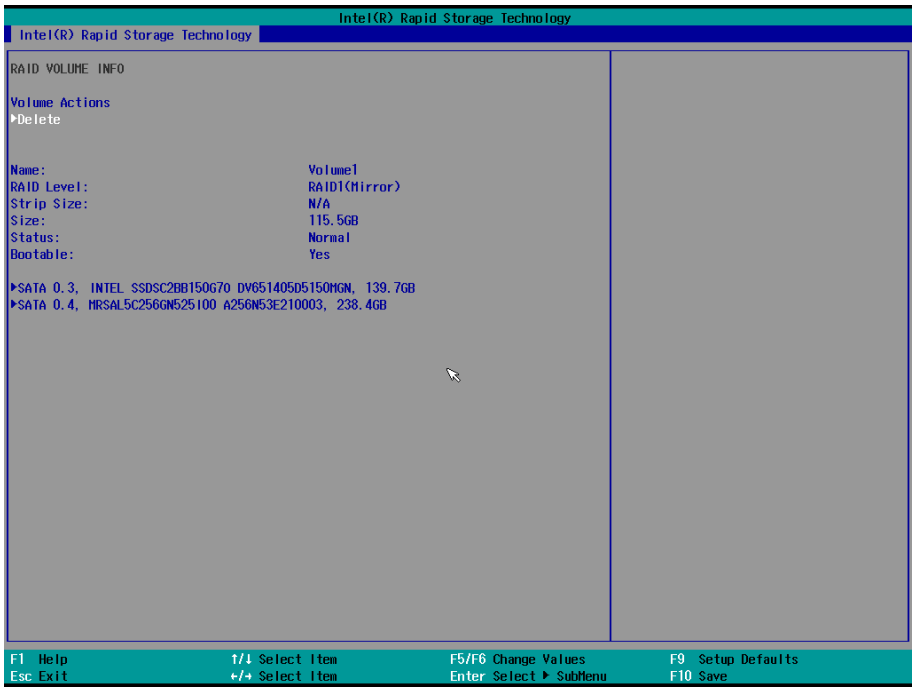


3. Select the **Intel® Rapid Storage Technology** option.

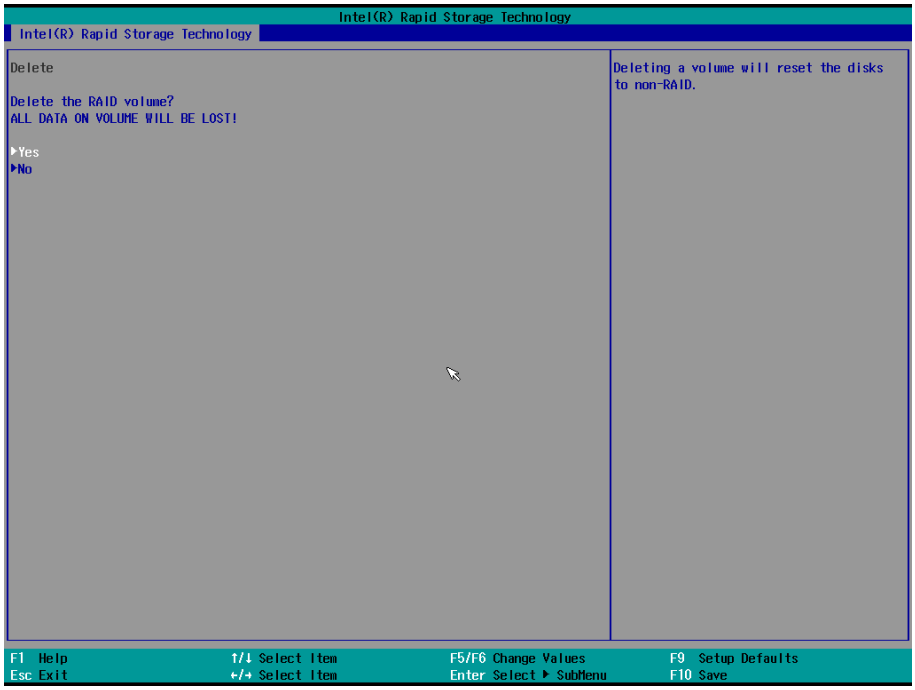
4. Select the RAID volume to be removed.



5. Select **Delete** and then press **Enter**.



6. Select **Yes** and then press **Enter**.



7. Press **F10** to save the settings.

4

Teaming

This chapter describes the setup process of the Intel Teaming function.

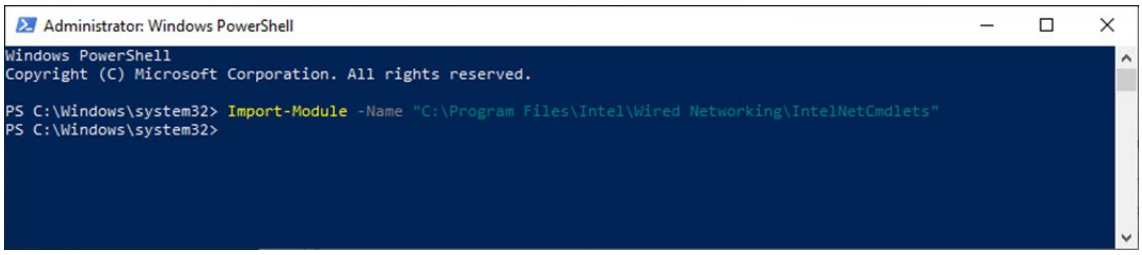
The following topics are covered in this chapter:

- **Creating an Intel Net Team**
- **Adding an Intel Net Team Member**
- **Removing an Intel Net Team Member**
- **Removing an Intel Net Team**

Creating an Intel Net Team

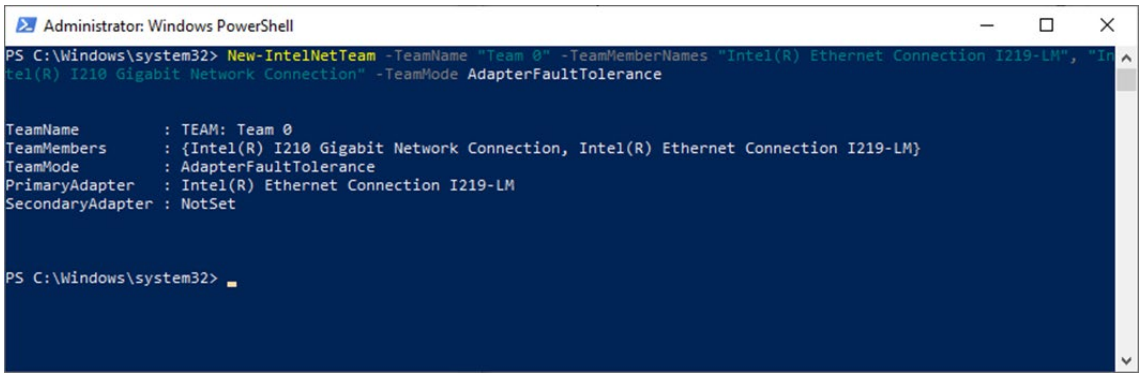
1. Run the Windows PowerShell as an Administrator.
2. Run the command:

   `Import-Module -Name "C:\Program Files\Intel\Wired Networking\IntelNetCmdlets"`

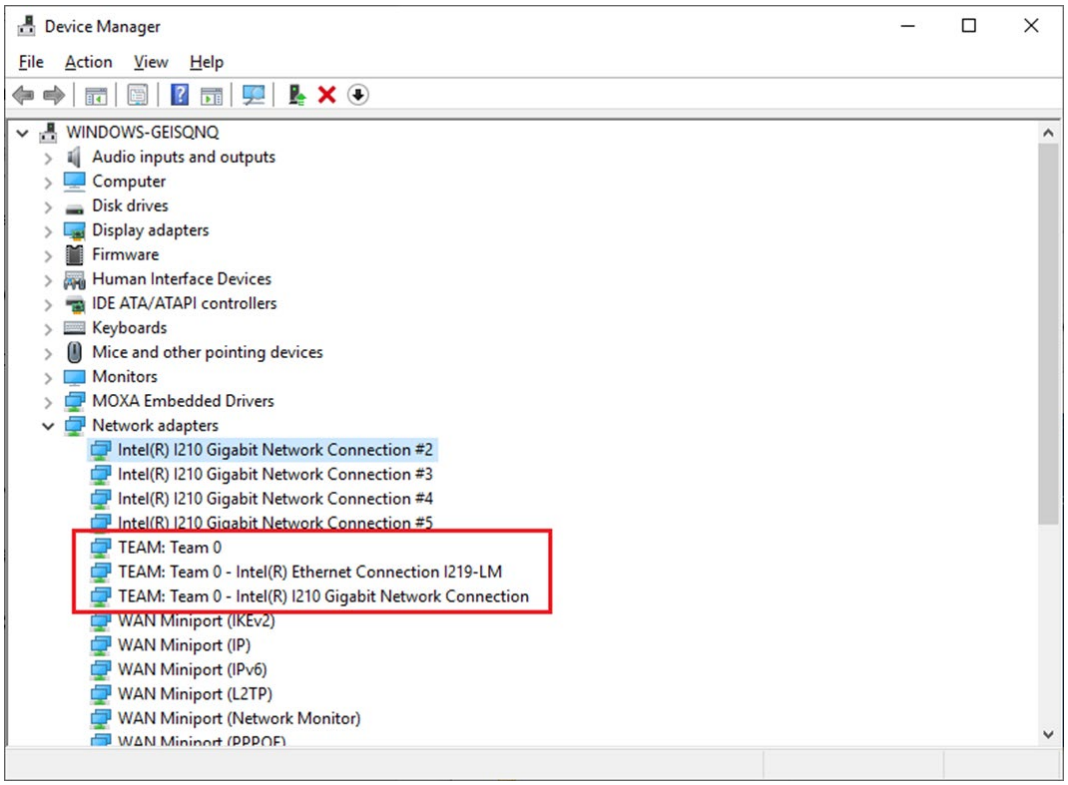


3. Run the **New-IntelNetTeam** command.

   This command creates a new Intel ANS team consisting of one or more adapters. A team may consist of both Intel and non-Intel adapters. Adapter objects obtained using the **`Get-IntelNetAdapter`** command can be passed into this cmdlet using the **`TeamMembers`** parameter.

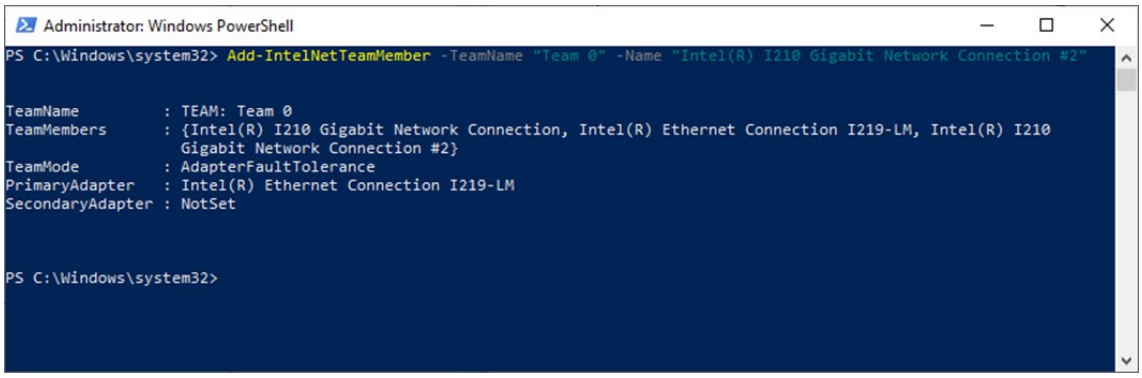


4. Check the Network adapters in the Windows Device Manager.

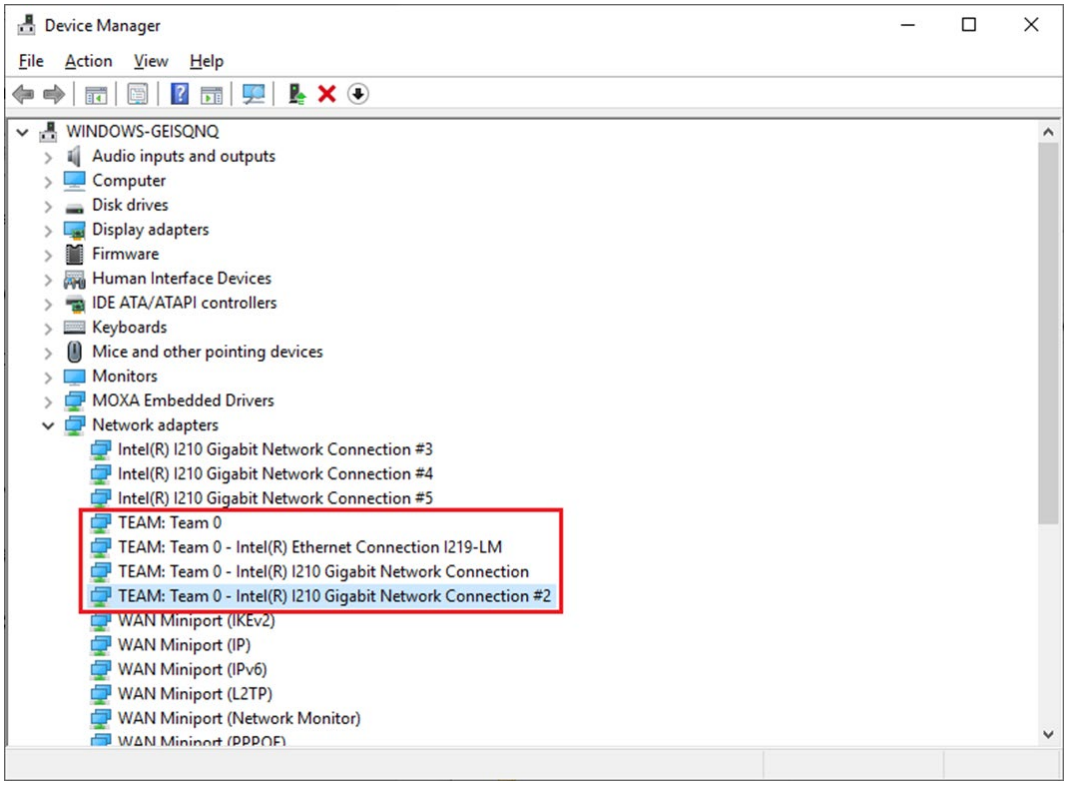


Adding an Intel Net Team Member

1. Run the **`Add-IntelNetTeamMember`** command.
   This command adds a new team member to an existing Intel® Advanced Network Services (Intel® ANS) Team. The new team member can be piped into the cmdlet or passed in using the adapter's name. An Intel ANS team can contain a maximum of eight members.

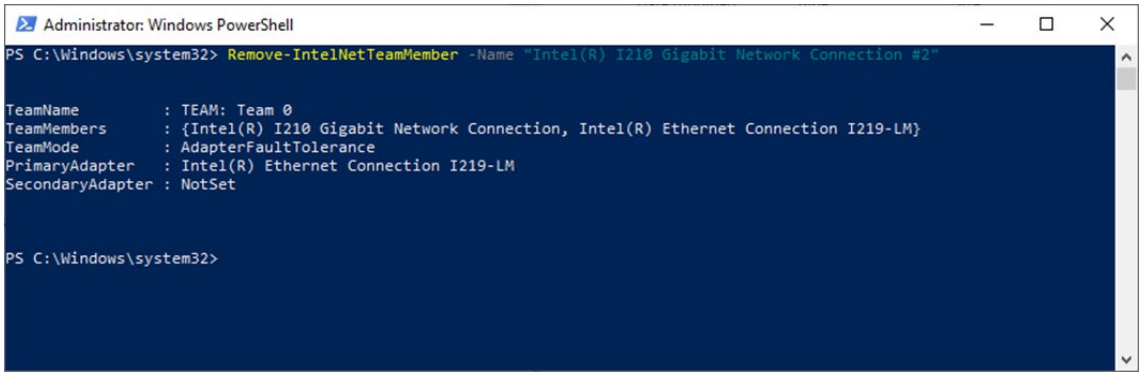


2. Check the Network adapters in the Windows Device Manager.

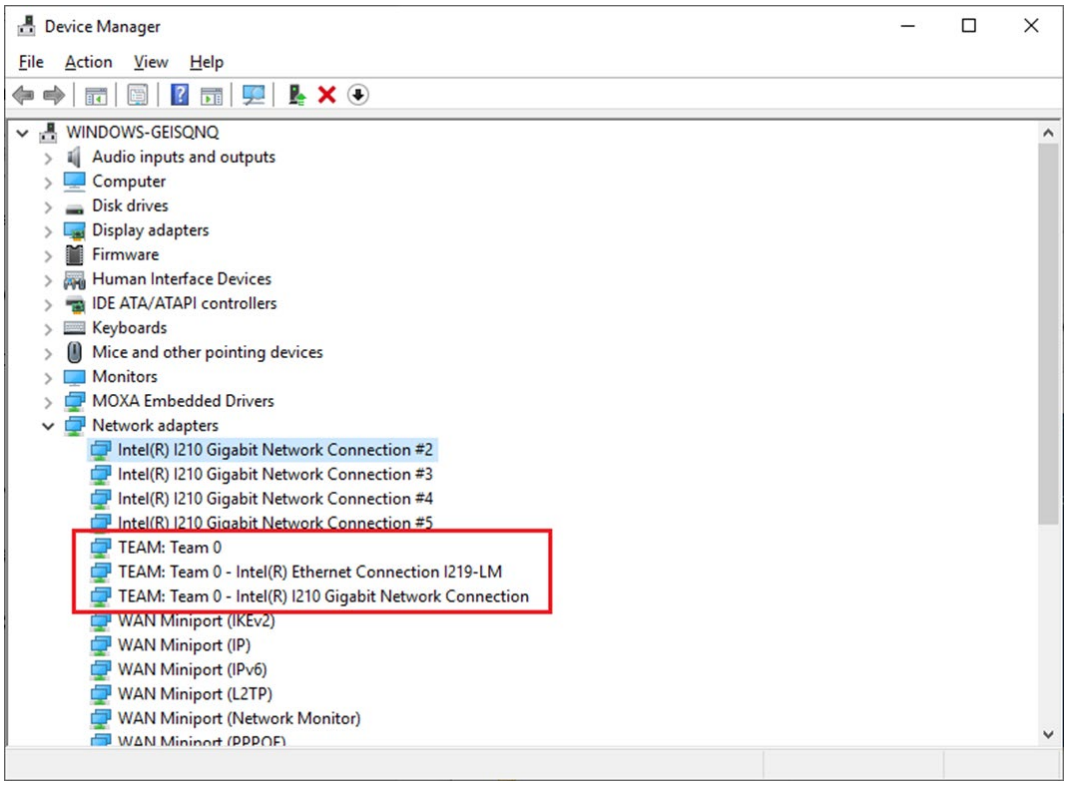


Removing an Intel Net Team Member

1. Run the **`Remove-IntelNetTeamMember`** command.
   This command removes a team member from an Intel ANS team. The team member can be piped into the cmdlet or passed in using the team member's name.

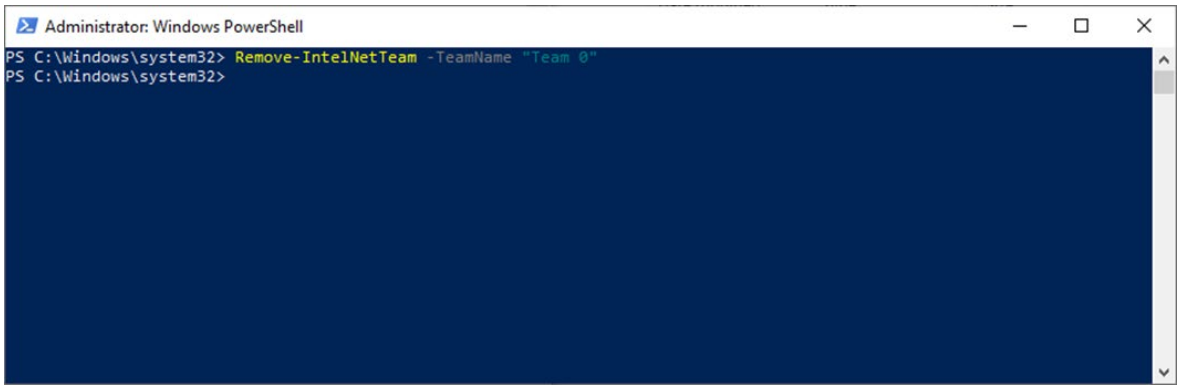


2. Check the Network adapters in the Windows Device Manager.



Removing an Intel Net Team

Run the **Remove-IntelNetTeam** command. This command removes the specified Intel ANS team.



5

Unified Write Filter (UWF)

This chapter describes how to use the Unified the Write Filter (UWF) feature.

To use UWF, you'll first need to install the feature and enable (optionally configure) it.

The first time you enable UWF on your device, UWF makes the following changes to your system to improve its performance:

- Paging files are disabled.
- System restore is disabled.
- SuperFetch is disabled.
- File indexing service is turned off.
- Fast boot is disabled.
- Defragmentation service is turned off.
- BCD setting **bootstatuspolicy** is set to **ignoreallfailures**.
- After UWF is enabled, you can finally select a drive to protect and start using UWF.

You can install UWF for running PCs and devices, manage it remotely using WMI.

The following topics are covered in this chapter:

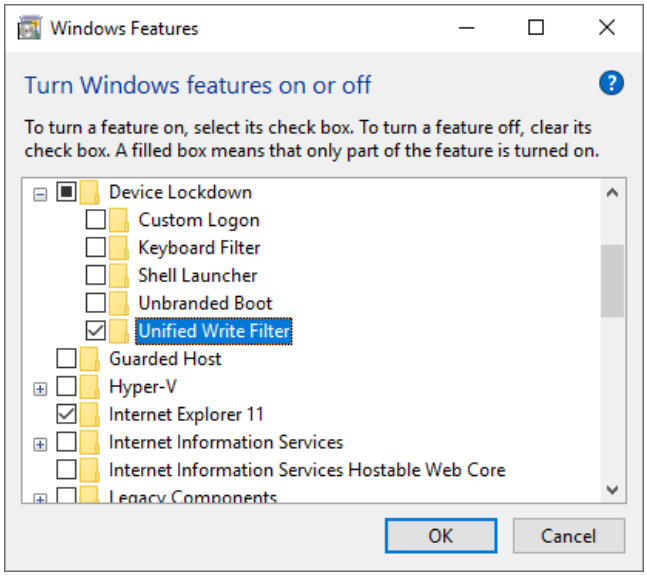
- ❒ **Turn on UWF on a running PC**
- ❒ **Install the UWF feature by using Windows Management Instrumentation (WMI)**

Turn on UWF on a running PC

1. Install the feature:
   a. Click **Start**, type **Turn Windows features on or off**.
   b. In the Windows Features window, expand the **Device Lockdown** node, and check **Unified Write Filter > OK**

      The Windows Features window indicates Windows is searching for required files and displays a progress bar. Once found, the window indicates Windows is applying the changes. When completed, the window indicates the requested changes are completed.

   c. Click **Close** to close the Windows Features window.

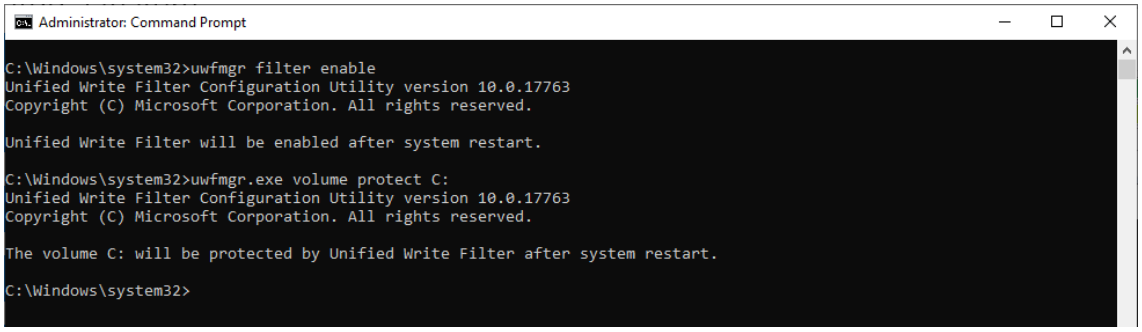


2. Enable the following filter as an Administrator:

   `cmd uwfmgr filter enable`

3. Enable write protection for a drive:

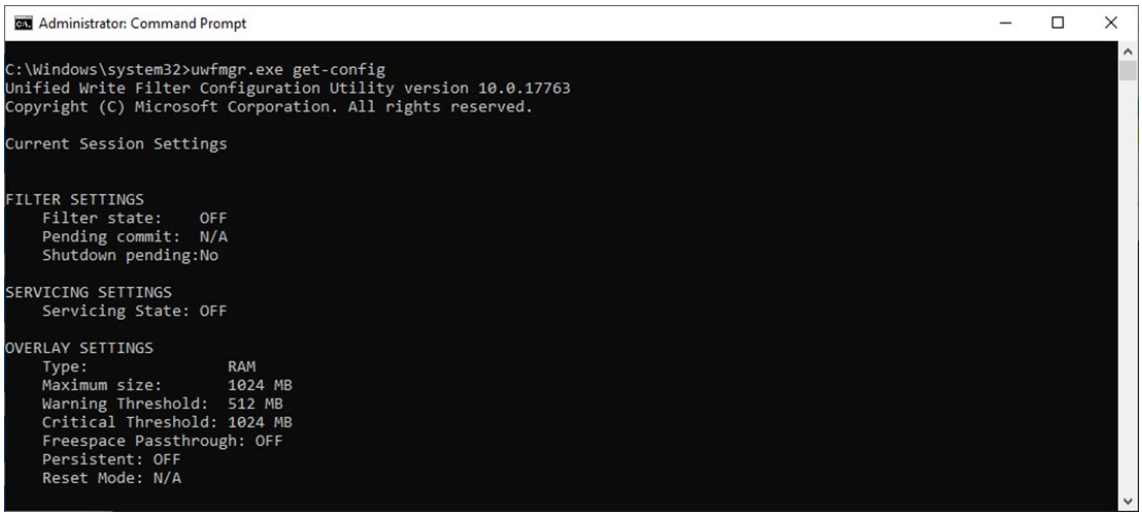
   `cmd uwfmgr.exe volume protect C:`



4. Restart your computer.

5. Confirm that UWF is running:

   cmd uwfmgr.exe get-config



Install the UWF feature by using Windows Management Instrumentation (WMI)

If Windows has already been installed and you do not want to use a provisioning package, you can also configure UWF by using the Windows Management Instrumentation (WMI) providers. To turn on UWF using WMI, you can use the UWF_Filter function, specifically the UWF_Filter.Enable method in one of the following ways:

- Use the WMI providers directly in a PowerShell script.
- Use the WMI providers directly in an application.
- Use the command line tool, uwfmgr.exe.

You must restart your device after you turn on or turn off UWF before the change takes effect.

You can change these settings after you turn on UWF if you want to. For example, you can move the page file location to an unprotected volume and re-enable paging files.

IMPORTANT!

If you add UWF to your image by using SMI settings in the unattend.xml file, turning on UWF only sets the bootstatuspolicy BCD setting and turns off the defragmentation service. In this case, you must manually turn off the other features and services if you want to increase the performance of UWF.

All configuration settings for UWF are stored in the registry. UWF automatically excludes these registry entries from filtering.

UWF maintains configuration settings in the registry for the current session and for the next session after a device restart. Static configuration changes do not take effect until after a device restart, and these changes are saved in the registry entries for the next session. Dynamic configuration changes occur immediately and persist after a device restart.

6

Disk Hot Swap Function

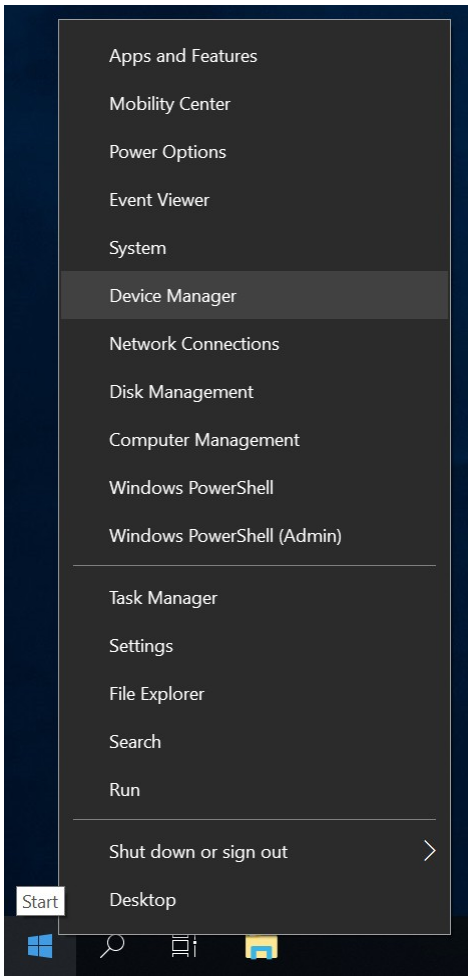
This chapter describes the setup process of Disk Hot Swap Function.

The following topics are covered in this chapter:

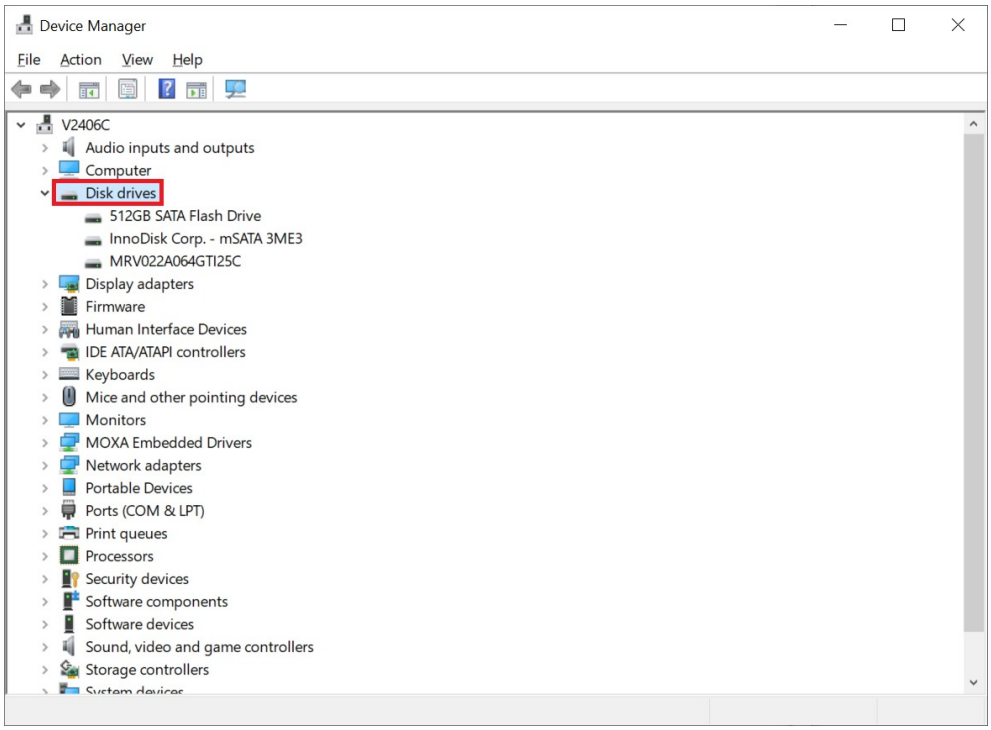
- **Setting the Disk Removal Policy**
- **Setting Up the Drive Actions**
  - Default Actions
- **Unmounting and Mounting Disks**
  - Unmounting a Disk Drive
  - Mount Disk Drive
- **Notifications of Hot Swap Function**

Setting the Disk Removal Policy

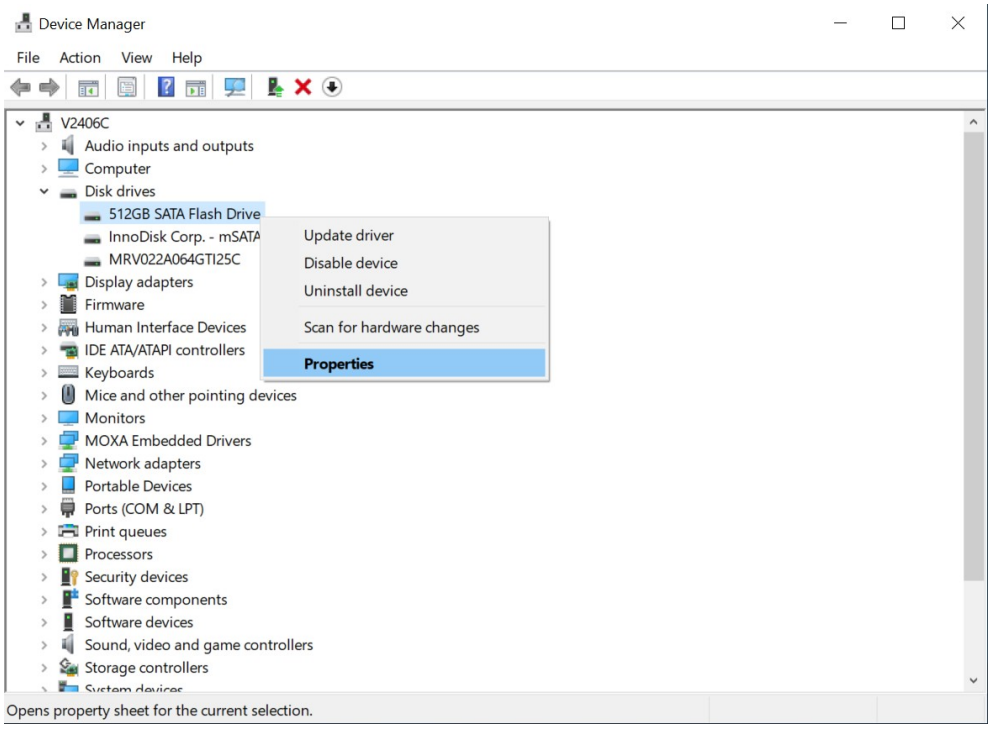
1. Right-click on the Windows Start icon and select **Device Manager**.



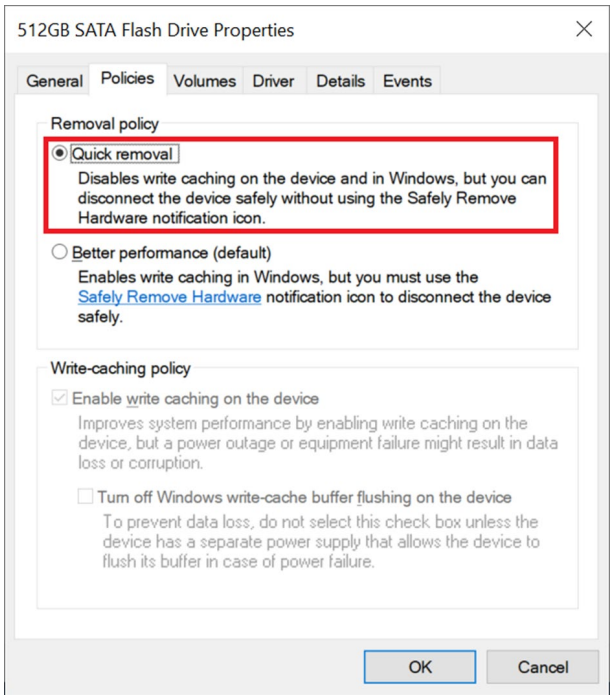
2. Expand the **Disk drives** under the device list.



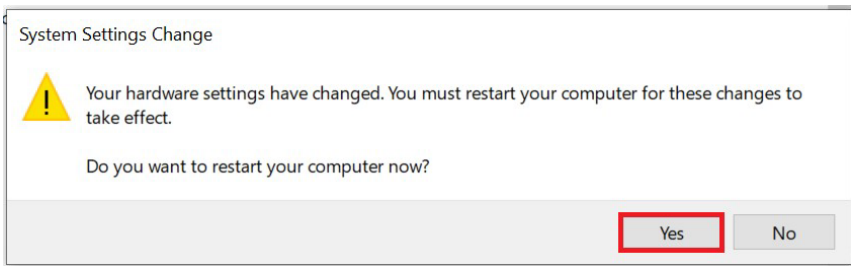
3. Select the target disk drive and right-click to select **Properties**.



4. In the **Policies** tab, select **Quick removal** and click **OK**.

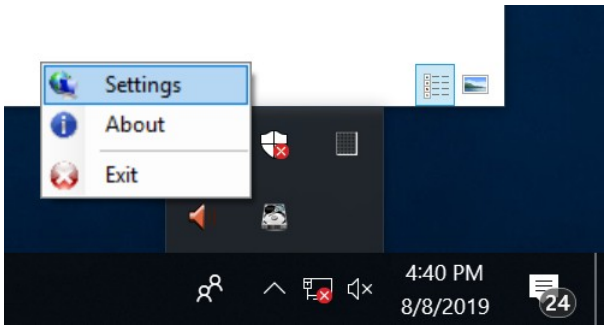


5. Because the system settings have changed, click **Yes** to restart the computer and apply the new settings.

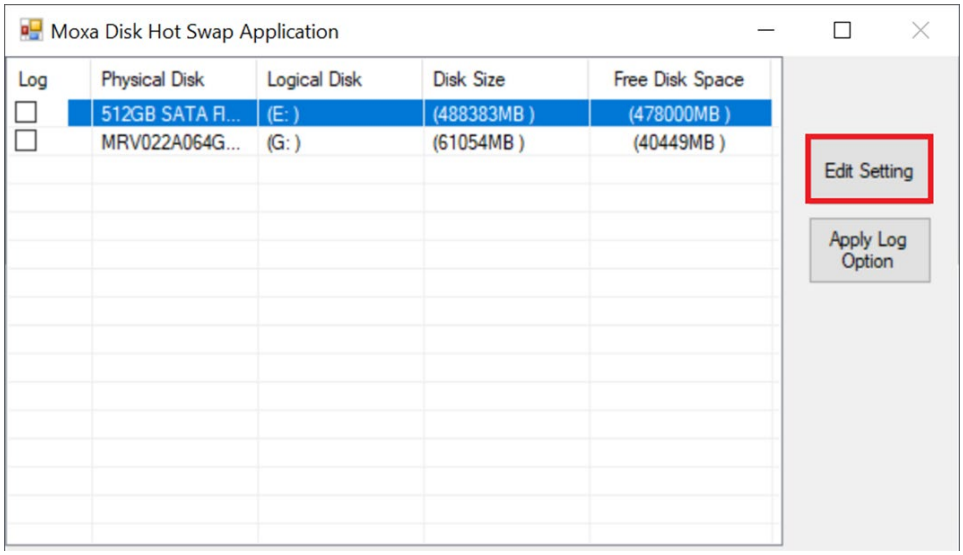


Setting Up the Drive Actions

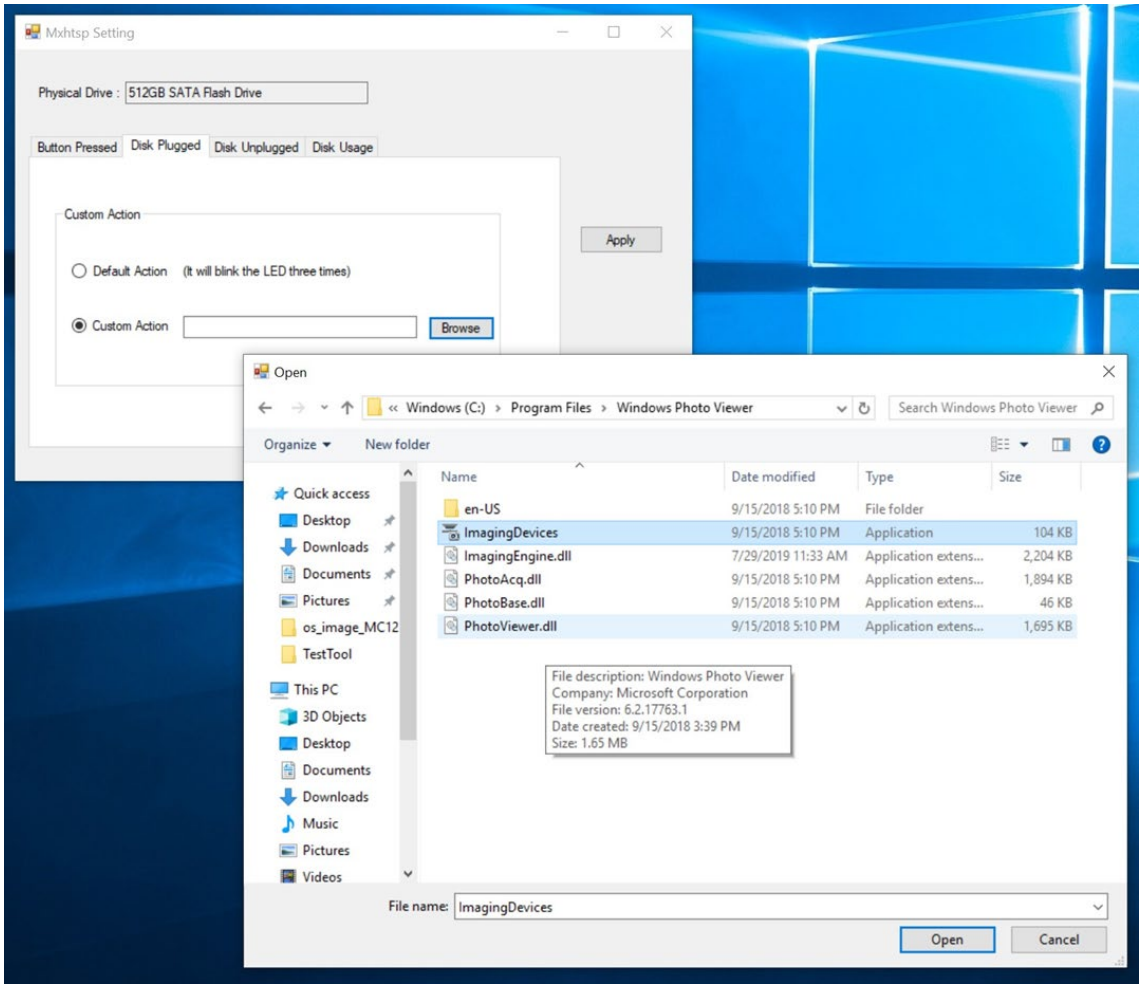
1. Right-click the Disk Hot Swap application icon on the task bar and select **Settings**.



2. Select the target drive and click **Edit Setting**.



3. Open the event tab (**Button Pressed**, **Disk Plugged**, **Disk Unplugged,** or **Disk Usage)** and select **Custom Action.** Choose the application to run when the event is triggered.
   The application will run in the background. Change in the settings will take effect the next time the **Disk Hot Swap Function** program is run.

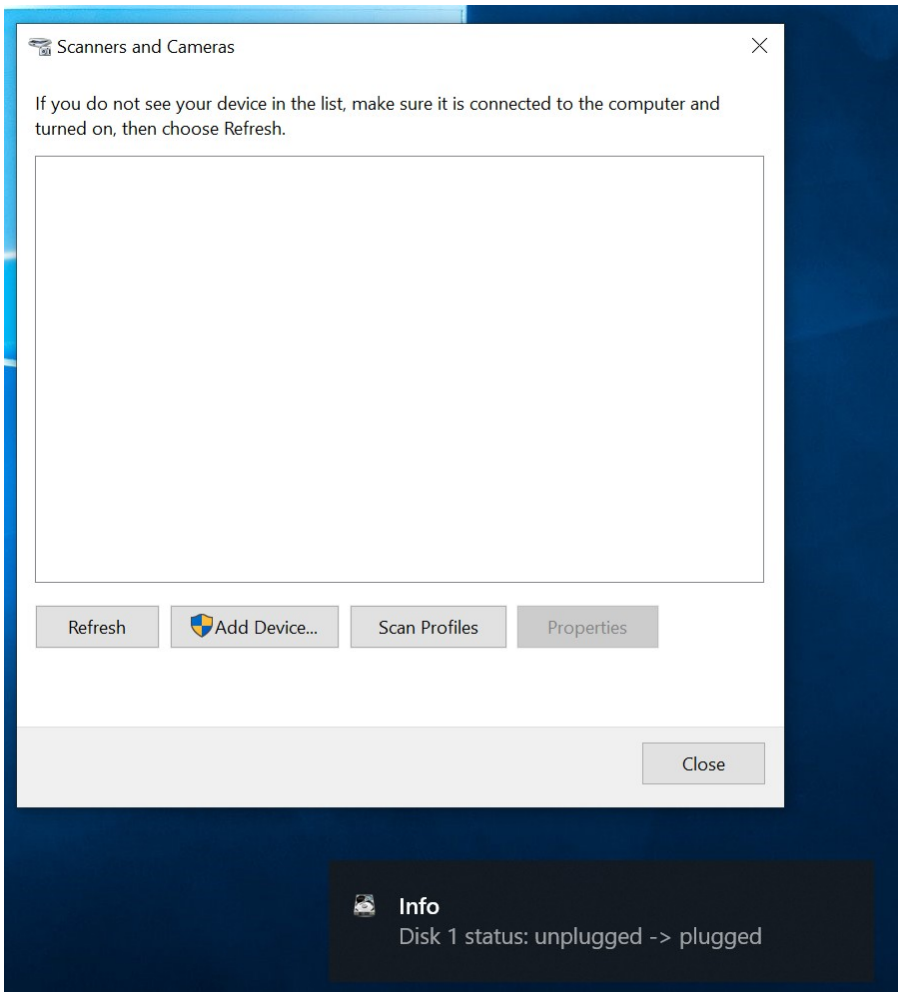


IMPORTANT!

The action for the **Button Pressed** event is triggered when the button is pressed for over 3 seconds.

Example

The Scanners and Cameras application is run after the event **Disk Plugged** is triggered. A notification message pops up to indicate the change in status of the device.



Default Actions

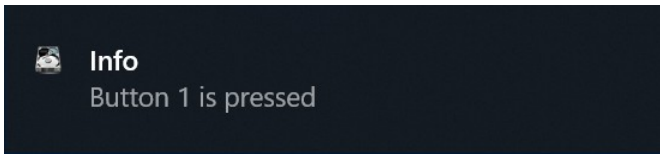
If no **Custom Action** is configured, the following default actions will be triggered by the events.

1. **Button Pressed:** Disk unmount procedure is triggered when the button is pressed for over 3 seconds. In addition, the disk LED will blink three times.
2. **Disk Plugged:** The disk LED will blink 3 times and the Disk drives list in Windows Device Manager is refreshed.
3. **Disk Unplugged:** The disk LED will blink 3 times and the Disk drives list in Windows Device Manager is refreshed.
4. **Disk Usage:** This event is triggered if on "**Check Disk Usage**", the disk usage is equal to or higher than the disk usage threshold. The default action will only pop up a notification regarding the disk usage information.

Unmounting and Mounting Disks

Unmounting a Disk Drive

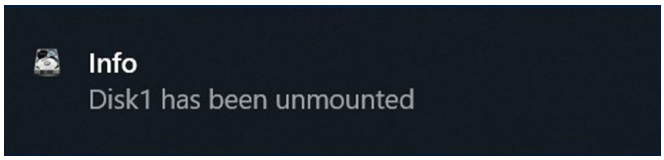
1. Press button of target disk over three seconds. Notification of **Button is pressed** will pop up and blink LED for three times. Then, disk unmount procedure will start.

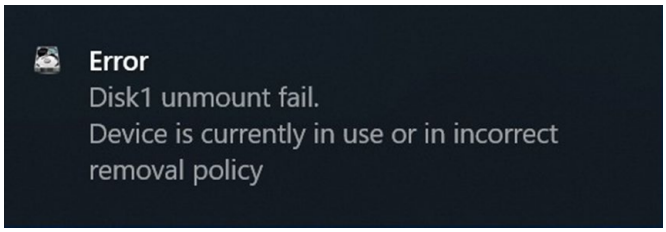


IMPORTANT!

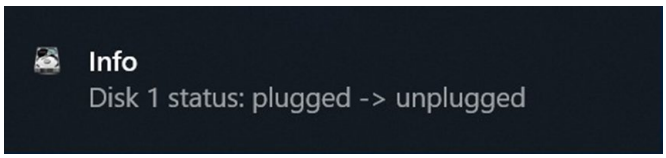
Action of **button pressed** should be set to default.

2. Notification of "**Disk has been unmounted**" will pop up after disk unmount successfully. Notification of "D**isk unmount fail. Device is currently in use or in incorrect removal policy**" will pop up while disk unmount fail. Make sure the target disk removing policy is in **Quick removal**. And the target disk is not in busy, then try again later.



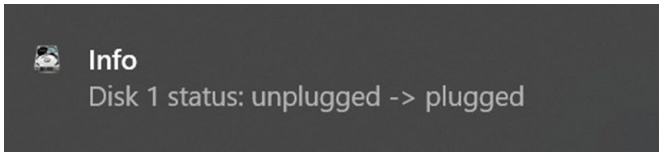


3. After disk has been unmounted, removing the disk from the computer. Notification of "**Disk status: plugged -> unplugged**" will pop up. Then, all steps of unmounting disk drive are completed.

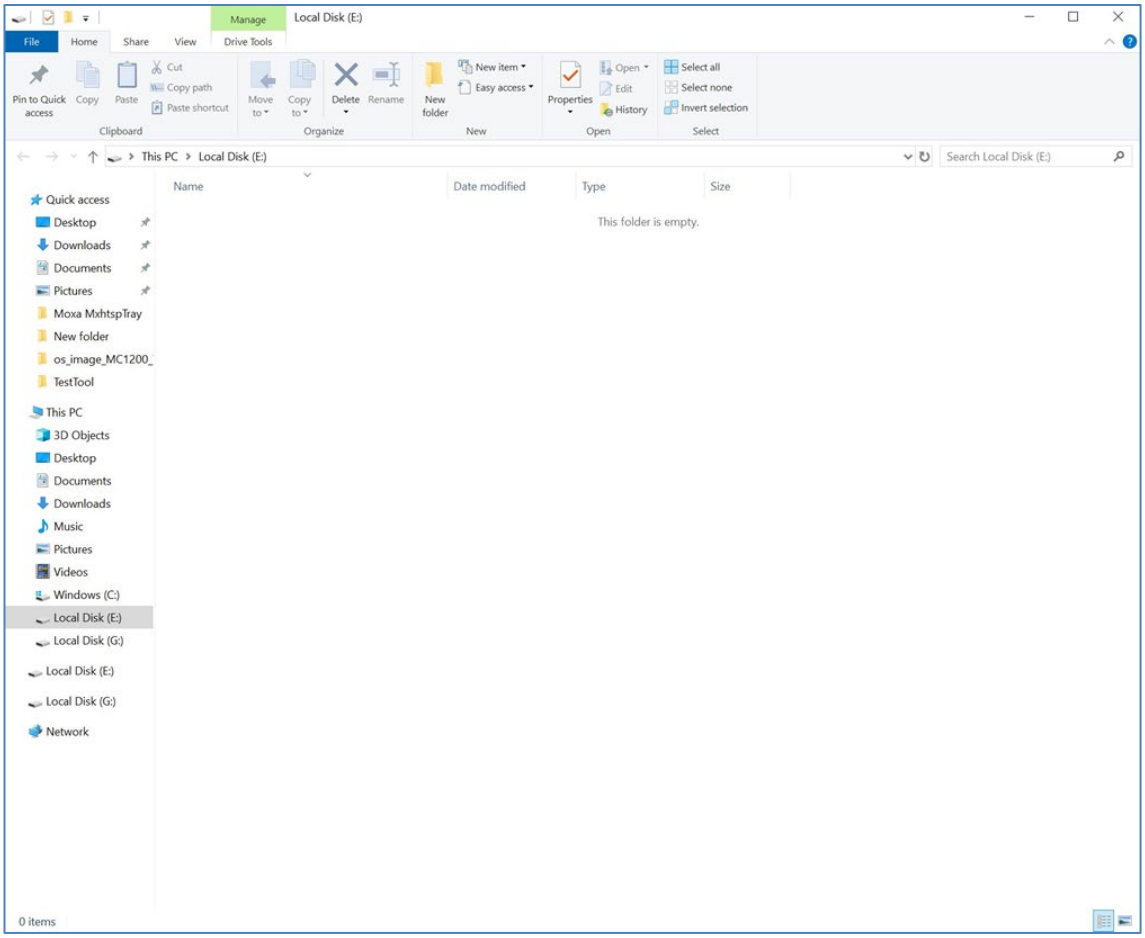


Mount Disk Drive

1. Inject the disk to the computer. Notification "**Disk status: unplugged -> plugged**" will pop up.



2. After successfully mounting the disk, disk folder will pop up on the PC automatically.



Notifications of Hot Swap Function

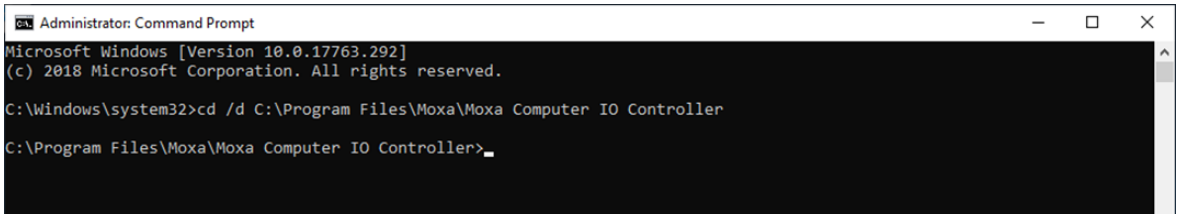
Notification Type	Notification Item	Description
Info	Button is pressed	Pop up this message if button is pressed.
Info	Disk has been unmounted	Pop up this message if disk is unmounted successfully.
Info	Disk status: unplugged -> plugged	Pop up this message if disk is plugging in the computer.
Info	Disk status: plugged -> unplugged	Pop up this message if disk is unplugging from the computer.
Info	Partition is over usage, execute user program	Pop up this message if disk usage is over pre-defined threshold. Then, execute the user-defined program.
Info	Partition is over usage, use system default action	Pop up this message if disk usage is over pre-defined threshold. Then, execute the default action.
Error	Disk unmount fail. Device is currently in use or in incorrect removal policy	Failure when unmounting the disk. Disk is in busy state or removal policy is incorrect.
Error	Invalid handle	Pop up this message when an internal error occurs.
Application	Starting Moxa Disk Hot Swap Application	This message pops up when the application starts up.
Application	Stopping Moxa Disk Hot Swap Application	This message pops up while exiting the application.

7

Moxa IO Controller Utility

This chapter describes how to use Moxa IO Controller utility.

To use the Moxa IO Controller utility, first install the utility and enable the utility to configure the DIO, UART mode, SIM, and LED settings. After the installation process is complete, run the Command Prompt as an Administrator and change the path to C:\Program Files\Moxa\Moxa Computer IO Controller.



The following topics are covered in this chapter:

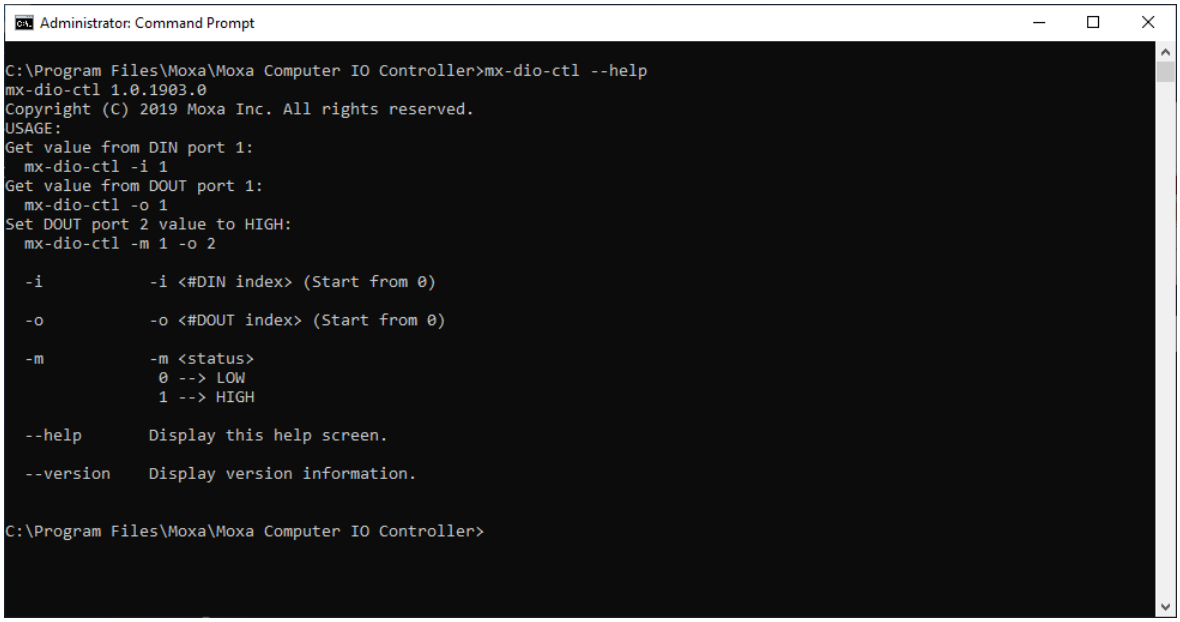
- **Setting DIO Status**
- **Setting UART Mode**
- **Setting SIM Status**
- **Setting LED Status**

Setting DIO Status

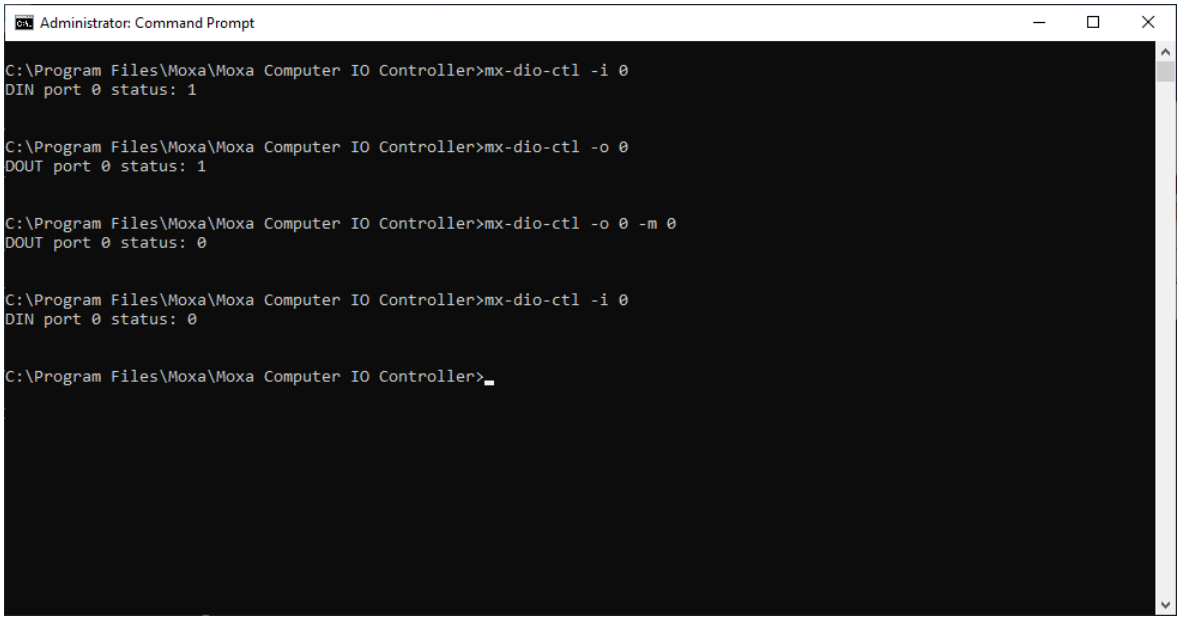
Type the command **mx-dio-ctl --help** to see the instructions on using this utility and follow them to get or set the DIO status.

IMPORTANT!

The DIN and DOUT index start at 0. If the printing starts from 1, the index still starts from 0 in this utility.



Example:

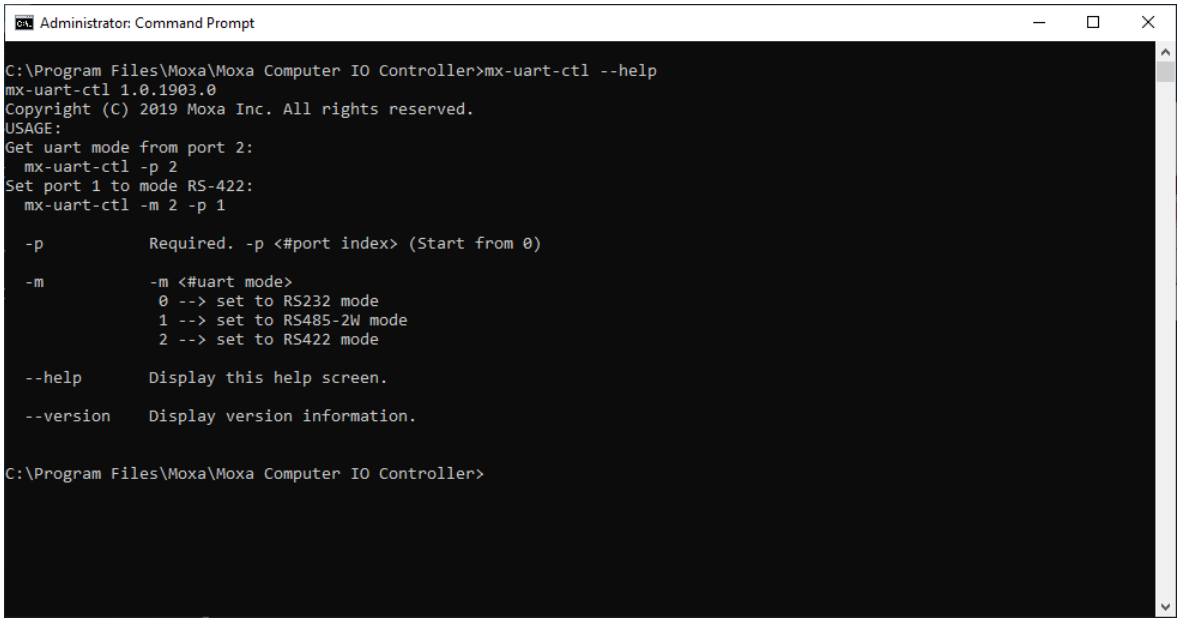


Setting UART Mode

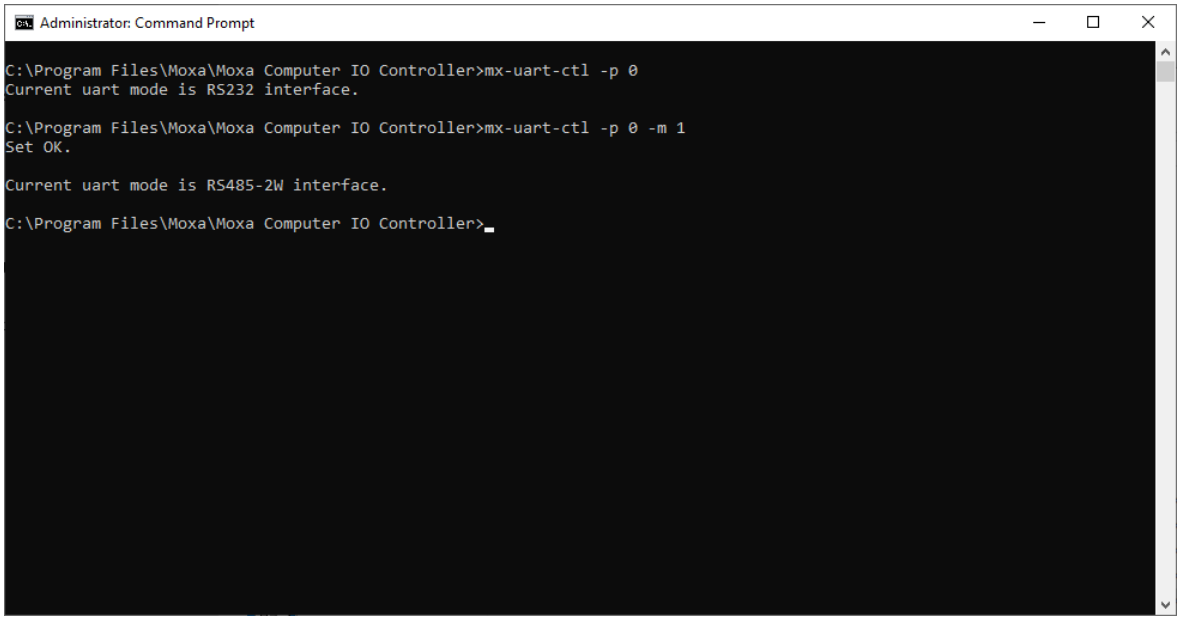
Type the **mx-uart-ctl --help** command to see instructions on using this utility and follow the onscreen instructions to get or set the UART mode.

IMPORTANT!

The UART index start from 0. If the printing starts at 1, the index still starts from 0 in this utility.



Example:

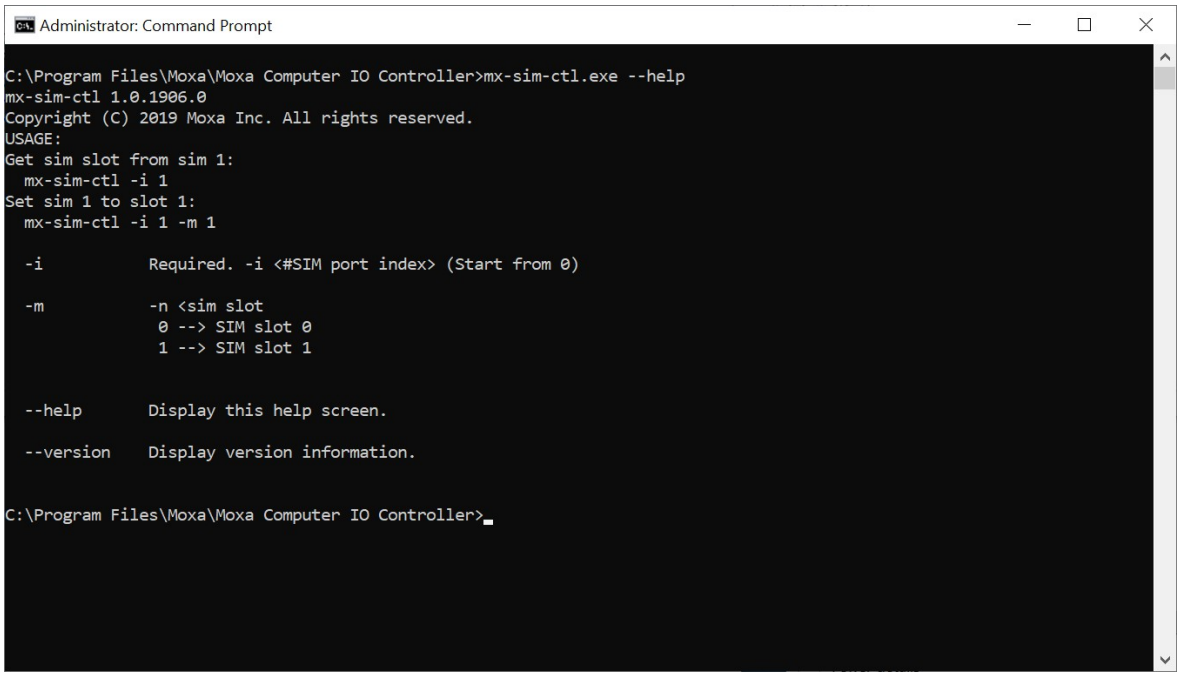


Setting SIM Status

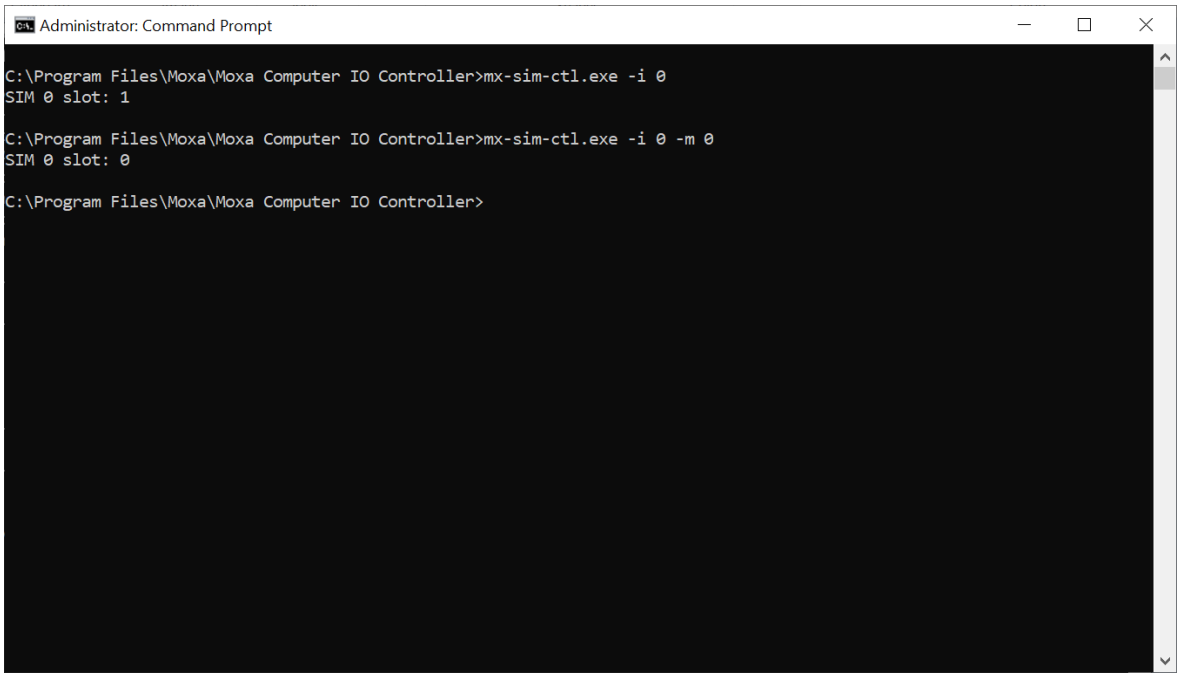
Type the **mx-sim-ctl --help** command to see instructions on using this utility and follow the onscreen instructions to get or set the status of the relay output.

IMPORTANT!

The SIM indices start from 0. Even though the output starts from the index 1, the SIM indices still start from 0 in this utility.



Example:

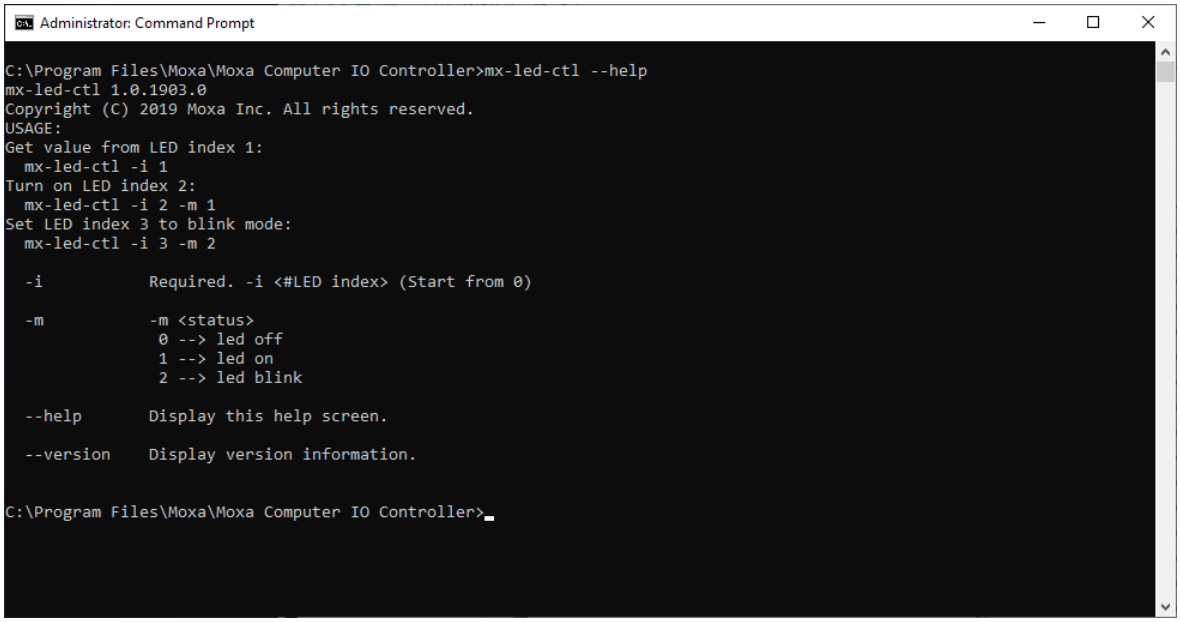


Setting LED Status

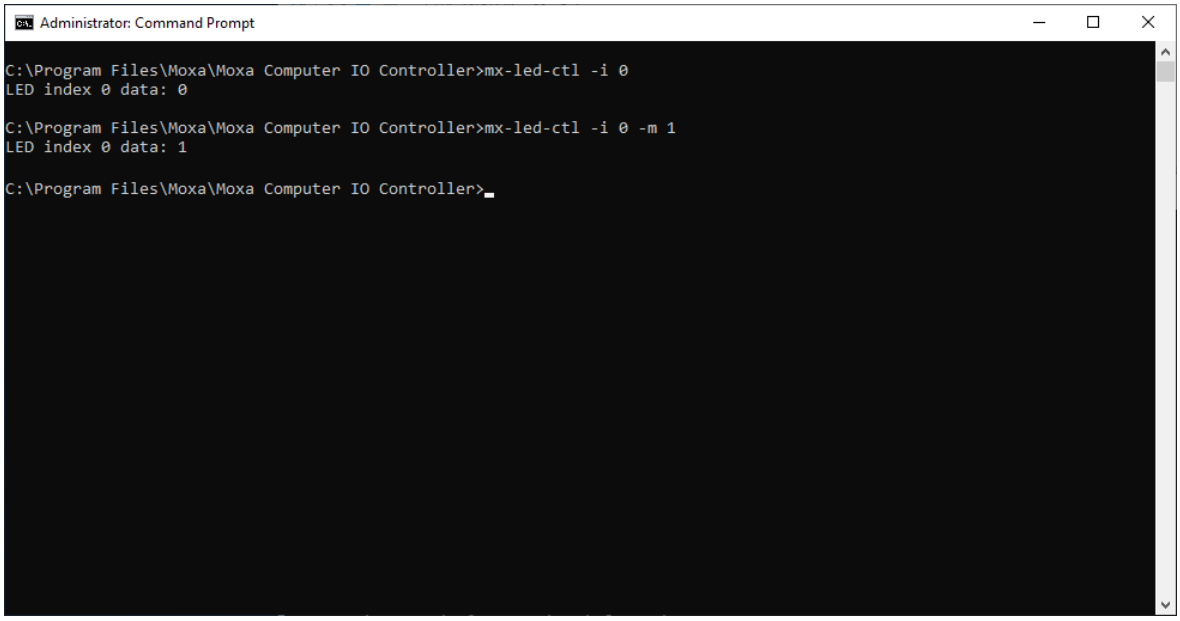
Type the command **mx-led-ctl --help** to see instructions on using this utility and following the onscreen instructions to get or set LED status.

IMPORTANT!

All the LED index start at 0. If the printing starts from 1, the index still starts from 0 in this utility.



Example:



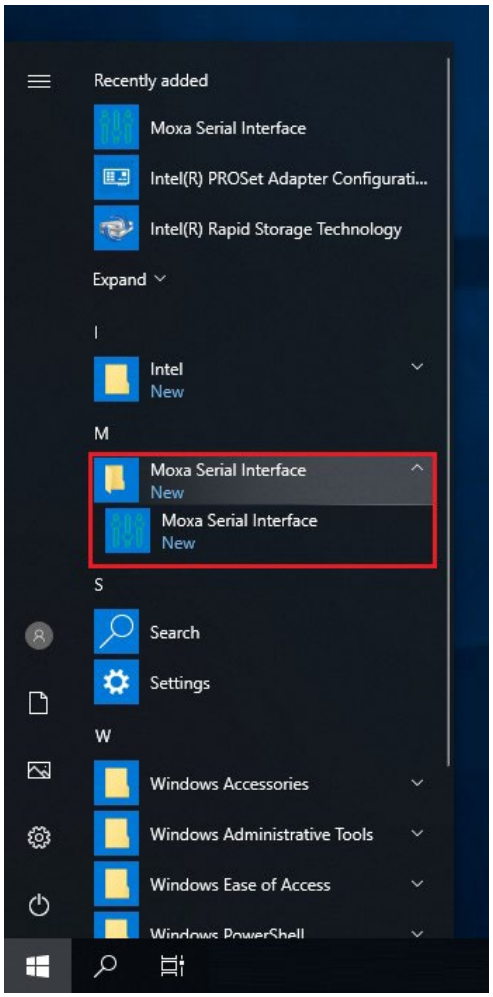
8

Moxa Serial Interface Utility

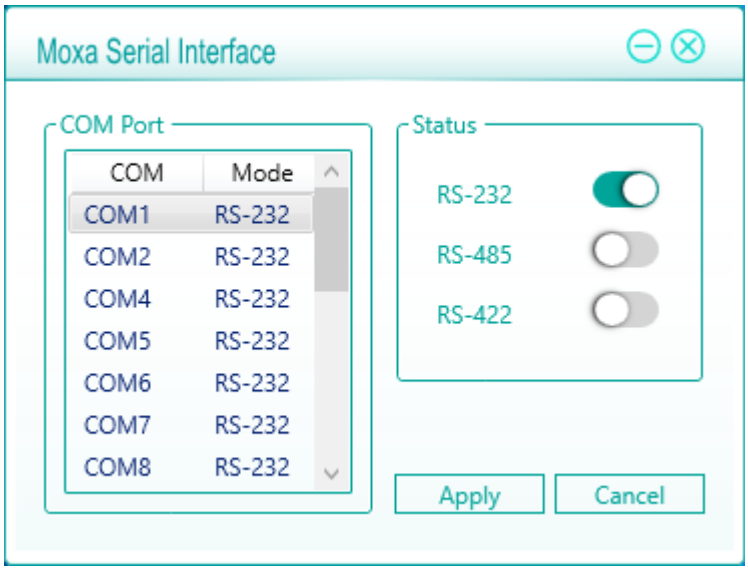
In this chapter, we describe how to use Moxa Serial Interface utility to set the UART mode in your computer's serial interface.

Setting the UART Mode

1. Install the Moxa Serial Interface Utility.
2. From the Windows programs menu, run the **Moxa Serial Interface** utility.



3. Select the target COM port and UART mode, click **Apply** to save the setting.



9

IO Control API

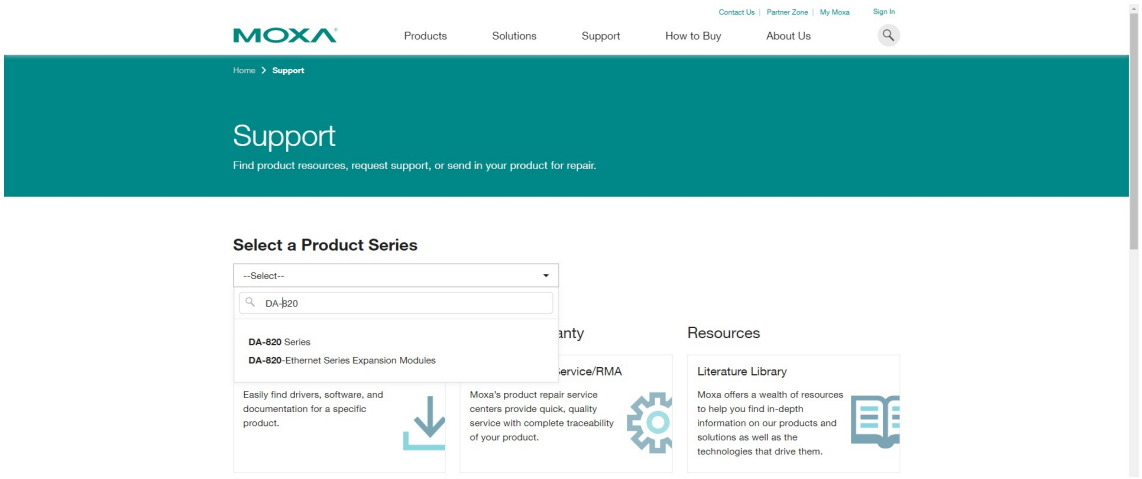
This chapter describes how to use IO Control API.

The following topics are covered in this chapter:

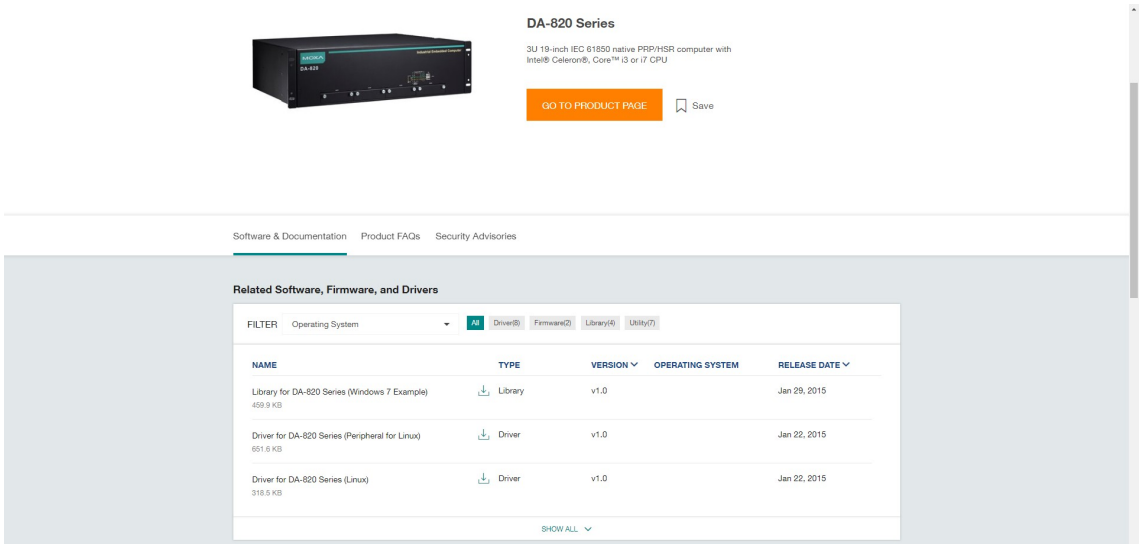
- **Downloading the API**
- **mxdgio**
  - GetDinStatus
  - GetDoutStatus
  - SetDoutStatus
- **mxled**
  - GetLedData
  - SetLedData
- **mxsp**
  - GetUartMode
  - SetUartMode
- **mxwdg**
  - mxwdg_open
  - mxwdg_refresh
  - mxwdg_close
- **mxsim**
  - GetSIMSlot
  - SetSIMSlot

Downloading the API

1. Access the Moxa support page: https://www.moxa.com/en/support
2. Select the product series DA-682C.



3. Download the related files.



mxdgio

The mxdgio library operates on the digital I/O. The following topics are covered in this section:

- GetDinStatus
- GetDoutStatus
- SetDoutStatus

GetDinStatus

Syntax

int GetDinStatus(int port);

Description

Gets the status of a digital input port.

Parameters

port: The index of the digital input port; starts at 0.

Return Value

The status of the digital input port; 0 for low and 1 for high.

Error codes

The following error codes can be retrieved by the **DIO_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxdgio library initialization failed. Can't open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Requirements

Name	Items
Header	mxdgio.h
Library	mxdgio.lib
DLL	mxdgio.dll
Profile	MxdgioProfile[*ModelName*].json

GetDoutStatus

Syntax

int GetDoutStatus(int port);

Description

Gets the status of a digital output port.

Parameters

port: The index of the digital output port; starts at 0.

Return Value

The status of the digital output port; 0 for low and 1 for high.

Error codes

The following error codes can be retrieved by the **DIO_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxdgio library initialization failed. Can't open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Requirements

Name	Items
Header	mxdgio.h
Library	mxdgio.lib
DLL	mxdgio.dll
Profile	MxdgioProfile*[ModelName]*.json

SetDoutStatus

Syntax

int SetDoutStatus(int *port*, int *status*);

Description

Sets the status of a digital output port.

Parameters

port: The index of the digital output port; starts at 0.

status: The status of the digital output port; 0 for low and 1 for high.

Return Value

Returns the value 0 if the digital output status is successfully set.

Error codes

The following error codes can be retrieved by the **DIO_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxdgio library initialization failed. Can't open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.
SET_STATUS_ERR	-3	Set the status fail. Status is defined with a bad format.

Requirements

Name	Items
Header	mxdgio.h
Library	mxdgio.lib
DLL	mxdgio.dll
Profile	MxdgioProfile*[ModelName]*.json

mxled

The mxled library operates on the programmable LED. The following topics are covered in this section:

- GetLedData
- SetLedData

GetLedData

Syntax

int GetLedData(int *port*);

Description

Gets the status of the LED port.

Parameters

port: The index of the LED port; starts at 0.

Return Value

The status of a LED port; 0 for OFF, 1 for ON.

Error codes

The following error codes can be retrieved by the **LED_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxled library initialization failed. Can't open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Requirements

Name	Items
Header	mxled.h
Library	mxled.lib
DLL	mxled.dll
Profile	MxledProfile[*ModelName*].json

SetLedData

Syntax

int SetLedData(int *port*, int *status*);

Description

Sets the status of the LED port.

Parameters

port: The index of the LED port; starts at 0.

status: The status of the LED; 0 for OFF, 1 for ON, and 2 for blinking.

Return Value

Returns 0 if the LED status is set successfully.

Error codes

The following error codes can be retrieved by the **LED_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxled library initialization failed. Can't open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.
SET_STATUS_ERR	-3	Set the status fail. Status is defined with a bad format.

Requirements

Name	Items
Header	mxled.h
Library	mxled.lib
DLL	mxled.dll
Profile	MxledProfile[*ModelName*].json

mxsp

The mxsp library operates on the serial port. The following topics are covered in this section:

- GetUartMode
- SetUartMode

GetUartMode

Syntax

int GetUartMode(int *port*);

Description

Gets the status of the UART port.

Parameters

port: The index of the UART port; starts at 0.

Return Value

The mode of a UART interface; 0 for RS-232, 1 for RS-485-2w, and 2 for RS-422.

Error codes

The following error codes can be retrieved by the **UART_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxsp library initialization failed. Can't open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Requirements

Name	Items
Header	mxsp.h
Library	mxsp.lib
DLL	mxsp.dll
Profile	MxspProfile[*ModelName*].json

SetUartMode

Syntax

int SetUartMode(int *port*, int *mode*);

Description

Sets the status of the UART port.

Parameters

port: The index of the UART port; starts at 0.

mode: The mode of a UART interface; 0 for RS-232, 1 for RS-485-2w, and 2 for RS-422.

Return Value

Returns 0 if the UART mode is successfully set.

Error codes

The following error codes can be retrieved by the **UART_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxsp library initialization failed. Can't open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.
SET_STATUS_ERR	-3	Set the status fail. Status is defined with a bad format.

Requirements

Name	Items
Header	mxsp.h
Library	mxsp.lib
DLL	mxsp.dll
Profile	MxspProfile[*ModelName*].json

mxwdg

The mxwdg library operates on the watchdog. The following topics are covered in this section:

- mxwdg_open
- mxwdg_refresh
- mxwdg_close

mxwdg_open

Syntax

PVOID mxwdg_open(unsigned long *time*);

Description

Initializes the watchdog timer.

Parameters

time: The interval at which the watchdog timer is refreshed; unit is seconds.

Return Value

Returns pointer to the watchdog handle; return -1 on failure to initialize the watchdog timer.

Requirements

Name	Items
Header	mxwdg.h
Library	mxwdg.lib
DLL	mxwdg.dll

mxwdg_refresh

Syntax

int mxwdg_refresh(PVOID *fd)*;

Description

Refreshes the watchdog timer.

Parameters

fd: The handle of the watchdog timer.

Return Value

Returns o on success; otherwise the function has failed.

Requirements

Name	Items
Header	mxwdg.h
Library	mxwdg.lib
DLL	mxwdg.dll

mxwdg_close

Syntax

void mxwdg_close(PVOID *fd*);

Description

Disables the watchdog timer.

Parameters

fd: The handle of the watchdog timer.

Return Value

This function does not return a value.

Requirements

Name	Items
Header	mxwdg.h
Library	mxwdg.lib
DLL	mxwdg.dll

mxsim

The mxsim library operates on the switch the SIM number of SIM slot. The following topics are covered in this section:

- GetSIMSlot
- SetSIMSlot

GetSIMSlot

Syntax

int GetSIMSlot(int *port*);

Description

Gets the SIM slot of the SIM number.

Parameters

port: The index of the SIM number; starts at 0.

Return Value

The SIM slot of a SIM number; 0 for SIM 0 slot, 1 for SIM 1 slot.

Error codes

The following error codes can be retrieved by the **SIM_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxsim library initialization failed. Can't open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.

Requirements

Name	Items
Header	mxsim.h
Library	mxsim.lib
DLL	mxsim.dll
Profile	MxsimProfile*[ModelName]*.json

SetSIMSlot

Syntax

int GetSIMSlot(int *port*);

Description

Sets the SIM slot of the SIM number.

Parameters

port: The index of the SIM number; starts at 0.

slot: The SIM slot of a SIM number; 0 is SIM 0 slot, 1 is SIM 1 slot .

Return Value

Returns 0 if the SIM slot of the SIM number is successfully set.

Error codes

The following error codes can be retrieved by the **SIM_STATUS** function.

Name	Value	Meaning
LIB_INITIALIZE_FAIL	-1	The mxsim library initialization failed. Can't open json profile.
PORT_OUTOF_INDEX	-2	Target port index is out of range.
SET_STATUS_ERR	-3	Set the status fail. Status is defined with a bad format.

Requirements

Name	Items
Header	mxsim.h
Library	mxsim.lib
DLL	mxsim.dll
Profile	MxsimProfile[*ModelName*].json

10

Windows Recovery

This chapter describes the setup process of the Windows Recovery function.

The following topics are covered in this chapter:

- **Preparing the USB Device**
- **Booting From the USB Recovery Disk**
- **System Image Backup**
- **Restoring the System Image**

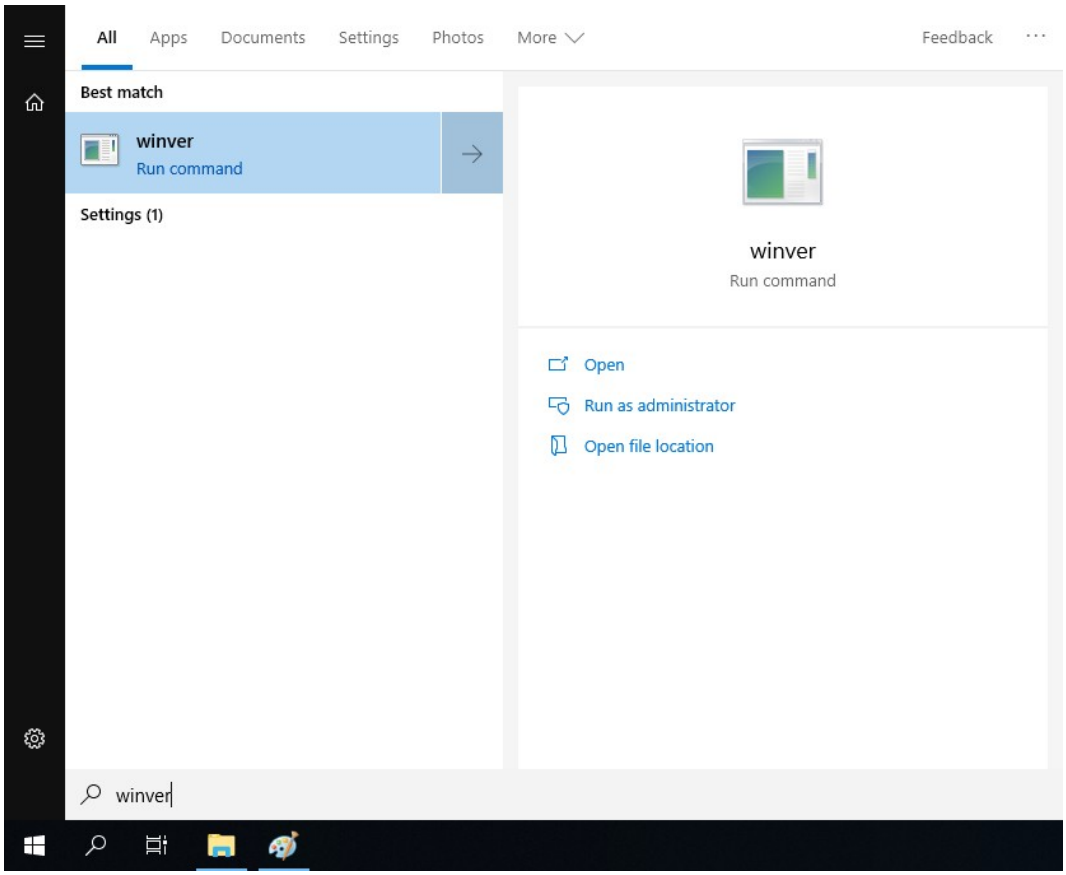
Preparing the USB Device

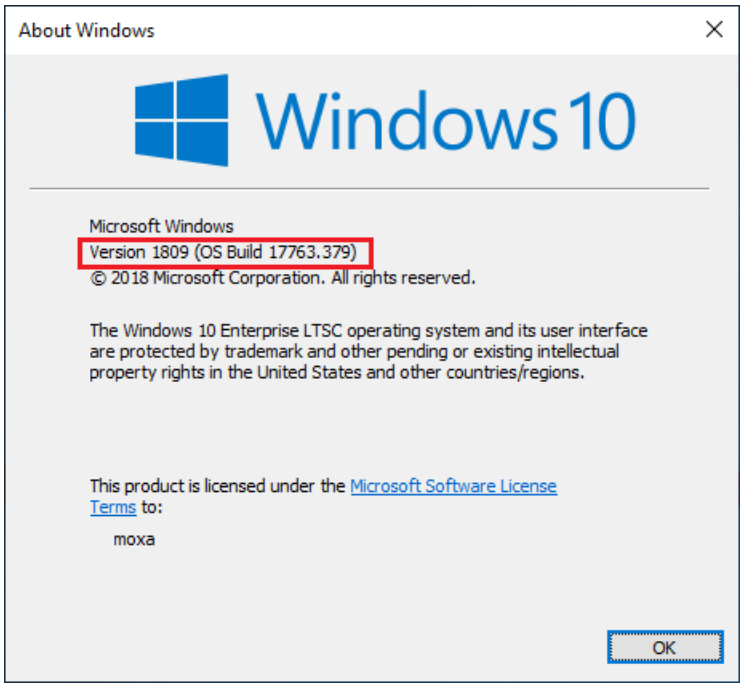
1. Ensure that your computer has the Diskpart **version 10.0.17134.0 or higher** installed.

   You can check the version of the Diskpart tool using the following methods:

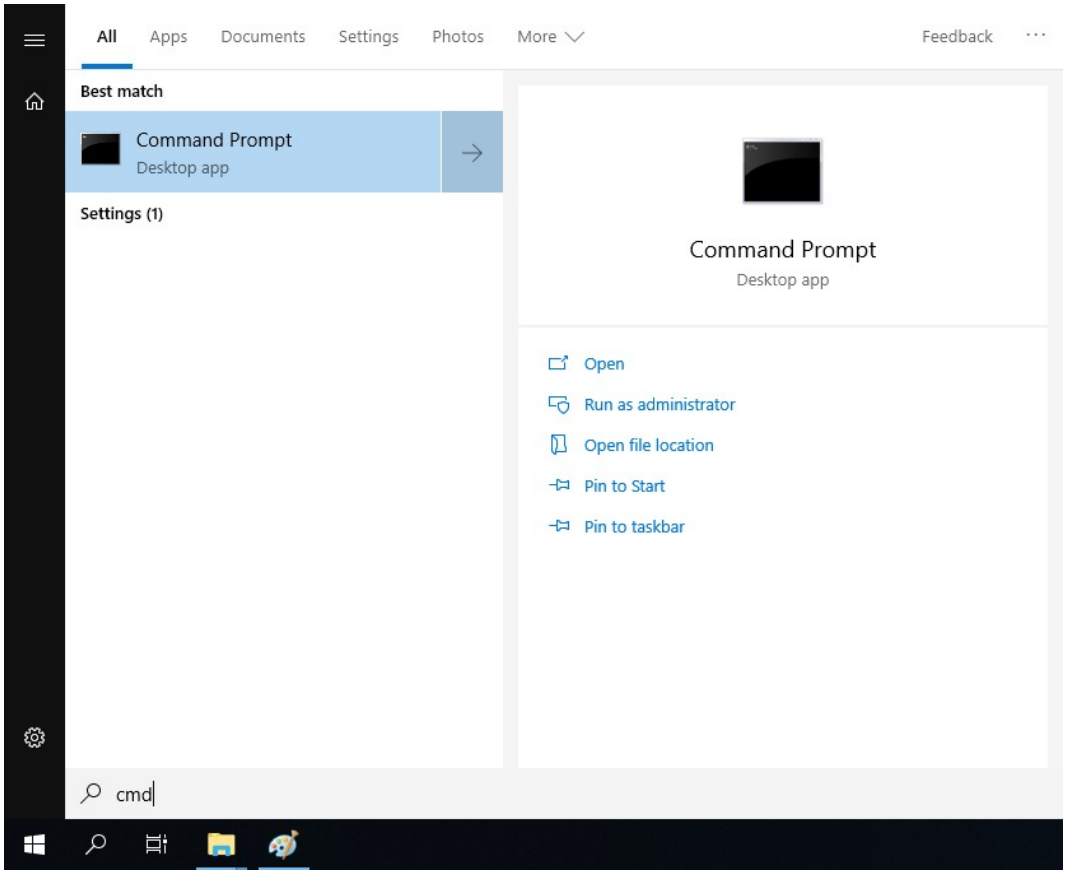
   a. In the Windows start menu, type **`winver`** to check the OS Build.

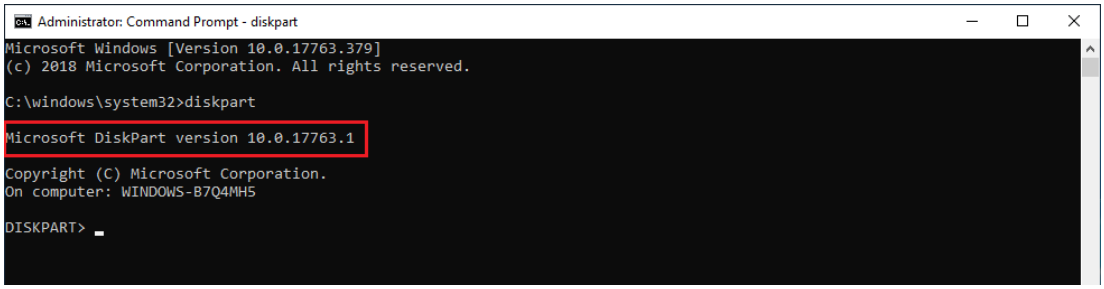
      The OS version should be 1803 or higher and the corresponding OS Build will be 17763 or later.



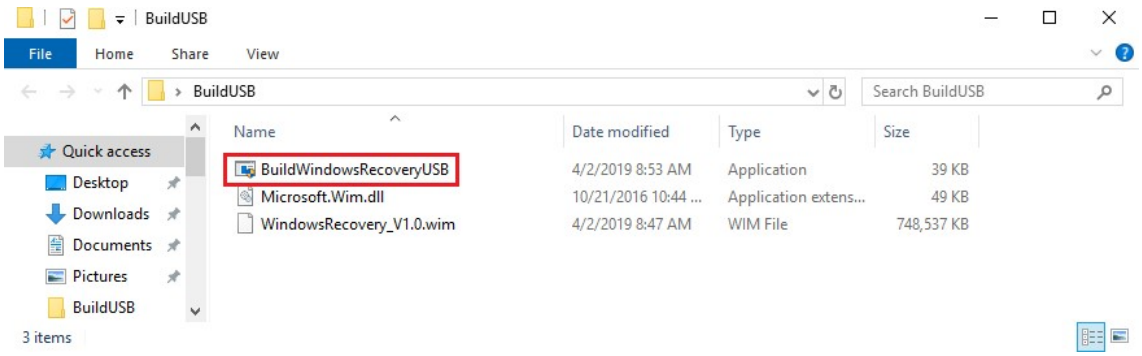


b. Run the command line as an **Administrator** and type **`diskpart`** to check the diskpart version.

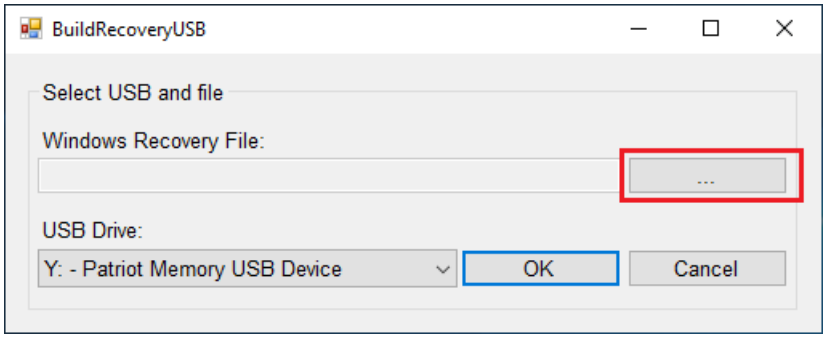


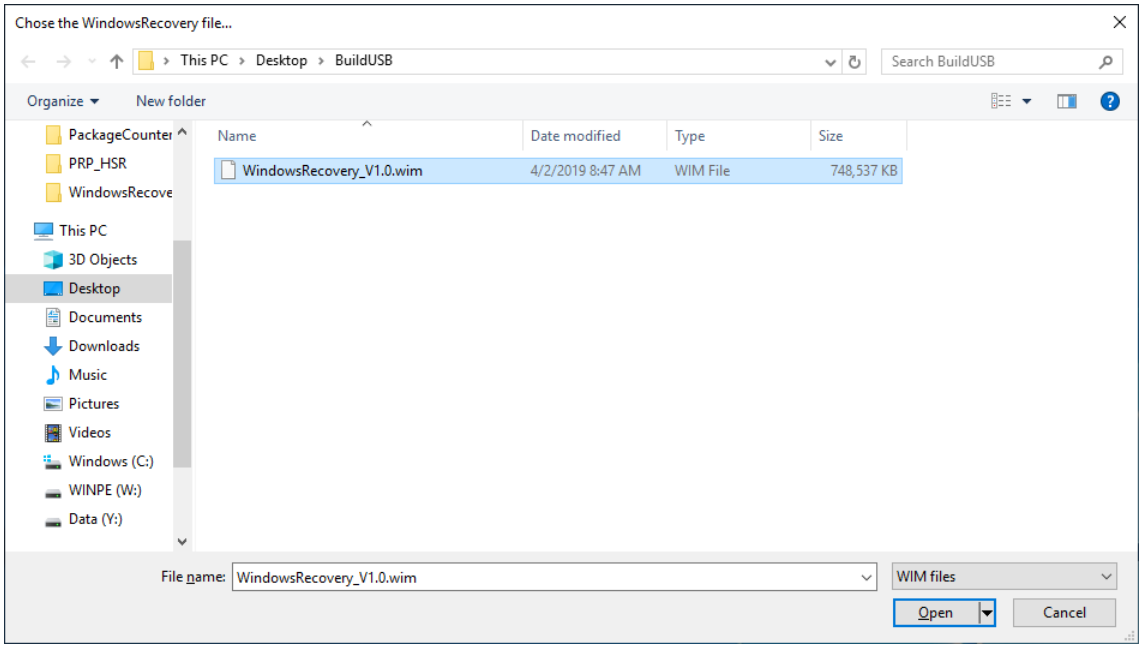


2. Run **BuildWindowsRecoveryUSB.exe** program from the ***<USB drive>*\recovery** folder.

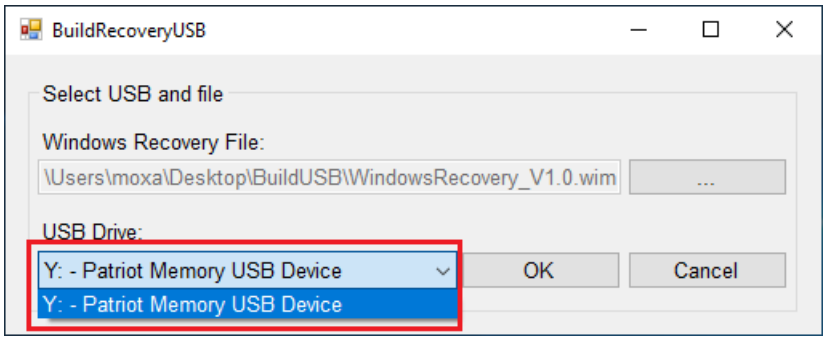


3. Click "..." to select **.wim** file from the ***<USB drive>*\recovery** folder





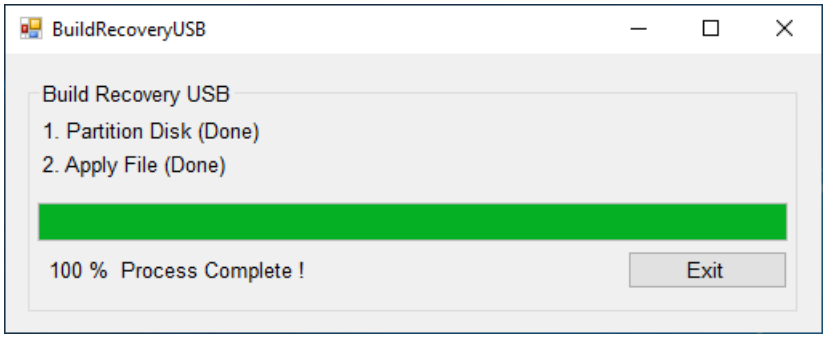
4. Select the **USB Drive** option and click **OK**.



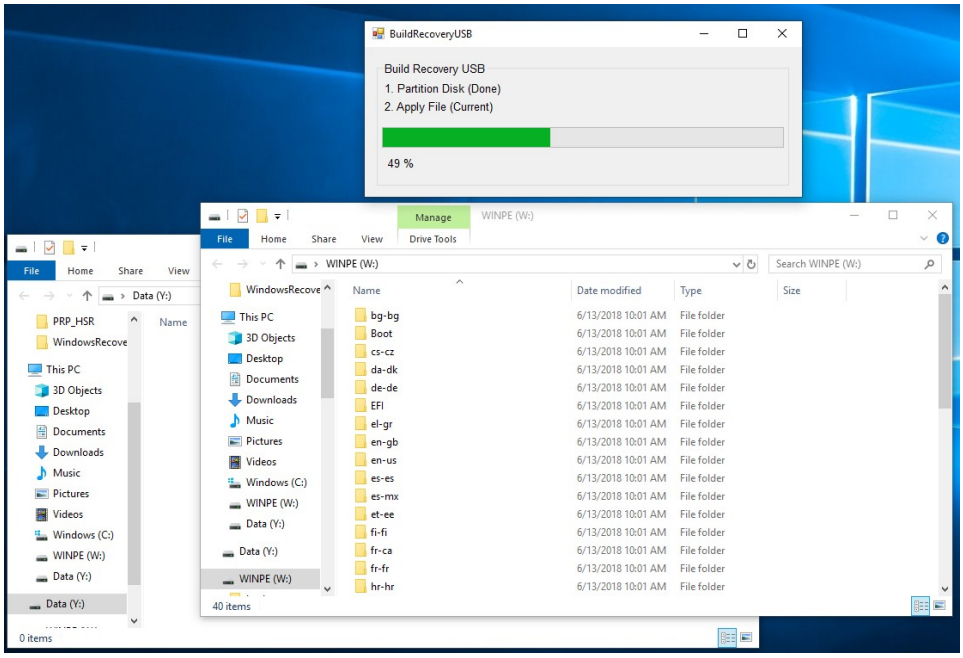
The program will format the USB disk. Two volumes are created on the USB disk and the boot file is copied to the USB disk.

NOTE Additional pop-up windows may open during this process. You can close these windows after the process is completed.

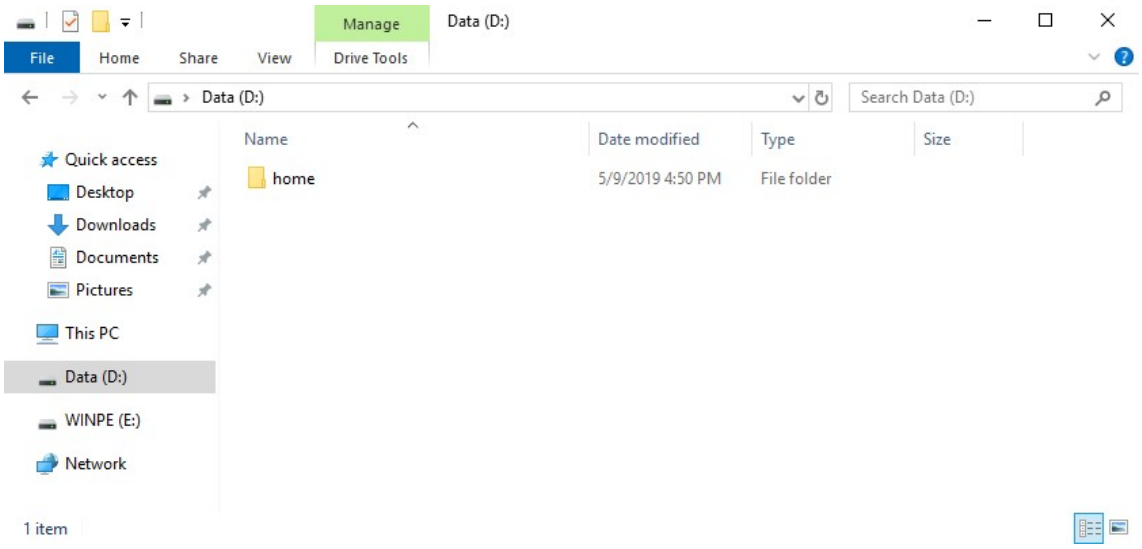
5. Click **Exit** to close the program.



After the process is completed, two volumes are created on the USB disk, as follows:

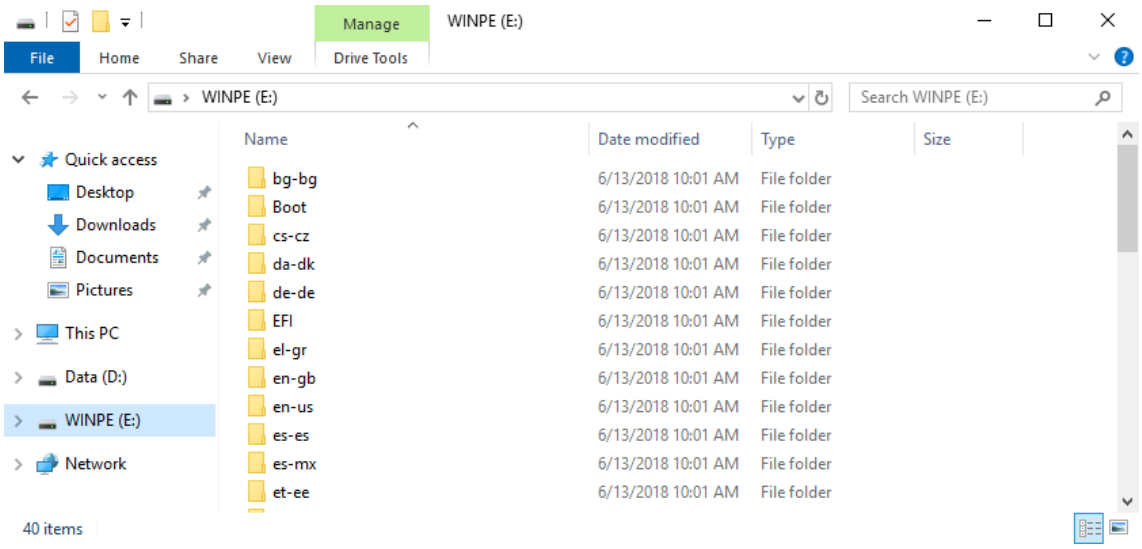


a. The first volume includes a **home** folder, which can be used to store the OS image.

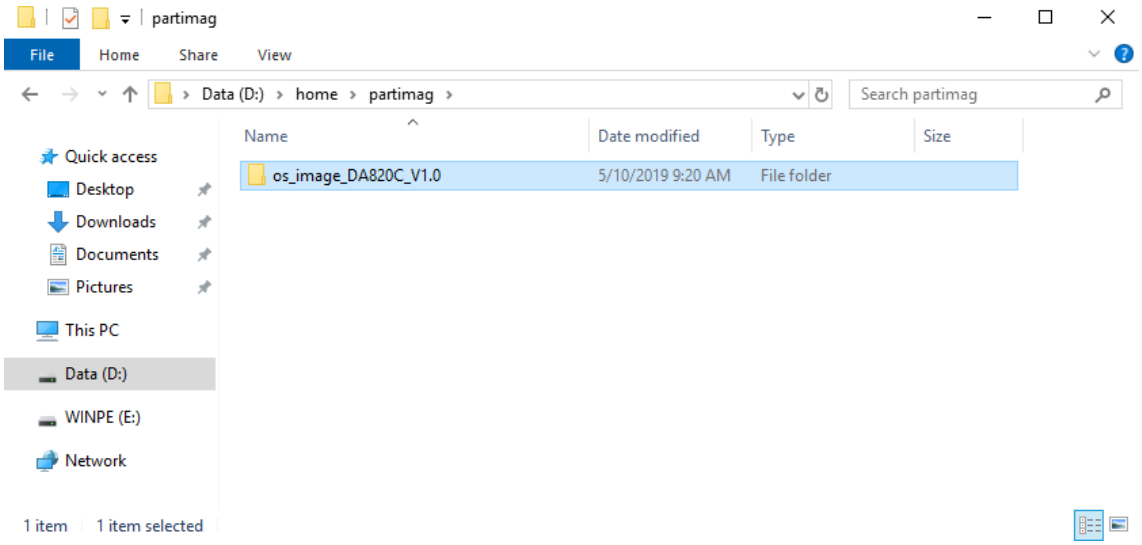


b. The second volume includes multiple folders that contain data that is required for booting into WinPE to run the recovery program.

NOTE This volume may not be visible in systems running Windows 7 or Windows 10 versions prior to 1803.



6. Copy the **os_image_ModelName** directory from the ***<USB drive>*\recovery** folder to the **\home\partimag** folder on the USB drive.

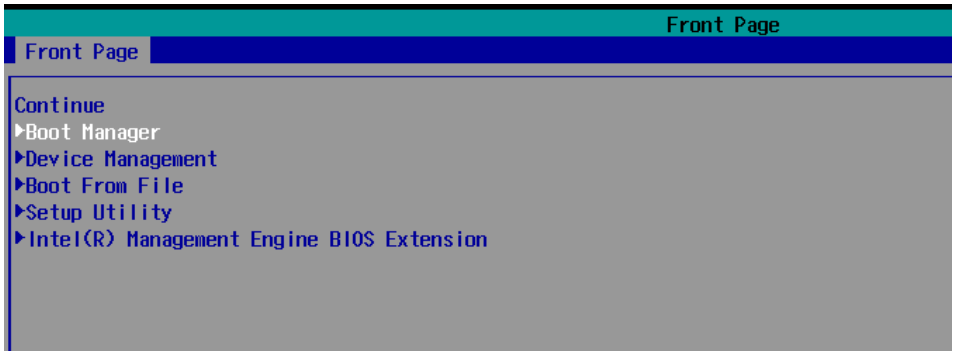


The USB disk is now ready for use in the recover process.

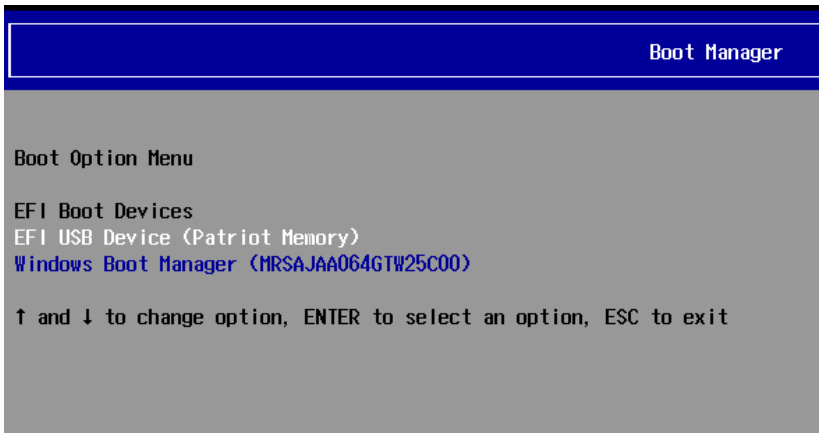
Booting From the USB Recovery Disk

To boot up from the USB recovery disk, do the following:

1. Turn on the computer and press **F2** when you hear the beep.
2. In the BIOS setup menu, select **Boot Manager** and press **Enter** to continue



3. Select the **EFI USB Device** and press Enter to continue to boot from the USB device.



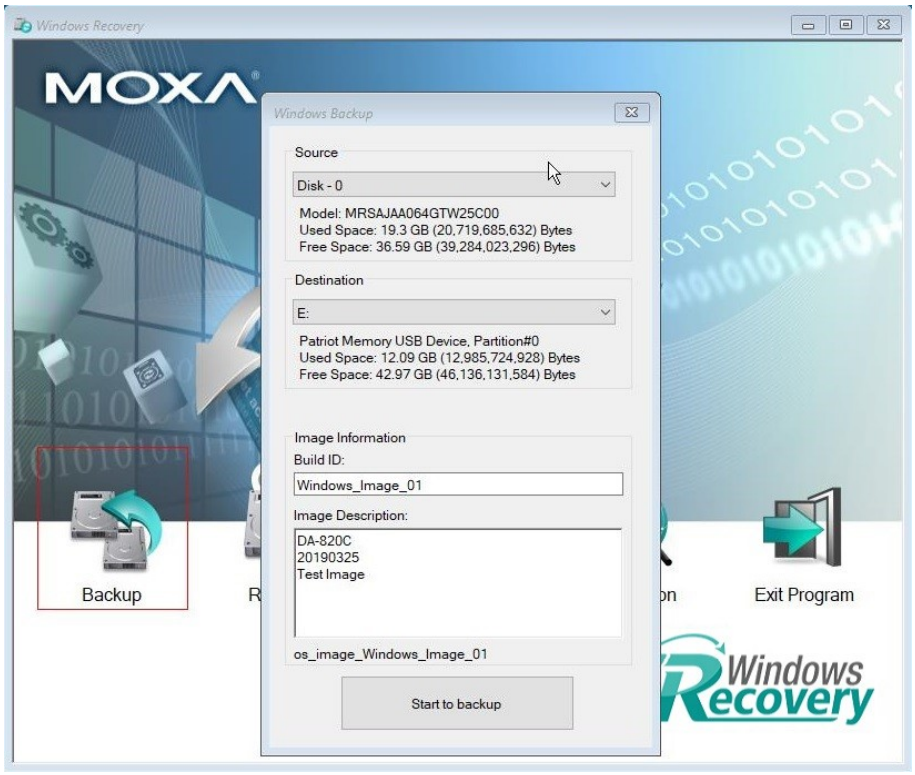
System Image Backup

To back up a system image on to a USB disk, do the following:

1. Boot the system from the USB disk.

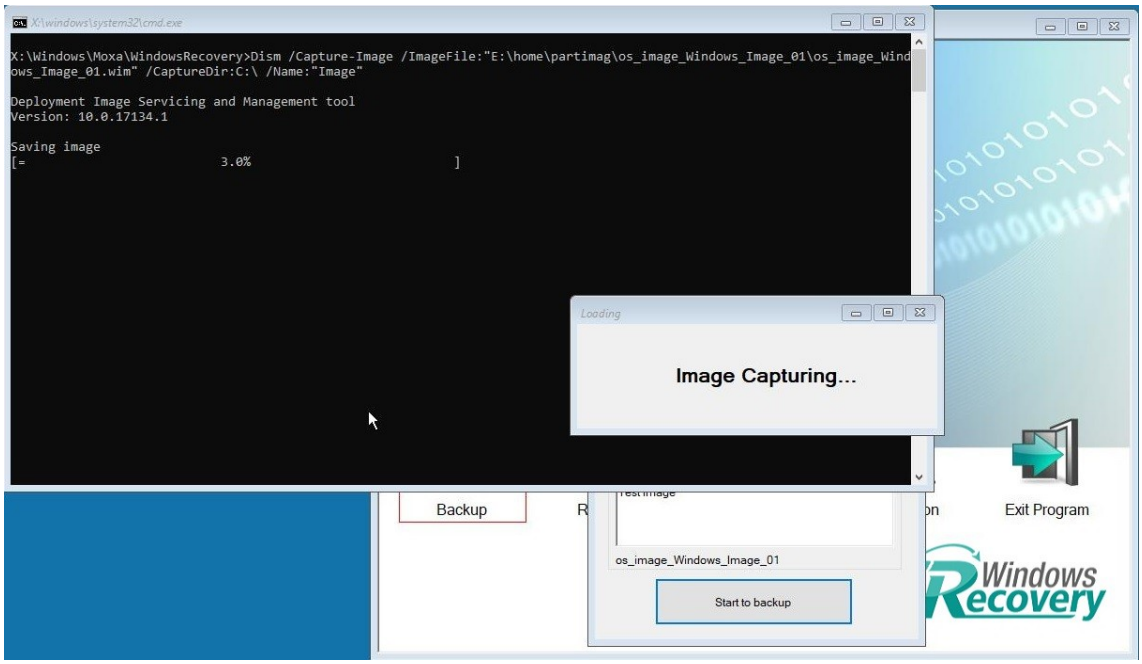
   The **Windows Preinstallation Environment (WinPE)** and the **Windows Recovery** utility will be displayed.
2. In the **Windows Recovery** utility, select the **Backup** option.

3. Select the **Source** disk to backup and the **Destination** USB to store the OS image in; specify a **Build ID** and an **Image Description** for the image file.
4. Click **Start to backup**.



5. Click **Yes** to continue the process.

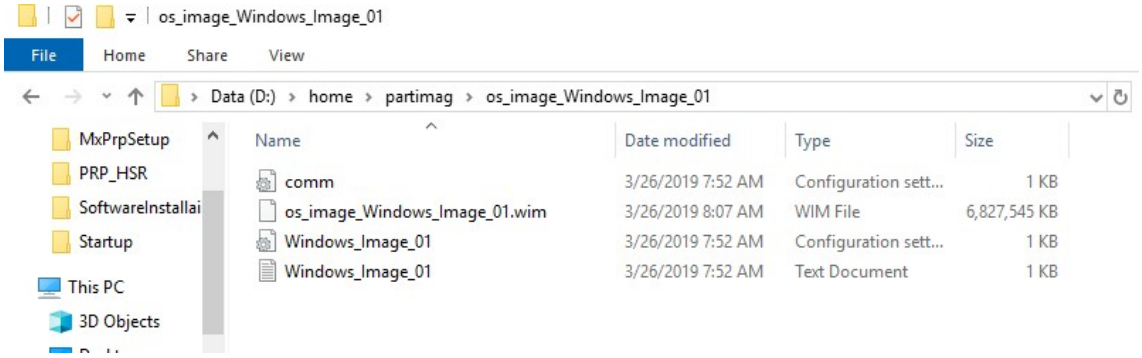
6. Wait for the backup process to finish.



7. After the backup process is completed, click **OK**.

8. Select the **Shutdown** option in the tool and click **OK**.
   The program will shut down the computer.

The OS image is saved in the USB disk at **home\partimag** and the **os_image** folder will have the backup information and the image file.



Restoring the System Image

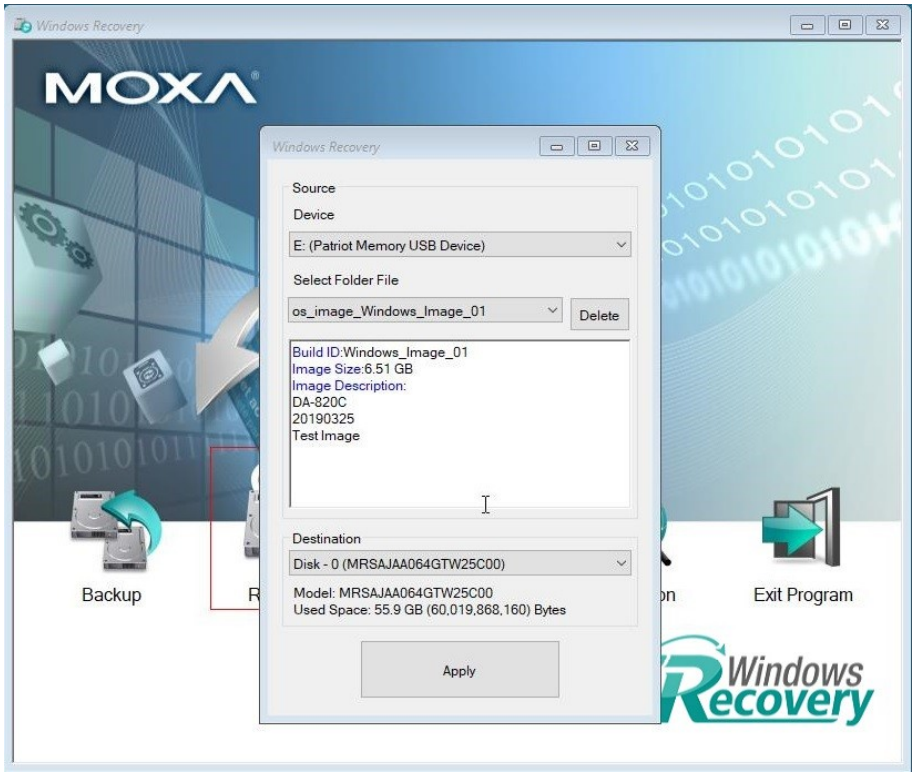
To restore the system image from a USB disk, do the following:

1. Boot the system from the USB disk.

   The **Windows Preinstallation Environment (WinPE)** and the **Windows Recovery** utility will be displayed.

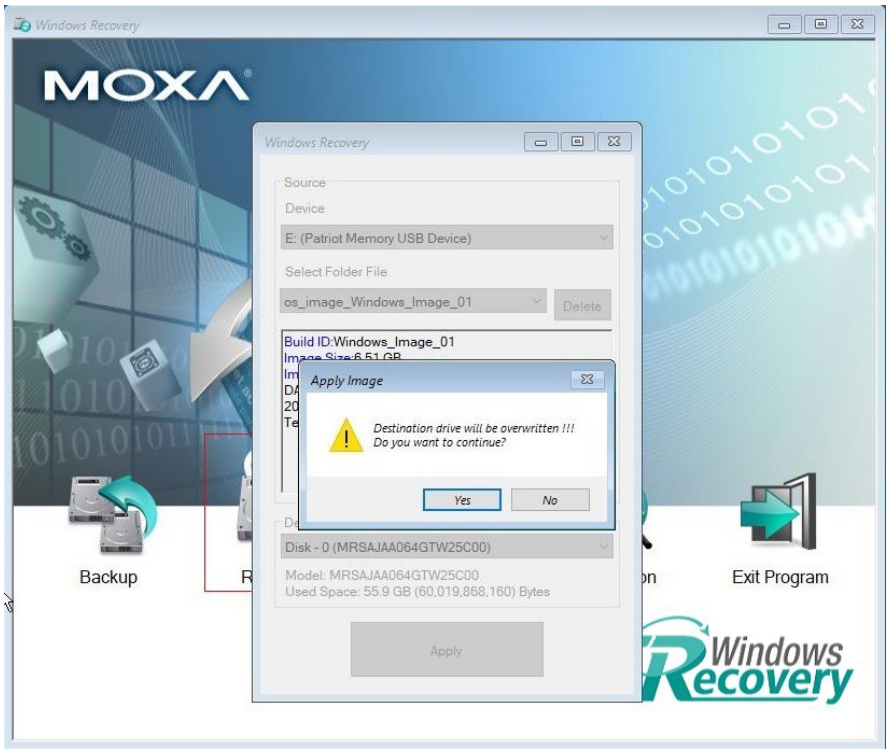
2. In the **Windows Recovery** utility, select the **Recovery** option.

3. Select the **Source** USB Device and the folder for the image file and check the image information.
4. Select the **Destination** Disk to restore the system image to and click **Apply**.



5. Click **Yes** to start the recovery process.

6. Click **Yes** to confirm.



7. Wait for the restore process to complete.

8. Click **OK**.

9. Select the **Shutdown** option and click **OK**.
   The program will shut down the computer.

10. Reboot the computer.

IMPORTANT!

When you restart the computer, you will need to wait for around 5 minutes for the computer to go through two cycles of reboots. The system configuration files will be initialized during the first boot-up process. Do not turn off the power or shut down the computer while the system is rebooting.