Windows 10 Installation

Lenovo ThinkStation PX, P8, 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, P8, P7, and P5 platforms.

Section 1 – BIOS Setup

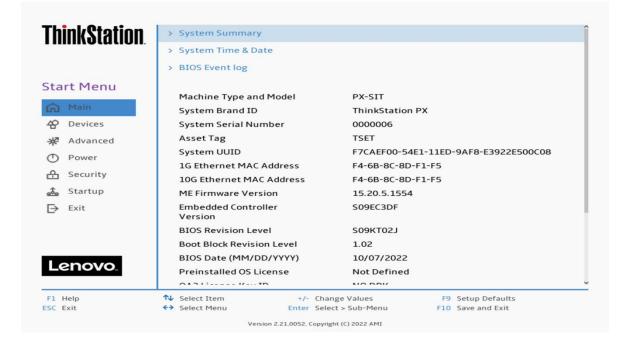
Prior to installing any operating system, it is important to make sure BIOS recognizes the storage devices appropriately.

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 <u>not</u> show up here if they are part of a RAID array.

ThinkStation	Front Fan 2	Operating
i mininotution.	Front Fan 3	Operating
	Rear Fan 1-1	Operating
	Rear Fan 1-2	Operating
Start Menu	Flex Bay Fan 1	Operating
Main	Flex Bay Fan 2	Operating
P Devices	Flex Bay Fan 3	Not Operating
T Devices	PSU HDD Fan	Not Operating
* Advanced	M.2 Drive 1	SAMSUNG MZVL22T0HBLB-00BL7
Power	M.2 Drive 2	None
🔒 Security	M.2 Drive 3	None
Startup	MCIO Drive 1-1	None
	MCIO Drive 1-2	None
Exit Exit	MCIO Drive 2-1	None
	MCIO Drive 2-2	None
	PCIe Drive 1	None
	PCIe Drive 2	None
Lenovo	PCIe Drive 3	None
	PCIe Drive 4	None
F1 Help		ange Values F9 Setup Defaults
SC Exit	♦ Select Menu Enter Se	lect > Sub-Menu F10 Save and Exit

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

ThinkStation.		
	Storage Setup	
Start Menu	SATA Controller Select whether to enable or disable SATA controller.	Enabled 🗸
A Main	SATA Drive 1 Select whether to enable or disable SATA drive 1.	Enabled 🗸
* Advanced	SATA Drive 2 Select whether to enable or disable SATA drive 2.	Enabled 🗸
Power	SATA Drive 3 Select whether to enable or disable SATA drive 3.	Enabled 🗸
🕂 Security	SATA Drive 4 Select whether to enable or disable SATA drive 4.	Enabled 🗸
Exit	M.2 Drive 1 Select whether to enable or disable M.2 Drive 1.	Enabled 🗸
	M.2 Drive 2 Select whether to enable or disable M.2 Drive 2.	Enabled 🗸
Lenovo	M.2 Drive 3 Select whether to enable or disable M.2 Drive 3.	Enabled 🗸
	MCIO Drive 1-1	Enabled 🗸
F1 Help SC Exit	↓ Select Item +/- Change Values ↔ Select Menu Enter Select > Sub-Menu	F9 Setup Defaults F10 Save and Exit

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.



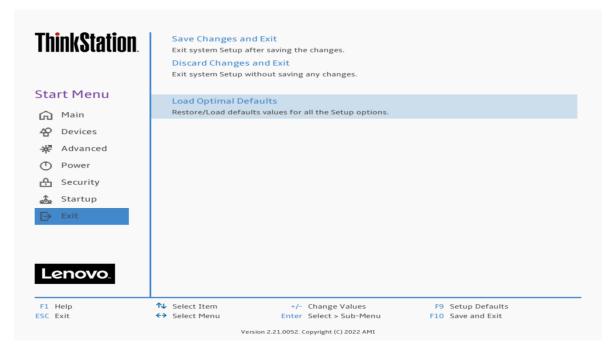
Make sure the drive is linking properly.

ThinkStation	← M 2 51at1 6a	- firmentia -		
Start Menu	M.2 Slot1 Co	-	Auto	~
 Main ☆ Devices ☆ Advanced 	PCIe Port Link Sta PCIe Port Link Ma: PCIe Port Link Spe	x	Linked as x4 Max Width x4 Gen 4 (16.0 GT/s)	
Power Security Startup				
🚵 Startup [→ Exit				
Lenovo.				
F1 Help ESC Exit	 ↑↓ Select Item ↔ Select Menu 	+/- Change Values Enter Select > Sub-Menu	F9 Setup Defaults F10 Save and Exit	

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



Select the 'Exit' menu option -> 'Load Optimal Defaults' to load BIOS defaults. Note, in the P8 BIOS, this option is called 'Load Factory Defaults'



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

Th:	
ThinkStation	Save Changes and Exit Exit system Setup after saving the changes.
	Discard Changes and Exit Exit system Setup without saving any changes.
Start Menu	Load Optimal Defaults
🛱 Main	Restore/Load defaults values for all the Setup options.
谷 Devices	
₩ Advanced	
O Power	
🕂 Security	
💑 Startup	
⊨ Exit	
Lenovo	
F1 Help ESC Exit	↑↓ Select Item +/- Change Values F9 Setup Defaults ♦ Select Menu Enter Select > Sub-Menu F10 Save and Exit
ESC EXIL	Version 2.21.0052. Copyright (C) 2022 AMI

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, P8, 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.

ThinkStation . 全 Boot Menu 谷 App Menu	Startup Device Menu Network 1-[UEFI: PXE IPv4 I Network 2-[UEFI: PXE IPv4 N USB HDD 1-[UEFI: SMI USB I Enter Setup	intel(R) Ethernet Connection (15) I2 Marvell AQC113C]	L9-LM]
♣ Select Item Del key to enter Deployment	←→ Select Menu t boot mode	Enter Select > Sub-Menu	ESC Exit

/ersion 2.21.0052. Copyright (C) 2022 AMI

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

🖆 Windows Setup	-
	-Windows [*]
Langua <u>ge</u> to instal <u>T</u> ime and currency forma	II: English (United States)
<u>K</u> eyboard or input method	us 💌
Enter your language	e and other preferences and click "Next" to continue.
Microsoft Corporation. All rights reserved.	1

5. Select 'Install now'.

🍹 Windows Setup		
	Install now	
	×	
<u>R</u> epair your computer		
Microsoft Corporation. All ri	ghts reserved.	

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

	🕞 ፈ Windows Setup	
	Activate Windows	
	you need to enter a valid Wi	installing Windows on this PC (or you're installing a different edition), ndows product key. Your product key should be in the confirmation ing a digital copy of Windows or on a label inside the box that
	The product key looks like the	nis: XXXXX-XXXXX-XXXXXX-XXXXXX-XXXXXX
	If you're reinstalling Window automatically activated later	vs, select I don't have a product key. Your copy of Windows will be
	1	
		l≩
	Privacy statement	I don't have a product key Next
$1^{Collecting}$	^{g information} 2 ^{Installing}	Windows

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.

Select the operating system you want to	o install		
Operating system	Architecture	Date modified	^
Windows 10 Enterprise N	x64	9/8/2022	
Windows 10 Pro	x64	9/8/2022	
Windows 10 Pro N	x64	9/8/2022	
Windows 10 Pro Education	x64	9/8/2022	
Windows 10 Pro Education N	x64	9/8/2022	
Windows 10 Pro for Workstations	x64	9/8/2022	
Windows 10 Pro N for Workstations	x64	9/8/2022	
		L3	Next
			Next

8. Check the box next to "I accept the license terms" and select 'Next'.

G	Windows Setup	
	Applicable notices and license terms	
	Your use of this software is subject to the terms and co agreement by which you acquired this software. If you customer, use of this software is subject to your volum may not use this software if you have not validly acqui software from Microsoft or its licensed distributors.	u are a volume license ne license agreement. You
	I accept the license terms	Next
ollecting inf	ormation 2 Installing Windows	

- 9. Choose the type of installation to perform.
 - <u>To upgrade to Windows 10 from an earlier version of Windows</u>, select the "Upgrade" option below.
 - <u>To perform a clean OS installation</u>, select "Custom: Install Windows only (advanced)" option below. *(This option was selected below!)*

which type	e of installation do you want?	
The files, sett	stall Windows and keep files, settings, and applications ings, and applications are moved to Windows with this option. This optio en a supported version of Windows is already running on the computer.	n is only
The files, sett make change	stall Windows only (advanced) ings, and applications aren't moved to Windows with this option. If you v is to partitions and drives, start the computer using the installation disc. V backing up your files before you continue.	

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

Note, some drives and RAID controllers may <u>not</u> 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.

	Windows Setup				×
	Name		Total size	Free space	Туре
	Drive 0 Unal	located Space	1907.7 GB	1907.7 GB	
	<u>R</u> efresh Load driver	Delete	ermat 🖓	<mark>∦</mark> N <u>e</u> w	
					Next
ecting inform	ation 7 In:	stalling Windows			

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.

	🚳 Windows Setup			
	Windows needs to restart to continue			
	Restarting in 6 seconds			
	R3			
	Retet new			
	<u>R</u> estart now			
1 Collecting inform	1 Collecting information 2 Installing Windows			

Lenovo

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, P8, P7, and P5 systems.

1. Select the appropriate location from the list below.

Let's s	start with region. Is this rig	ht?
U	J.S. Virgin Islands	
l	Jganda	
l	Jkraine	
, t	Jnited Arab Emirates	
,	Jnited Kingdom	
	Jnited States	
		Yes

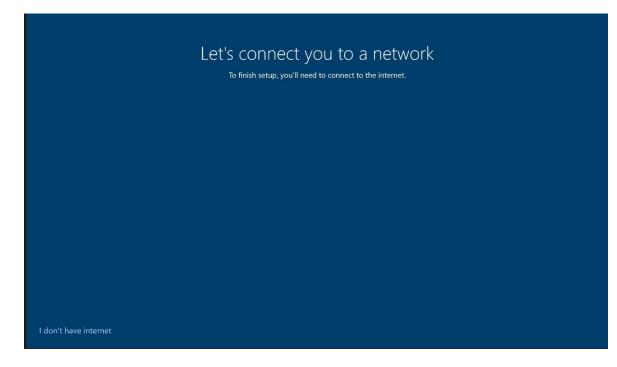
2. Select the appropriate keyboard layout from the list below.

ls tł	nis the right keyboard layou; If you also use another keyboard layout, you can add that next.	t?	
	US		
	Canadian Multilingual Standard English (India)		
	Irish		
	Scottish Gaelic United Kingdom		
		Yes	

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

Want to add a second keyboard layout?
Add layout Skip

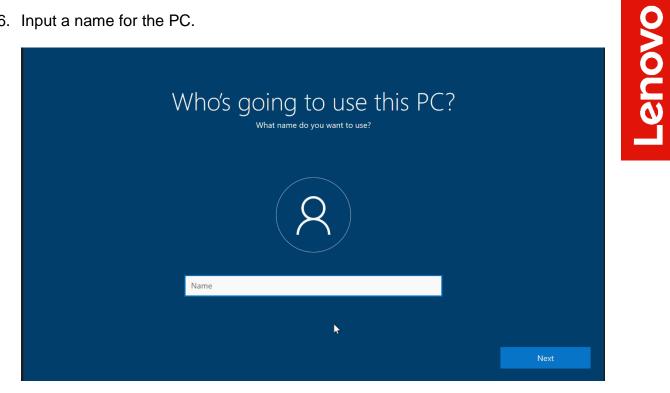
4. Connect to a network or select "I don't have internet".



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

There's r	more to discover when you conn	ect to the i	nternet
	f apps that help you work and play the way you want when you conne ble to browse the internet, get email, and work across devices, you'll a		
_		Full setup with Microsoft account	
	Advanced Security and Privacy Protect and secure your device and personal data	\checkmark	
	Free access to Office Online, Outlook, Skype, and more Office Online, Outlook, Skype, Free OneDrive cloud storage, and more	~	
	Unlock the best Windows 10 features Sync photos from your Android phone, pick up where you left off, and more	~	
Continue with limited setup	k		Connect now

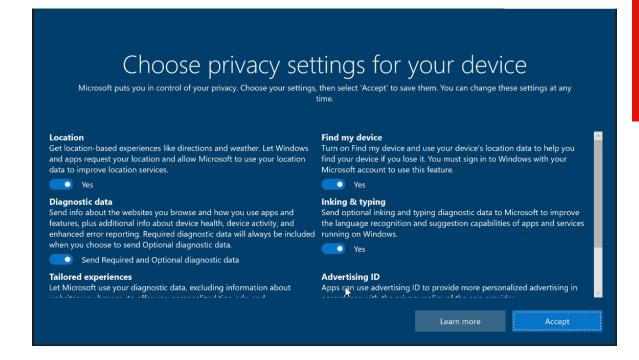
6. Input a name for the PC.



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

Create a super memorable password Make sure to pick something you'll absolutely remember.	
Password	
*	
	Next

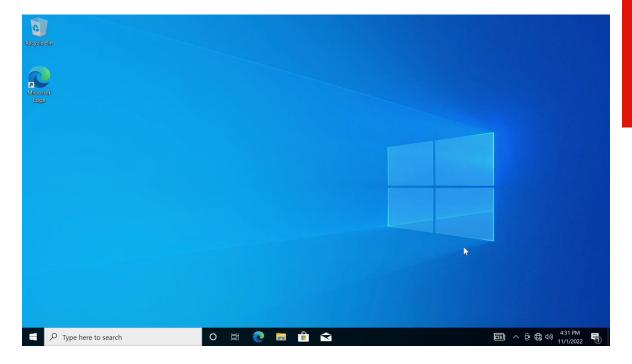
8. Choose the appropriate privacy settings and select 'Accept'.



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



10. Windows 10 desktop screen.



Section 4 – Install Device Drivers

Once the OS installation is complete and Windows 10 has been setup, it is important to make sure all device drivers are installed properly. Any missing drivers can be obtained from the Lenovo Support Site or through Lenovo Vantage.

Additionally, any third-party peripherals that have been installed in the system may need an appropriate device driver from the vendor support site.

Revision History

Version	Date	Author	Changes/Updates
1.1	2/8/2024	A Panteleev	Added support for P8
1.0	4/19/2023	J Moebs	Initial launch release.