

Dell Wyse USB Imaging Tool

Version 3.5.0 User's Guide



Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

Chapter 1: Introduction.....	4
What is new in this release.....	4
Key features.....	4
Supported operating system and thin clients.....	5
Technical support.....	6
Chapter 2: Installing Dell Wyse USB Imaging Tool.....	7
Supported operating systems for Dell Wyse USB Imaging Tool installation.....	7
Downloading Dell Wyse USB Imaging Tool.....	7
Installing Dell Wyse USB Imaging Tool.....	7
Uninstalling Dell Wyse USB Imaging Tool.....	8
Chapter 3: Using Dell Wyse USB Imaging Tool.....	9
Boot details for supported devices.....	10
Performing an image pull operation.....	11
Configuring USB drive for pull operation.....	11
Pulling an image from a source device.....	12
Performing an image push operation.....	16
Configuring the USB drive for local image push operation.....	17
Pushing a local image to a target device.....	18
Configuring the USB drive for network image push operation.....	22
Pushing a network image to a target device.....	24
Cloning a USB drive.....	27
Configuring USB Imaging Tool settings.....	29
Appendix A: Troubleshooting.....	31
Boot issues on USB drives.....	31
Partition issues on SanDisk Cruiser flash drives.....	31
USB drive less than 1 GB error message.....	31
USB drive not found.....	31
Failed to format USB drive error message.....	32
Client stops responding and fails to display Client Reboot Window after completing merlin imaging	32
Failed to parse image file error.....	32

Introduction

Dell Wyse USB Imaging Tool version 3.5.0 provides a simple USB imaging solution to help IT administrators to easily perform the pull or push operations in thin clients by using USB drives.

Dell Wyse USB Imaging Tool helps to quickly and easily image or reimage the supported Dell Wyse thin clients. The tool enables you to configure a bootable USB drive that you can plug into a thin client or a mobile thin client to pull or push the operating system images.

What is new in this release

This release of the Dell Wyse USB Imaging Tool v3.5.0 provides the below features:

- Supports Imaging operation (PULL/PUSH) for Dell OptiPlex 3000 thin client.
- Supports Imaging with Secure Boot option.
- Updates to Merlin version 4.1.0.

Key features

USB Imaging Tool has the following key features:

- Provision to push an Image from a network.
- A simple and friendly user interface that enables you to perform the various operations with ease.
- All the available USB disks and drives connected to the thin client devices are listed.
- Provision to configure a USB drive to copy or pull the operating system Image from the source thin client devices. Only operating system and only BIOS (which includes CMOS) can be pulled separately.
- Provision to configure a USB drive to update or push an operating system Image to target thin client devices. Image push operation can be performed for only operating system and only BIOS (which includes CMOS). A single USB key can store multiple Images of different platforms.
- Provision to clone an already configured USB drive containing the Image that you want to push to target devices. Cloning helps to simultaneously update the operating system on multiple thin client devices.
- Administrators can easily configure the backup path and back up the data present in the USB key during configuration. After the device is configured, the imaging tool seamlessly restores the data back to the USB key.
- Support for both removable and fixed type USB keys/Hard Disk Drives (HDDs).
- Support for 64-bit operating system platforms.
- Provision to configure different types of Dell Wyse thin clients.
- Secure boot is enabled and supported.
- Support for Windows 10 Enterprise LTSC 2021 unified image
- Support for Windows 10 Enterprise LTSC 2019 unified image.

NOTE: All the 32-bit architecture platforms are end of marketing life, hence they are excluded in this release. It is recommended to use 2.1.4 or earlier version of USB imaging tool when configuring it on 32-bit architecture platforms because version 3.5.0 does not support the same.

Supported operating system and thin clients

The following table gives the list of embedded operating system and the corresponding Dell thin clients that are supported by Dell Wyse USB Imaging Tool version 3.5.0:

Table 1. Operating Systems and Dell Thin Clients

Operating Systems	Dell Thin Clients
ThinOS 9.0	• Wyse 3040 Thin Client • Wyse 5070 Thin Client • Wyse 5470 All-in-One Thin Client • Wyse 5470 Thin Client
Windows 10 IoT Enterprise LTSC (64-bit)	• Wyse 5070 Thin Client with Windows 10 IoT Enterprise LTSC 2019 • Wyse 5070 Thin Client with Windows 10 IoT Enterprise LTSC 2016 • Wyse 5470 All-in-One Thin Client with Windows 10 IoT Enterprise LTSC 2016 • Wyse 5470 Thin Client with Windows 10 IoT Enterprise LTSC 2016 • Dell OptiPlex 3000 Thin Client with Windows 10 IoT Enterprise LTSC 2021
Windows 10 IoT Enterprise LTSC (64-bit)	• Wyse 5070 Thin Client • Wyse 5470 All-in-One Thin Client • Wyse 5470 Thin Client
Wyse ThinOS	• Wyse 3040 Thin Client with ThinOS • Wyse 5040 All-in-One Thin Client with ThinOS • Wyse 5040 All-in-One Thin Client with PCoIP • Wyse 5070 Thin Client with ThinOS • Wyse 5070 Thin Client with PCoIP • Wyse 5470 All-in-One Thin Client with ThinOS • Wyse 5470 All-in-One Thin Client with PCoIP • Wyse 5470 Thin Client with ThinOS • Wyse 5470 Thin Client with PCoIP
Wyse ThinLinux	• Wyse 3040 Thin Client with ThinLinux 2.x • Wyse 5070 Thin Client with ThinLinux 2.x • Wyse 5470 Thin Client with ThinLinux 2.x

NOTE: End-of-Life (EOL) platforms are not supported in USB Imaging Tool version 3.5.0. Existing customers must use USB Imaging Tool version 2.1.4 and earlier versions.

Supported types of USB drives

Dell Wyse USB Imaging tool version 3.5.0 enables you to configure the following types of USB drives:

- USB drive less than 32 GB of disk space, removable type
- USB drive higher than 32 GB of disk space, removable type
- USB drive higher than 32 GB of disk space, fixed type
- USB drive up to 1 TB of disk space, fixed type

NOTE: Two partitions are created for USB drives greater than 32 GB of disk space and marked as Removable type. One is 350 MB usable space, which is partitioned for creation of configuration files and the remaining disk space is allocated for operating system images

- Support for 64-bit operating system platforms.
- USB Imaging Tool supports both FAT32 and NTFS file systems for fixed type USB keys or Hard Disk Drives (HDDs).

Supported USB drives

The following USB drives are successfully validated with Dell Wyse USB Imaging tool version 3.5.0:

Table 2. Supported USB drives

USB Key	Size	Version	Type
Kingston DT G4 - Security Key	8 GB	3	Removable
Kingston Data Traveler G4	16 GB	3	Removable
Kingston DT G4	16 GB	3	Removable
Kingston Data Traveler 106	32 GB	2	Removable
Kingston DT microDuo 3C C-type	32 GB	3	Removable
Kingston Data Traveler G4	64 GB	3	Removable
Kingston Data Traveler SE9	64 GB	2	Removable
Kingston Data Traveler G4	64 GB	3	Removable
Kingston DT SE9	64 GB	2	Removable
Kingston Data Traveler 101 G2	128 GB	2	Removable
SanDisk Ultra	32 GB	3	Removable
SanDisk Ultra Micro C-type	32 GB	3	Removable
SanDisk Ultra	64 GB	3	Removable
SanDisk Extreme	32 GB	3	Removable
SanDisk Extreme	64 GB	3	Removable
SanDisk Extreme	64 GB	3	Fixed
SanDisk Extreme Pro	128 GB	3	Removable
SanDisk Cruzer Blade	64 GB	2	Fixed
Seagate Expansion	500 GB	3	Fixed
Seagate Expansion	1 TB	3	Fixed
Toshiba	1 TB	3	Fixed
Transcend	16 GB	2	Removable
Transcend	64 GB	2	Removable
Transcend	64 GB	3	Removable
Transcend JetFlash	128 GB	3	Removable

 **NOTE:** USB drives from other manufacturers are not validated with USB Imaging Tool, and hence the supported USB drives are recommended.

Technical support

To access technical resources self-service portal, knowledge base articles, software downloads, registration, warranty extensions/RMAs, reference manuals, contact information, and so on, visit <https://support.dell.com>.

Installing Dell Wyse USB Imaging Tool

You can install Dell Wyse USB Imaging tool version 3.5.0 on any thin client device that meets the operating system and disk space requirements.

[Supported operating systems for USB Imaging Tool installation](#)

[Downloading USB imaging tool](#)

[Installing USB imaging tool](#)

[Uninstalling USB imaging tool](#)

Supported operating systems for Dell Wyse USB Imaging Tool installation

The following are the supported operating systems:

- Windows Server 2016 Standard
- Windows Server 2019 Standard
- Windows 10 Enterprise Build 1709 (64-bit)
- Windows 10 Enterprise Build 1809 (64-bit)

Downloading Dell Wyse USB Imaging Tool

USB Imaging Tool is available on the Dell Support site.

Steps

1. Open a web browser and go to dell.com/support.
2. Click the directory path that displays the latest version of USB Imaging tool.
The download link for USB Imaging tool software along with relevant pdf files such as Release Notes and User's Guide are displayed on the web page.
3. Click the download link (.exe file) for USB Imaging tool and navigate to the location where you want to save the self-extracting .exe file that contains USB Imaging Tool installer.
The file is downloaded in the location you have specified.

Installing Dell Wyse USB Imaging Tool

Prerequisites

- A minimum free disk space of 2 GB to download, extract, and install USB Imaging Tool.
- Microsoft Net Framework 3.5 installed.

 **NOTE:** If you are installing USB Imaging Tool version 3.5.0 on a thin client device, ensure that you disable the File-Based Write Filter (FBWF) on the device.

Steps

1. Log in as Administrator in to the system where you want to run the installation and extract the contents of the Dell Wyse USB Imaging Tool installer.
2. Navigate to the folder where you have extracted the installer and run **Dell Wyse USB Imaging Tool.exe**.
The Welcome screen is displayed.

3. Click the **Dell Application software EULA** link to read the license agreements.
4. Click **Next**.
The default installation path is displayed.
5. Click **Change** if you want to specify a custom installation path, and click **Next** after you specify the path.
6. Click **Next** to start the installation process.
7. Click **Exit** to close the installer window.

Uninstalling Dell Wyse USB Imaging Tool

Steps

1. Go to **Control Panel**, and click **Programs and Features**.
 2. From the programs list, select **Dell Wyse USB Imaging Tool**.
 3. Click **Uninstall**.
The **Dell Wyse USB Imaging Tool Uninstallation** screen is displayed.
 4. Click **Next**.
After the uninstallation is complete, the **Uninstallation Complete** message is displayed.
 5. Click **EXIT** to close the **Uninstaller** window.
-  **NOTE:** You can also re-run the `Dell Wyse USB Imaging Tool.exe` file on your thin client to uninstall USB Imaging tool.

Using Dell Wyse USB Imaging Tool

Dell Wyse USB Imaging Tool enables you to prepare USB drives to perform various operations on source and target thin clients. The tasks that you can perform are:

- **Image Pull**—Enables you to prepare the USB drive to pull an operating system image or BIOS configuration including CMOS settings from a source device.
- **Image Push**—Enables you to prepare the USB drive to push an operating system image or BIOS configuration to a target device.
- **Clone USB**— Enables you to create a copy of a configured USB drive that is configured for the pull or push operation.

NOTE: Only configured images and supportive files are cloned.

- **Configure Backup Path**— Enables you to set the backup path to back up the contents of a USB drive.

After you plug a USB drive to the thin client and start the Dell Wyse USB Imaging Tool, the following screen is displayed: The number of USB drives that are connected to your thin client are displayed on the **Home** screen.

The USB drive attributes that are displayed are **Used Space**, **Free Space** and **Total Space**.

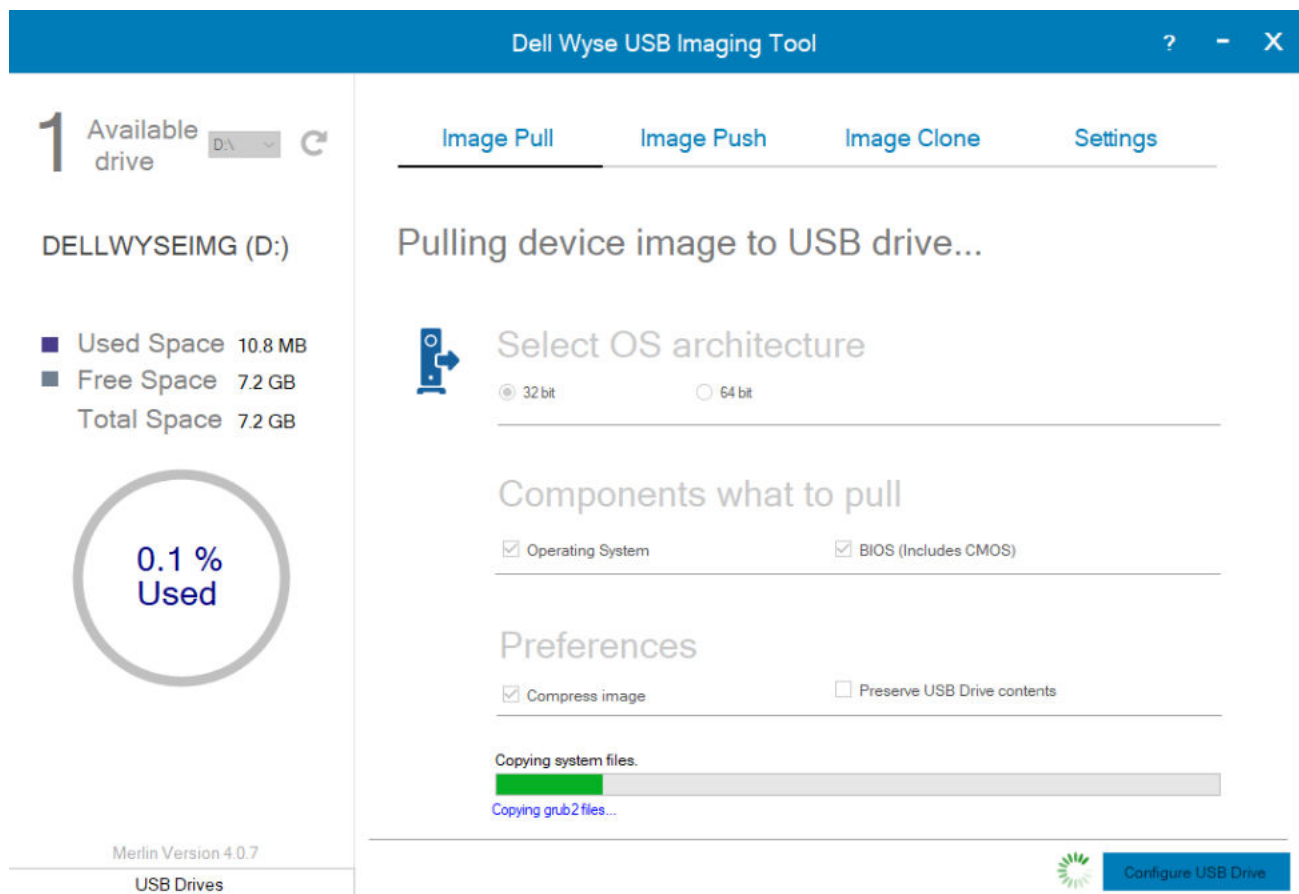


Figure 1. Home screen

To view the USB drives, click **USB Drives** in the left pane.

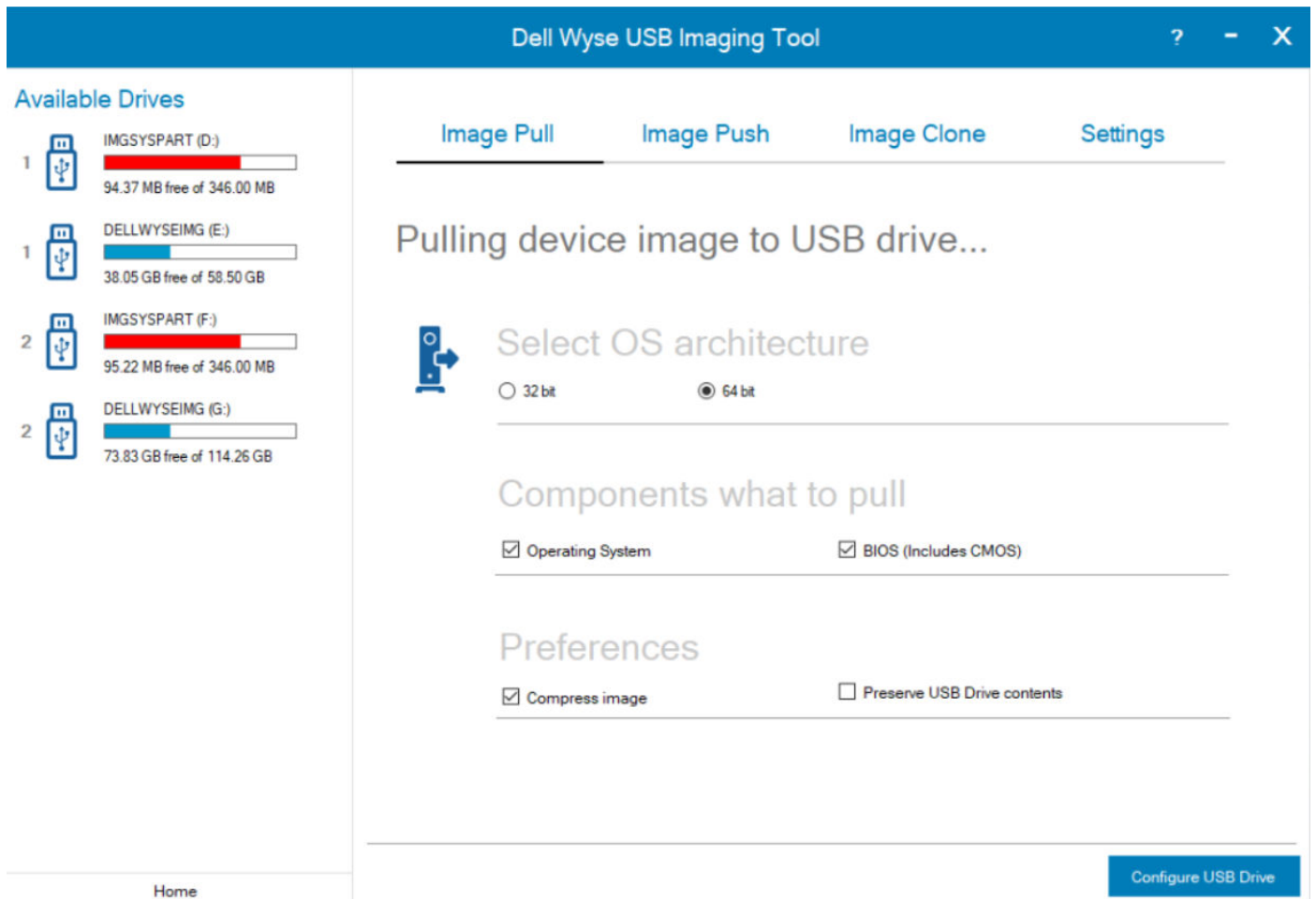


Figure 2. Available USB drives

Boot details for supported devices

The following table provides the guidelines for configuring the boot options on the supported thin-client devices:

Table 3. Supported thin-client devices and corresponding boot guidelines

Supported thin-client devices	Boot guidelines
- Wyse 5070 Thin Client with Windows 10 IoT Enterprise Redstone5 - Wyse 5070 Thin Client with ThinLinux 2.x - Wyse 5070 Thin Client with ThinOS - Wyse 5070 Thin Client with PCoIP - Wyse 5470 All-in-one Thin Client with Windows 10 IoT - Wyse 5470 All-in-one Thin Client with ThinOS - Wyse 5470 All-in-one Thin Client with PCoIP - Wyse 5470 Thin Client with Windows 10 IoT - Wyse 5470 Thin Client with ThinLinux 2.x - Wyse 5470 Thin Client with ThinOS - Wyse 5470 Thin Client with PCoIP - Dell OptiPlex 3000 Thin Client with Windows 10 IoT Enterprise LTSC 2021	To enter and use the boot menu: 1. Plug in the configured USB drive to the thin client. 2. During boot, keep pressing the F12 key until the Boot menu is displayed. 3. Select the UEFI option displaying your USB drive vendor name and press Enter. 4. Follow the steps displayed on the screen.

Performing an image pull operation

An image pull operation consists of two parts. In the first part, you configure the USB drive for the pull operation by using USB Imaging Tool. In the second part, you plug in the USB drive to a source device and perform the pull operation.

NOTE: When you prepare the USB drive for a pull operation, the USB drive is also configured for a push operation. You can use the same drive for a pull or push operation. However, if you use the same key for the push operation, ensure that the images you want to push are copied to the USB drive.

For more information, see
[Configuring USB drive for pull operation.](#)
[Pulling an image from a source device.](#)

Configuring USB drive for pull operation

Steps

1. Start USB Imaging Tool.
The tool displays the **Image Pull** screen by default.

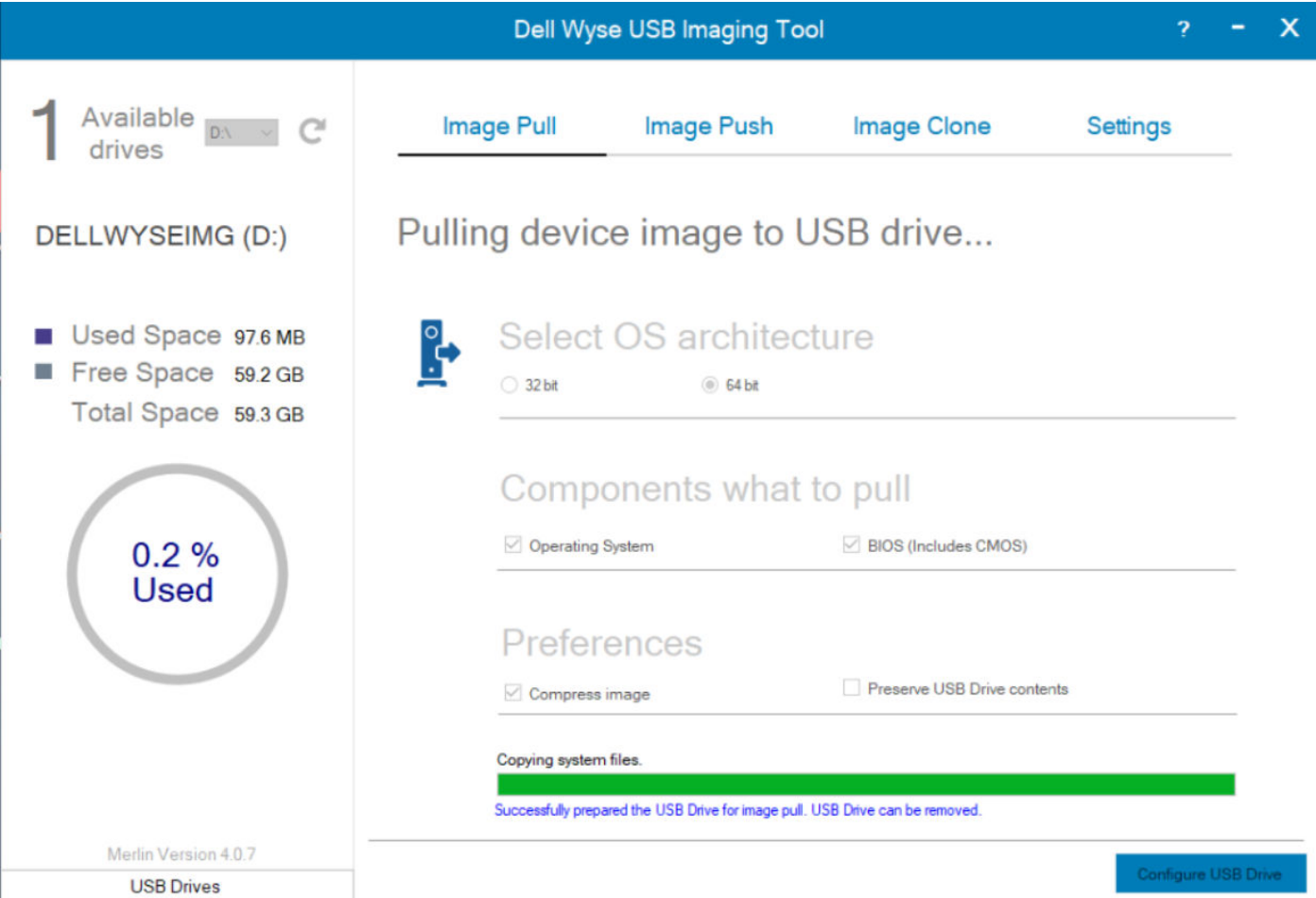


Figure 3. Image Pull

2. Plug in the USB drive to the system running the USB Imaging Tool.
3. Click the **Refresh** button to populate the USB drives.
- NOTE:** You can have multiple USB drives plugged to your system.
4. Select the USB drive from the **Available drives** drop-down list.

5. Select the operating system architecture that you want to pull from the source device, and then select the following:
 - **64 bit**—Select only this option to copy the 64-bit architecture based OS from the source device.
6. Select the components that you want to pull from the source thin client device.

You can select either one or both of the following options:

 - **Operating System**—Select this option to pull the operating system image from the source device.
 - **BIOS (Includes CMOS)**—Select this option to pull only the BIOS and CMOS configuration from the source device.

 **NOTE:** BIOS and CMOS configuration is supported only on legacy Wyse devices.
7. To configure the USB drive, select the **Preferences** option.

You can select either one or both of the following options:

 - **Compress image**—Select this option to pull the image from the source device in a compressed format.
 - **Preserve USB Drive contents**—Select this option to preserve all the data present in the USB drive before configuring it for an image pull operation.

 **NOTE:** It is recommended to backup the contents of data partition, if any, as the data partition is not saved.
8. Click **Configure USB Drive**.

The USB drive is formatted, and the status is displayed in the progress bar.

Results

USB Imaging Tool formats the USB drive, copies the necessary files based on the selected OS architecture, and completes the configuration of USB drive for the image pull operation.

Pulling an image from a source device

Prerequisites

Before you begin the pull operation, ensure that your device is configured to boot from the USB drive.

Steps

1. Plug in the USB drive to the supported source device.
2. To access the boot menu, reboot the device, and keep pressing either **P** key or **F12** key during system reboot depending on your thin client model; To choose the boot menu function key (P or F12) for your thin client model, see [Boot details for supported devices](#).

The boot options are displayed, and you can see either of the following boot menu screens depending on your thin client model:

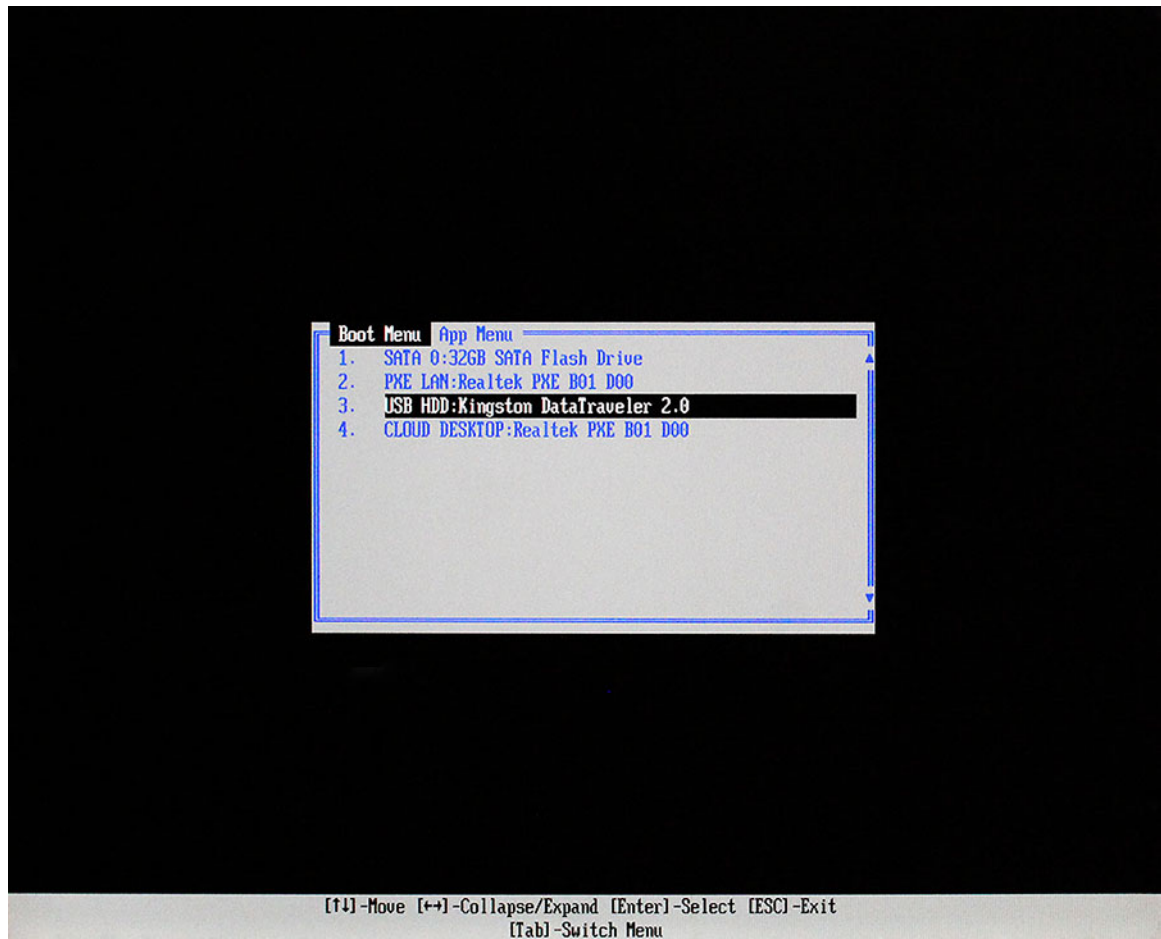


Figure 4. Boot Menu

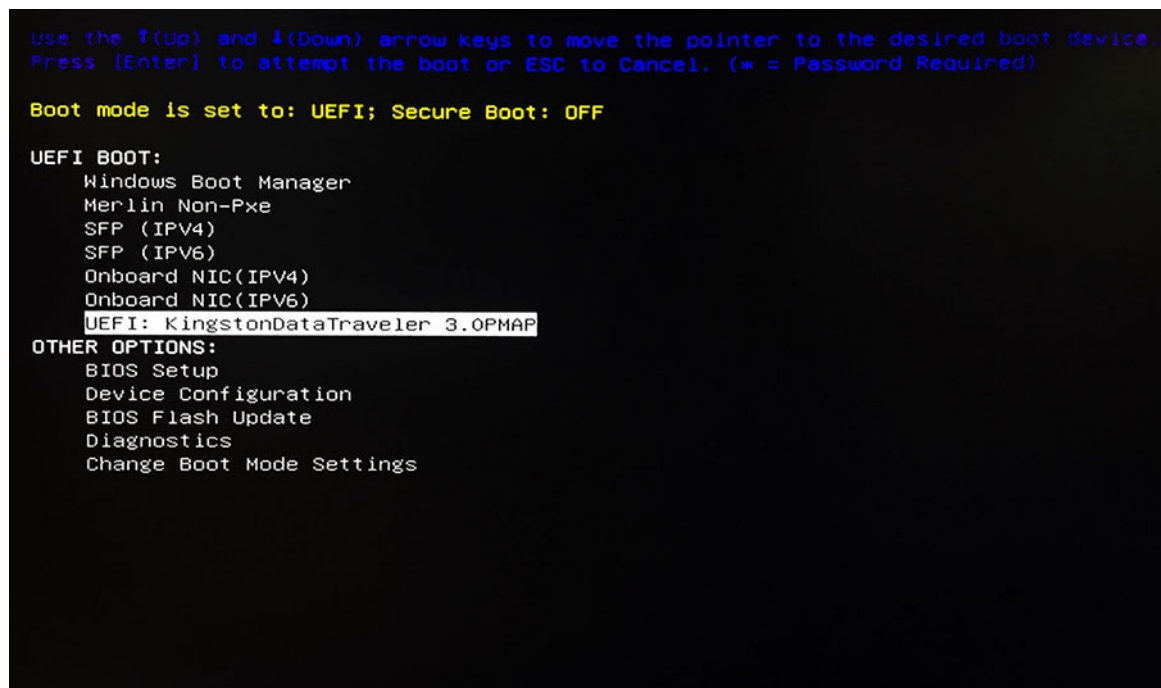


Figure 5. Boot Menu

3. Select the USB option displaying your USB drive vendor name, and press Enter.
The device reboots from the USB drive, and the following screen is displayed:

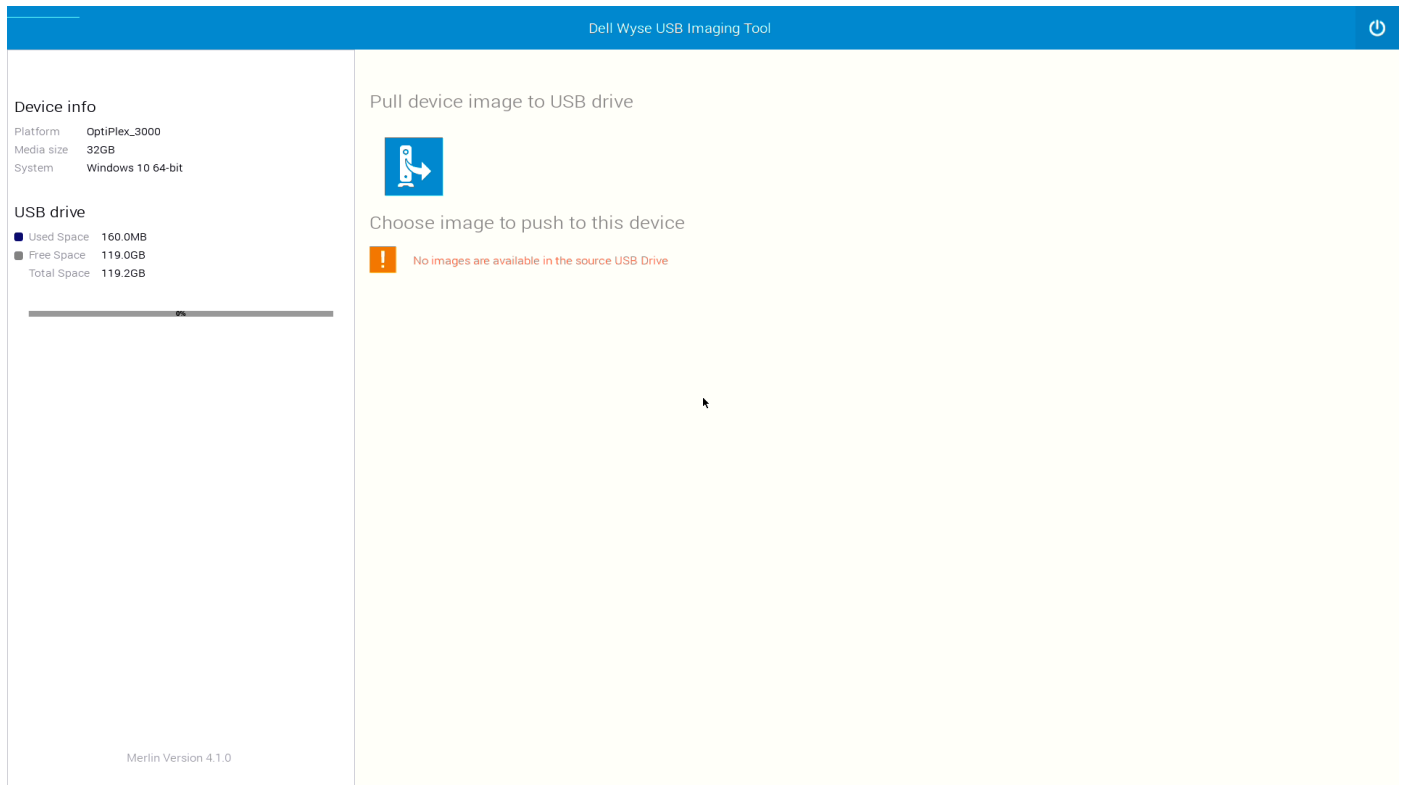


Figure 6. Pulling the image to the USB drive

In the left pane, the following information is displayed:

- **Device info**—**Device info** displays information such as platform, media, and the system of the source device.
- **USB drive**—**USB drive** displays information such as used space, free space, and total space of the USB drive.

4. Click the  icon.

If the source device runs an operating system other than ThinLinux 2.0, go to step 6.

The **Pulling device image to USB drive** screen is displayed.

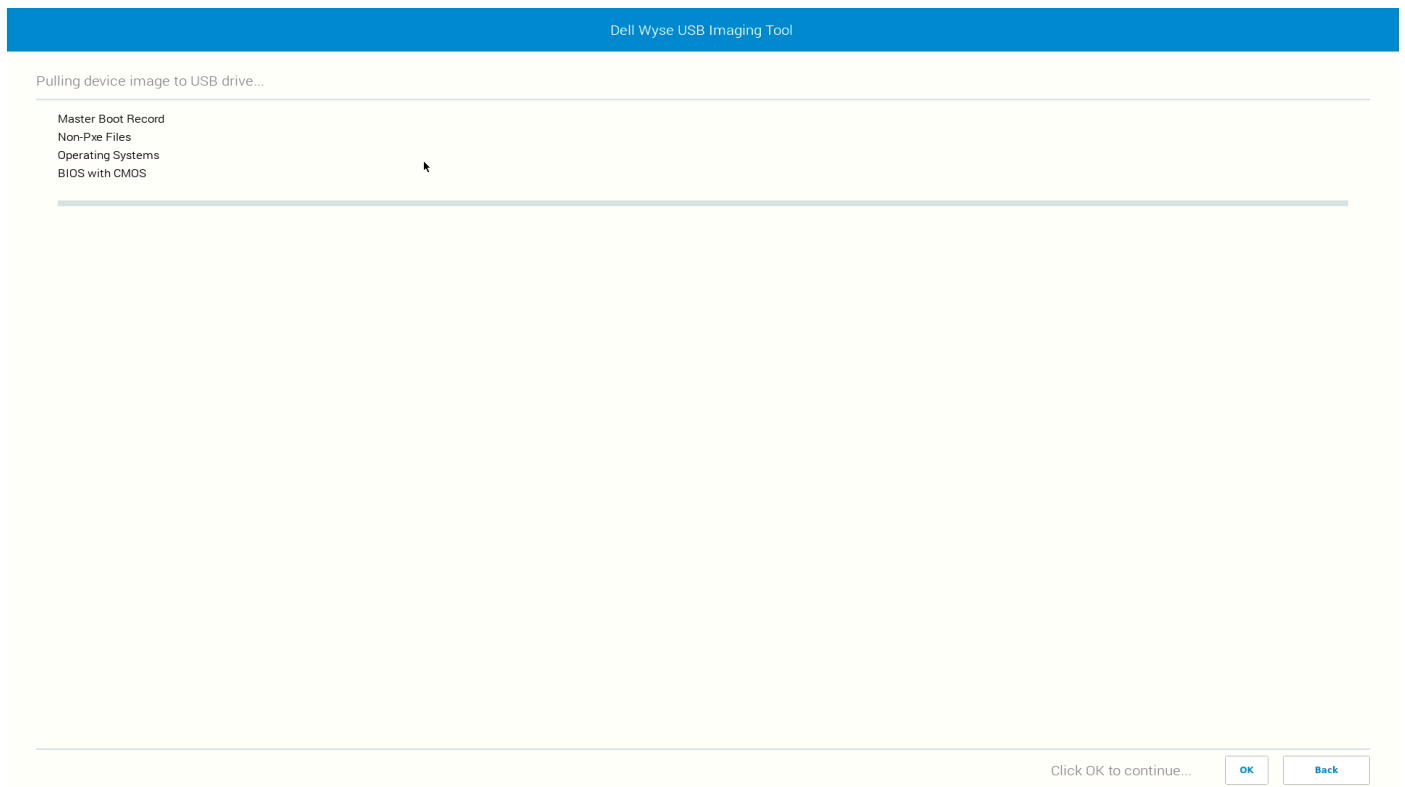


Figure 7. Pulling the image to the USB drive

5. If the source device runs ThinLinux 2.0 operating system, select one of the following options:

- **Boot + Recovery + OS**
- **Boot + Recovery (Recommended)**
- **Boot + OS**

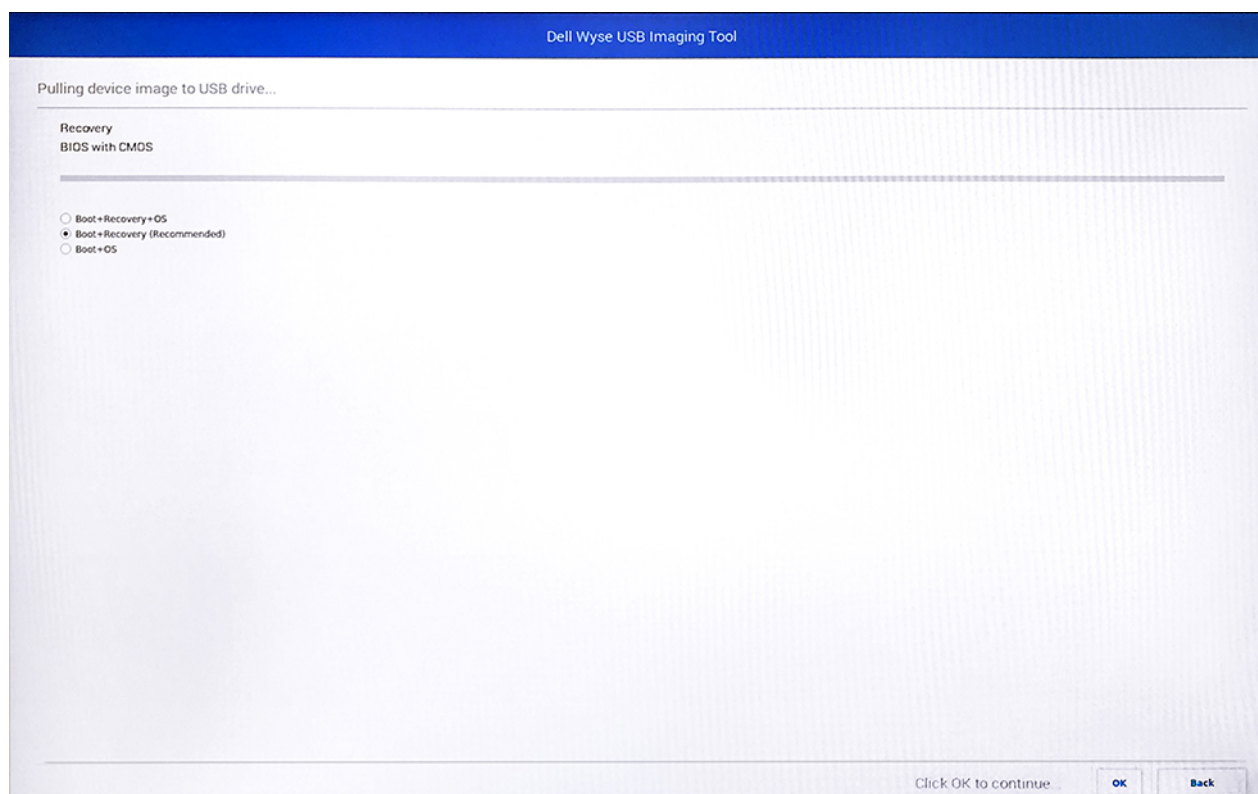


Figure 8. Pulling the ThinLinux 2.0 image to the USB drive

6. Click **OK**.

The image pull operation starts, and the overall status is displayed in the progress bar.

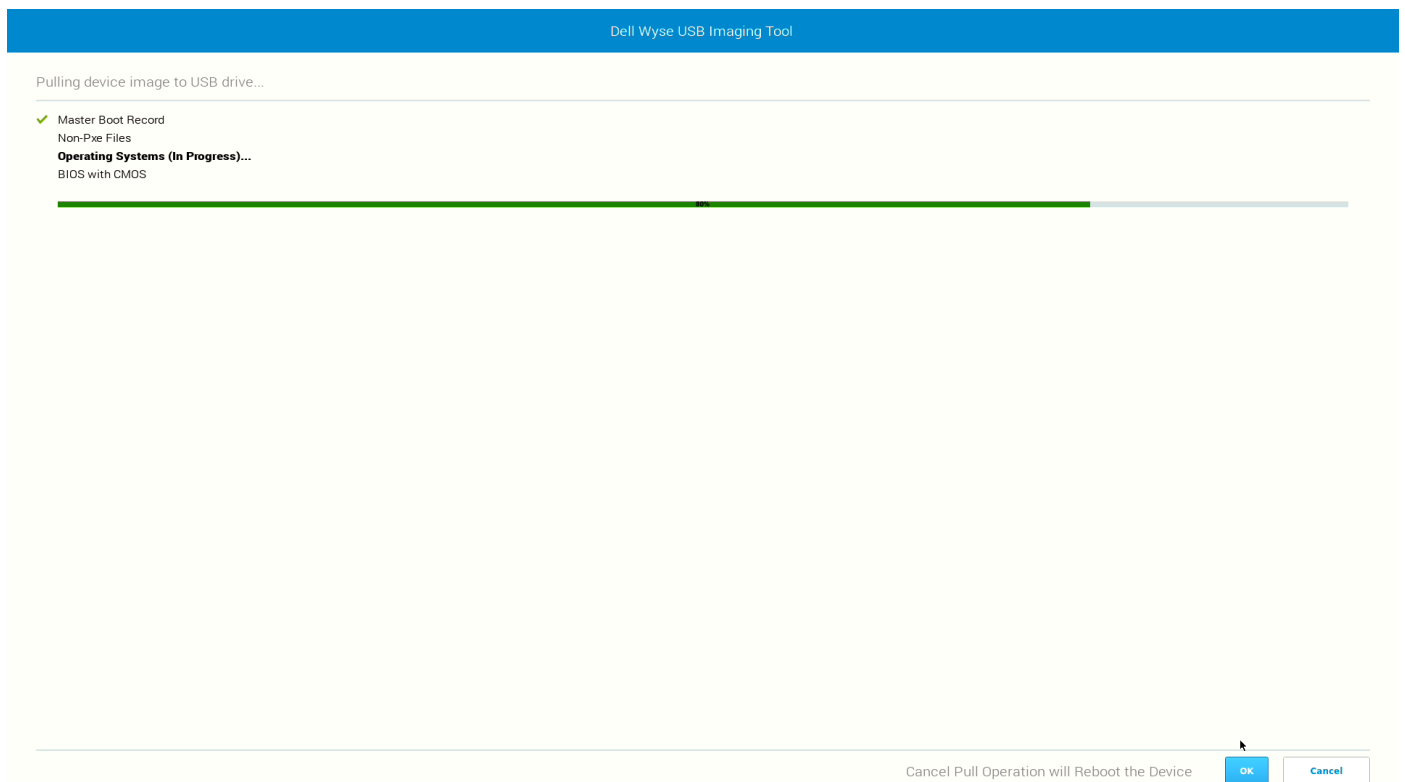


Figure 9. Copying the image to USB key

NOTE: The pull operation pulls the operating system image, or the BIOS configuration, or both depending on the options you have selected in the **Image Pull** screen of USB Imaging Tool. If you have selected the **Compress Image** option, then the image is pulled in a compressed format.

7. After the pull operation is complete, remove the USB drive from the source device.
8. To reboot the device, click **Restart**.

Performing an image push operation

Similar to the image pull operation, the image push operation also consists of two parts. In the first part, you prepare the USB drive to perform an image push operation. In the second part, you push the operating system or BIOS images on to the target devices. You can add multiple images on a single USB drive.

Before you prepare the USB drive:

1. Download or obtain the image to be deployed to the device.
2. Extract the contents of the image to your local drive (or network drive).

If you are extracting a Windows10 IoT image, the extracted image should be as per the folder structure that is given below:

- Windows10_IoT_Enterprise_LTSC_2021_OptiPlex_3000_Oct2022 - First-level folder
 - Windows10_IoT_Enterprise_LTSC_2021_OptiPlex_3000_Oct2022 - Second-level folder
 - Windows10_IoT_Enterprise_LTSC_2021_OptiPlex_3000_Oct2022.rsp
 - Windows10_IoT_Enterprise_LTSC_2021_OptiPlex_3000_Oct2022 - Third level folder
 - commandsXml.xml
 - initrd64.pxe
 - mbr.img
 - par2.img
 - par3.img
 - par4.img
 - part5Image1.img

- part5Image2.img
- part5Image3.img
- part5Image4.img
- vmlinuz64.pxe

NOTE: If the folder structure for Windows10 IoT is not as mentioned above, you cannot proceed with the image push operation.

You can perform the push operation in two ways:

- Local image push
 - [Configuring USB drive for local image push operation](#)
 - [Pushing local image to a target device](#)
- Network image push
 - [Configuring USB drive for network image push operation](#)
 - [Pushing network image to a target device](#)

Configuring the USB drive for local image push operation

Steps

1. Start USB Imaging Tool.
The tool displays the **Image Pull** screen by default.
2. Click **Image Push** to display the **Image Push** screen.

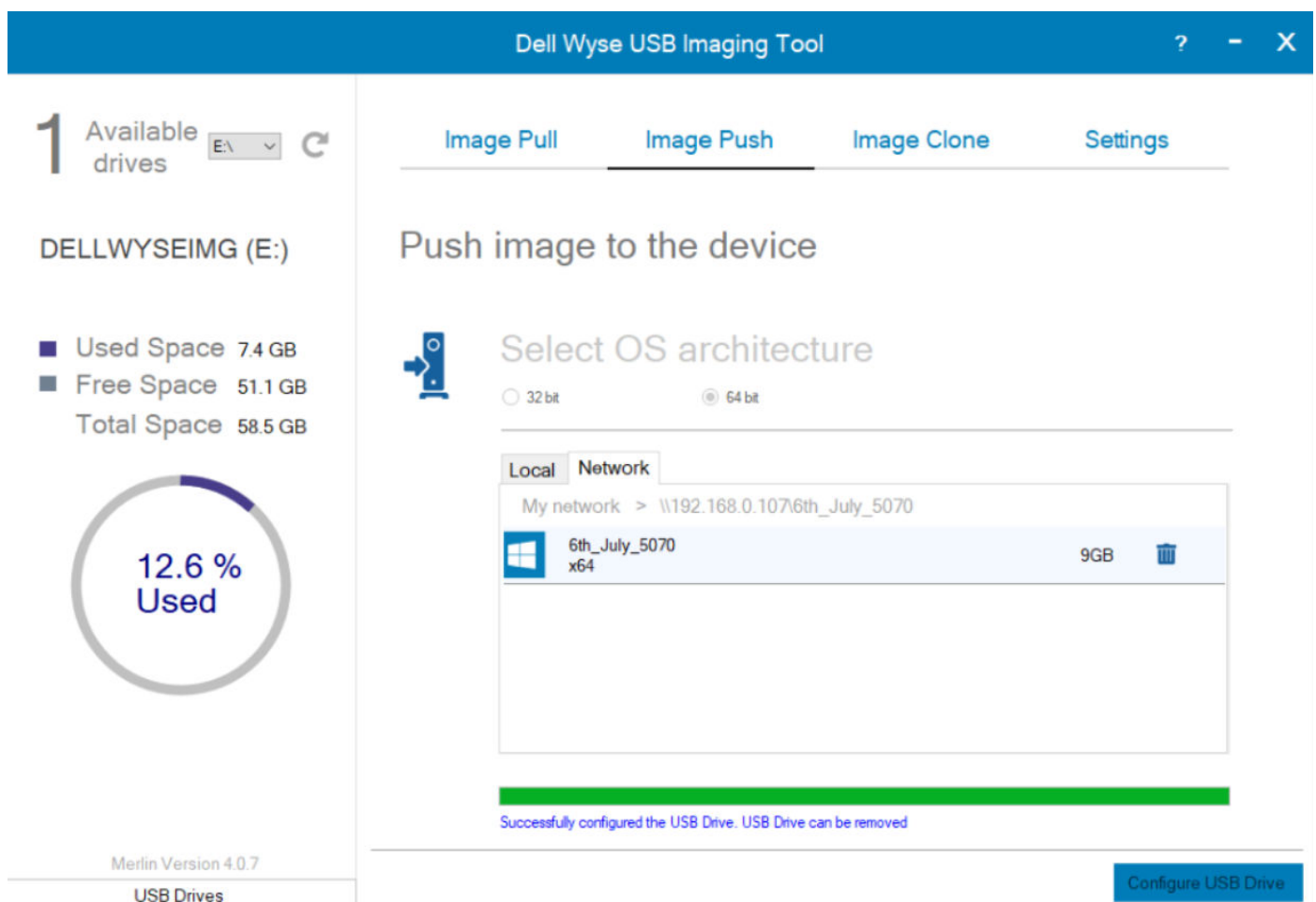


Figure 10. Image push

3. Plug in the USB drive to the system running USB Imaging Tool.
4. Select the USB drive from the **Available drives** drop-down list.

If your USB drive already contains images, the images are displayed on the screen.

5. Select the OS architecture that you want to push to the device.
 - **64 bit**—Select this option to push the 64-bit architecture based OS to the device.
6. To add a new local image on the USB drive, do the following:

Option	Description
Add a new Image on the USB drive	Perform the following steps: a. Click the Local tab. b. To add an image from a different location, click the + icon. c. Navigate to the location where you have saved the image files. d. Select the .rsp file from the image folder. You can also select the Command XML file. For this, select the Command XML option from the drop-down against File Name, and navigate to the commands XML file location. This file is located under a sub-folder that has the same name as the OS image folder. e. Click OK to add the image to the table. The image is displayed in the table.
Delete existing Images on the USB drive	To delete the existing images, click the Delete icon on the images displayed in the table. The images are deleted from the table but are only marked for deletion in the USB drive.

You can view the **OS** and **BIOS** check boxes selected or cleared as per the contents of the image files you have chosen. For example, if the image file contains only the BIOS configuration, only the BIOS check box is selected for that image.

If both the **OS** and **BIOS** check boxes are selected and you clear one of the check boxes, then that image component is not added on the USB drive.

NOTE:

- In a single session, you cannot configure the local image and network image path simultaneously.
- You cannot add the same network image path with different file transfer protocols, such as FTP, HTTP, HTTPS, or CIFS.
- On the **Image Push** screen, the information entered in the local image fields are retained if you configure the USB drive or else navigating between different tabs results in information loss.
- On the **Image Push** screen, the information entered in the network image fields are retained when you switch to the **Local** tab.
- On the **Image Push** screen, the information entered in the local and network image fields are not retained when you switch to **Image Pull**, **Image Push**, **Clone**, or **Settings** tabs.

7. Click **Configure USB Drive**.
8. Select one of the following options:
 - **Update (Recommended)**—Select this option to add or delete images from an existing configured USB drive.
 - **Format and Update**—Select this option if your USB drive is corrupted or not configured. This option enables you to back up contents, initialize the drive, and add or delete the selected image.

The status is displayed in the progress bar.

Pushing a local image to a target device

Prerequisites

Before you begin the pull operation, ensure that your device is configured to boot from the USB drive.

Steps

1. Plug in the USB drive to the supported source device.
2. To access the boot menu, reboot the device, and keep pressing either the **P** key or **F12** key during system reboot depending on your thin client model; To select the boot menu function key (P or F12) for your thin client model, see [Boot details for supported devices](#).

The boot options are displayed, and you can see either of the following boot menu screens depending on your thin client model:

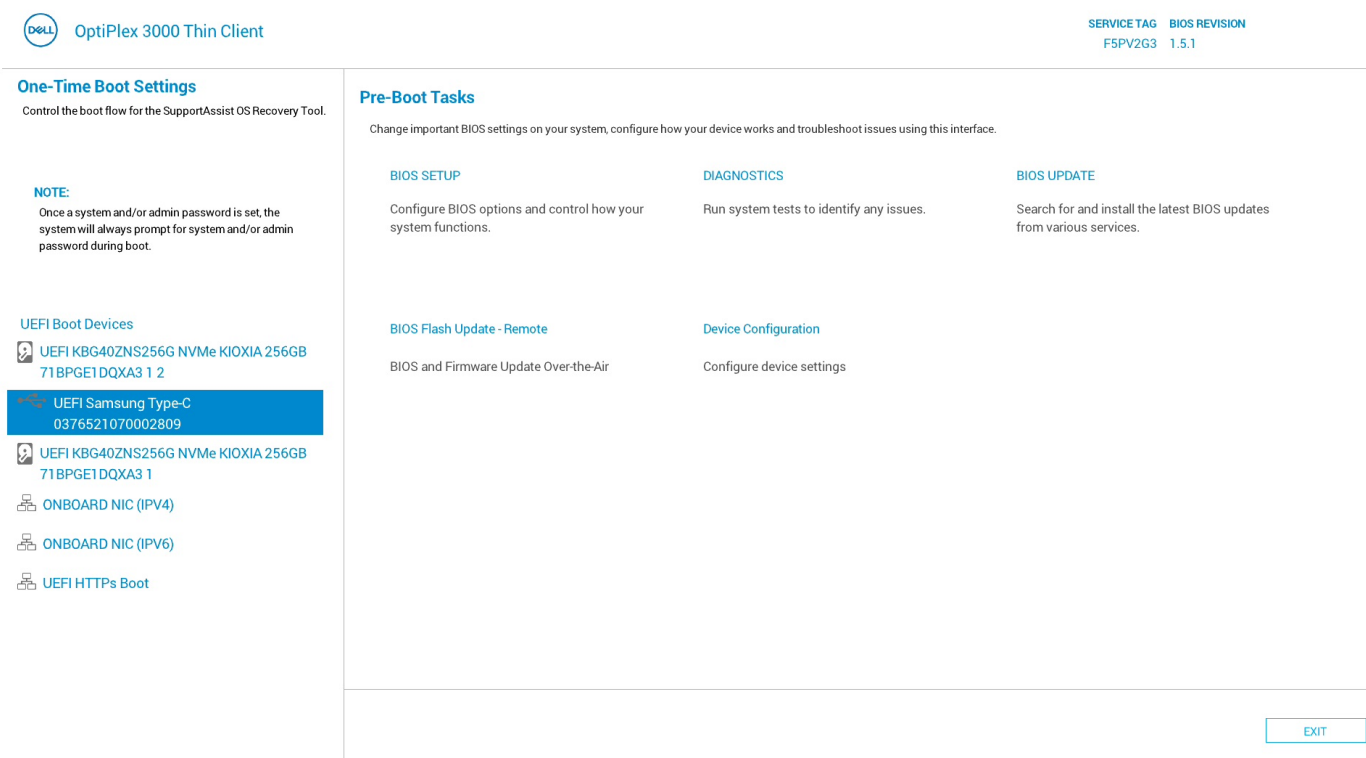


Figure 11. Boot menu- OptiPlex 3000 Thin client

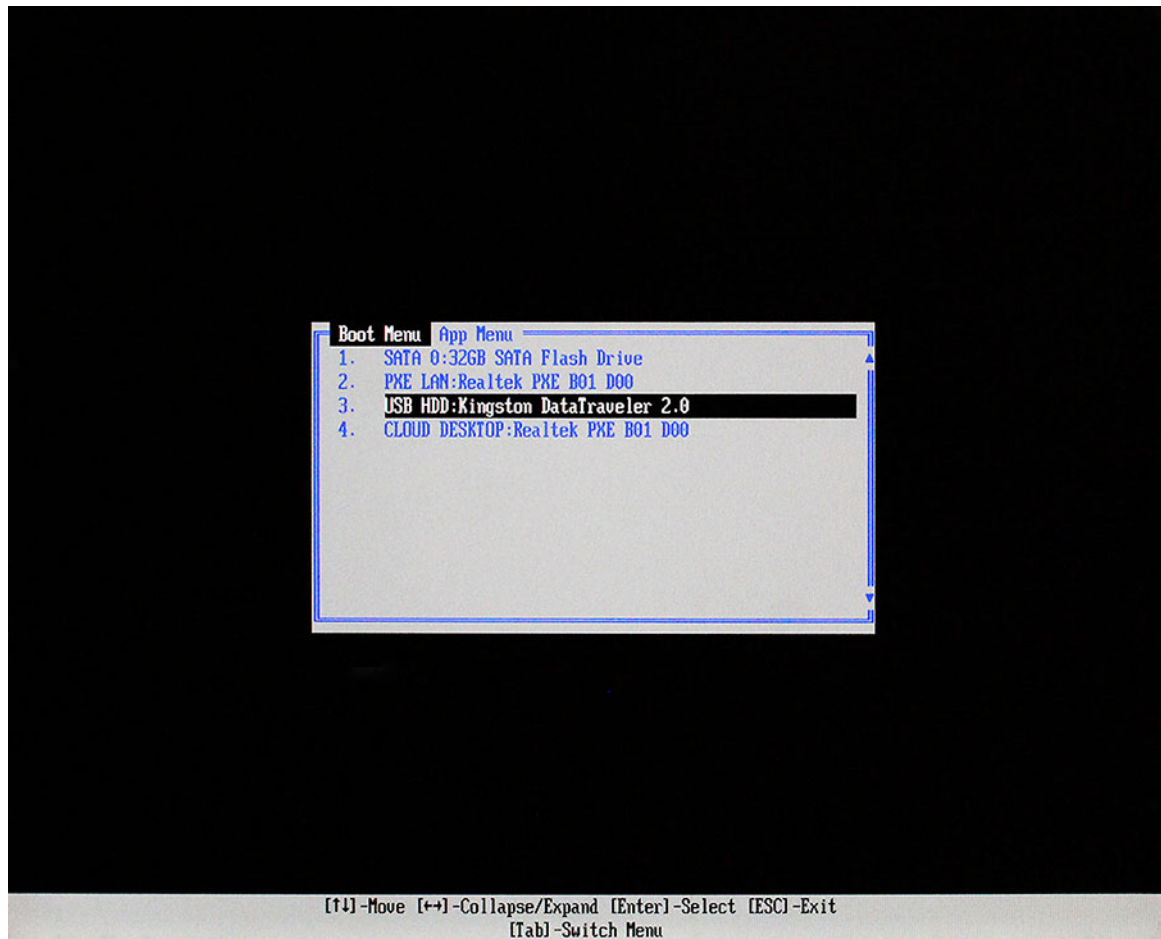


Figure 12. Boot menu

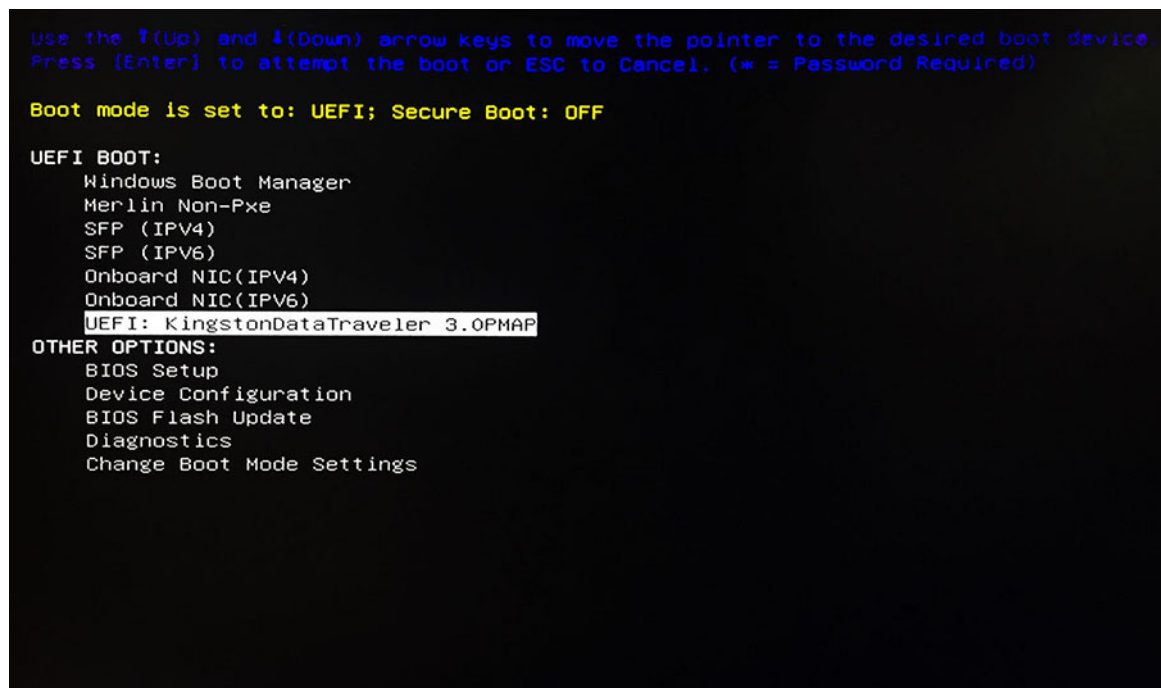


Figure 13. Boot menu

3. Select the USB option displaying your USB drive vendor name and press Enter.

NOTE: You will be prompted to enter the BIOS password. You shall reach out to the sales Engineer for the default BIOS password.

The device reboots from the USB drive, and the image that is to be pushed to the device is displayed.

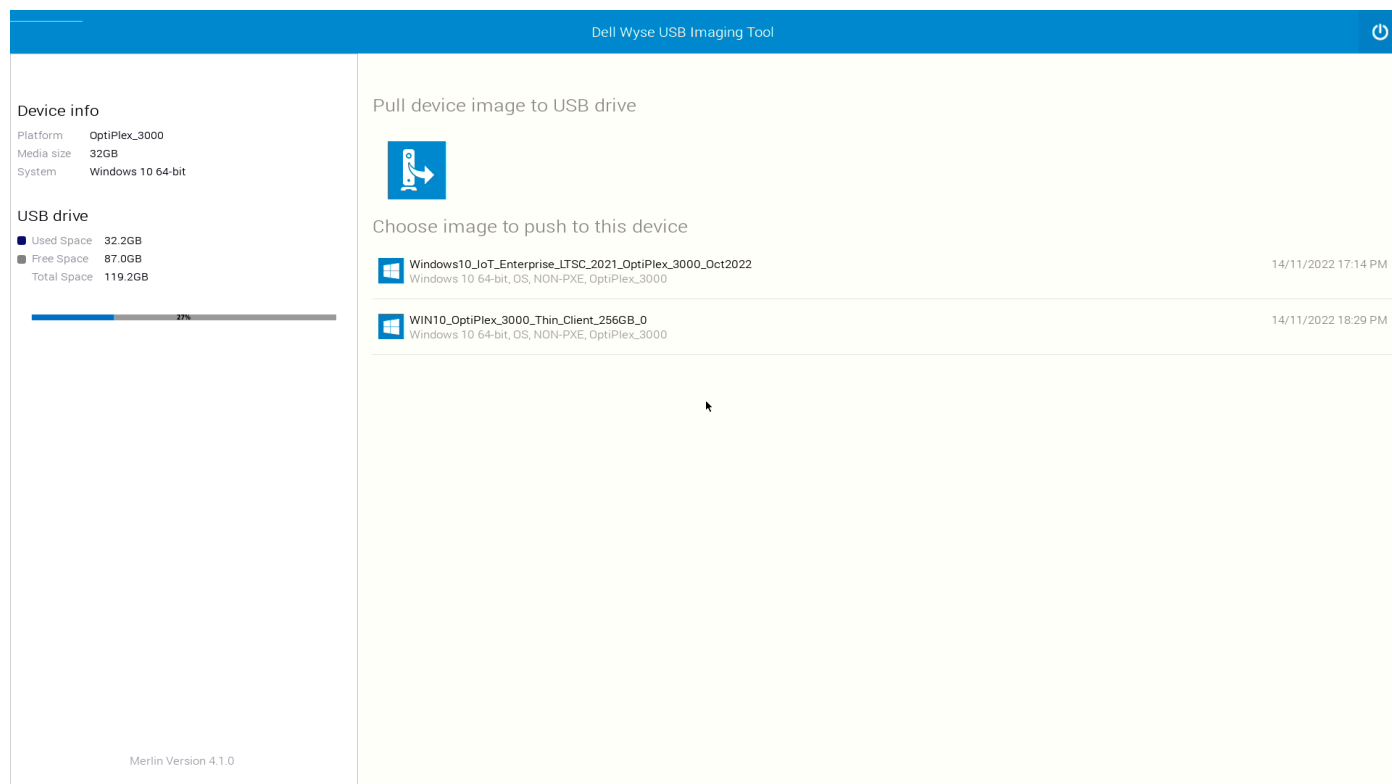


Figure 14. Local Image push

In the left pane, the following information is displayed:

- **Device info**—Displays information such as platform, media, and system of the target device.
- **USB drive**—Displays information such as used space, free space, and total space of the USB drive.

4. In the **Choose image to push to this device** section, select the local image from the list, and click **OK**.

The image push operation starts, and the overall status is displayed in the progress bar.

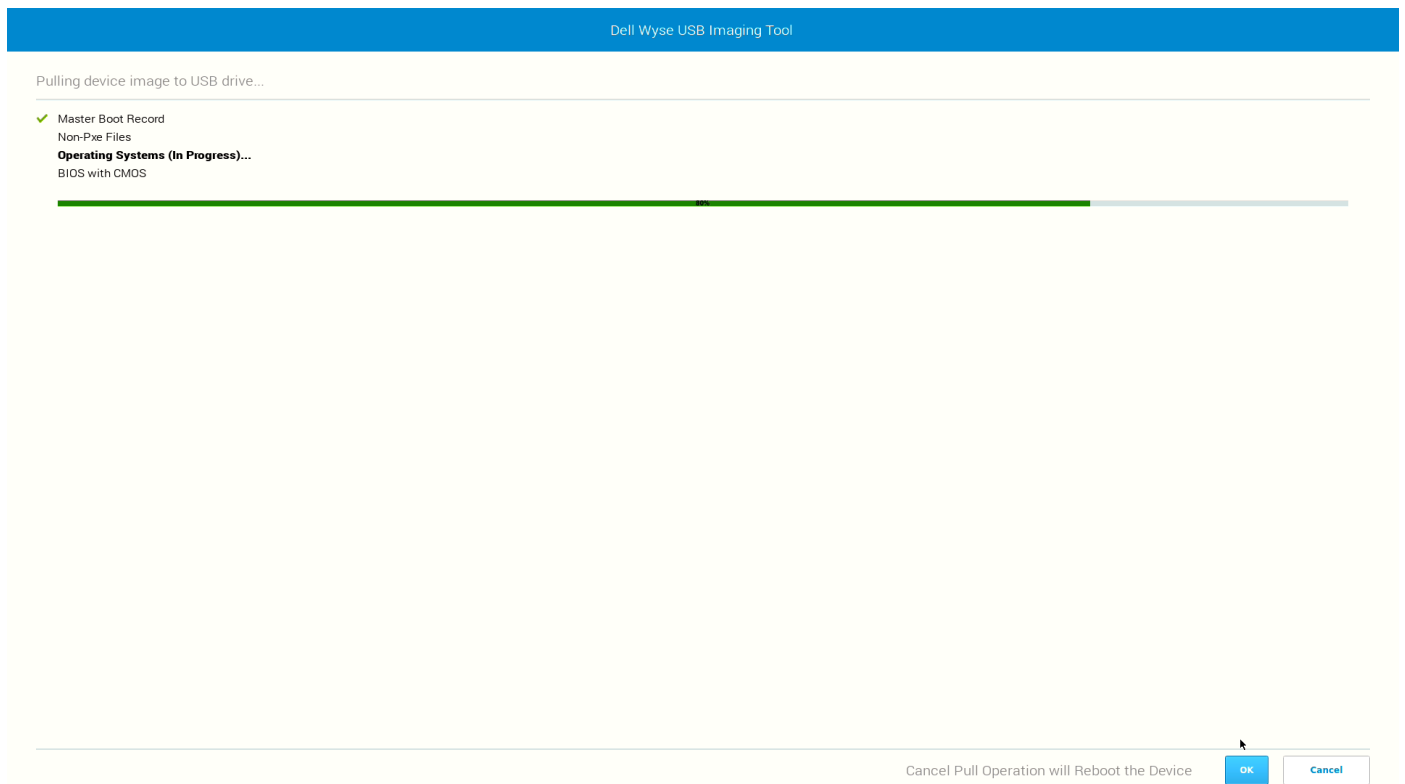


Figure 15. Operating Systems (In Progress)

5. After both operating system and BIOS push operations are complete, remove the USB drive from the target device.
6. To reboot the device, click **Restart**.

NOTE: Wyse 5060 thin client and Wyse 3030 LT thin client restart automatically after BIOS push operation is complete.

Configuring the USB drive for network image push operation

Steps

1. Start USB Imaging Tool.
The tool displays the **Image Pull** screen by default.
2. Click **Image Push** to view the **Image Push** screen.

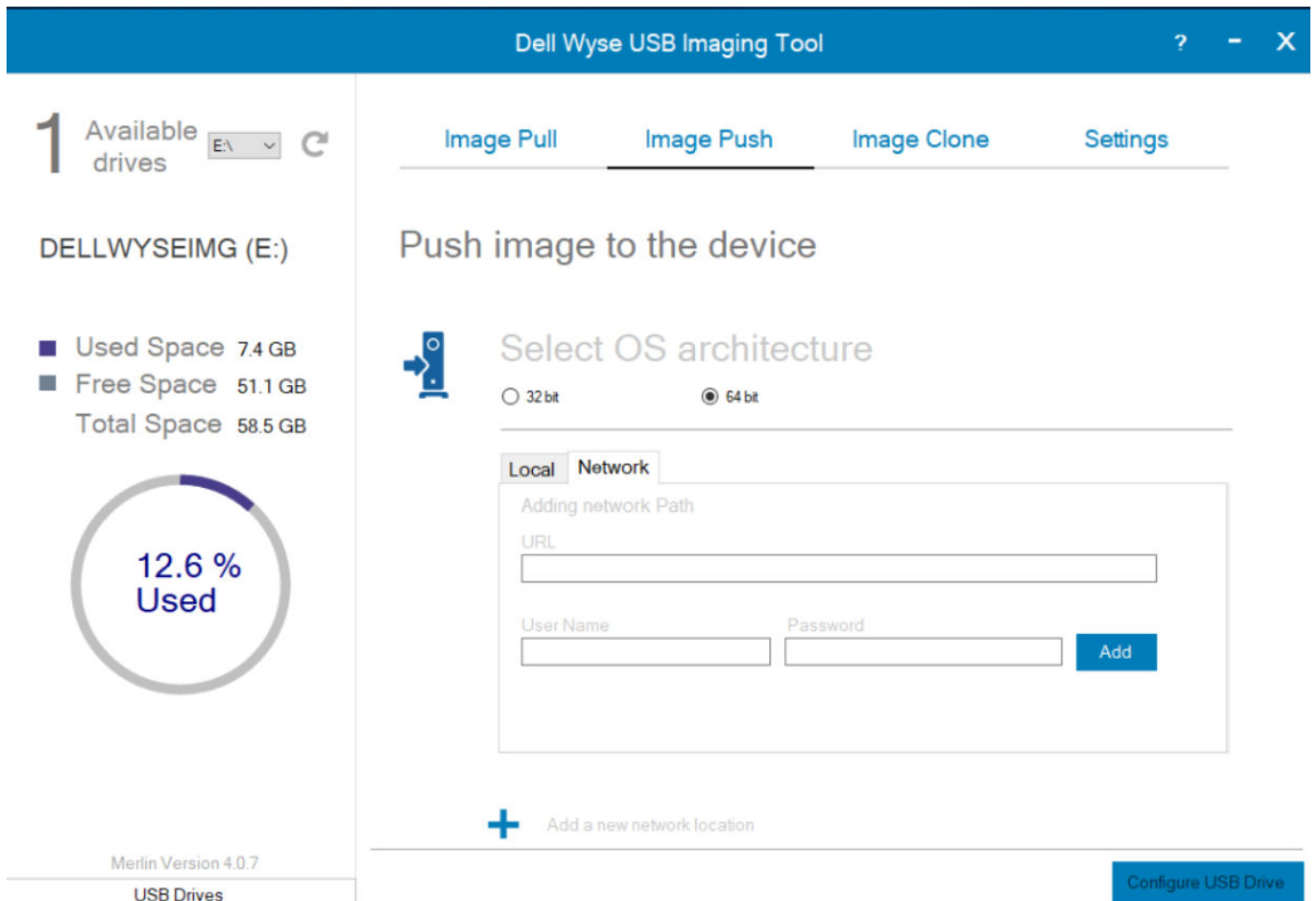


Figure 16. Network image push

3. Plug in the USB drive to the system running USB Imaging Tool.
4. Select the USB drive from the drop-down list.
If your USB drive contains other images, the screen displays the images in the table.
5. Select the operating system architecture that you want to push to the target device:
 - **64 bit**—Select only this option to push the 64-bit architecture based operating system to the target device.
6. To add an image to the USB drive, perform the following steps:

Option	Description
Add a new Image on the USB drive	Perform the following steps: a. Click the Network tab. b. Click the + icon. c. Enter the URL where the image files are present. NOTE: Before configuring the USB drive for network image Push, ensure that you check the reachability and accessibility of the URL which you enter. d. Enter the username and password. e. Click Add to create an image push entry in the table.
Delete existing image path on the USB drive	To delete the existing image path, click the Delete icon on the image path entry displayed in the table. The image path entries are deleted from the table but are only marked for deletion in the USB drive.

NOTE:

- In a single session, you cannot configure the local image and network image path simultaneously.
- You can add the same network image path with different file transfer protocols, such as FTP, HTTP, HTTPS, or CIFS.

- On the **Image Push** screen, the information entered in the local image fields are retained when you switch to the **Network** tab.
- On the **Image Push** screen, the information entered in the network image fields are retained when you switch to the **Local** tab.
- On the **Image Push** screen, the information entered in the local and network image fields are not retained when you switch to **Image Pull**, **Image Push**, **Clone**, or **Settings** tabs.

7. Click **Configure USB Drive**.

8. Select any one of the following options:

- **Update (Recommended)**—Select this option to add or delete images to an existing configured USB drive.
- **Format and Update**—Select this option if your USB drive is corrupted or not configured. This option backs up contents, initialize the drive, and add or delete the selected image.

The status is displayed in the progress bar.

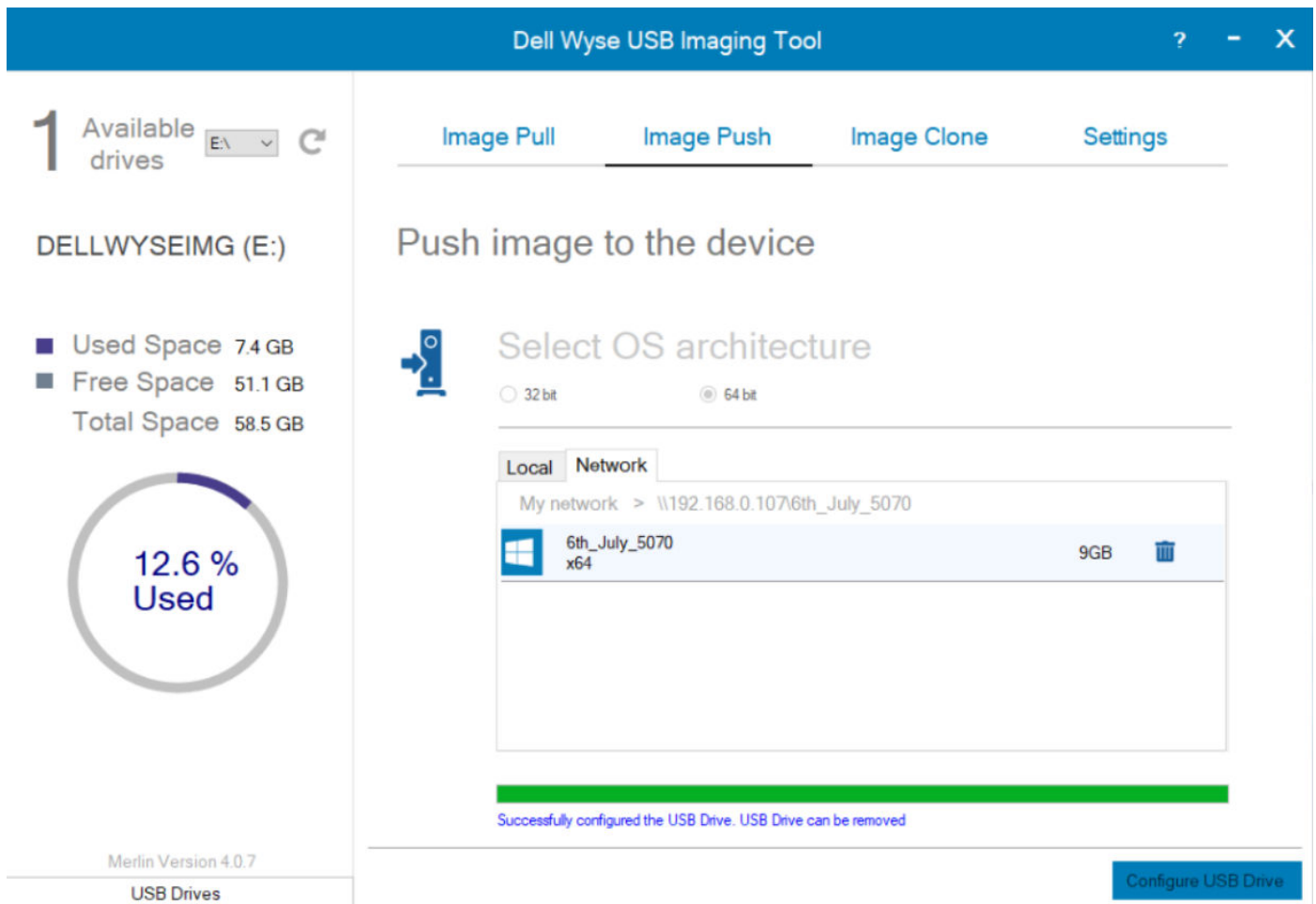


Figure 17. Pushing image to the device

USB Imaging Tool formats the USB drive, copies the necessary files based on the selected OS architecture, and completes the configuration of USB drive for the image pull operation.

Pushing a network image to a target device

Prerequisites

Before you begin the push operation, do the following:

NOTE:

- Ensure that your device is configured to boot from the USB drive.

- Before pushing the operating system image from the network location, ensure that the network location is reachable and accessible from the subnet/network where your thin client is connected.

Steps

1. Plug in the USB drive to the supported source device.
2. To access the boot menu, reboot the device, and keep pressing either the **P** key or **F12** key during system reboot depending on your thin client model; To choose the boot menu function key (P or F12) for your thin client model, see [Boot details for supported devices](#).

The boot options are displayed, and you can see either of the following boot menu screens depending on your thin client model.

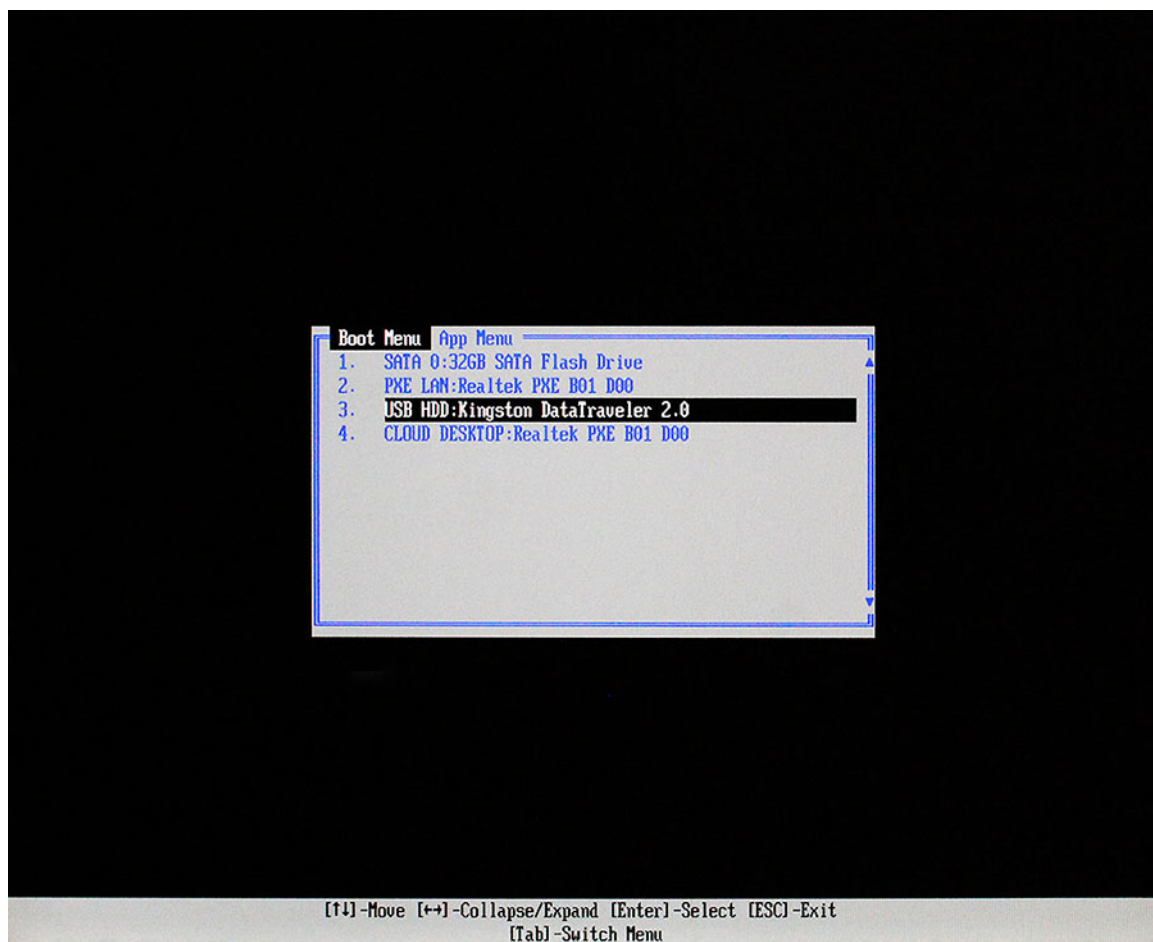


Figure 18. Boot menu

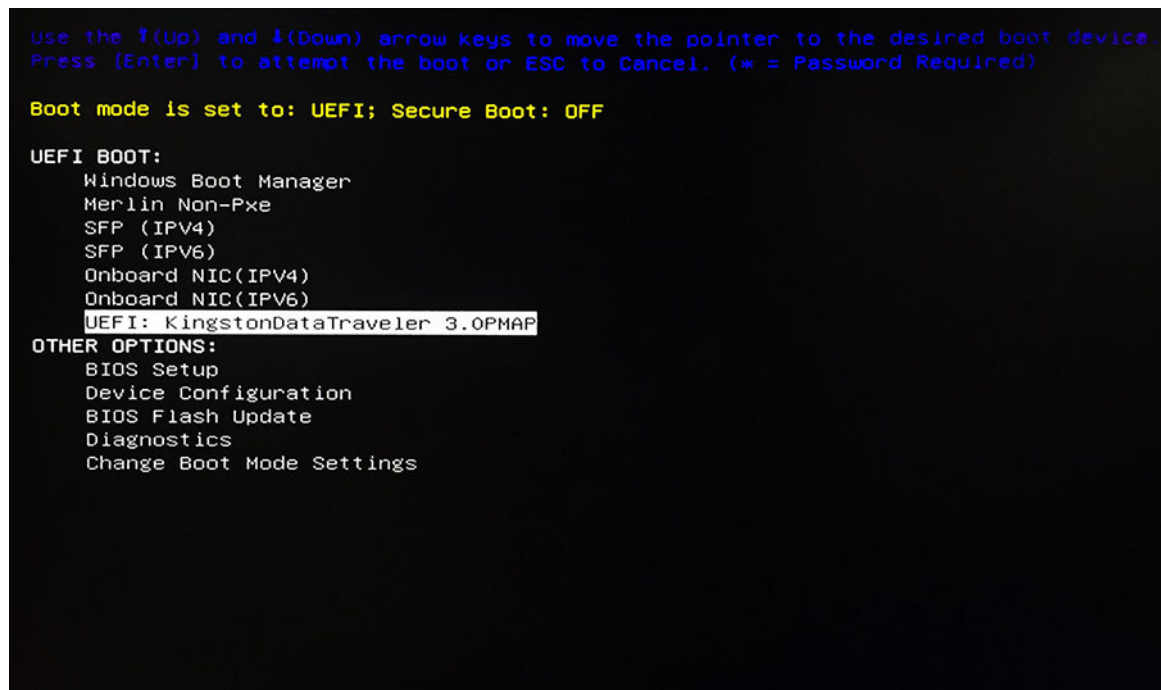


Figure 19. Boot menu

3. Select the USB option displaying your USB drive vendor name and press Enter.

The device reboots from the USB drive, and the screen with the network image that you want to push to the device is displayed.

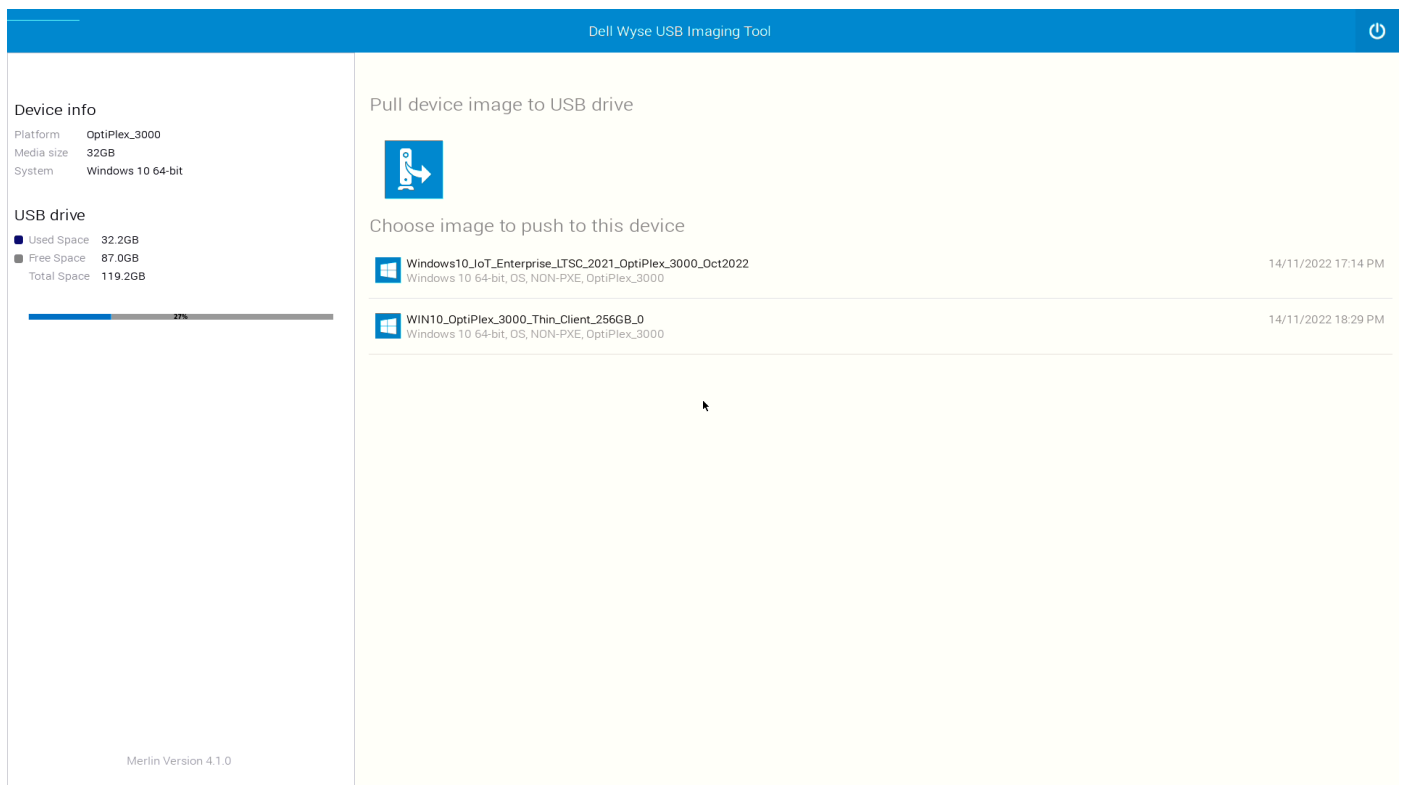


Figure 20. Network image push operation

4. In the **Choose image to push to this device** section, select the network image and click **OK**.

The network image push operation starts, and the overall status is displayed in the progress bar.

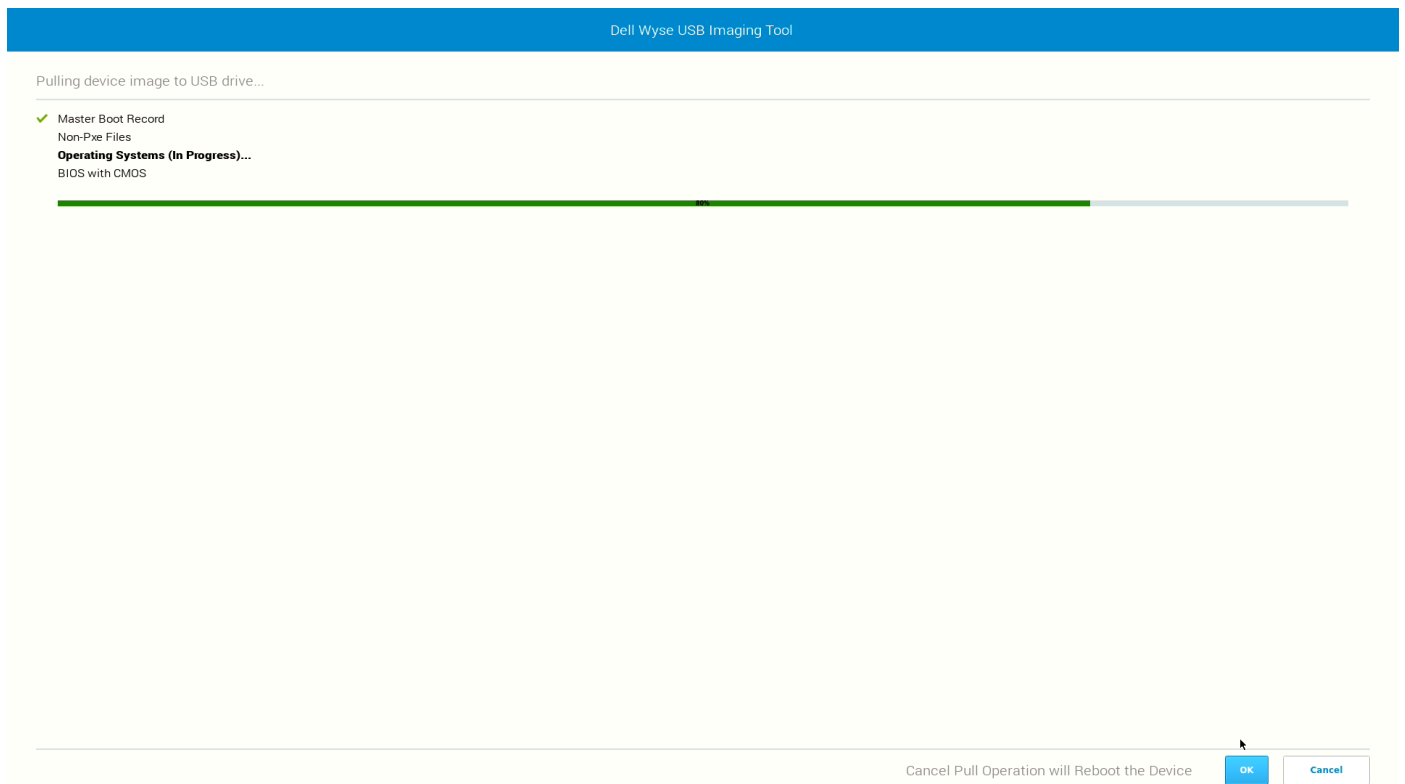


Figure 21. Operating System (In Progress)

5. After both operating system and BIOS push operations are complete, remove the USB drive from the target device.
6. To reboot the device, click **Restart**.

Cloning a USB drive

You can clone or duplicate a configured USB drive that is currently ready to push an image. Clone operation can be performed only when you have a configured USB drive for a push operation or you have a valid image. You can create as many clones or duplicates as you need to simultaneously perform the push operation on multiple devices at the same time.

Prerequisites

Ensure that the source and target USB drives contain the same disk space, or the target contains more disk space than the source.

Steps

1. Plug in a USB drive that is configured for a push operation to the system running USB Imaging Tool.
2. Plug in another USB drive for which you want to replicate the source USB drive.
3. Start USB Imaging Tool and click **Image Clone**.
The **Image Clone** page is displayed.
4. From the **Available drive** drop-down list, select the configured USB drive.
 - **Local**—The local images stored in the source USB drive are displayed in the table.

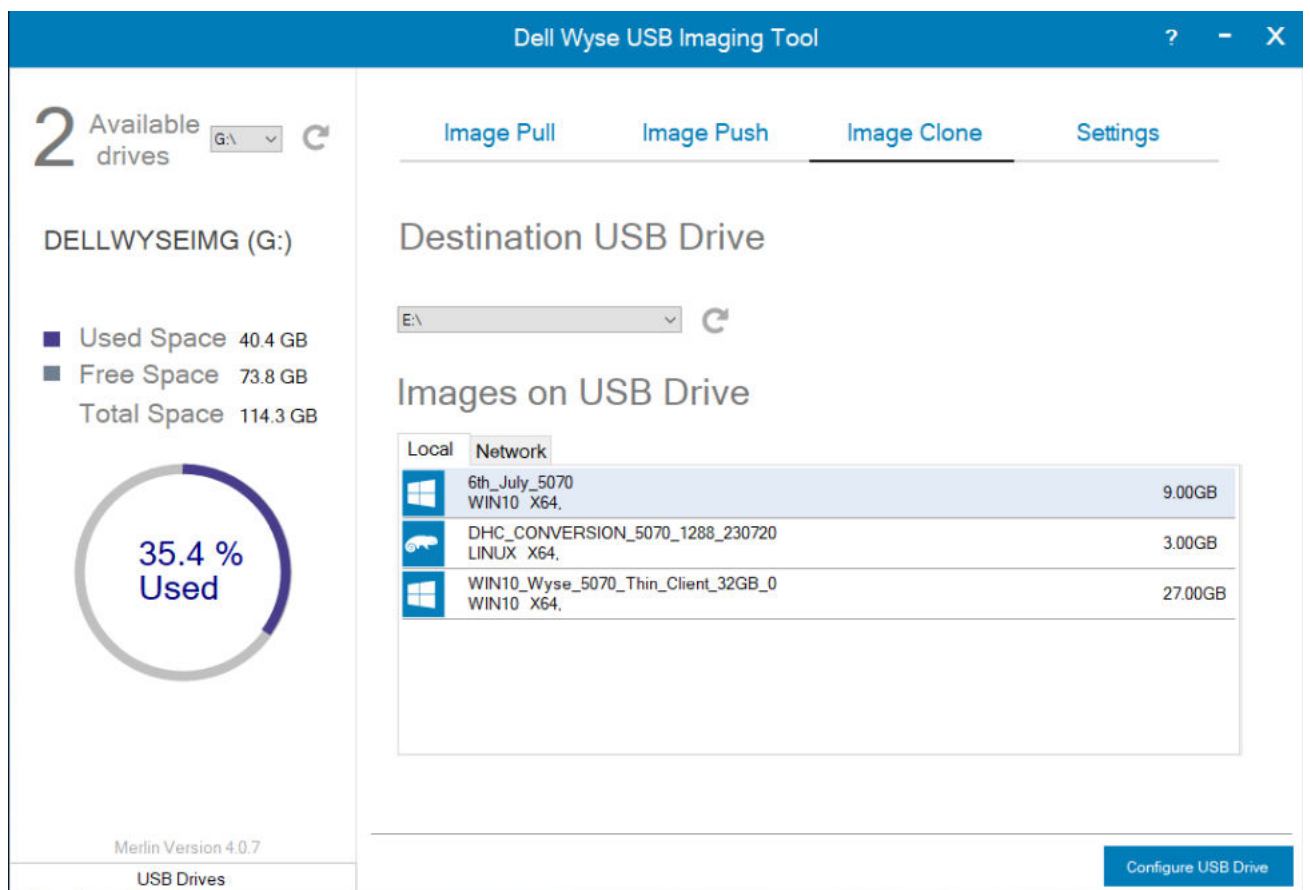


Figure 22. Local image clone

- **Network**—The network images stored in the source USB drive are displayed in the table.

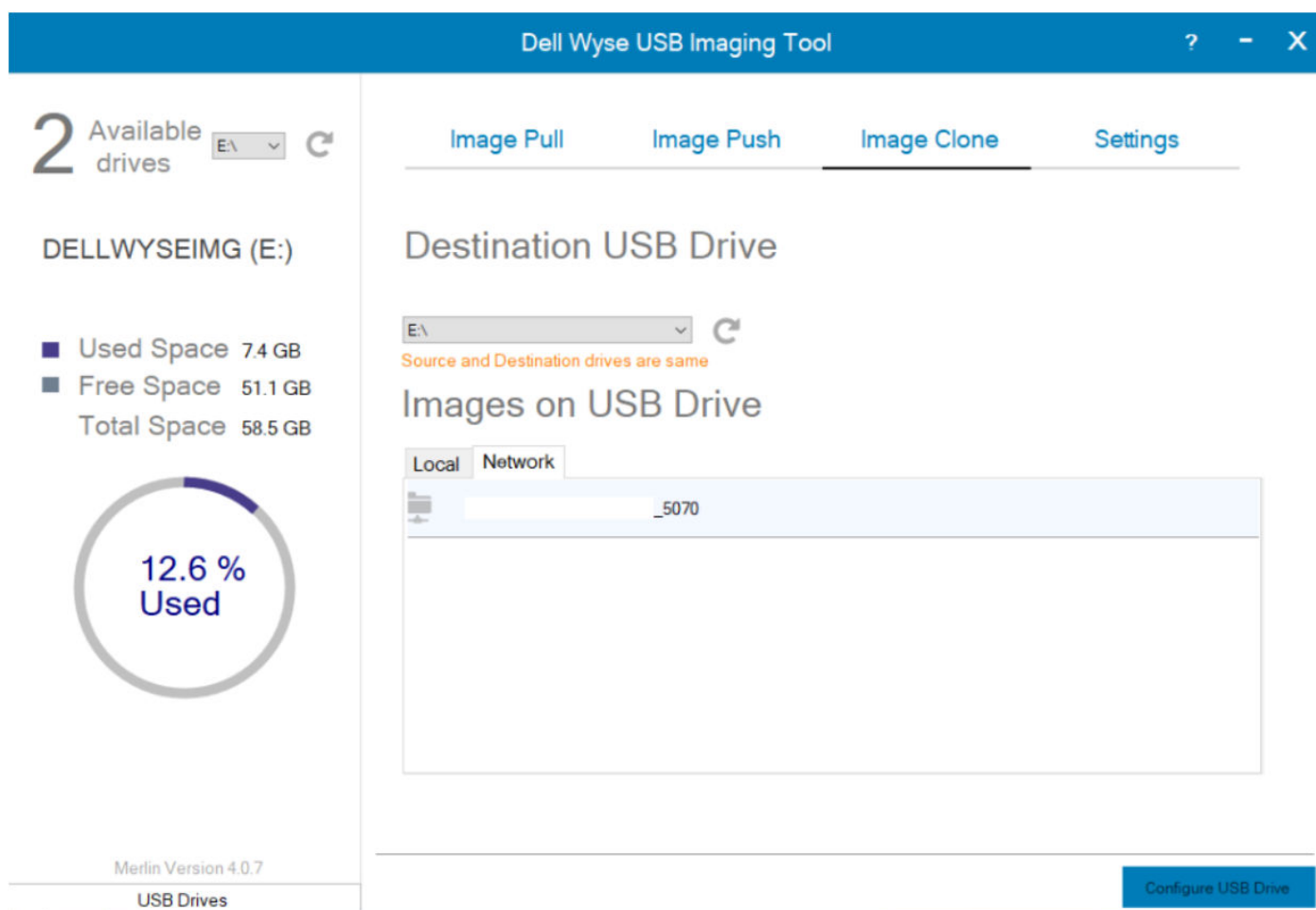


Figure 23. Network image clone

5. Select the target USB drive from the **Destination USB Drive** drop-down list.
6. Click **Configure USB Drive**.

USB Imaging Tool formats the destination USB drive, and then copies the necessary boot loader files based on the OS architecture configured in the source drive. The tool copies the OS Images from the source drive to destination drive.

The overall progress is displayed on the progress bar.

Configuring USB Imaging Tool settings

The **Settings** page enables you to set the backup path to back up the contents of a USB drive.

Steps

1. In the left pane, click the **Settings** tab.
The **Settings** page is displayed. This page enables you to change the configurable USB Imaging Tool settings.

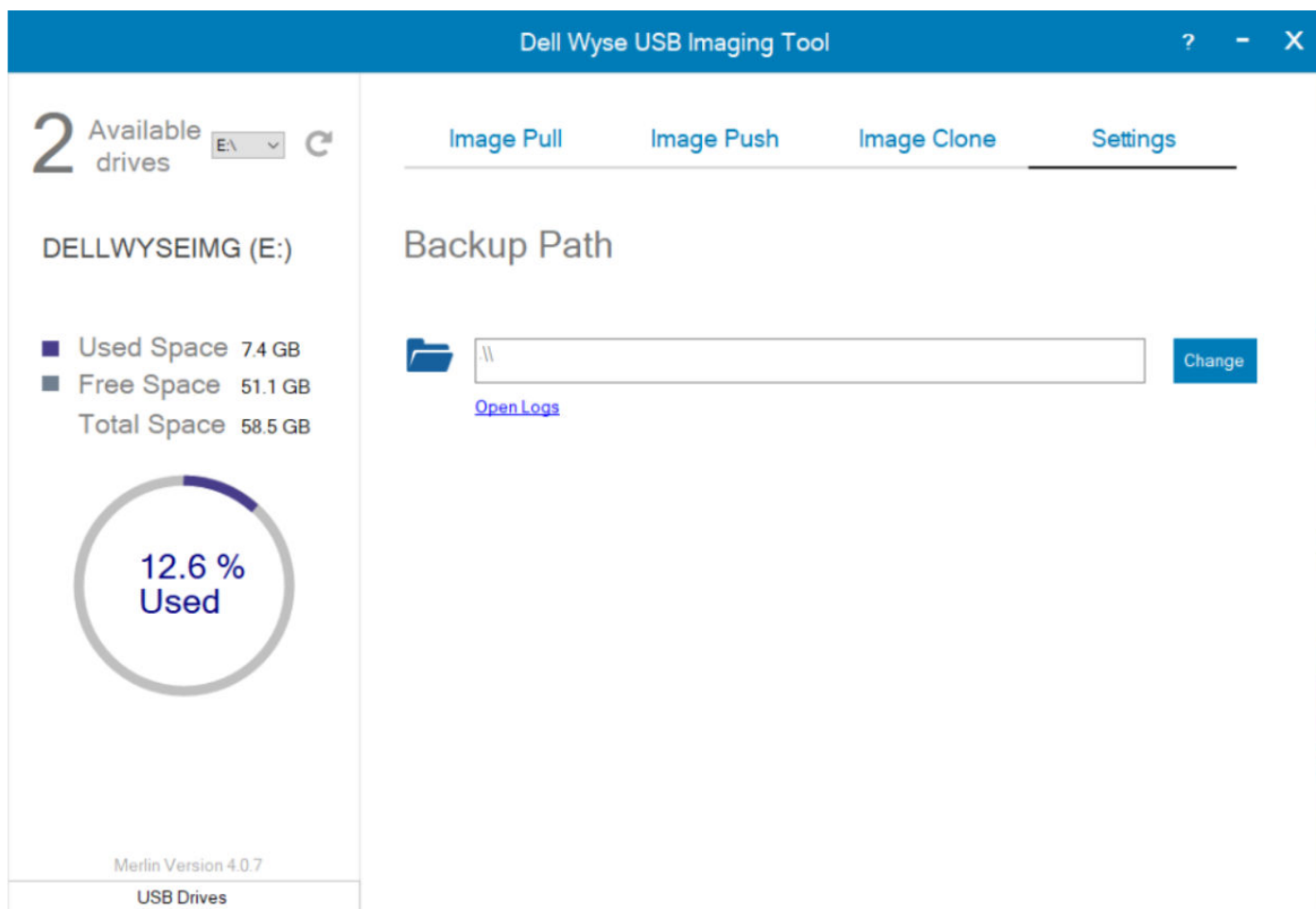


Figure 24. Settings

2. To change the location for your backup files, click **Change**.
3. To view the logfiles stored on the thin client, click the **Open Logs** link.

Troubleshooting

When you perform the pull or push operations on thin client devices, you may experience problems with the USB keys. This section describes some basic troubleshooting that you can implement when you experience any problems.

Boot issues on USB drives

If you experience problems booting from a configured USB drive, Dell recommends that you try a different brand of USB drive. For a list of USB drives that are successfully tested with USB Imaging Tool, see [Support matrix](#).

Partition issues on SanDisk Cruiser flash drives

SanDisk Cruiser Flash Drives come with support for U3. For more information on U3, see www.sandisk.com. When you use these drivers, you must select the drive usage from one of the following options:

- Apps and Storage
- Storage

If you select **Apps and Storage**, the drive creates two partitions—CD and Read-only. This partition sometimes prevents USB Imaging Tool to properly prepare the USB drive for a pull or push operation. To resolve this problem, you can do one of the following:

- Go to www.sandisk.com, click the **Support** tab, search in the SanDisk Knowledge Base for document **2550**, and then follow the instructions in the documentation.
- Go to www.sandisk.com, and do the following:
 1. Click the **Support** tab.
 2. From the **BROWSE A PRODUCT CATEGORY** list, select **Flash Drives**.
 3. Type **U3 Launchpad Remover** in the search bar, and click **Search All Answers**.
 4. Click the U3 Launchpad Remover documentation and follow the instructions.

USB drive less than 1 GB error message

About this task

When you are configuring a USB key for a pull or push operation, the following error message is displayed:

USB drive size is less than 1GB, please insert a higher capacity drive.

Dell recommends not to use USB drives with less than 1 GB of disk space.

USB drive not found

The USB HDDs go offline after multiple pull or push configurations of the USB HDDs.

To bring the disk to online state, do the following:

1. Go to **Disk Management**.
2. Select the USB HDDs that are in offline state.
3. Right-click each USB HDD in offline state and select **Online**.

The USB HDDs are accessible.

Failed to format USB drive error message

When you are configuring the USB drive for image pull or push operation, either of the following error messages may be displayed:

- Failed to format USB drive. Invalid Partitions. Please check logs
- Failed to finalize the USB Drive

Workaround: Close the USB Imaging tool application, format the USB drive by using any standard formatting tools, and then use the USB drive for image push or pull operation.

Client stops responding and fails to display Client Reboot Window after completing merlin imaging

This issue occurs only when the image being pushed is pulled from a lower disk size device and pushed into a higher disk size device. For example, a 16GB image being pushed into a 32GB device.

Workaround : Despite the issue, the imaging always completes successfully. Wait for a few minutes (5 to 10 minutes) after the progress bar reaches 100% and perform a hard restart of the device.

Failed to parse image file error

When you are preparing a USB drive for push operation, **Failed to parse image file** is displayed.

This message appears because the selected image file contents are not in the proper folder structure.

Workaround: See image folder structure details to be followed under [Performing an image push operation](#).