

Lenovo P-series Workstations Secure Erase

ThinkStation: P920-P720-P620-P520-P520c-P340-P330-P320

ThinkPad: P1-P15-P15v-P15s-P17-P14s-P53-P72-P73

Lenovo



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Overview

The purpose of this document is to provide guidelines for users on how to securely erase SATA and M.2 drives in Lenovo ThinkStations P920, P720, P620, P520, P520c, P340, P330, P320 and Lenovo ThinkPads P1, P15, P15v, P15s, P17, P14s, P53, P72, P73.

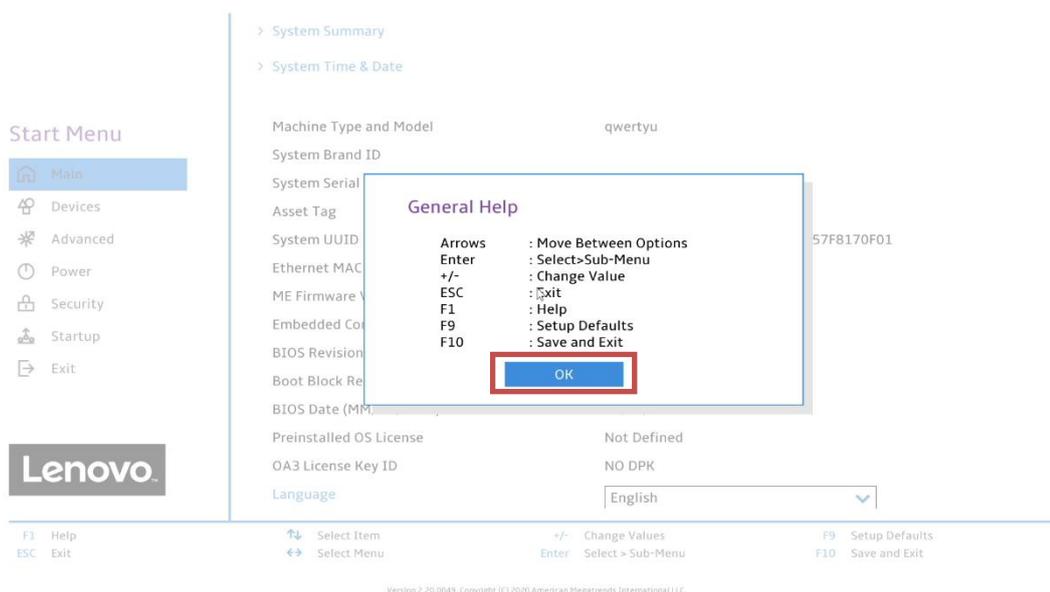
Section 1 – How To Securely Erase SATA Drives Using ThinkStation BIOS

The following instructions will cover the steps required to use ThinkStation BIOS to securely erase SATA HDD/SSD.

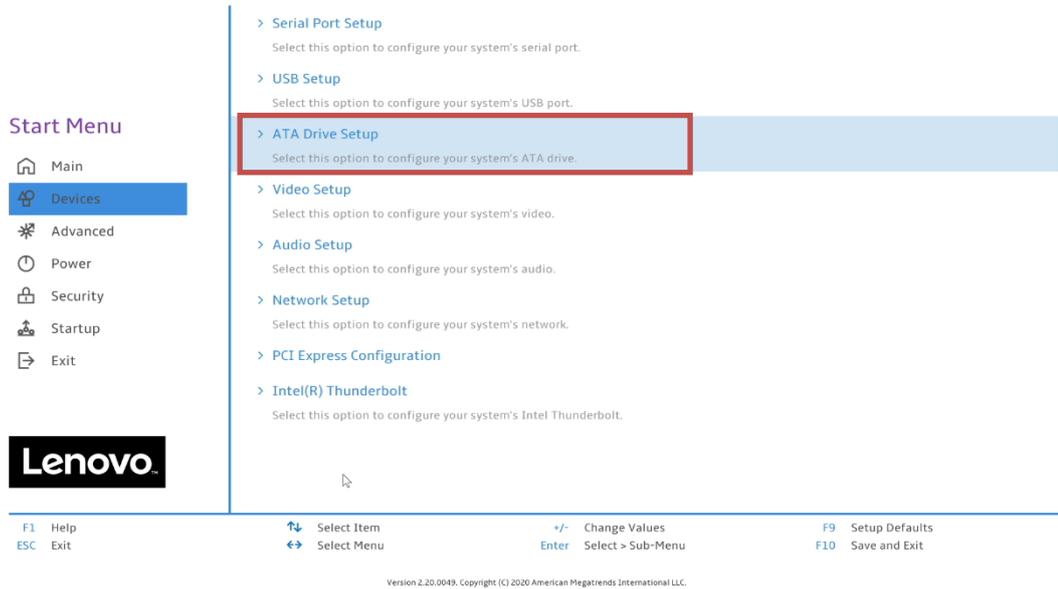
Note 1: Images represent newer platforms with graphical BIOS setup screens. BIOS interface on older platforms might appear different than the images shown.

Note 2: For the integrated secure erase feature to function correctly, any drive to be erased **MUST** be attached to one of the system’s onboard SATA ports. To avoid erasing incorrect drives, Lenovo recommends the users to remove any drives not targeted for secure erase to ensure only intended drive is erased.

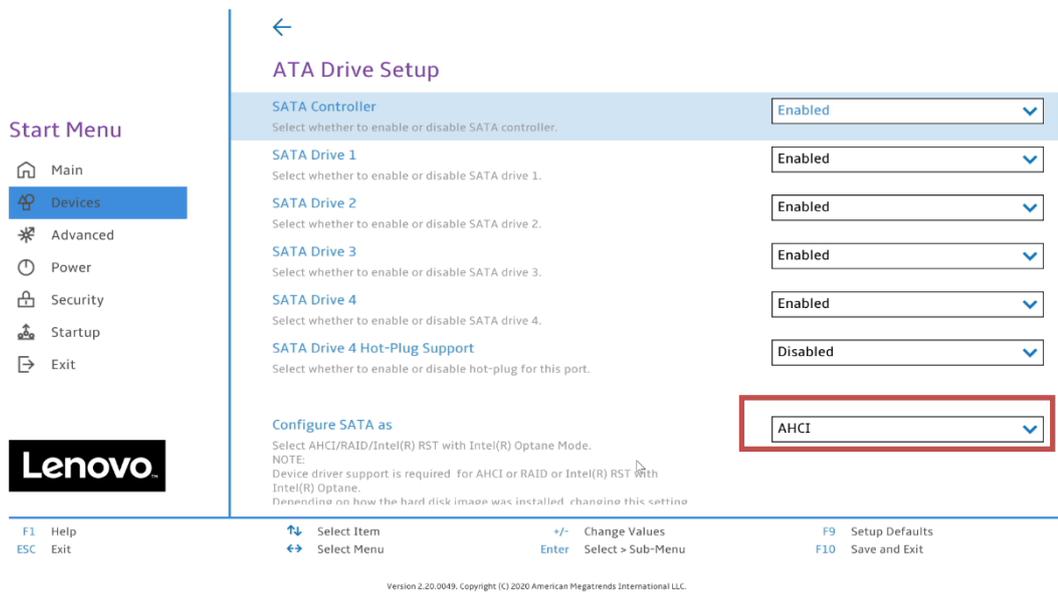
1. With the target drive connected to the system correctly, power on the system and keep pressing “F1” at the Lenovo splash screen to enter the BIOS setup.



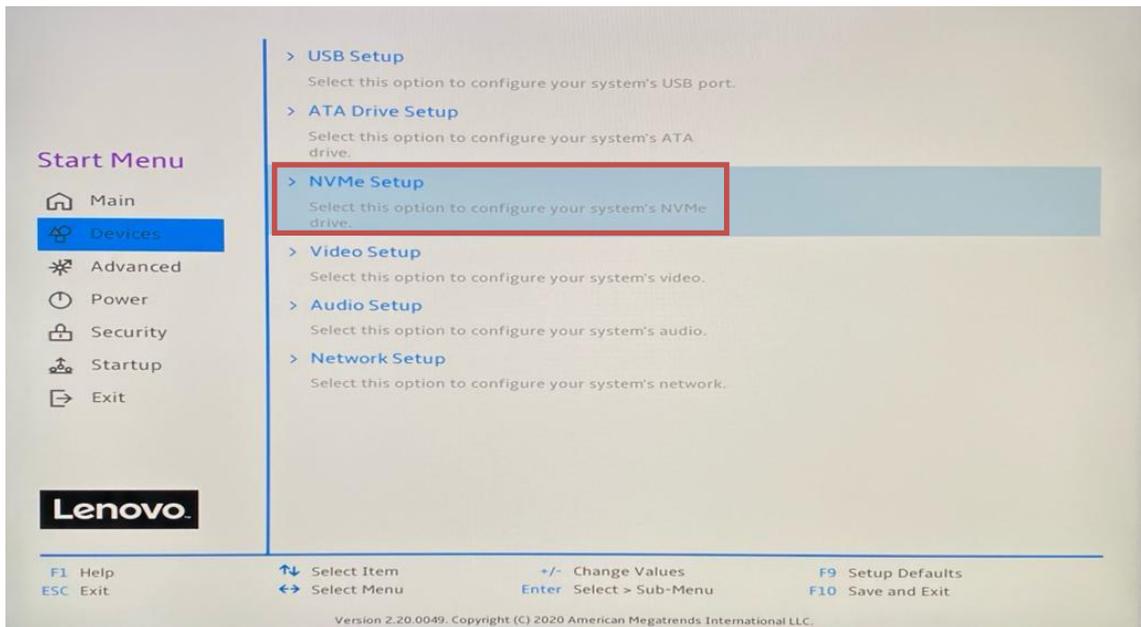
2. Navigate to the “Devices” tab and select the “ATA Drive Setup”. Press enter.



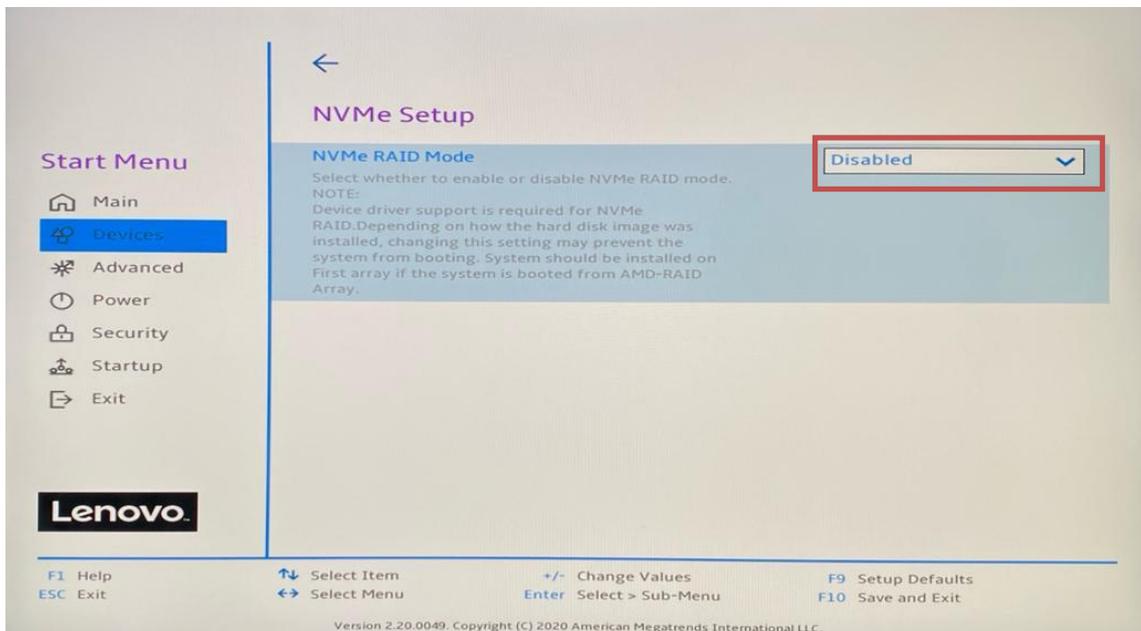
3. Make sure the “Configure SATA as” option is set to “AHCI”.



4. For users referring this document to securely erase NVMe drives, navigate to the “Devices” tab and select the “NVMe Setup”. Press enter.



5. Make sure the “NVMe RAID Mode” is set to “Disabled”.





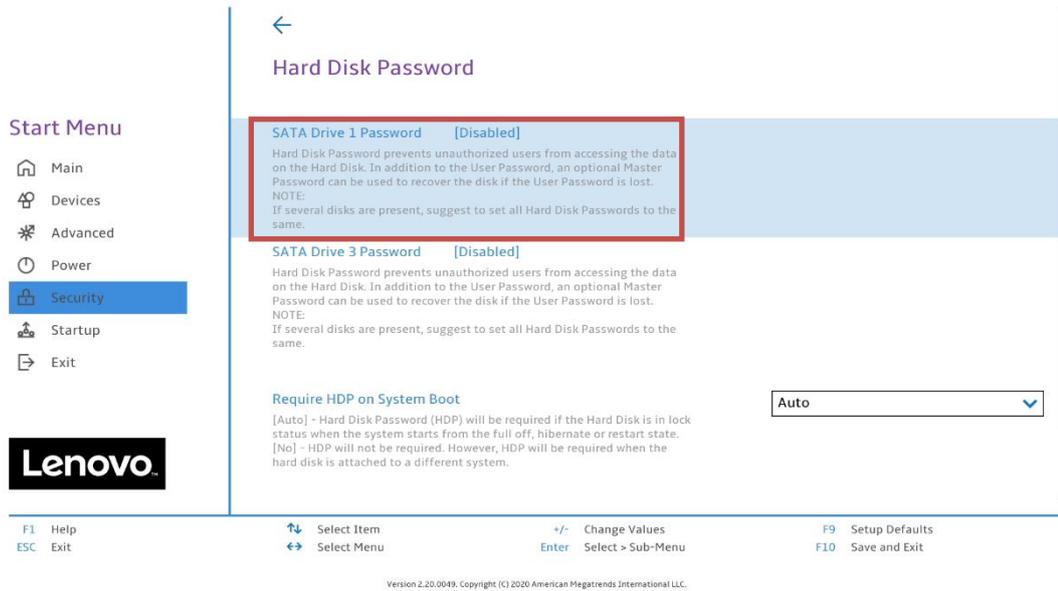
6. Use the arrow key to highlight the “Security” tab.

The screenshot shows the BIOS Security menu. On the left, the 'Start Menu' has 'Security' highlighted with a red box. The main area lists 'Supervisor Password', 'Power-On Password', and 'System Management Password', all marked as 'Not Installed'. Below these are instructions for setting and deleting each password. At the bottom, a legend explains navigation keys: F1 Help, ESC Exit, arrow keys for selection, +/- for changing values, Enter for sub-menu, F9 for Setup Defaults, and F10 for Save and Exit. The Lenovo logo is at the bottom left.

7. Use the down arrow to select the “Hard Disk Password” option, then press enter.

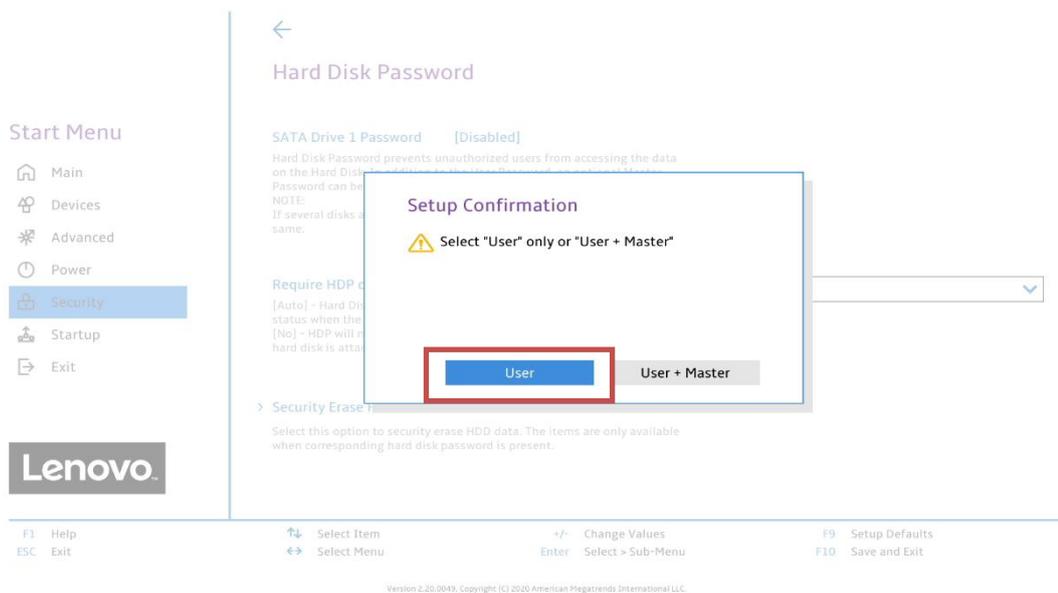
The screenshot shows the BIOS Security - Hard Disk Password menu. The 'Start Menu' on the left has 'Security' highlighted. The main area shows '> Hard Disk Password' highlighted with a red box, with the sub-option 'Configure hard disk password.' below it. Other options include 'TCG Feature Setup', 'System Event Log', 'Secure Boot', and 'Computrace'. At the bottom right, the 'Device Guard' setting is shown as 'Disabled' in a dropdown menu. The same navigation legend as in the previous screenshot is at the bottom. The Lenovo logo is at the bottom left.

- In order to secure erase a drive permanently, a password must be assigned to the drive. If a password is already assigned to the drive, skip to STEP 10. Otherwise, highlight “SATA Drive X Password” or “M.2 Drive X Password” (In case erasing M.2 drive. Where X = drive number to be erased) and press enter.

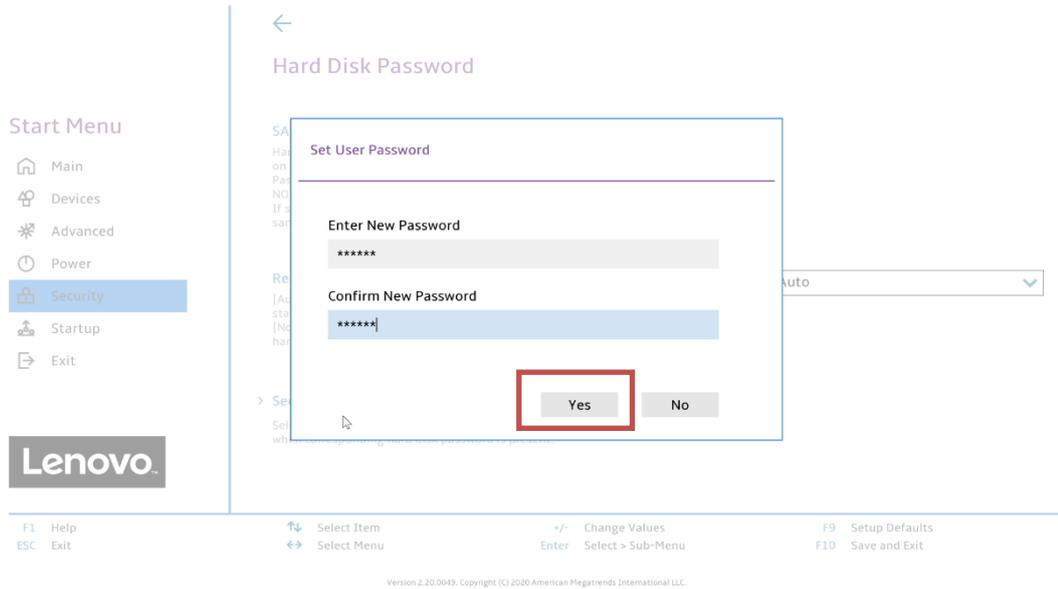


- A “Setup Confirmation” box will appear. Select “User” and press enter.

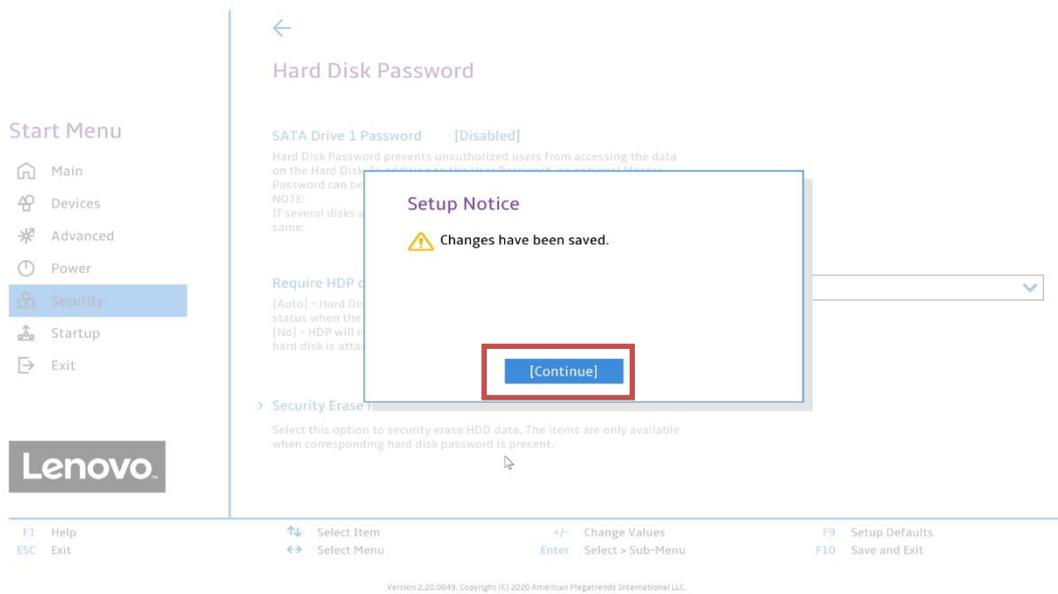
Note: Users can also select User + Master password option. At minimum, a user password is required for the secure erase feature to work.



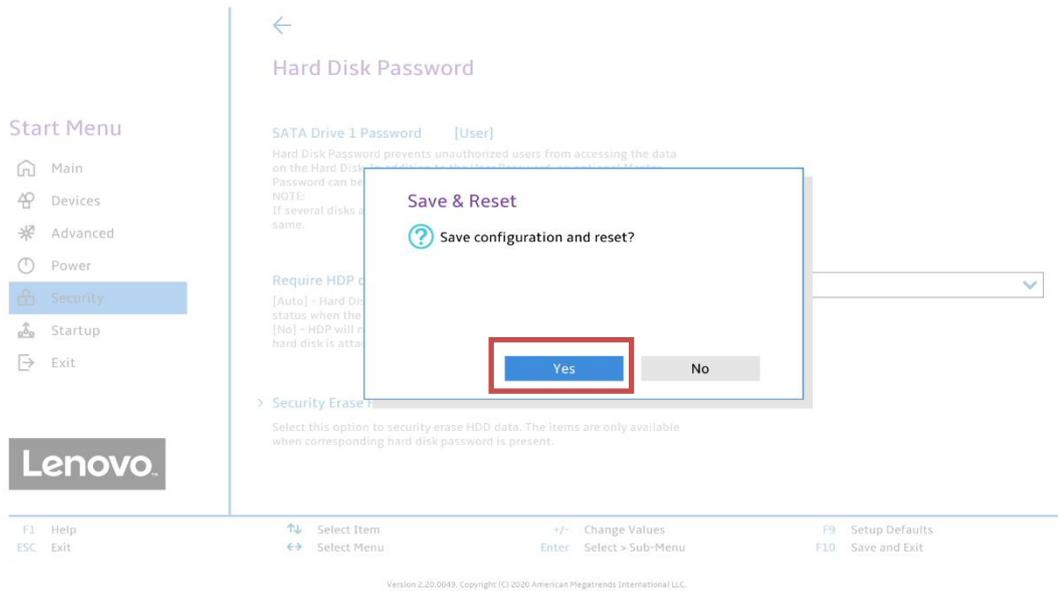
10. A “Set User Password” box will be prompted. Choose a temporary password and confirm it. Press enter or select “Yes” to continue.



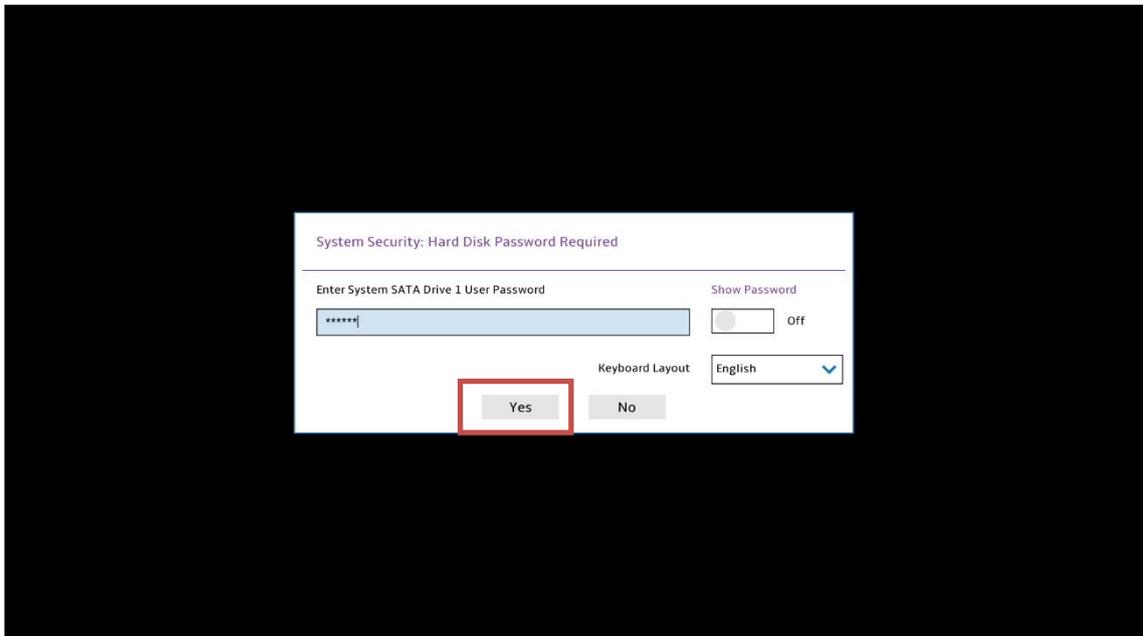
11. A “Setup Notice” box will be prompted displaying that the changes have been saved. Press “Continue”.



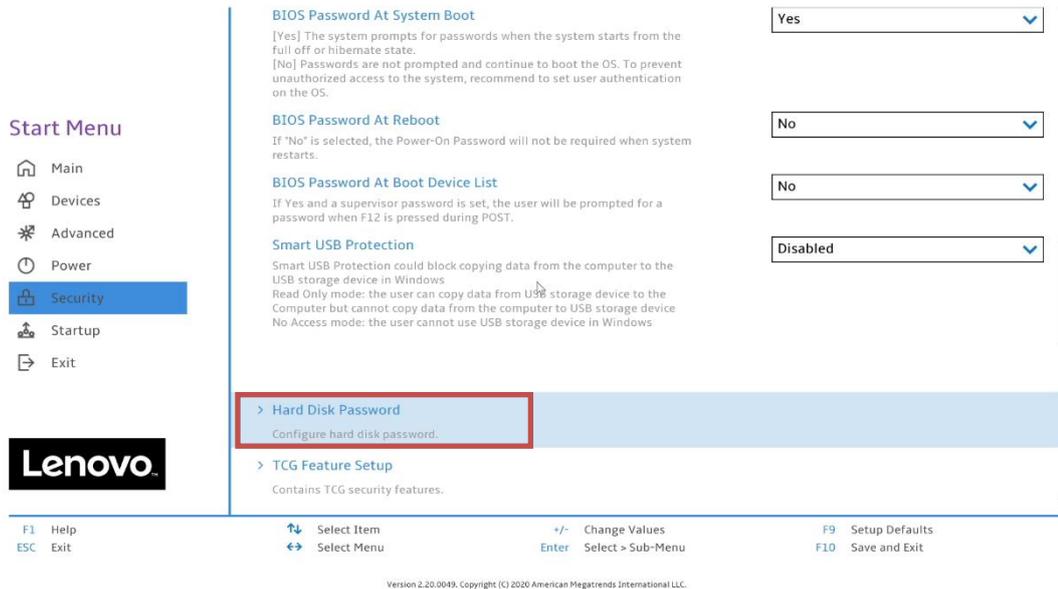
12. At this point, the system needs to be rebooted for the changes to take effect. Press “F10” function key to save and exit the BIOS setup.



13. Once the system starts to reboot, press “F1” at Lenovo splash screen to enter the BIOS setup again. If the system prompts to enter the “Hard Disk Password”, enter the temporary password created in STEP 6.

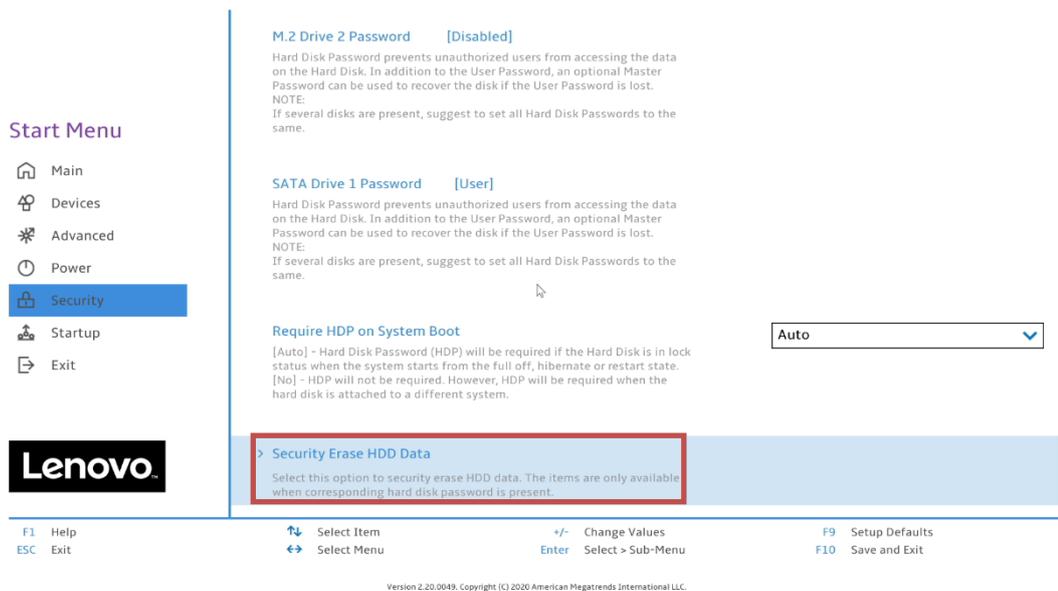


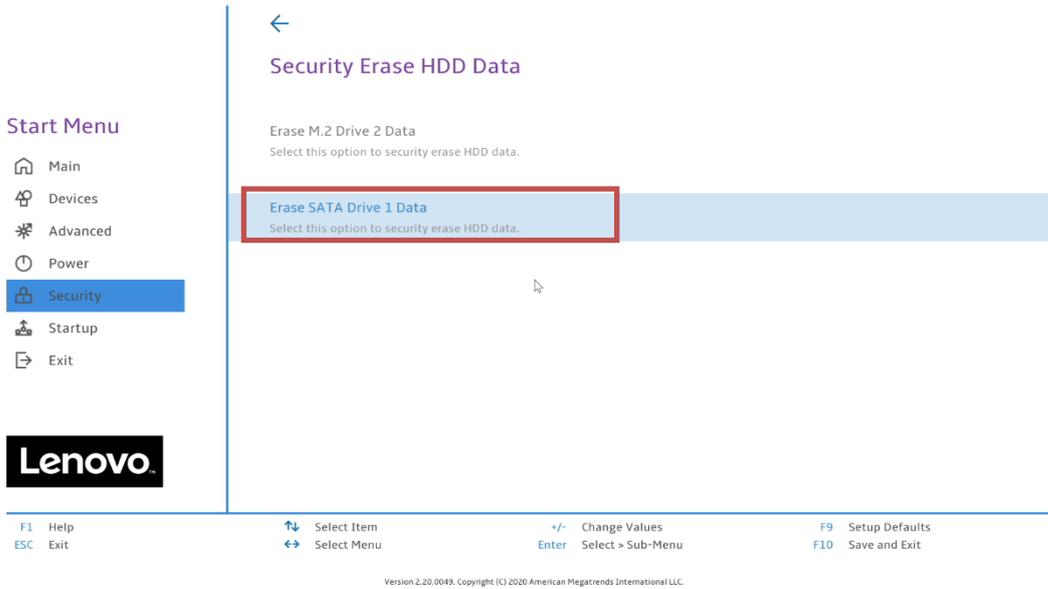
14. In the BIOS setup, navigate to the “Security” tab and open “Hard Disk Password” option.



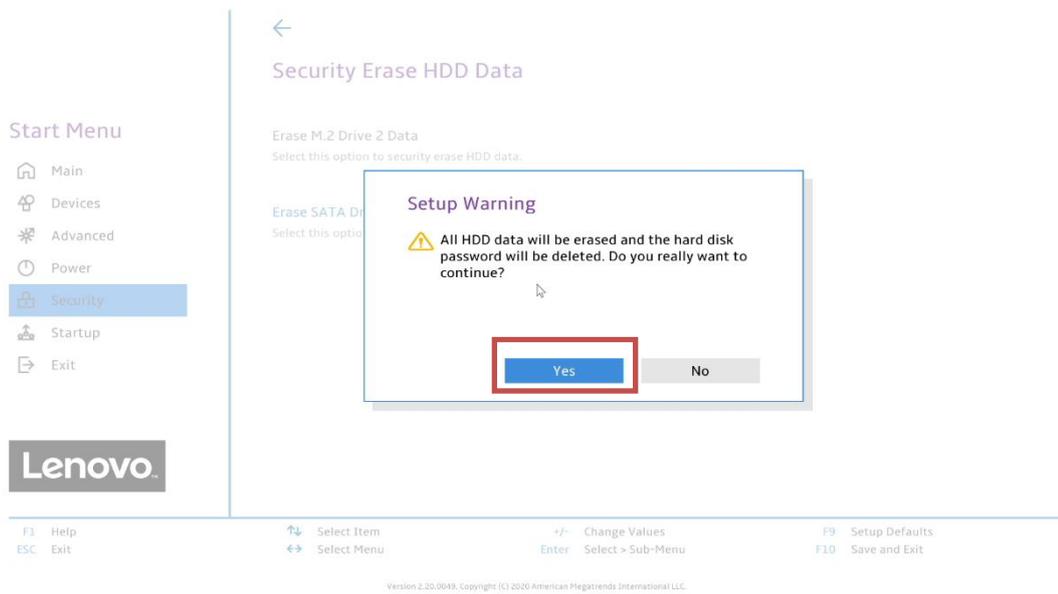
15. Highlight the “Security Erase HDD Data” and press enter. Select “Erase SATA Drive X Data” to wipe the drive.

Warning: In case of multiple drives present in the system, users need to make sure of selecting the correct drive for secure erase.



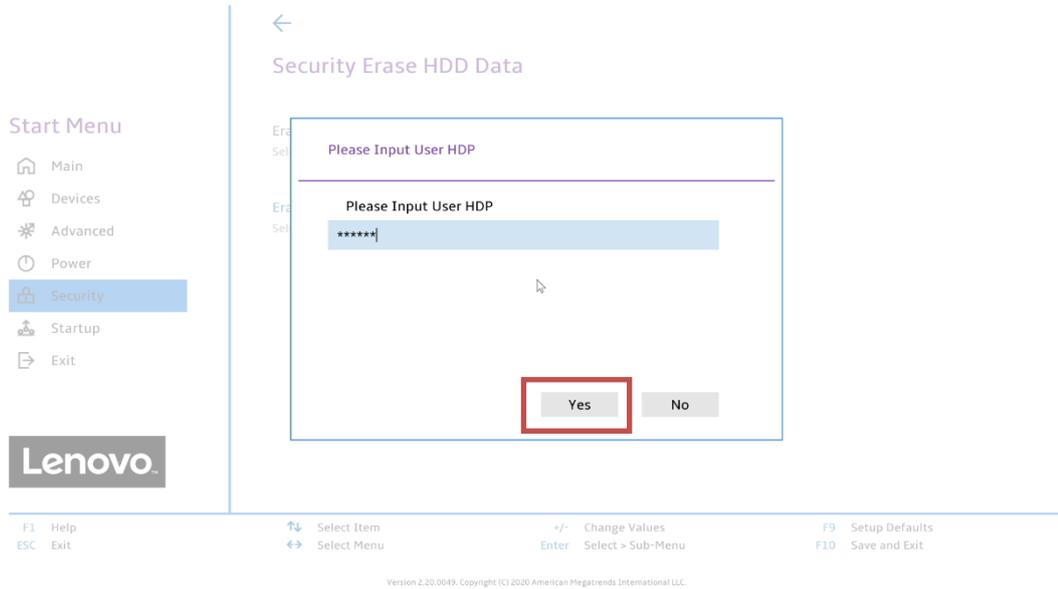


16. A “Setup Warning” box will appear as a final warning to the user before erasing the data from the drive permanently. Select “Yes” to proceed.



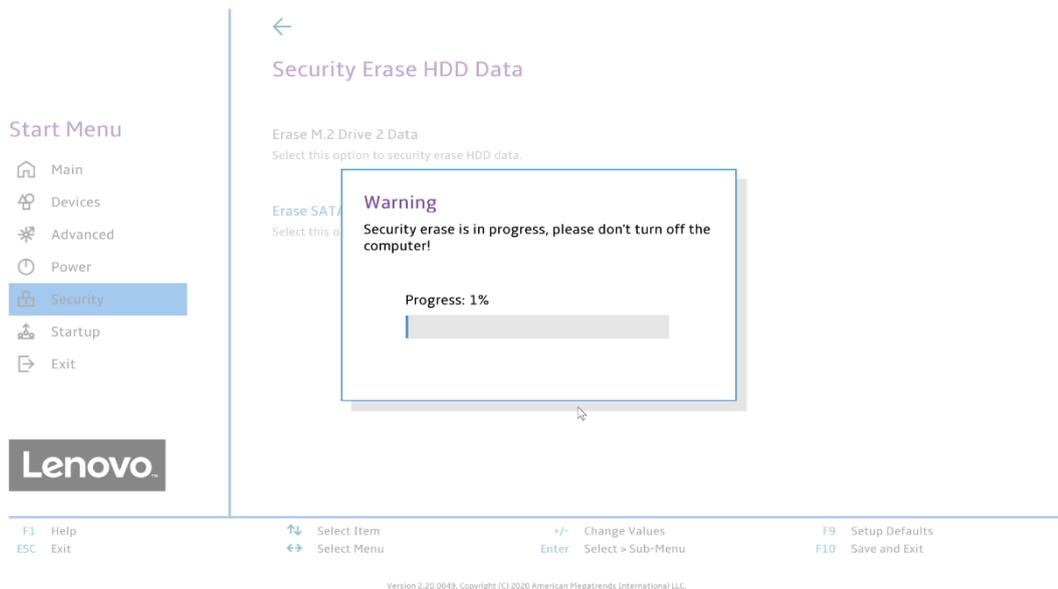
17. Input the temporary password created in STEP 6, and press enter.

Warning: Proceeding with this step will erase all data from the selected drive and cannot be undone.

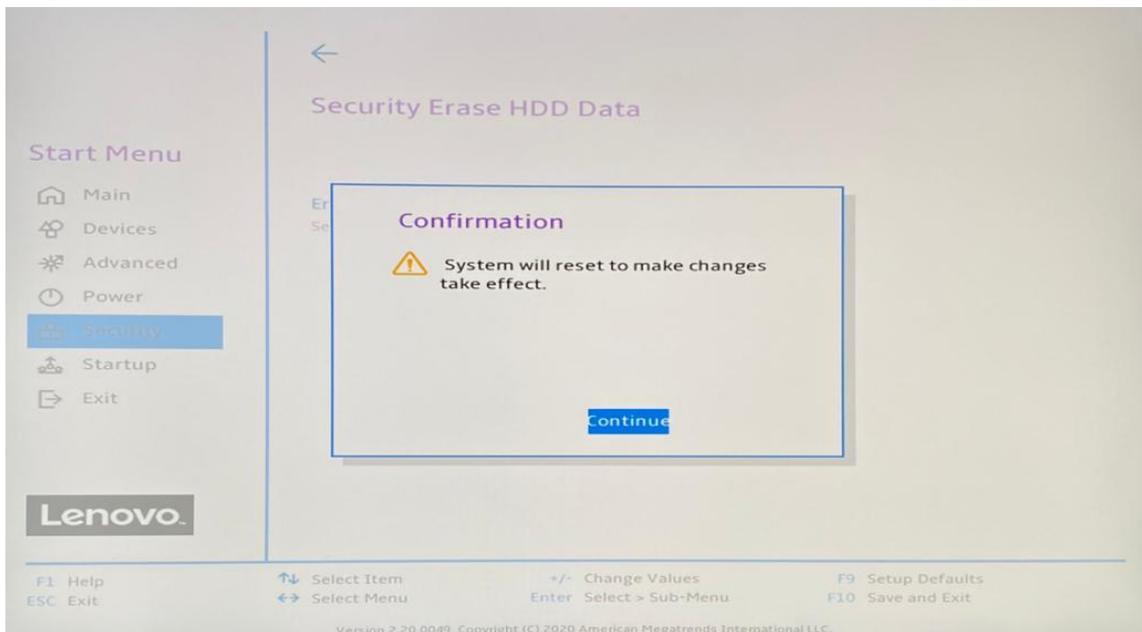


18. A progress bar will appear to display the secure erase progress.

Note: Users should not unplug the system during this process.



19. Once the secure erase process completes, a new confirmation box will be prompted stating “System will reset to make changes take effect”. Press enter to reboot the system.

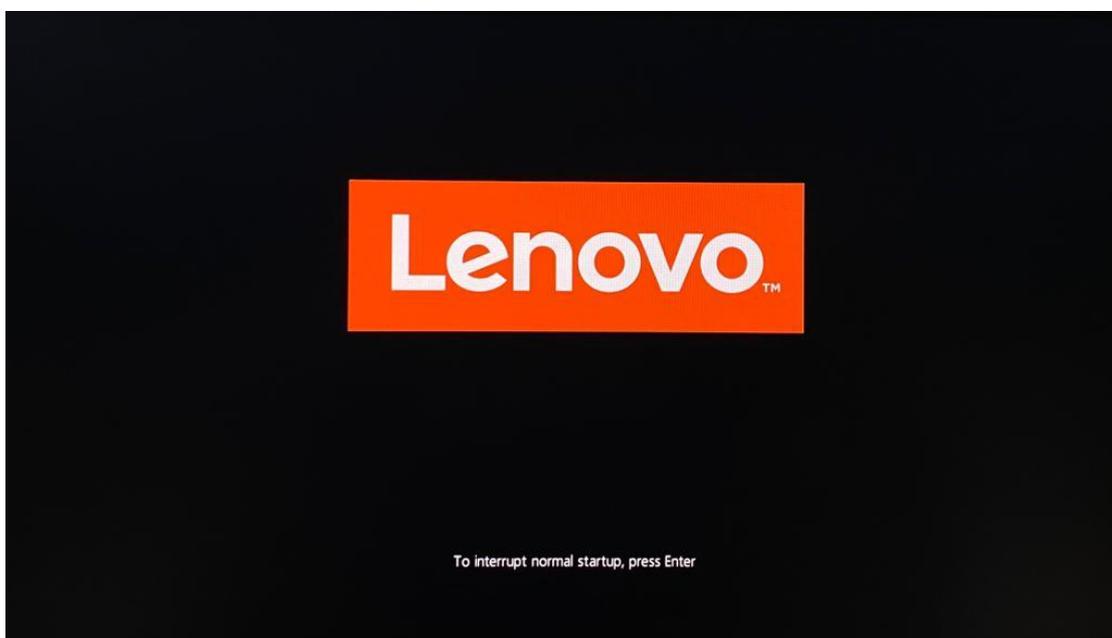


20. At this point, the erase procedure is complete. The system can be powered down, and the drive can safely be removed from the system. Repeat the process for any additional drives that might need to be securely erased.

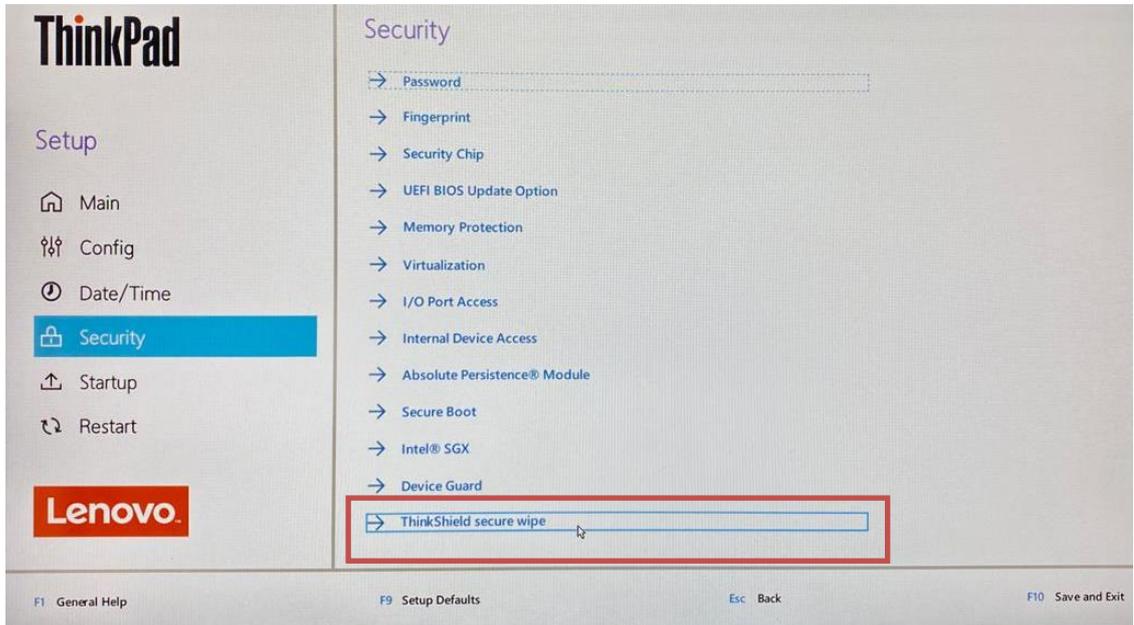
Section 2 – How To Securely Erase Drives Using ThinkPad's ThinkShield

The following instructions will cover the steps required to use ThinkShield feature in ThinkPad BIOS to securely erase storage drives.

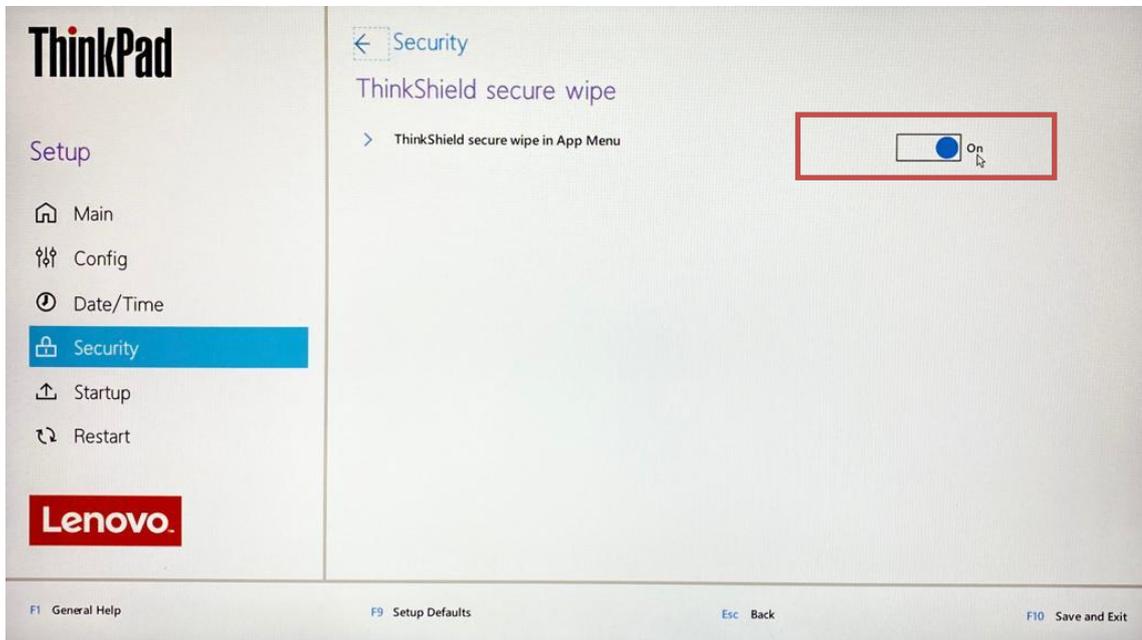
1. Boot into BIOS by pressing function "F1" key at the Lenovo splash screen.



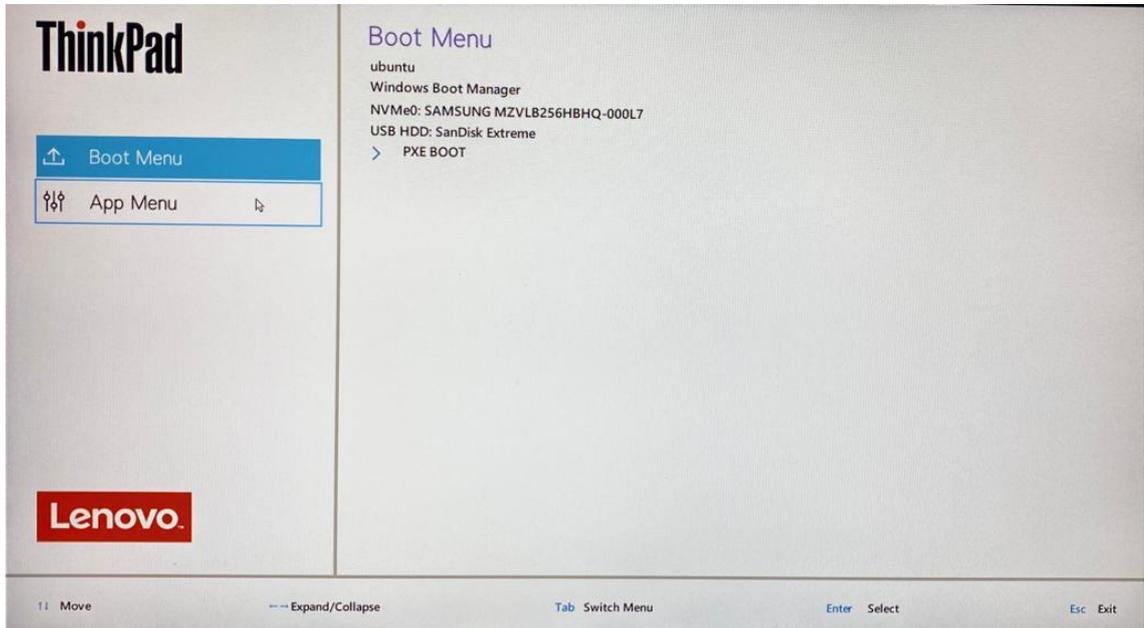
2. Once inside the BIOS setup, tab over to the “Security” menu and select “ThinkShield secure wipe”.



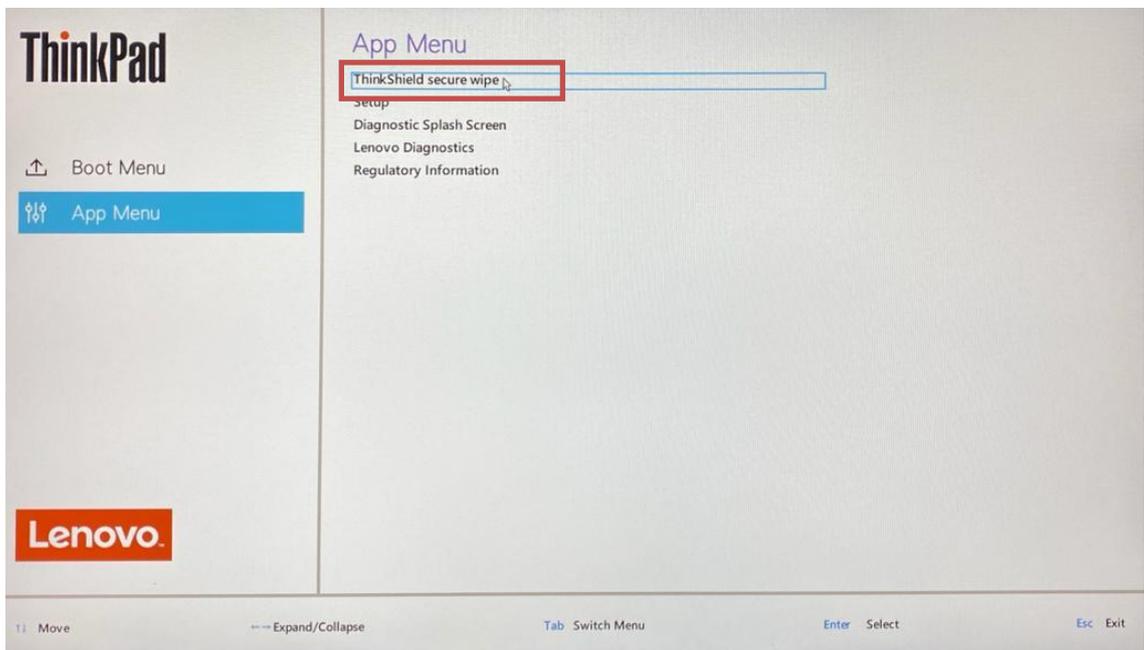
3. Confirm the “ThinkShield secure wipe in App Menu” is set to enabled.



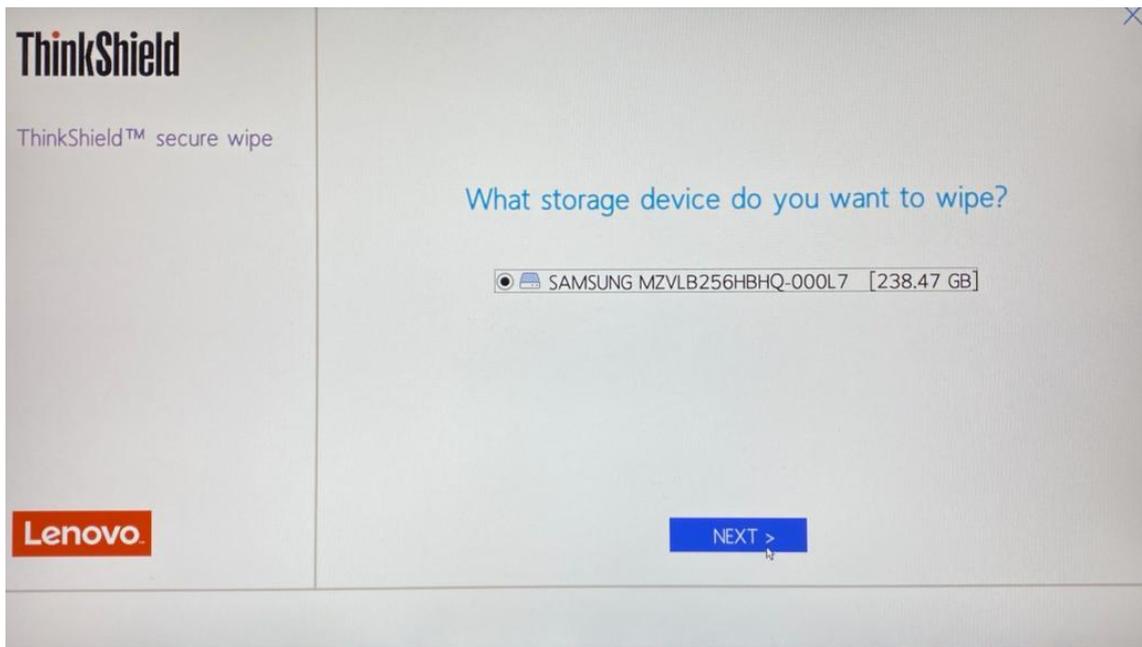
4. Save and exit the BIOS setup by pressing the “F10” function key. On reboot, boot into the “boot menu” by pressing the “F12” function key at the Lenovo splash screen.



5. Tab over to the “App Menu” and select “ThinkShield secure wipe” option.

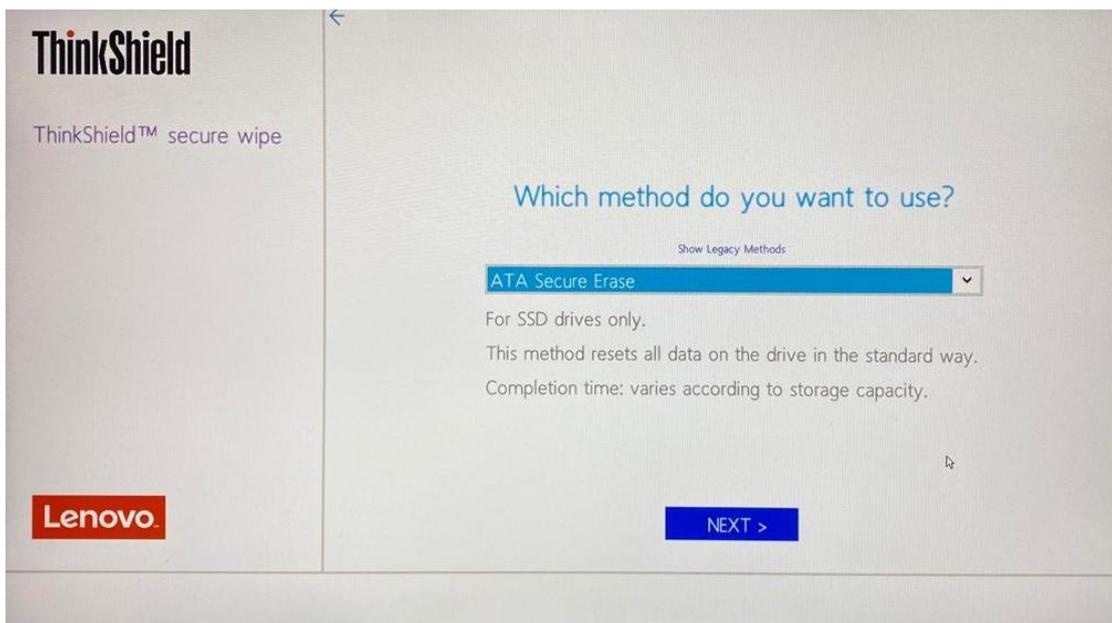


6. Select the storage device to be erased and press "Next".

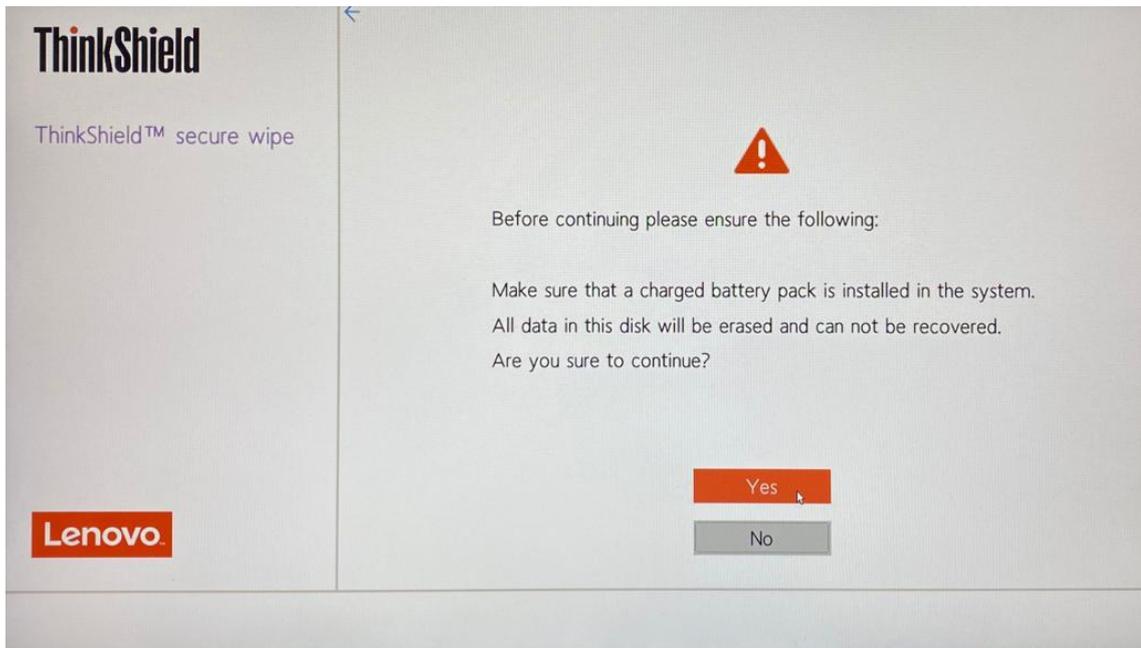


7. Select an appropriate method from the dropdown menu to securely erase the chosen drive and press "Next".

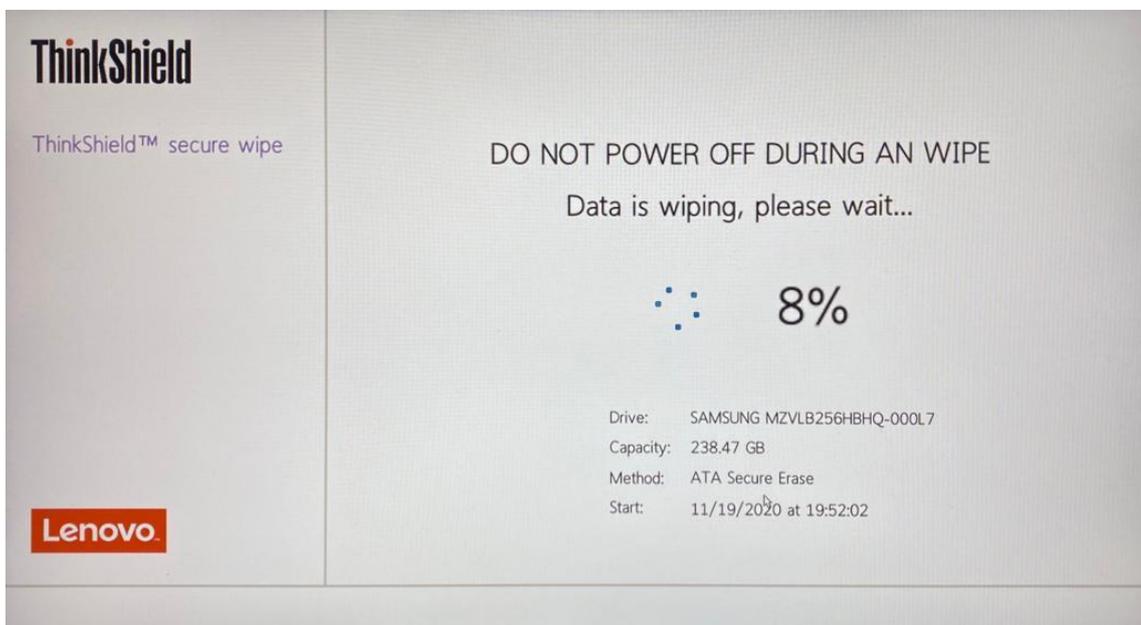
Note: ATA Secure Erase method resets all data in the standard way, while ATA Cryptographic Key Reset method resets the internal encryption key thereby making the drive data completely unreadable.



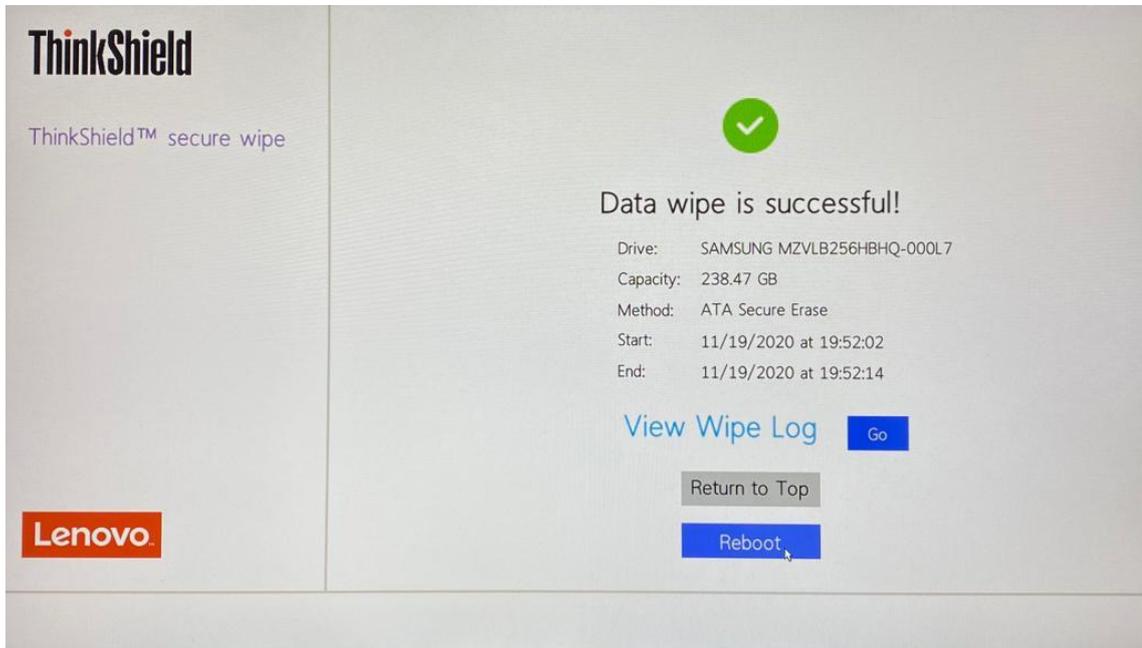
8. A warning will appear to confirm if the user wants to continue with the secure erase process. Select "Yes" to proceed.



9. A progress window will appear displaying the data wiping process. Do not power off until the process is complete.



10. On completion of the process, a confirmation message will be displayed. At this time, drives are wiped successfully, and the system should be rebooted for the changes to take effect. Select "Reboot".



11. At this point, the erase procedure is complete. Repeat the process for any additional drives that might need to be securely erased.

Section 3 – Document Revision History

Version	Date	Author	Updates
1.0	03/22/2021	Sayali Pawar	Initial launch release