

# Windows 10 Installation

Lenovo ThinkStation PX, P7, P5



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## Overview

The purpose of this document is to provide high-level guidance for users to adequately install a retail Windows 10 operating system on the ThinkStation PX, P7, and P5 platforms.

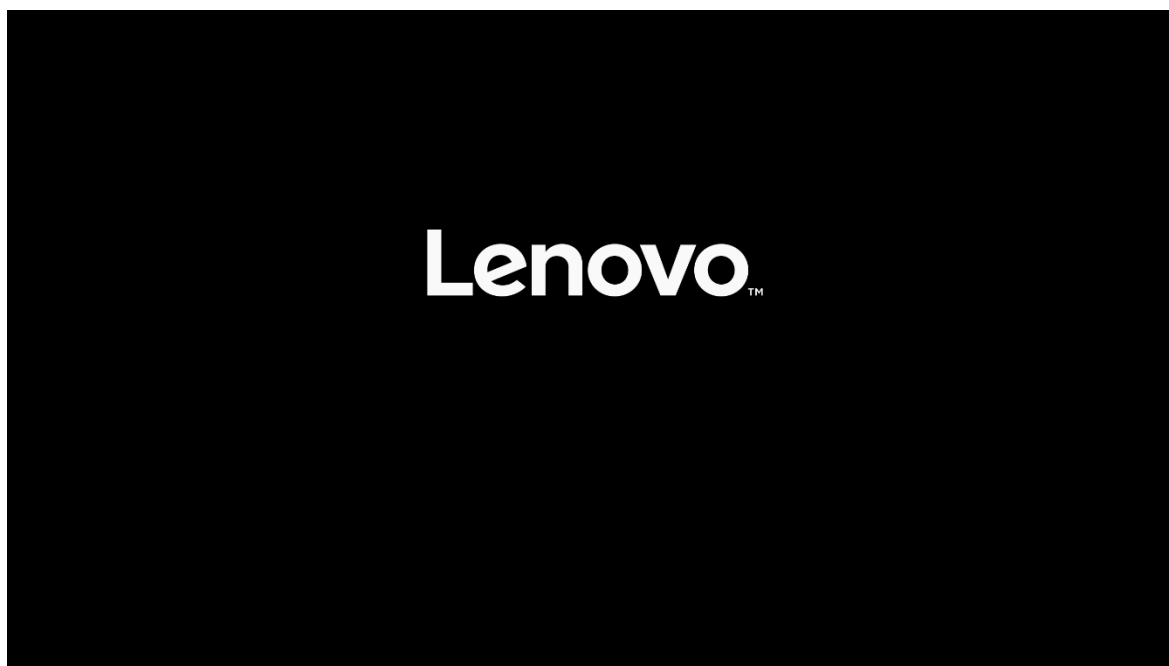
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## Section 1 – BIOS Setup

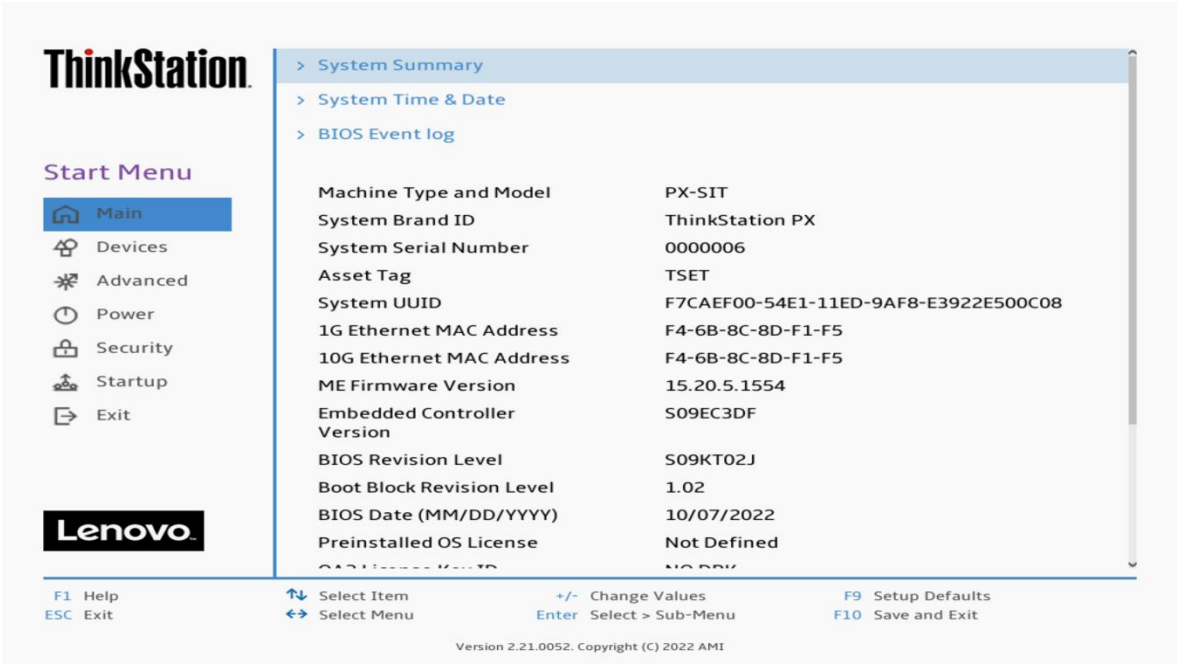
Prior to installing any operating system, it is important to make sure BIOS recognizes the storage devices appropriately.

Here are some key items to look for within BIOS setup.

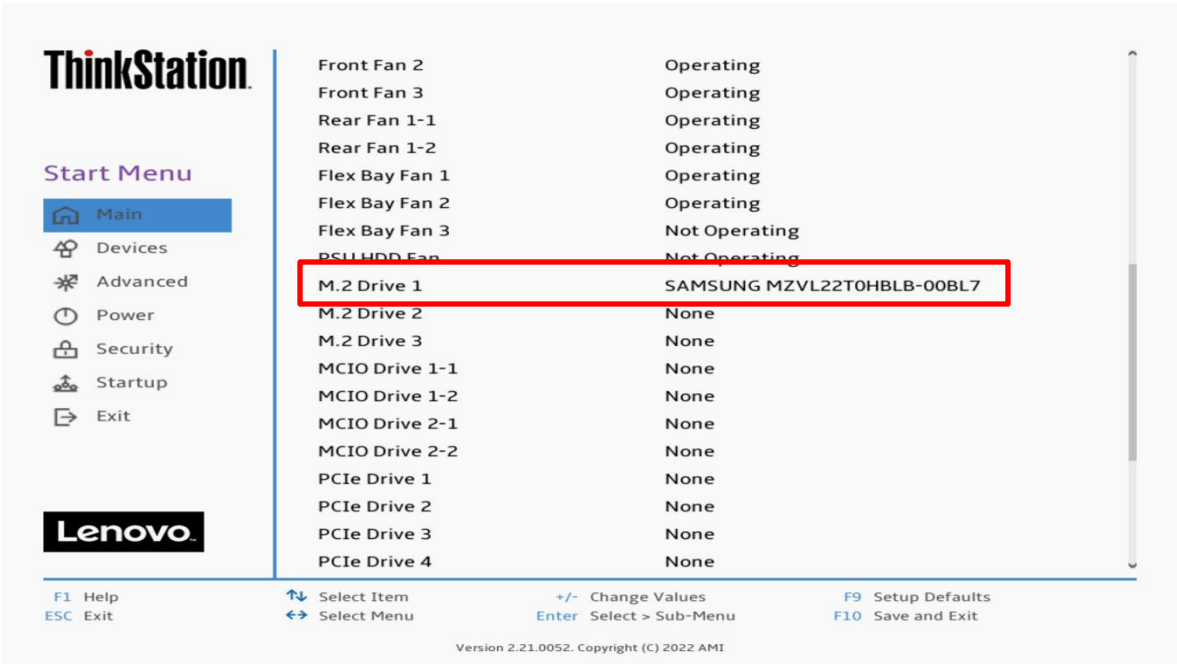
At the Lenovo splash screen, press the function key F1 to enter BIOS setup.



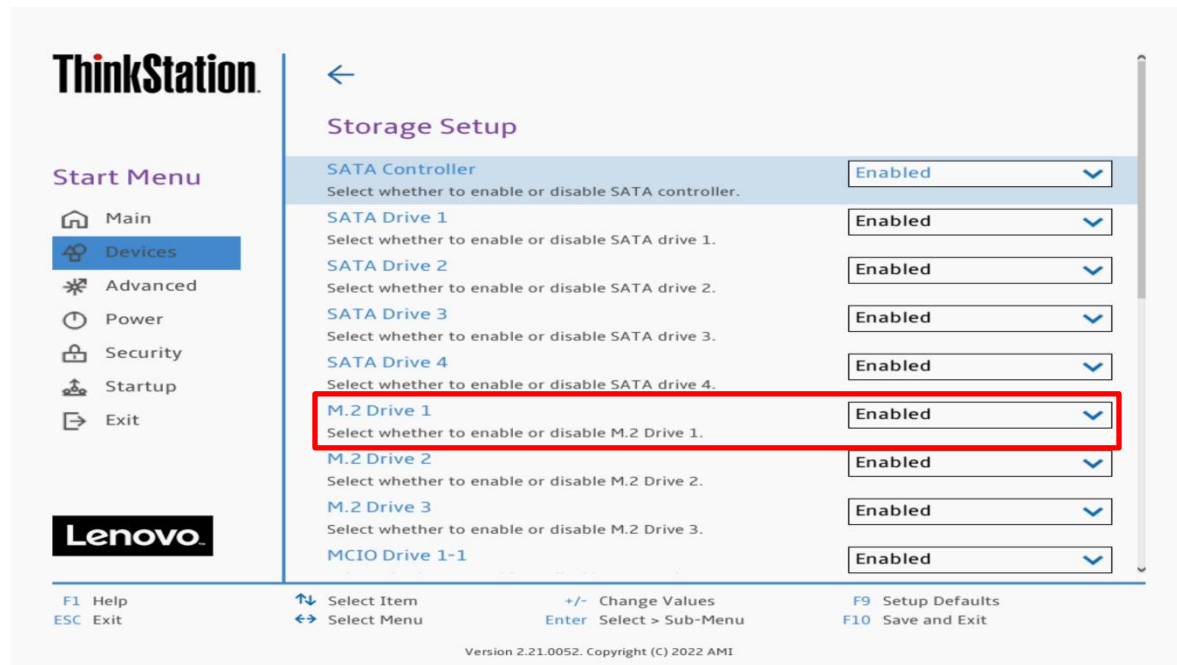
Select 'System Summary' from the main BIOS setup page.



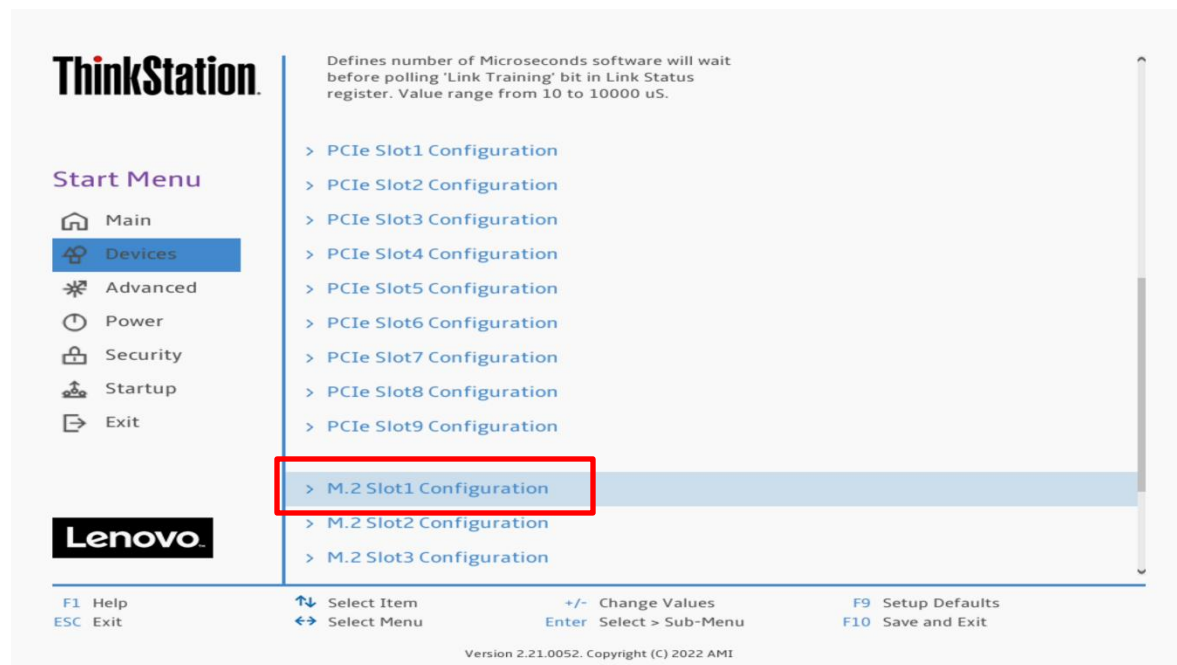
Scroll down through the list until you see the type of drive(s) you are intending to use. Note, drives may not show up here if drives are part of a RAID array.



Select 'Devices' -> 'Storage Setup' to make sure the drive is enabled.



For PCIe drives, select 'Devices' -> 'PCI Express Setup' and select the slot for where the drive is physically installed. In this example, the M.2 drive is installed in Slot 1.



Make sure the drive is linking properly.



The screenshot shows the BIOS configuration for M.2 Slot1. The 'Link Speed' is set to 'Auto'. A red box highlights the following status information:

PCIe Port Link Status	Linked as x4
PCIe Port Link Max	Max Width x4
PCIe Port Link Speed	Gen 4 (16.0 GT/s)

Navigation keys at the bottom: F1 Help, ESC Exit, Select Item, Select Menu, Change Values, Enter Select > Sub-Menu, F9 Setup Defaults, F10 Save and Exit. Version 2.21.0052. Copyright (C) 2022 AMI.

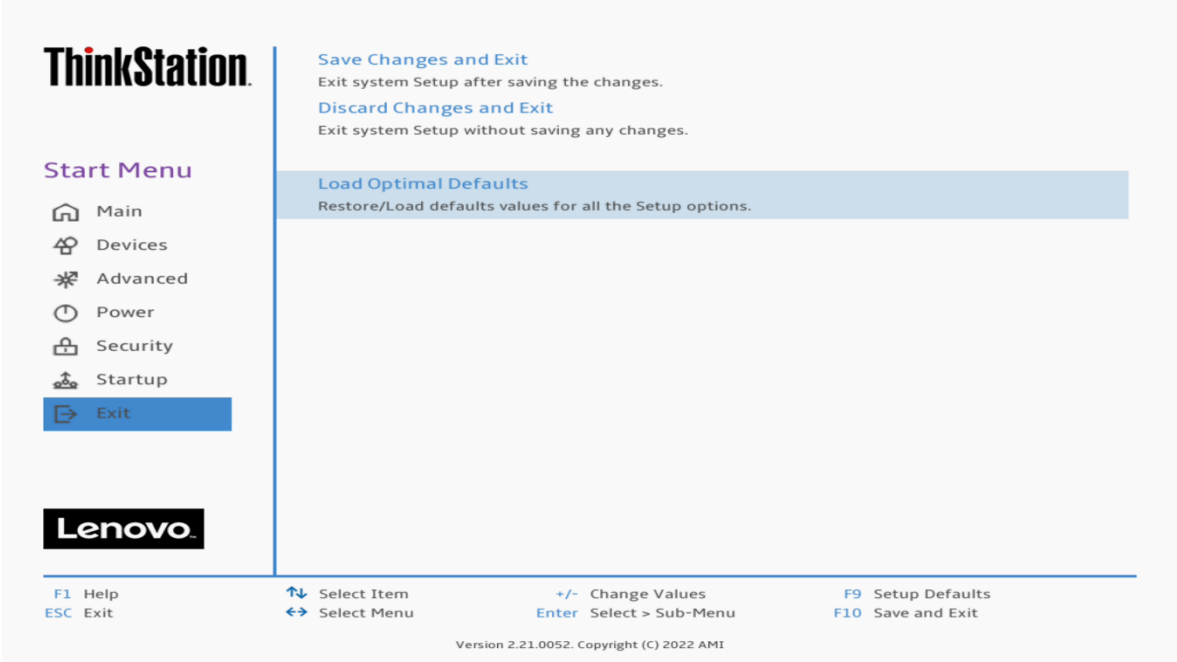
Here's an example of BIOS not recognizing a PCIe drive.

The screenshot shows the BIOS configuration for M.2 Slot2. The 'Link Speed' is set to 'Auto'. A red box highlights the following status information:

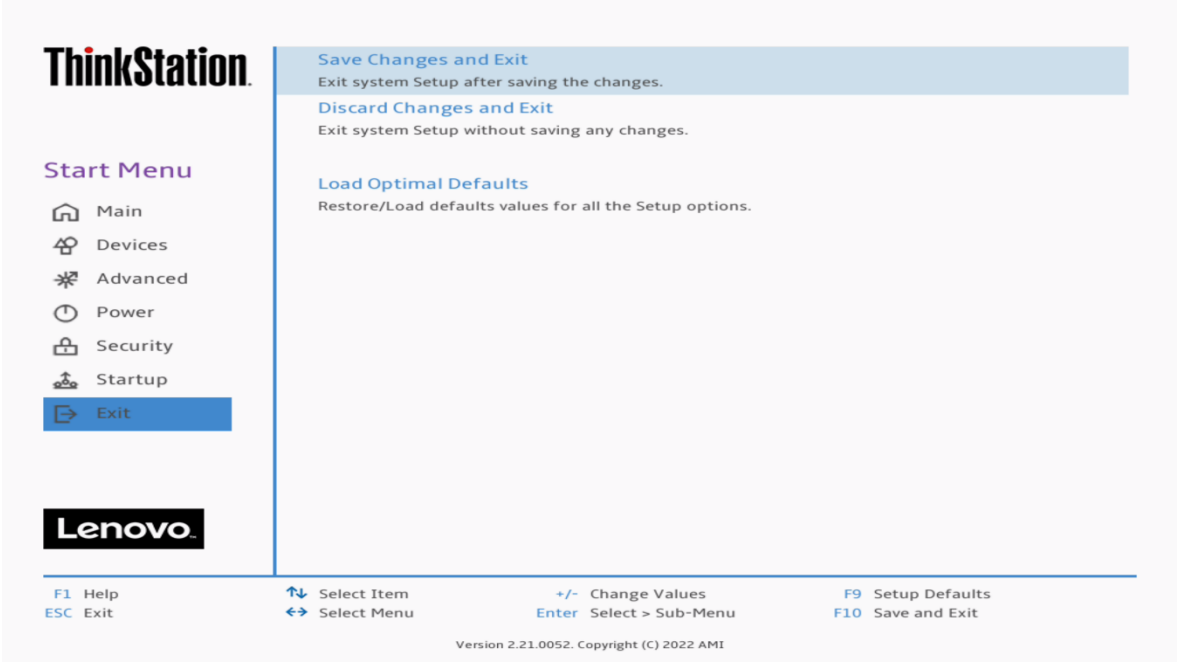
PCIe Port Link Status	Link Did Not Train
PCIe Port Link Max	Max Width x4
PCIe Port Link Speed	Link Did Not Train

Navigation keys at the bottom: F1 Help, ESC Exit, Select Item, Select Menu, Change Values, Enter Select > Sub-Menu, F9 Setup Defaults, F10 Save and Exit. Version 2.21.0052. Copyright (C) 2022 AMI.

Select the 'Exit' menu option -> 'Load Optimal Defaults' to load BIOS defaults.



Select the 'Exit' menu option -> 'Save Changes and Exit' to reboot the system.

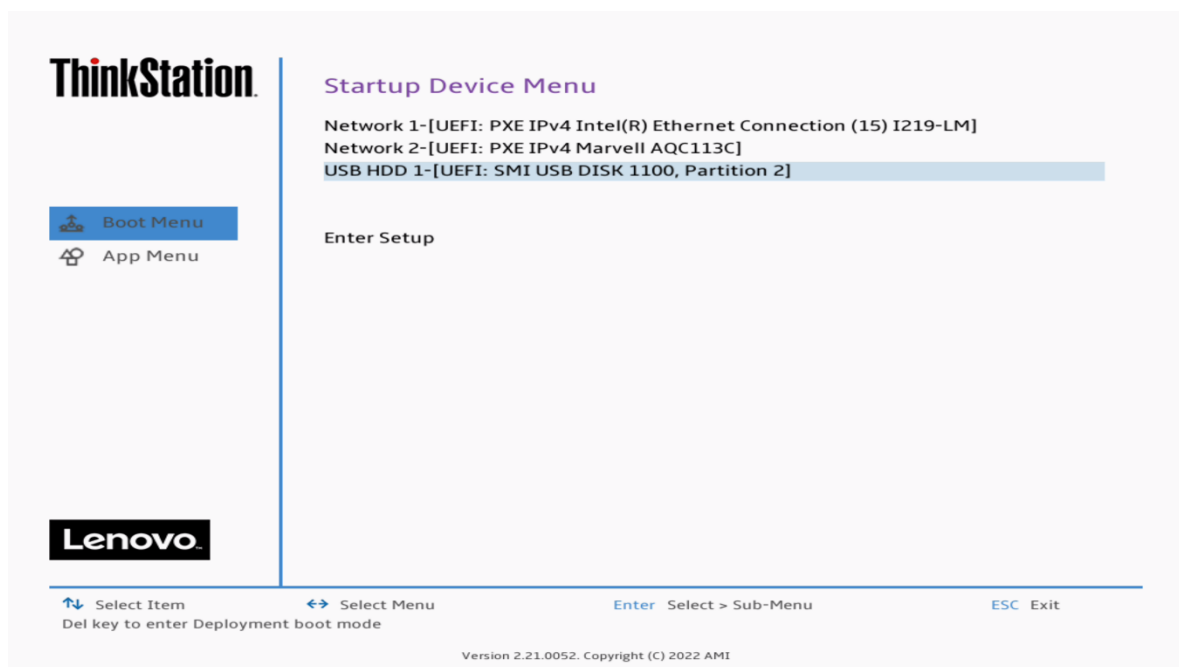




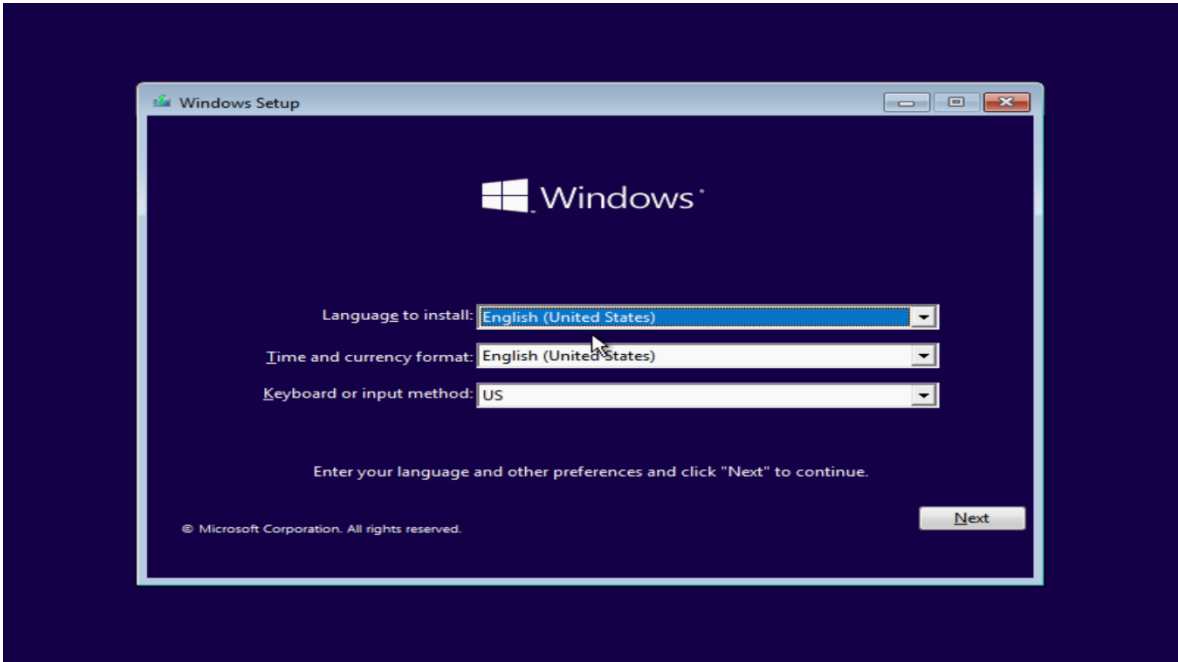
## Section 2 – Windows 10 Installation

Here are some step-by-step instructions on how to get a Windows 10 operating system installed on the ThinkStation PX, P7, and P5 systems.

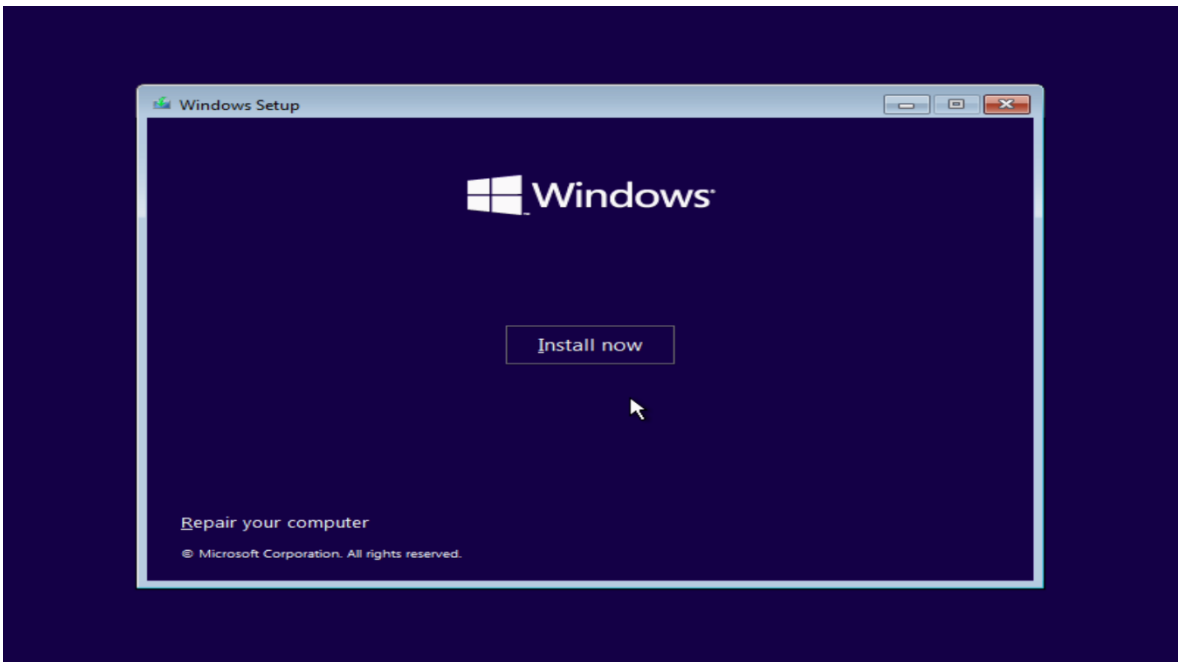
1. Obtain a copy of the Windows 10 installation media. If the Windows 10 media is an .iso image, extract the .iso image to the root of a freshly formatted FAT32 USB memory key.
2. Insert the USB memory key into one of the USB ports on the system and power on the system.
3. At the Lenovo splash screen, press the function F12 key to enter the BIOS startup menu and select the USB installation media from the list.



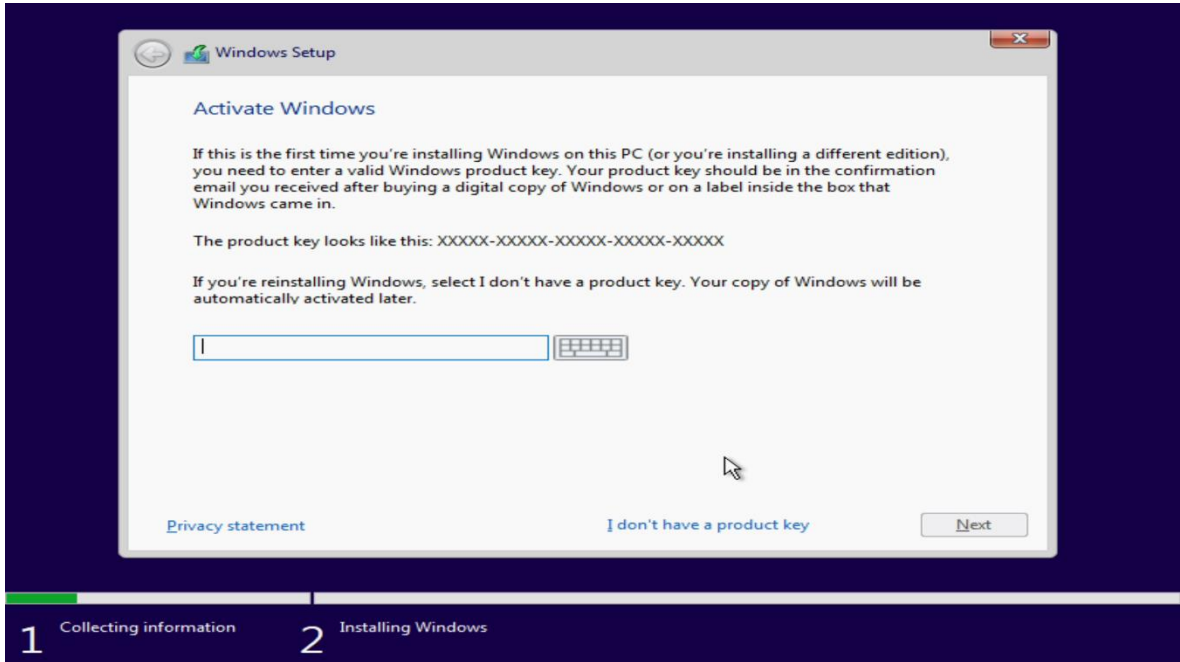
4. At the Windows 10 setup screen, select the Language, Time, and Keyboard Layout from the dropdown menus and select 'Next'.



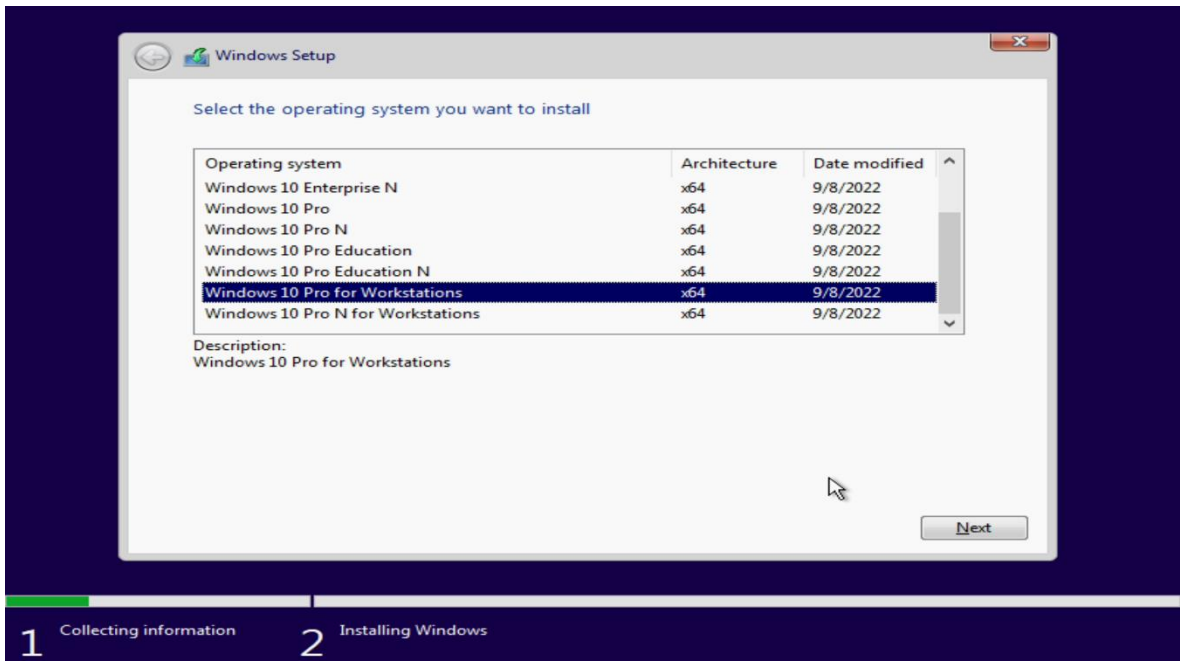
5. Select 'Install now'.



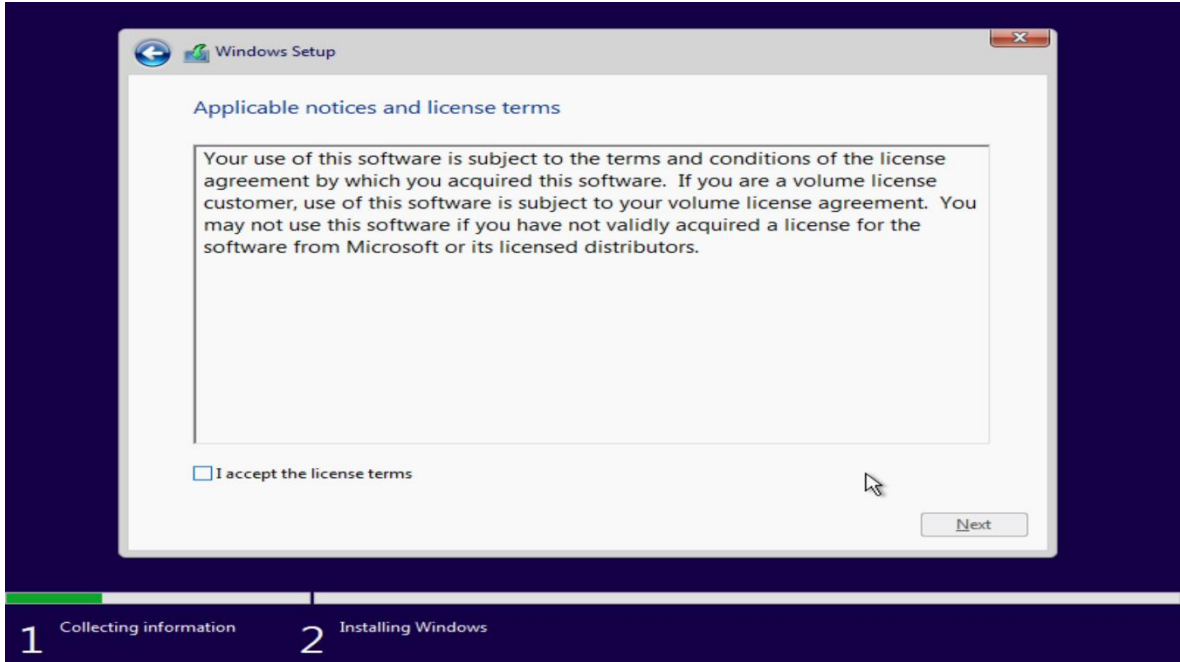
6. Enter a valid Windows 10 product key here or select “I don’t have a product key” to activate windows later.



7. For a multiple Windows 10 version operating system media, select the type of Windows 10 operating system to install. In this example, “Windows 10 Pro for Workstations” was used.

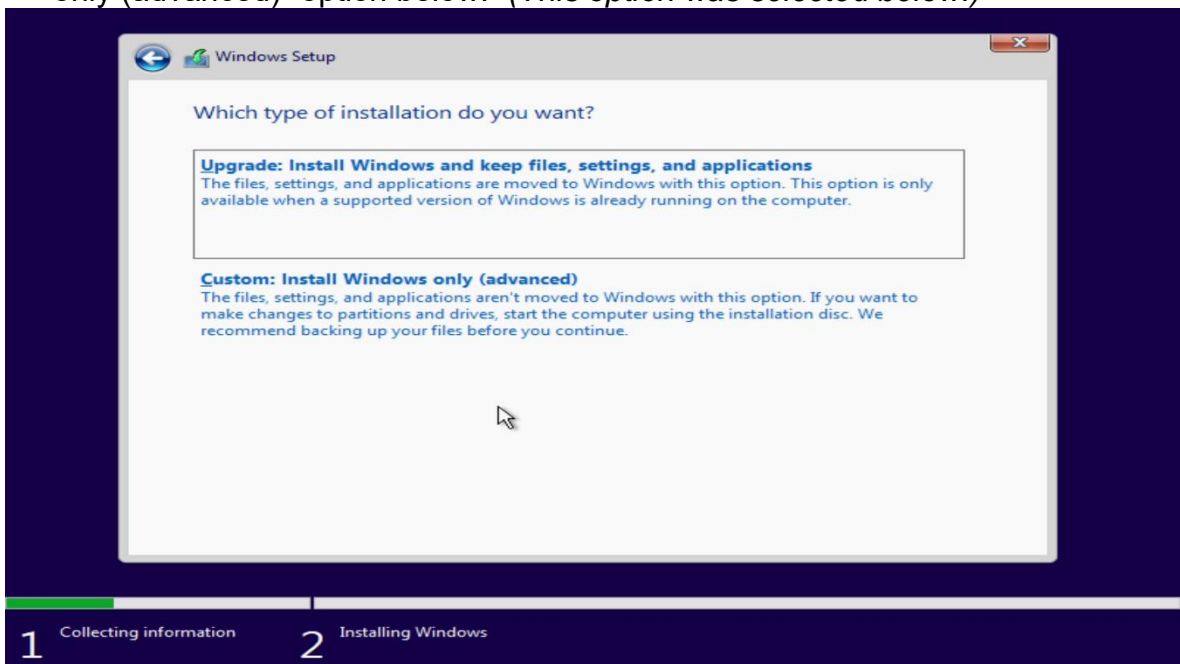


8. Check the box next to “I accept the license terms” and select ‘Next’.



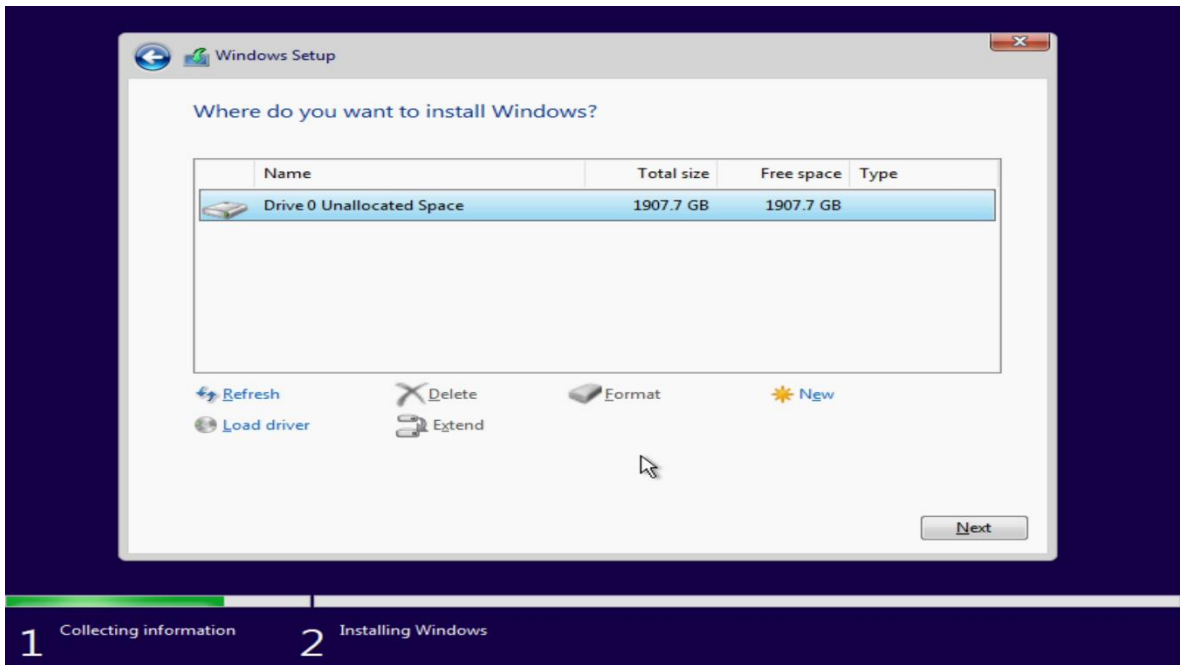
9. Choose the type of installation to perform.

- To upgrade to Windows 10 from an earlier version of Windows, select the “Upgrade” option below.
- To perform a clean OS installation, select “Custom: Install Windows only (advanced)” option below. *(This option was selected below!)*

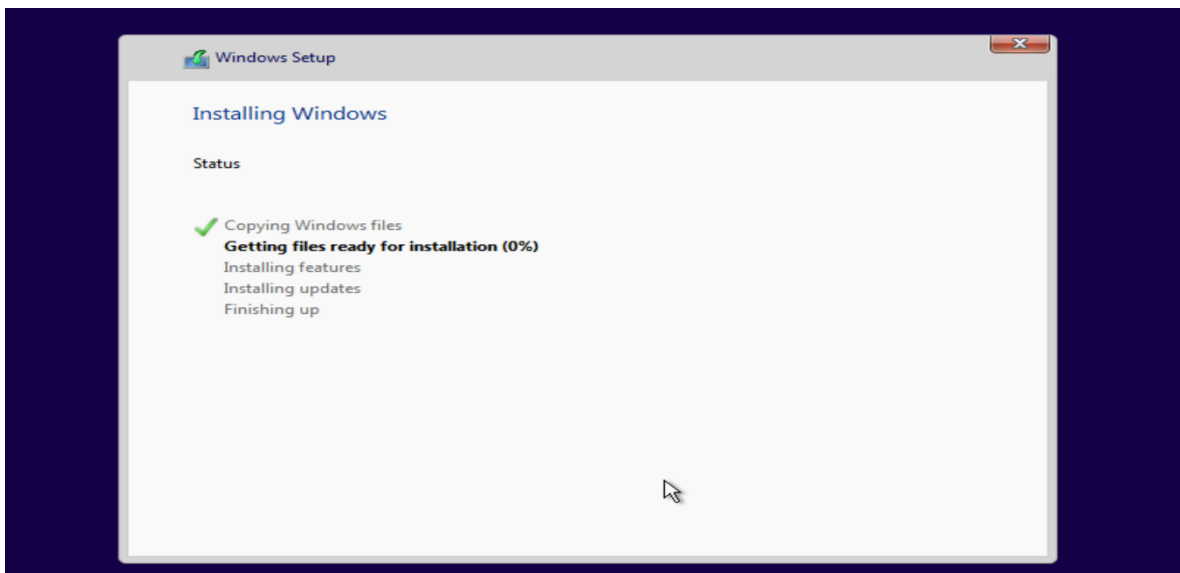


10. Select the drive to install the operating system on from the list below and select 'Next'.

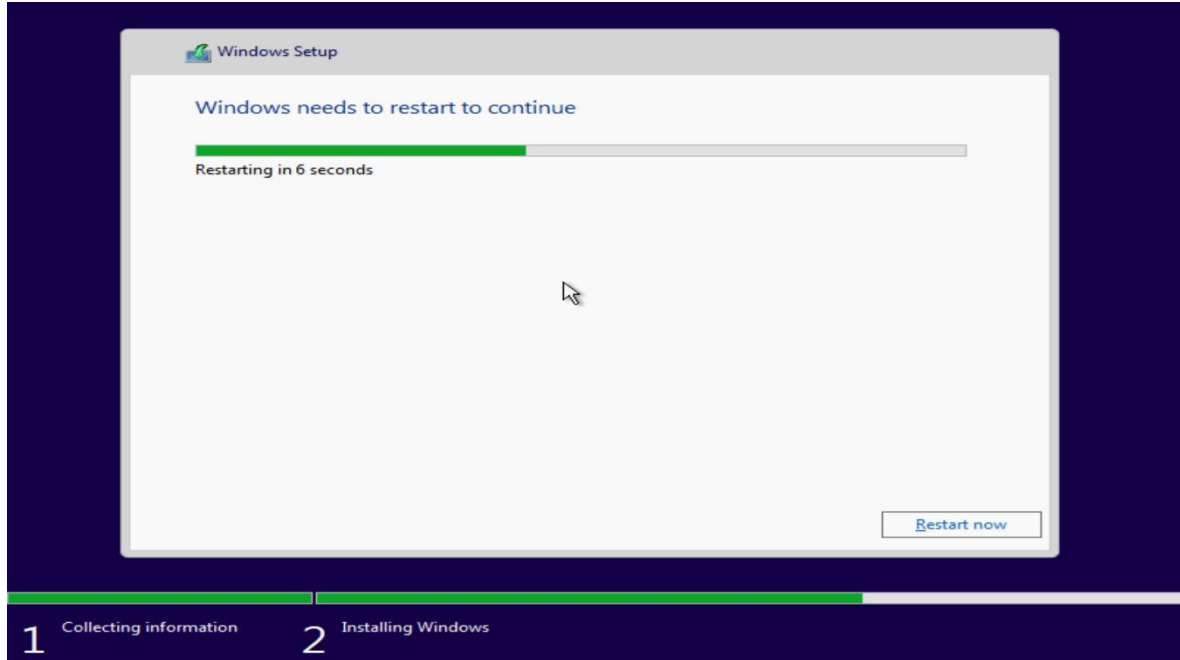
Note, some drives and RAID controllers may not be native to the Windows 10 operating system and may require a proprietary driver to get them to show up here. If so, load the proprietary driver to a USB memory key and select 'Load driver' from the screen below.



11. The Windows 10 operating system will begin to install on the drive selected above.



12. After the installation completes, the system should automatically reboot.

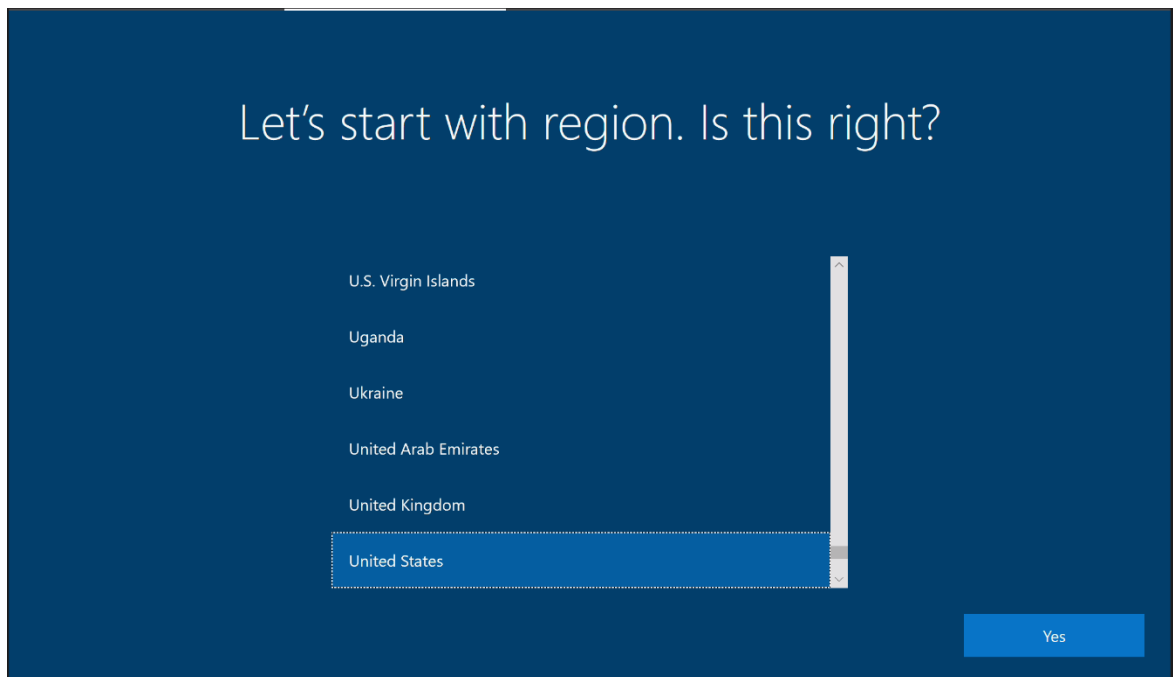


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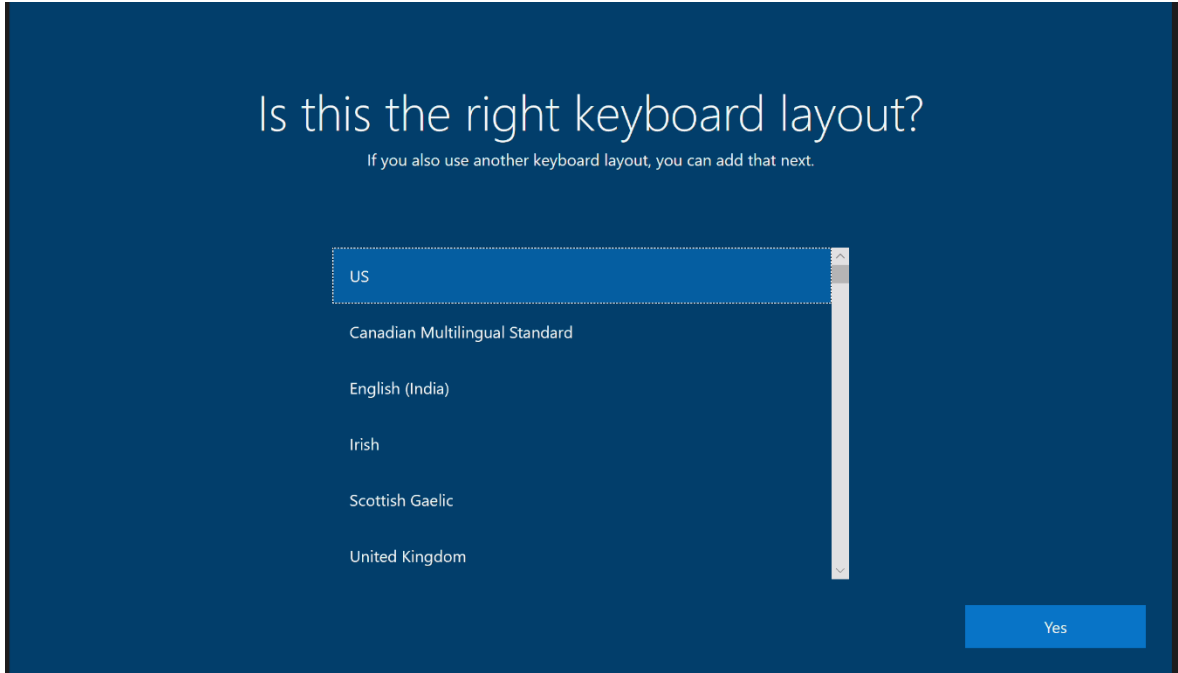
## Section 3 – Windows 10 Setup

Here are some step-by-step instructions on how to get a Windows 10 operating system setup on the new ThinkStation PX, P7, and P5 systems.

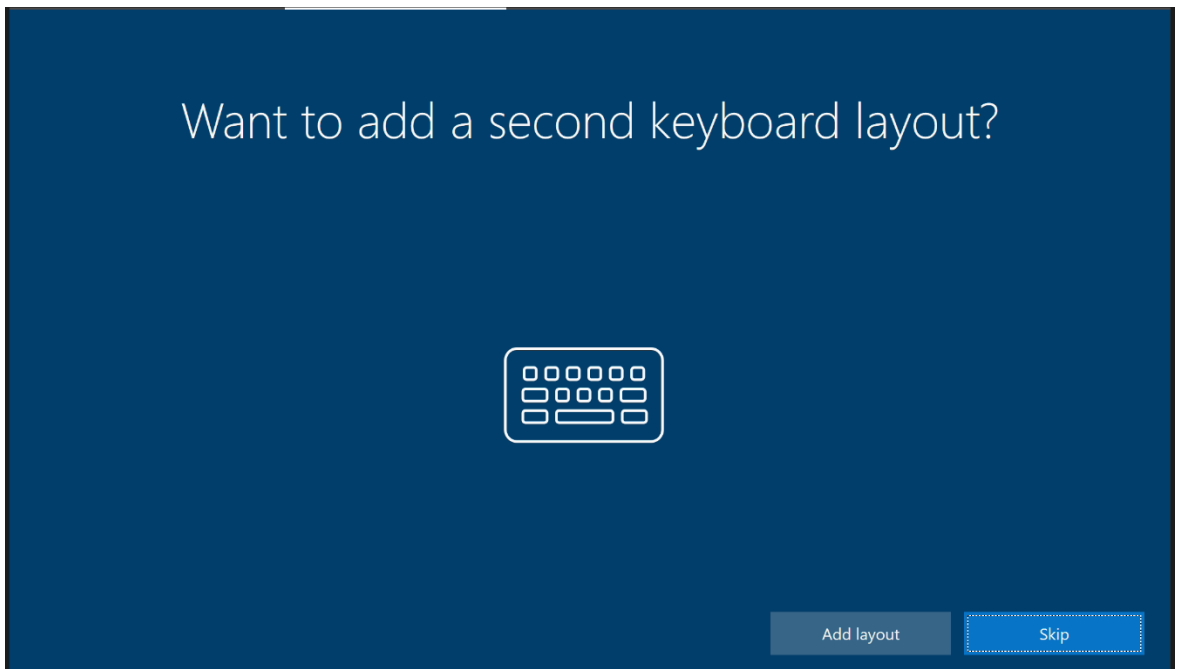
1. Select the appropriate location from the list below.



2. Select the appropriate keyboard layout from the list below.

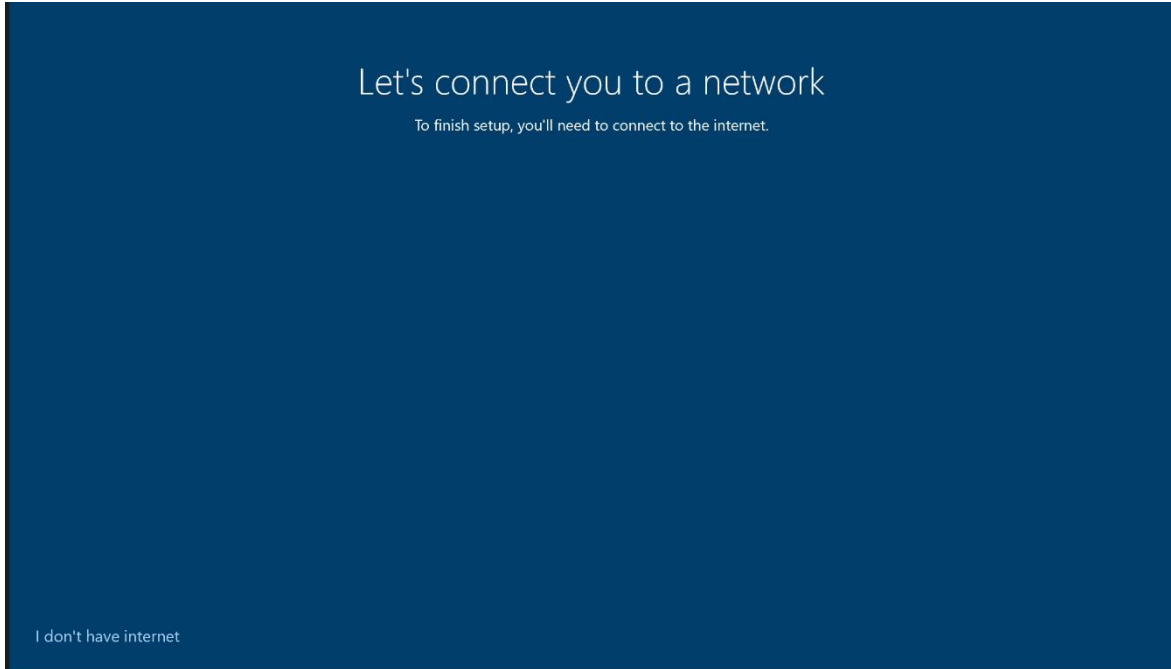


3. Select an optional second keyboard layout or 'Skip' below.

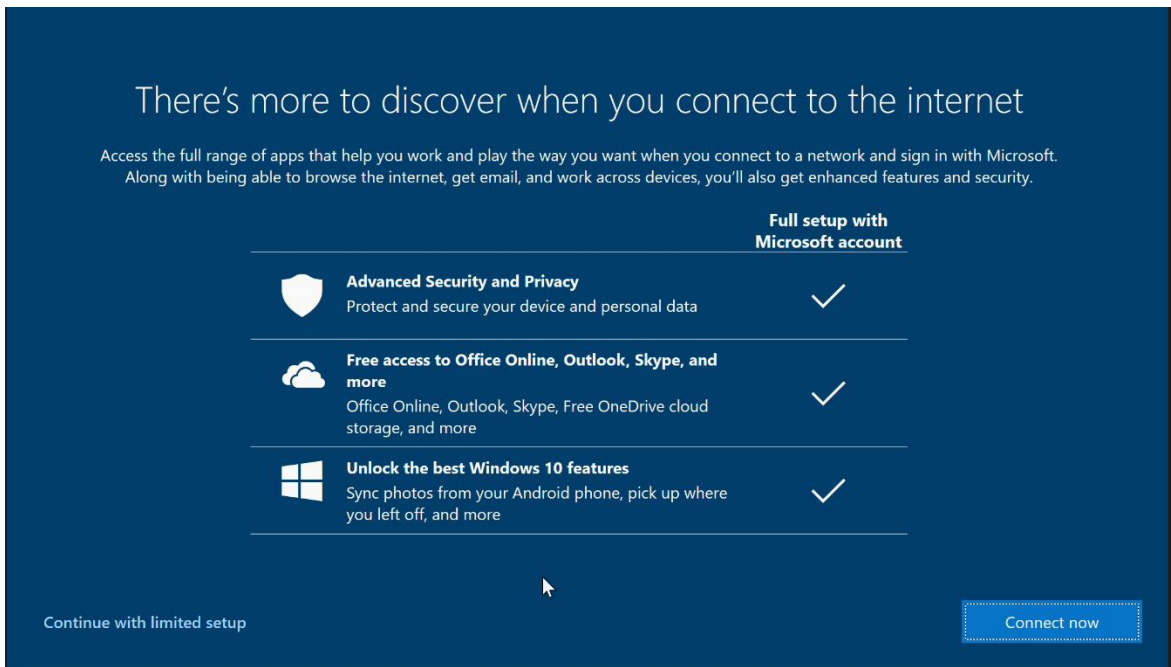




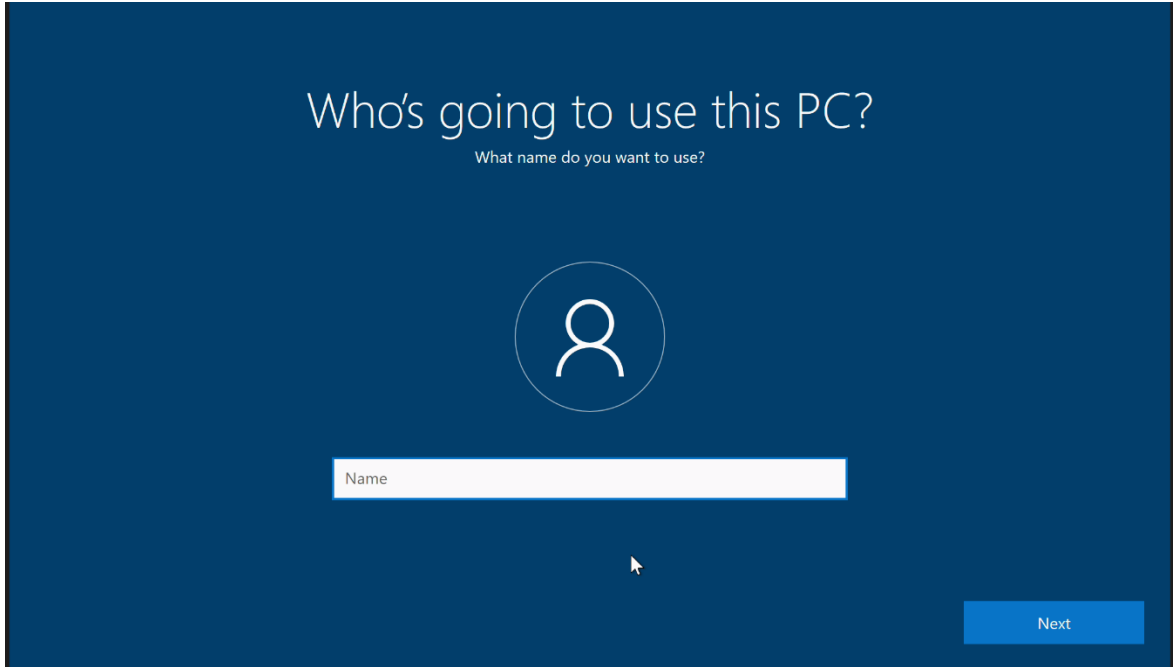
4. Connect to a network or select “I don’t have internet”.



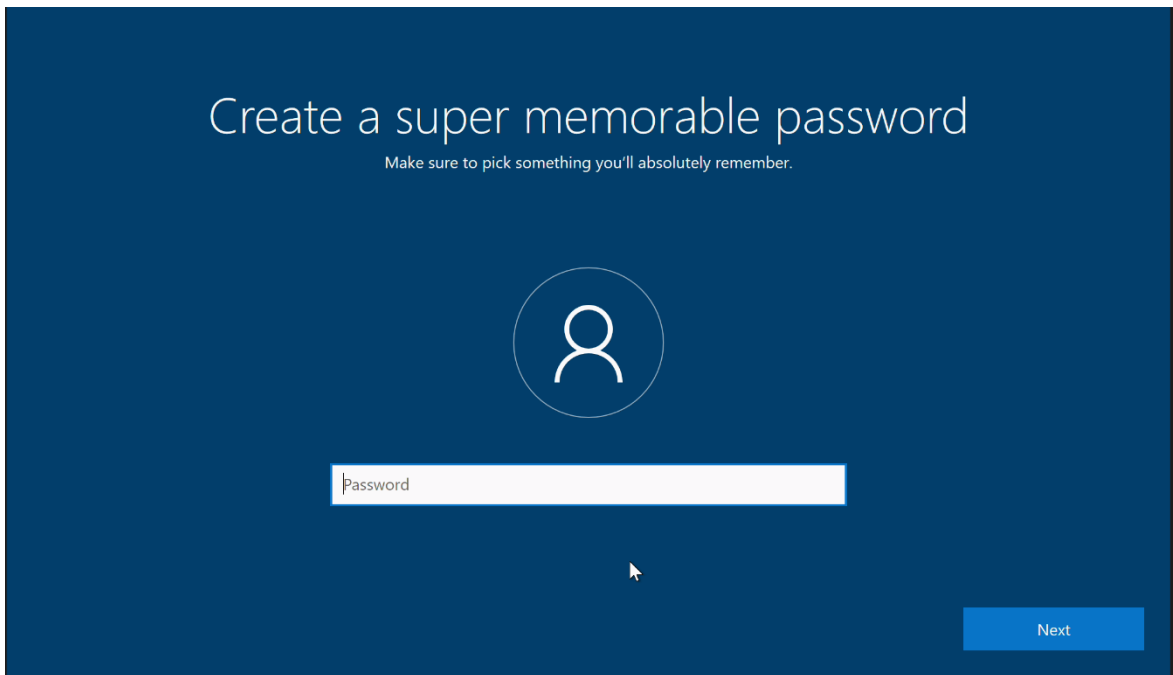
5. With no internet connection, select 'Continue with limited setup'.



6. Input a name for the PC.



7. Create a password or leave blank to continue with no password.



8. Choose the appropriate privacy settings and select 'Accept'.

## Choose privacy settings for your device

Microsoft puts you in control of your privacy. Choose your settings, then select 'Accept' to save them. You can change these settings at any time.

<p><b>Location</b> Get location-based experiences like directions and weather. Let Windows and apps request your location and allow Microsoft to use your location data to improve location services.</p> <p><input checked="" type="checkbox"/> Yes</p>	<p><b>Find my device</b> Turn on Find my device and use your device's location data to help you find your device if you lose it. You must sign in to Windows with your Microsoft account to use this feature.</p> <p><input checked="" type="checkbox"/> Yes</p>
<p><b>Diagnostic data</b> Send info about the websites you browse and how you use apps and features, plus additional info about device health, device activity, and enhanced error reporting. Required diagnostic data will always be included when you choose to send Optional diagnostic data.</p> <p><input checked="" type="checkbox"/> Send Required and Optional diagnostic data</p>	<p><b>Inking &amp; typing</b> Send optional inking and typing diagnostic data to Microsoft to improve the language recognition and suggestion capabilities of apps and services running on Windows.</p> <p><input checked="" type="checkbox"/> Yes</p>
<p><b>Tailored experiences</b> Let Microsoft use your diagnostic data, excluding information about...</p>	<p><b>Advertising ID</b> Apps can use advertising ID to provide more personalized advertising in...</p>

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9. Select the option on whether to use Cortana or not.

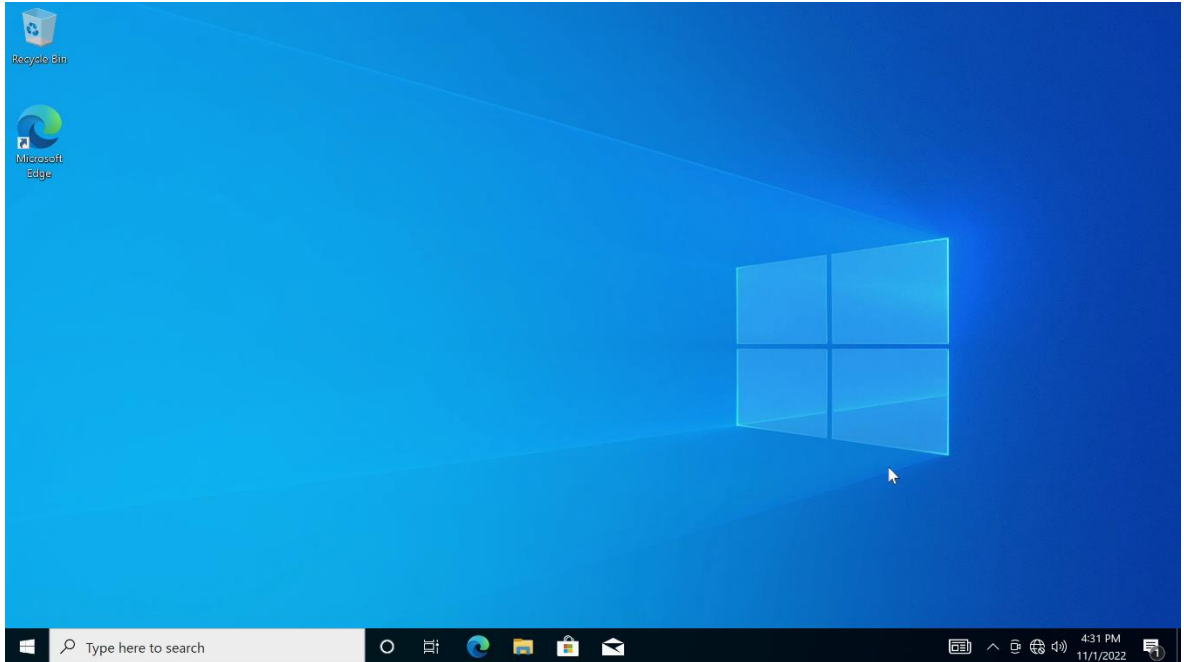
## Let Cortana help you get things done

To do this, Cortana needs access to some of your personal information

To let Cortana provide personalized experiences and relevant suggestions, Microsoft collects and uses information including your location and location history, contacts, voice input, speech and handwriting patterns, typing history, search history, calendar details, content and communication history from Microsoft services, messages and apps. In Microsoft Edge, Cortana uses your browsing history. You can always

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10. Windows 10 desktop screen.



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## Section 4 – Install Device Drivers

Once the Windows 10 installation is complete and has been setup, it is important to make sure all the correct device drivers get installed. At a high-level, here are the drivers that will need to get installed. All of these drivers can be obtained from the Lenovo Support Site.

- Intel Chipset
- Intel AMT
- Intel RSTe
- Realtek Audio
- Intel I219 Ethernet
- Aquantia AQC113C Ethernet
- Nvidia Graphics

Additionally, other third-party adapters that could be installed in the system may need an appropriate device driver as well.

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# Revision History

Version	Date	Author	Changes/Updates
1.0	5/26/2023	Jason M.	Initial launch release.