PCONA -How to add WinPE Drivers to MDT Boot Image

Overview

The document describes how to import and inject Panasonic TOUGHBOOK specific WinPE drivers for Intel 11th and later generation computers. This enables the use of the touchpad, LAN and raid functionality in the Windows pre-installation environment.

Windows PE (WinPE) is a small operating system used to install, deploy, and repair Windows desktop editions, Windows Server, and other Windows operating systems. From Windows PE, you can:

- Set up your hard drive before installing Windows.
- Install Windows by using apps or scripts from a network or a local drive.
- Capture and apply Windows images.
- Modify the Windows operating system while it's not running.
- Set up automatic recovery tools.
- Recover data from unbootable devices.
- Add your own custom shell or GUI to automate these kinds of tasks.

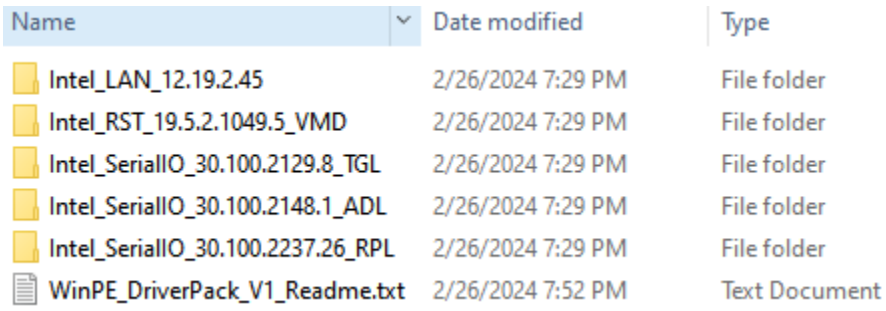
Prerequisite(s) or Supplies Needed to Complete Task

- Install Windows ADK (Windows Assessment and Deployment Kit) and Windows PE add-on
  - https://learn.microsoft.com/en-us/windows-hardware/get-started/adk-install
- Review Microsoft Deployment Toolkit Documentation
  - https://learn.microsoft.com/en-us/mem/configmgr/mdt/
- Download and Install Microsoft Deployment Toolkit
  - https://www.microsoft.com/en-us/download/details.aspx?id=54259
- Download and Install Microsoft Deployment Toolkit Patch – KB4564442
  - https://support.microsoft.com/en-us/topic/windows-10-deployments-fail-with-microsoft-deployment-toolkit-on-computers-with-bios-type-firmware-70557b0b-6be3-81d2-556f-b313e29e2cb7
- Download Panasonic Toughbook WinPE and Enterprise deployment drivers.
  - https://pc-dl.panasonic.co.jp/itn/drivers/deployment_support.html

Detailed Steps

Detailed video of entire process > Training Video - MDT-WinPE-DriverImport

Step 1: Download WinPE driver bundle from support website. Extract files to a location and review readme.



Name	Date modified	Type
Intel_LAN_12.19.2.45	2/26/2024 7:29 PM	File folder
Intel_RST_19.5.2.1049.5_VMD	2/26/2024 7:29 PM	File folder
Intel_SerialIO_30.100.2129.8_TGL	2/26/2024 7:29 PM	File folder
Intel_SerialIO_30.100.2148.1_ADL	2/26/2024 7:29 PM	File folder
Intel_SerialIO_30.100.2237.26_RPL	2/26/2024 7:29 PM	File folder
WinPE_DriverPack_V1_Readme.txt	2/26/2024 7:52 PM	Text Document

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--------------------------------------------------------------------------------
Software name     :  WinPE Driver Pack
Support models    :  CF-33/FZ-40/FZ-55/FZ-G2
Operating System  :  Windows PE
Version           :  V1.00
Release date      :  February 29, 2024
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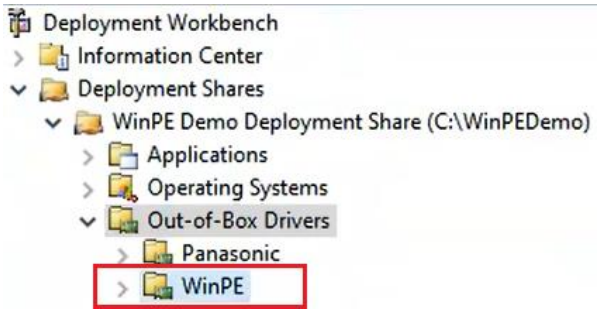
NOTES :
* In Microsoft Configuration Manager, run the Import Driver wizard to add the driver to a boot image.

* Version information
    Intel LAN driver                                    12.19.2.45
    Intel Serial IO Driver                              30.100.2129.8 TGL
    Intel Serial IO Driver                              30.100.2148.1 ADL
    Intel Serial IO Driver                              30.100.2237.26 RPL
    Intel Rapid Storage Technology for VMD              19.5.2.1049.5
```

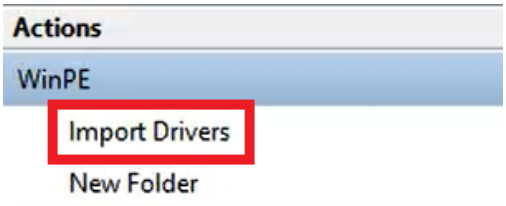
Details which drivers are included in driver bundle.

- Intel LAN is for network connectivity. PXE, connect to deployment share, distribution point, etc.
- Intel Serial I/O driver is a software component that provides support for the Serial Peripheral Interface (SPI) and Inter-Integrated Circuit (I2C) bus protocols on Intel-based systems. These protocols are used to facilitate communication between different hardware components, such as sensors, displays, and input devices.
- Intel Rapid Storage Technology for VMD is for storage controller and raid functionality in specific support TOUGHBOOK devices.

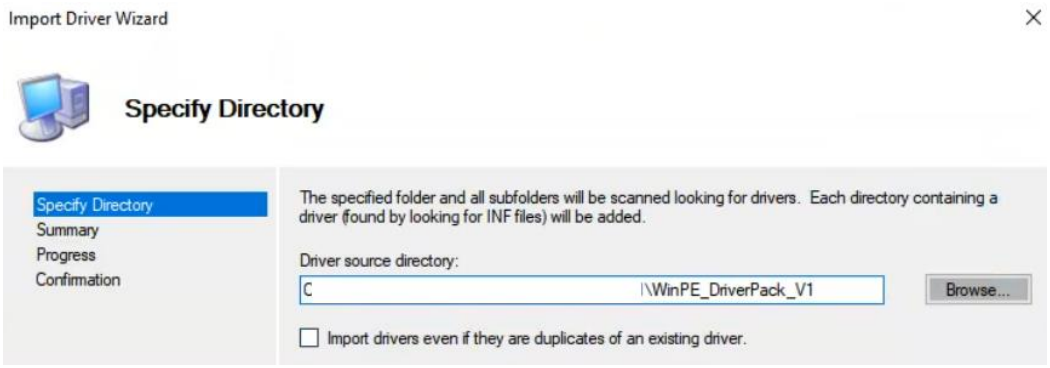
Step 2: Create new folder in Out-of-Box drivers for WinPE specific drivers.



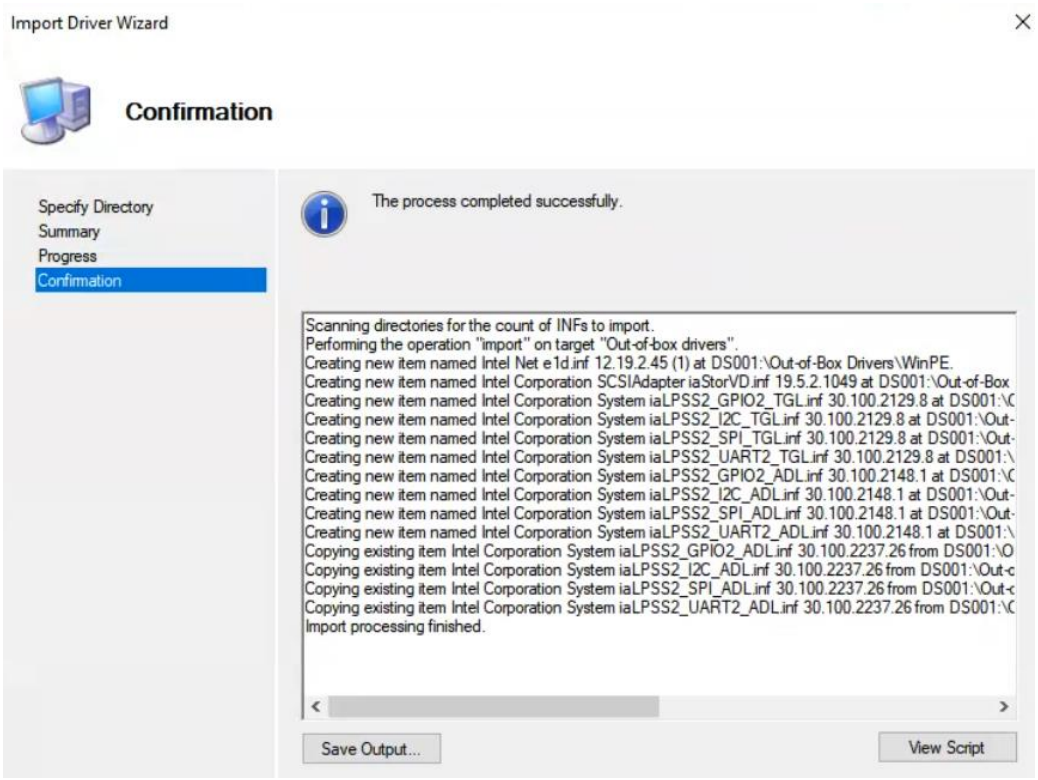
Step 3: Import Drivers into WinPE Folder



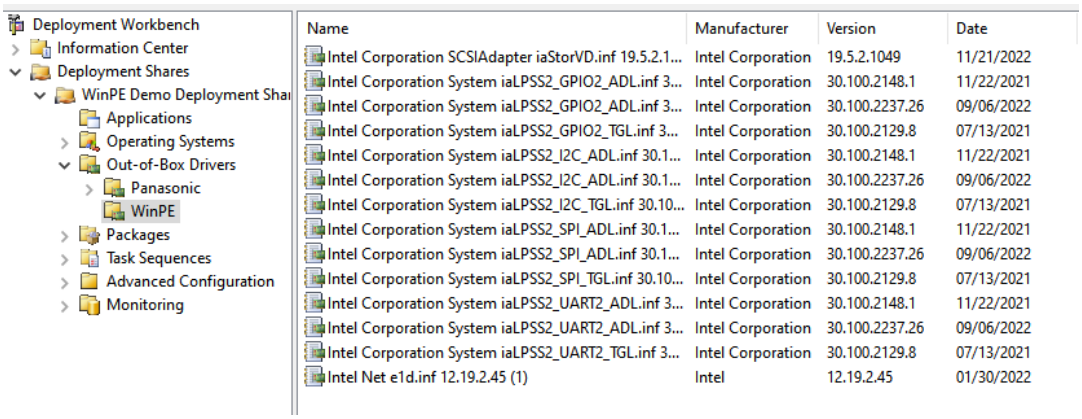
Select location of extracted drivers



Should receive confirmation all drivers were imported successfully.

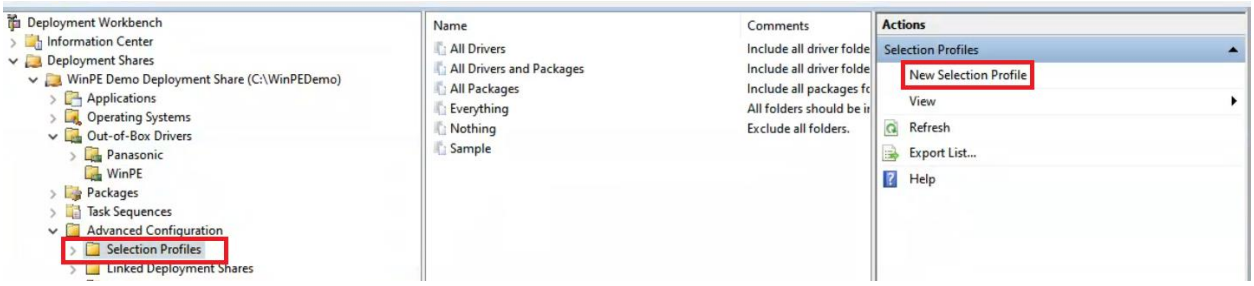


Verify that all imported drivers are in the WinPE folder.



Step 4: Create selection profile for WinPE Folder

- Under Advanced Configuration, select Selection Profiles
- Select New Selection Profile
- Name the selection profile something like “WinPE.”

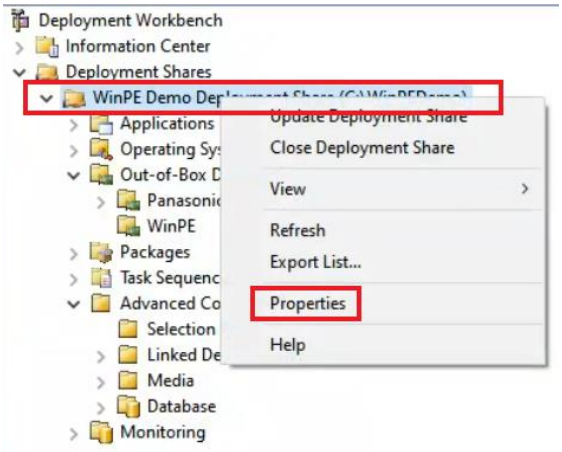


Select only the new WinPE folder that has the newly imported drivers.



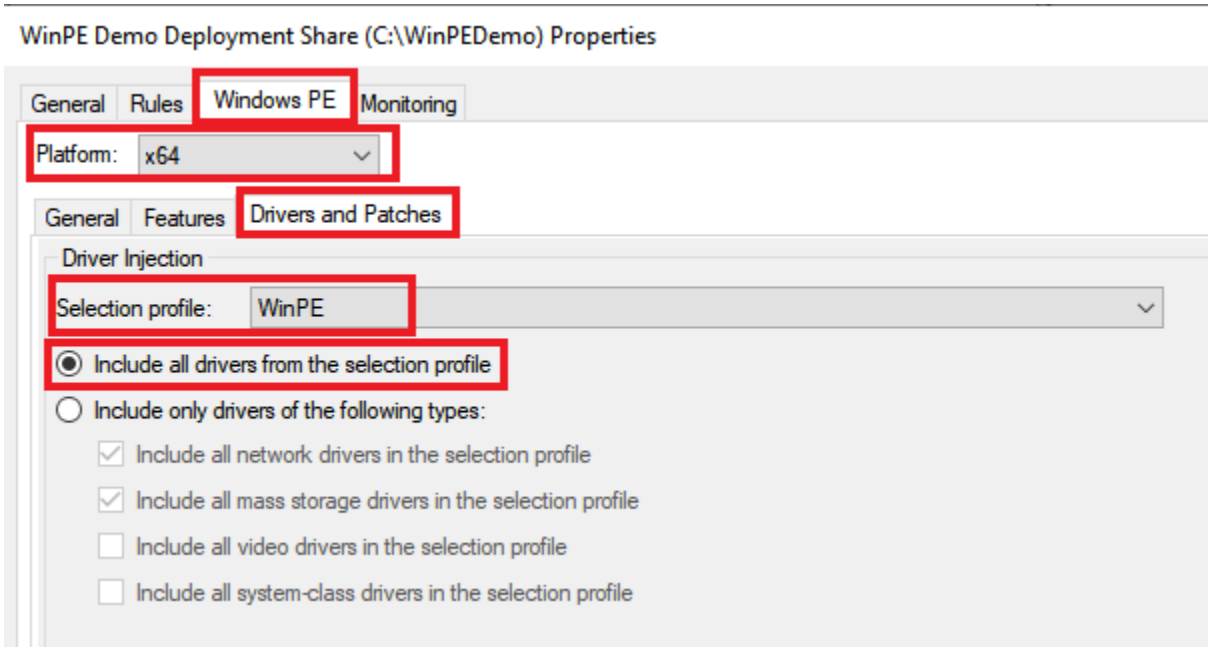
Step 5: Select WinPE driver profile to be used by WinPE for deployment share.

- Right-click deployment share root, select properties.

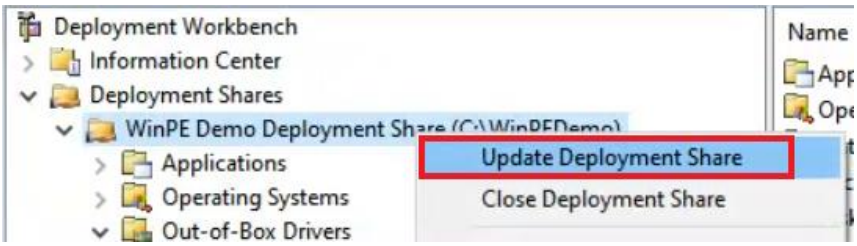


- Select WinPE tab.
- Select Platform “x64”.
- Select “Drivers and Patches” tab.

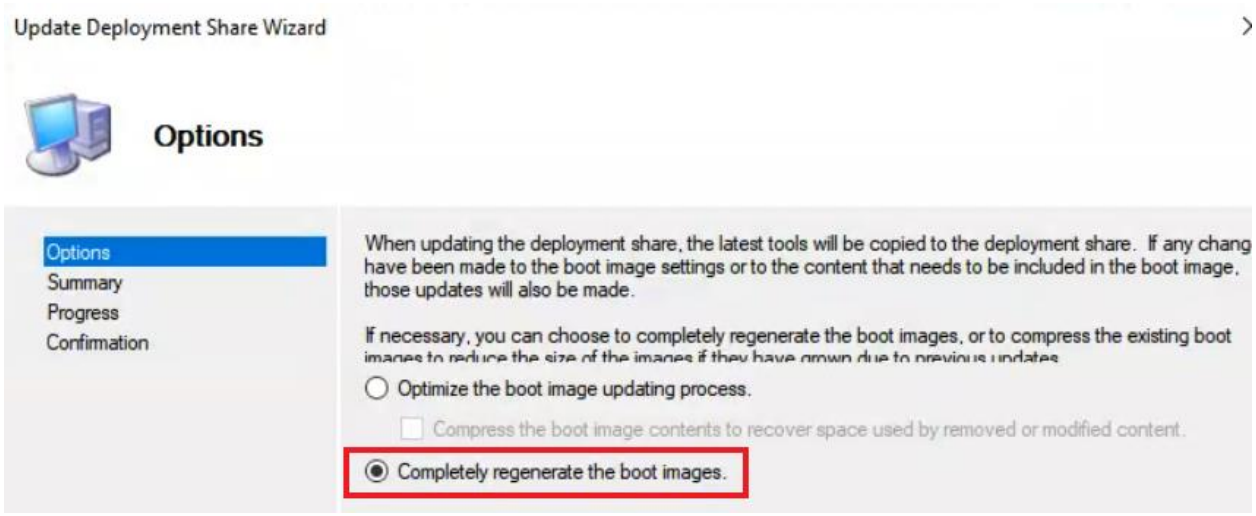
- Select Selection Profile: “WinPE”
- Select Include all drivers from the select profile



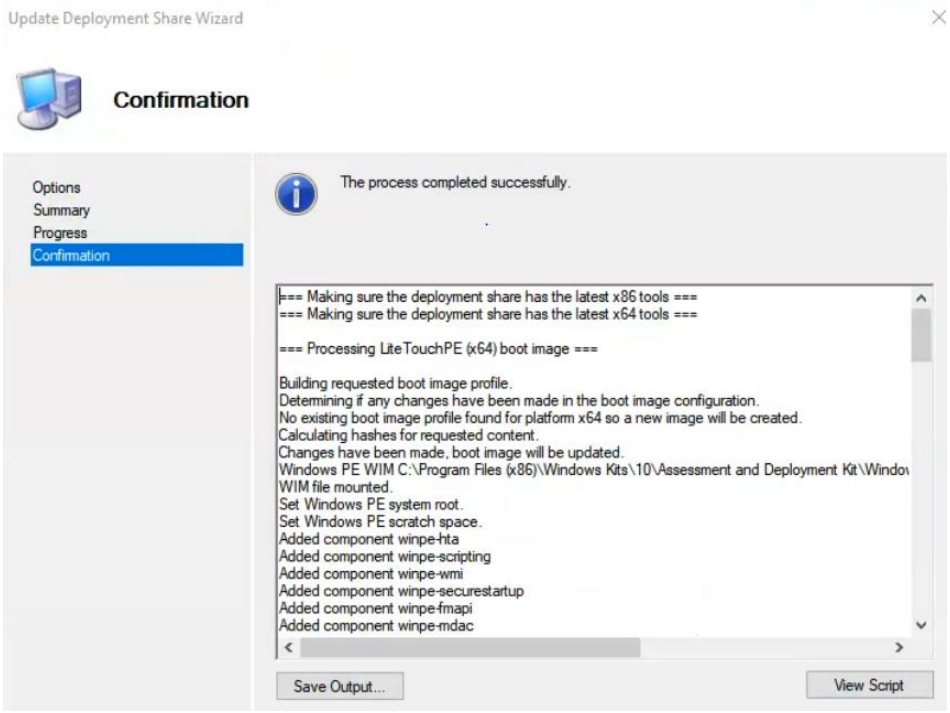
Step 6: Update deployment share for WinPE drivers to be injected into WinPE boot media.



- Select “Completely regenerate the boot images.



- Confirmation boot image has been updated.



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Result

Once boot image is updated with Windows PE drivers, touchpad and LAN will operate within Windows PE environment.

Revision History

Panasonic CONNECT

Date	Version	Description	Approved
[3/12/2024]	1.0	Initial document created	[JP]