#### Windows 11 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 11 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.

hink@tation	Front Fan 2	Operating	
ππλοτατισμ	Front Fan 3	Operating	
	Rear Fan 1-1	Operating	
	Rear Fan 1-2	Operating	
tart Menu	Flex Bay Fan 1	Operating	
A Main	Flex Bay Fan 2	Operating	
Dovisos	Flex Bay Fan 3	Not Operatin	Ig
Devices	PSU HDD Fan	Not Operatio	g
Advanced	M.2 Drive 1	SAMSUNG M	ZVL22T0HBLB-00BL7
D Power	M.2 Drive 2	None	
Security	M.2 Drive 3	None	
Startup	MCIO Drive 1-1	None	
	MCIO Drive 1-2	None	
→ 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	
1 Help	↑↓ Select Item	+/- Change Values	F9 Setup Defaults
C Exit	↔ Select Menu	Enter Select > Sub-Menu	F10 Save and Exit

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

<b>ThinkStation</b>	+	
	Storage Setup	
Start Menu	SATA Controller Select whether to enable or disable SATA controller.	Enabled 🗸
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 🗸
Lenovo	MCIO Drive 1-1	Enabled 🗸
F1 Help ESC Exit	↑↓     Select Item     +/- Change Values       ←>     Select Menu     Enter       Select Nenu     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.

<b>ThinkStation</b>	÷			
	M.2 Slot1 Con	figuration		
Start Menu	Link Speed		Auto	~
Main Pevices Advanced	PCIe Port Link Statu PCIe Port Link Max PCIe Port Link Spee	us ed	Linked as x4 Max Width x4 Gen 4 (16.0 GT/s)	]
Power Security				-
Exit				
Lenovo				
F1 Help ESC Exit	<ul> <li>↑↓ Select Item</li> <li>←&gt; Select Menu</li> </ul>	+/- 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.

Think Otation	Sava Changes and Frit
I UIUK2LATIOU	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
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#### Section 2 – Windows 11 Installation

Here are some step-by-step instructions on how to get a Windows 11 operating system installed on the ThinkStation PX, P7, P8, and P5 systems.

- 1. Obtain a copy of the Windows 11 installation media. If the Windows 11 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.

<b>ThinkStation</b> . 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	LI ntel(R) Ethernet Connection (15) I23 Aarvell AQC113C] DISK 1100, Partition 2]	L9-LM]
♣ Select Item Del key to enter Deployment	←→ Select Menu t boot mode	Enter Select > Sub-Menu	ESC Exit

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4. At the Windows 11 setup screen, select the Language, Time, and Keyboard Layout from the dropdown menus and select 'Next'.

🟜 Windows Setup		
Languag <u>e</u> to install: <u>T</u> ime and currency format:	English (United States) English (United States)	<b>•</b>
<u>K</u> eyboard or input method:	US	-
Enter your language	and other preferences and click "Next" to continue.	
Microsoft Corporation. All rights reserved.		N

5. Select 'Install now'.

Windows Setup		
	Windows	
	Install now	
<u>R</u> epair your computer		

6. For a multiple Windows 11 version operating system media, select the type of Windows 11 operating system to install. In this example, "Windows 11 Pro for Workstations" was used.

G	Windows Setup			
	Select the operating system you want to inst	all		
	Operating system	Architecture	Date modified	
	Windows 11 Enterprise N	x64	9/27/2021	_
	Windows 11 Pro	x64	9/27/2021	_
	Windows 11 Pro N	x64	9/27/2021	_
	Windows 11 Pro Education	x64	9/27/2021	
	Windows 11 Pro Education N	x64	9/27/2021	
	Windows 11 Pro for Workstations	x64	9/27/2021	
	Windows 11 Pro N for Workstations	x64	9/27/2021	
				Next
				-13

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



- 8. Choose the type of installation to perform.
  - <u>To upgrade to Windows 11 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 of installation do you want?	
Upgrade: Install Windows and keep files, settings, and applications The files, settings, and applications are moved to Windows with this option. This option is only available when a supported version of Windows is already running on the computer.	
<u>Custom: Install Windows only (advanced)</u> The files, settings, and applications aren't moved to Windows with this option. If you want to make changes to partitions and drives, start the computer using the installation disc. We recommend backing up your files before you continue.	
	G.

9. 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 11 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.

Name		Total size	Free space	Туре
€9 <u>R</u> efresh €9 <u>L</u> oad driver	Delete	Eormat	<mark>∦</mark> N <u>e</u> w	
Load driver	Estend	Found	<b>•</b> • • <b>2</b> •	Next

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



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

	🔏 Windows Setup	
	Windows needs to restart to continue	
	Restarting in 5 seconds	
	Restart now	
$1^{Collecting}$	information 2 Installing Windows	

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#### Section 3 – Windows 11 Setup

The following steps demonstrate how to begin the Windows 11 operating system setup on the ThinkStation PX, P8, P7, and P5 systems with network access.

1. Select the appropriate location from the list below.

Is this the right country or region?
Ukraine
United Arab Emirates
United Kingdom
United States
Uruguay
Uzbekistan
Yes
<b>党</b> 49

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

Is this the right keyboard layout or input method?
If you also use another keyboard layout, you can add that next.
US
Canadian Multilingual Standard
English (India)
Irish
NZ Aotearoa
 Yes

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



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4. Systems that are connected to a network with an Ethernet cable will try to automatically connect. Systems without an existing connection that have a wireless adapter will require input to select the desired wireless network and necessary security settings.

Once the system has connected to the selected network, continue the setup process, making the appropriate selections at each step.

Note, some versions of Windows 11 will allow users to continue the setup process without an active network connection, for more information on the offline setup of Windows 11 refer to <u>Section 4</u>.



5. Once all of the setup selections have been made, wait for any updates to install or select 'Stop update and go to desktop' to postpone installing updates. Proceed to the desktop and enter the PIN or password.



6. Completed setup with the Windows 11 desktop screen.

0									
Rocycle Bin	,O Type here	to search							
Milerosoft Réna	Pinned				1	All apps >			
	C Microsoft Edge	Mail	Calendar	Microsoft Store	Photos	Settings			
							:		
						Calculator			
	Recommend	<b>led</b> tarted rme to Windows							
	A Lenov	ro				Ċ	5/		
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## Section 4 – Offline Windows 11 Setup

The following steps demonstrate how to begin the Windows 11 operating system setup on the ThinkStation PX, P8, P7, and P5 systems without network access. These steps may not work on all versions of Windows 11.

1. At any point during the Windows setup process before the 'Let's connect you to a network' page, press 'SHIFT+F10' to open a Command Prompt.



2. Enter the following command 'OOBE\BYPASSNRO' in the command line then press 'Enter'. The computer will automatically reboot and restart the setup process. Repeat steps 1-3 from <u>Section 3</u>, once users get to the 'Let's connect you to a network' window, a new option 'I don't have internet' will appear.



3. Select 'I don't have internet'.

Let's connect you to a network
You'll need an internet connection to continue setting up your device. Once connected, you'll get the latest features and security updates.
Ethernet Not connected
I don't have internet Next

4. Once the 'Continue with limited setup' option is selected, continue the setup process, making the appropriate selections at each step.



5. Completed setup with the Windows 11 desktop screen.

8									
Ranyella Bin									
	,O Type here	to search							
Witerosoft Bidge	Pinned			-		All apps >			
	Microsoft Edge	Mail	Calendar	Microsoft Store	Photos	Settings			
6						-	:		
						Calculator			
	Recommend	led							
	Get St Welco	arted me to Windows							
	A Lenov	0				Ċ			
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#### Section 5 – Install Device Drivers

Once the OS installation is complete and Windows 11 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. Updated Section 3 and 4
1.0	4/19/2023	J Moebs	Initial launch release.