

LENOVO THINKSTATION P330 TOWER, SMALL FORM-FACTOR (SFF), TINY

NVME RAID SUPPORT



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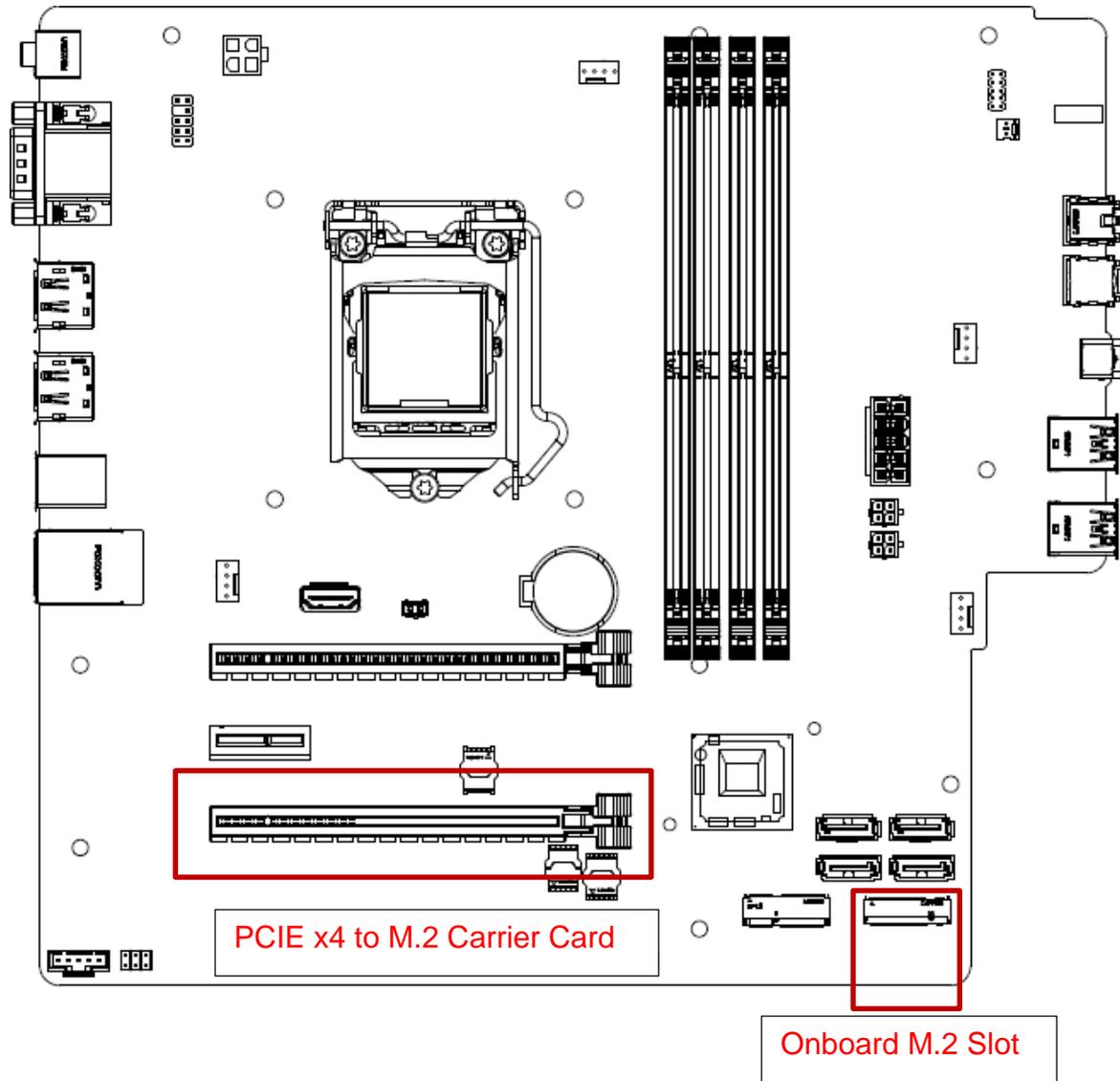
SECTION 2 – CONFIGURING NVME RAID FOR P330 TOWER & SFF

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Section 1 – Installing NVMe Devices to Setup RAID

Please make sure the NVMe devices are installed into the following PCIe slot locations on the ThinkStation P330 Tower and Small-Form Factor (SFF) motherboard.

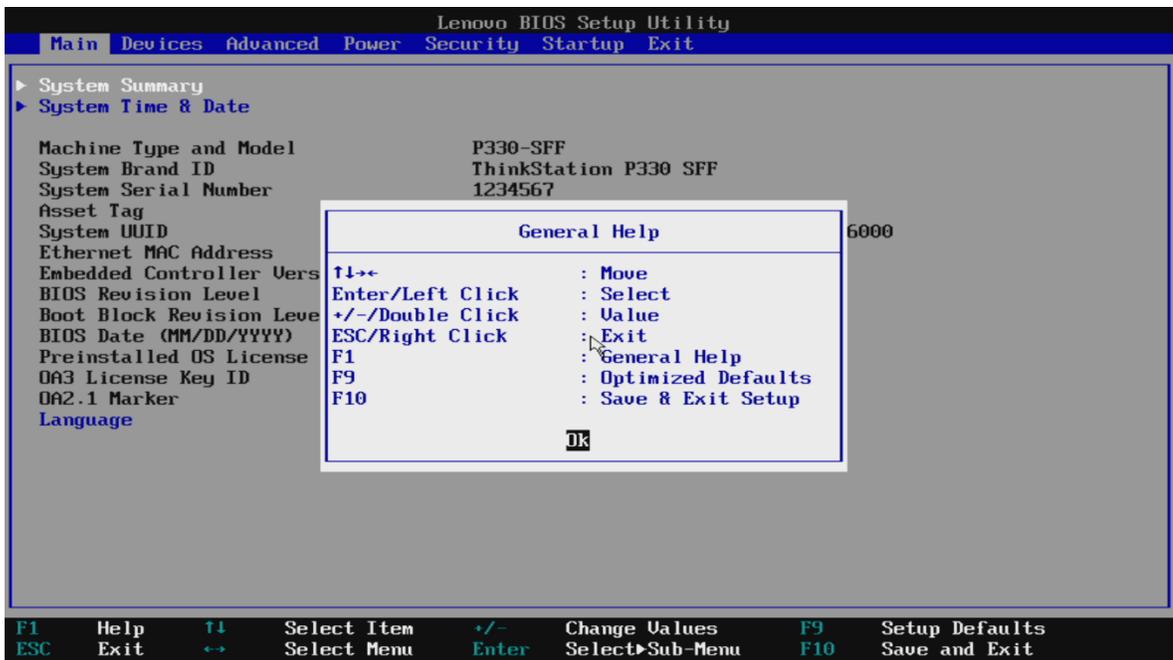
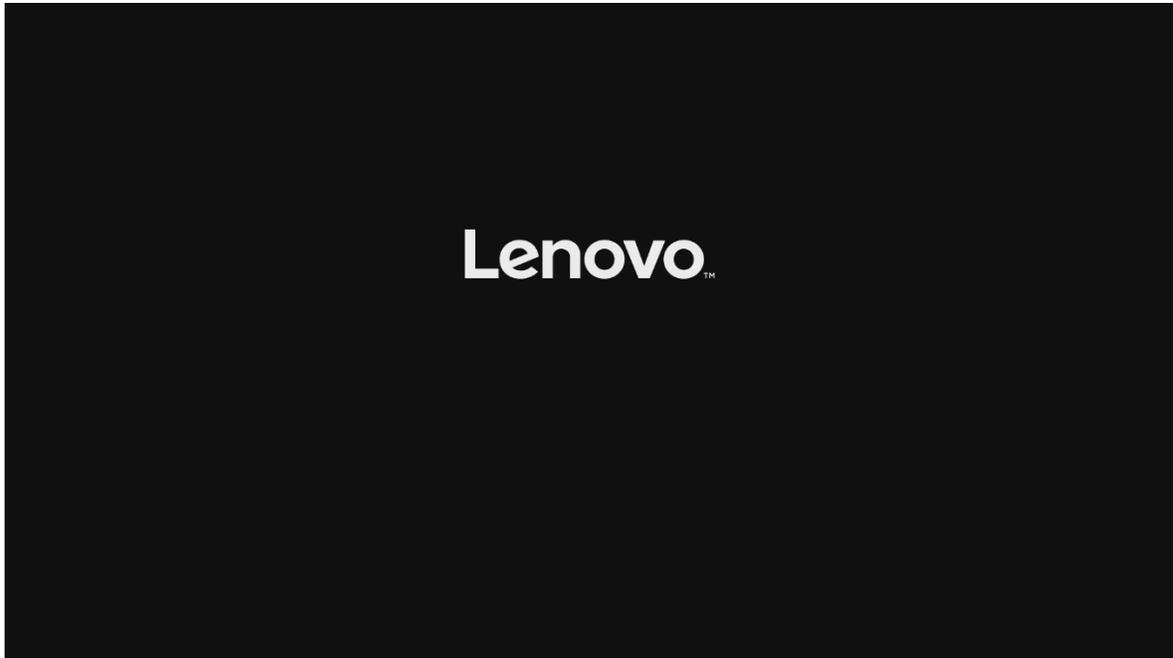


Note: The highlighted slots above are the only available slots that will allow the user to configure an NVMe RAID array on the ThinkStation P330 platform.

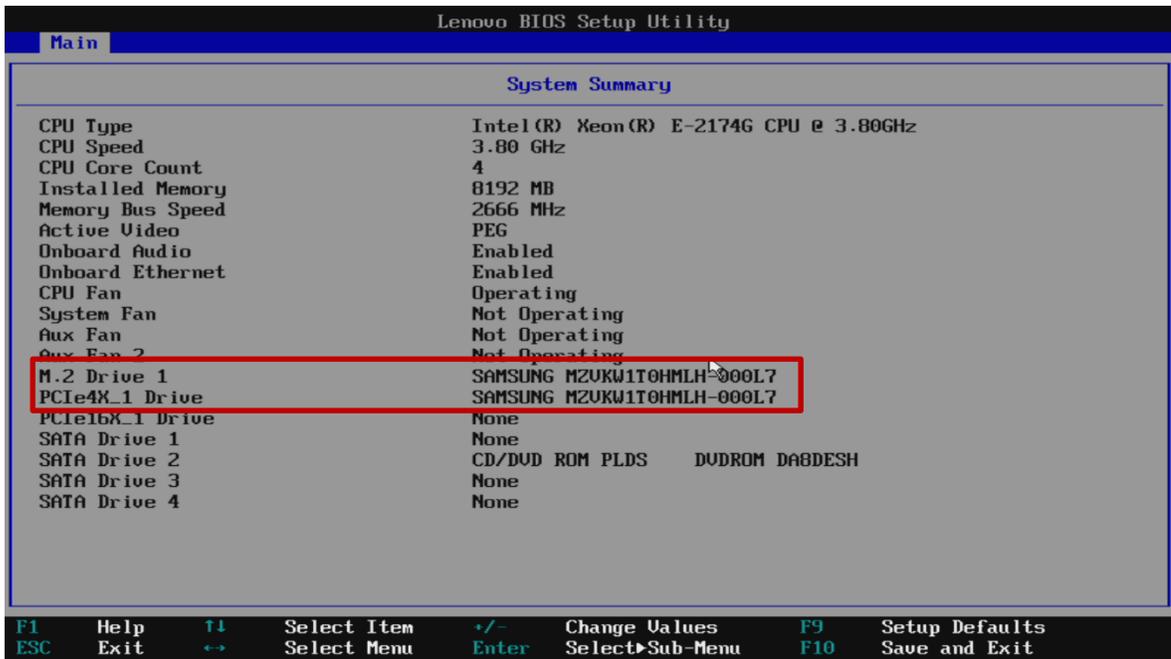
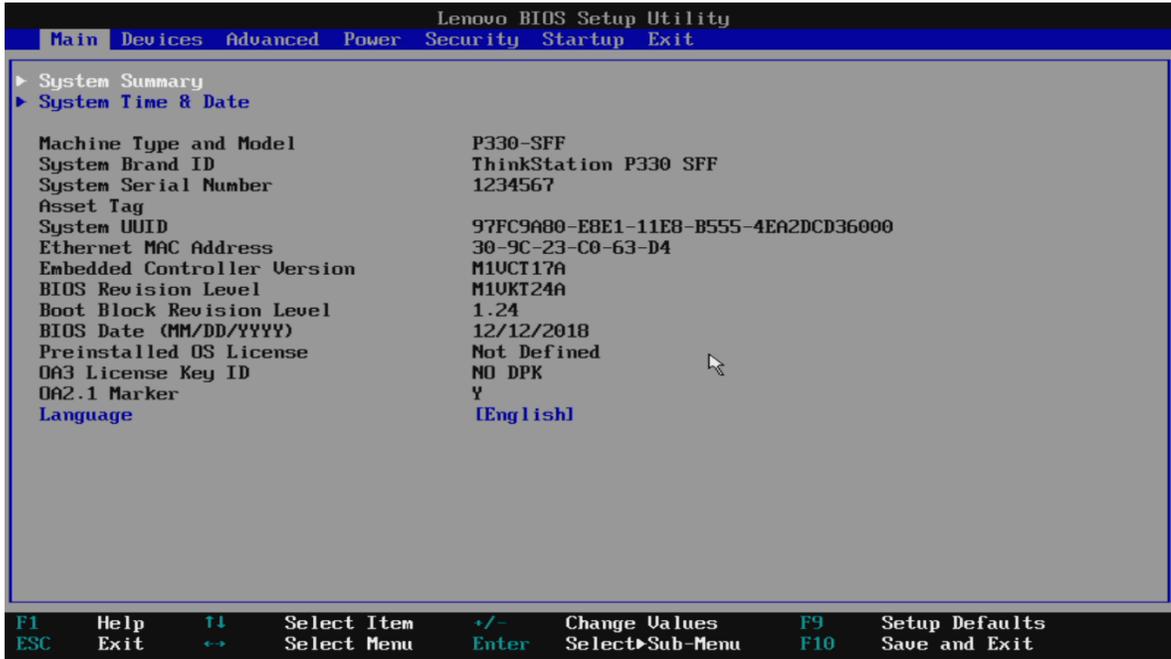
Section 2 – Configuring NVMe RAID for P330 Tower & SFF

Please see the following steps to configure NVMe RAID.

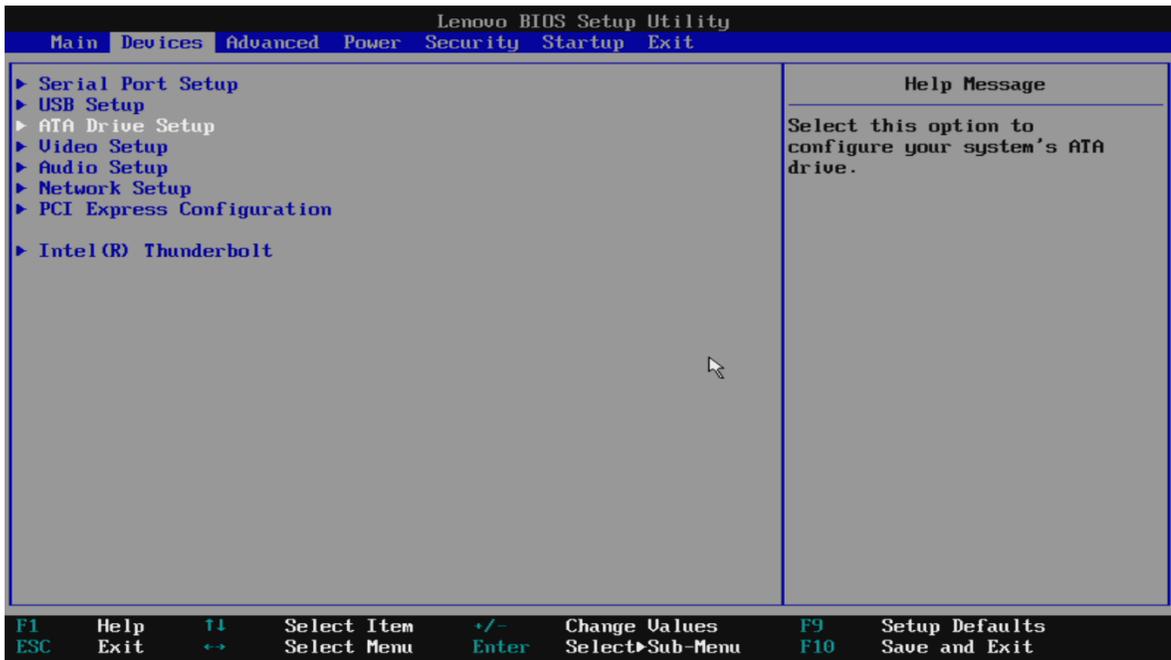
1. Boot into BIOS by pressing the function F1 key at the “Lenovo” splash screen.



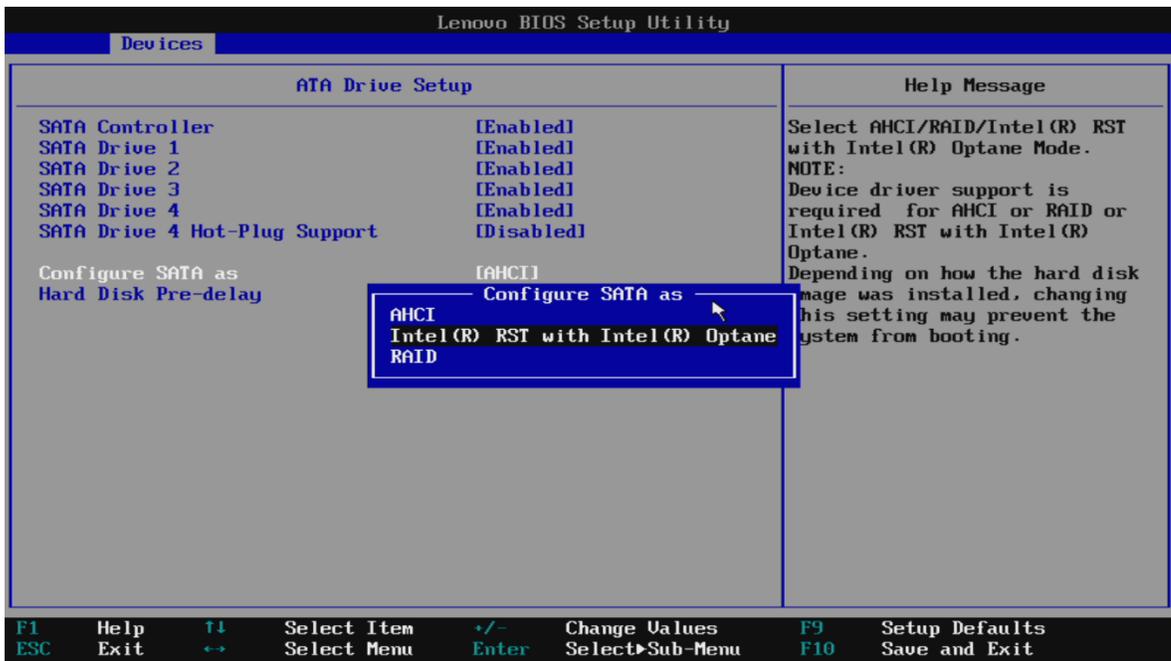
2. Select "System Summary" to verify BIOS is recognizing the NVMe drives.



3. Select the “Devices” menu at the BIOS main screen setup utility and “ATA Drive Setup”.

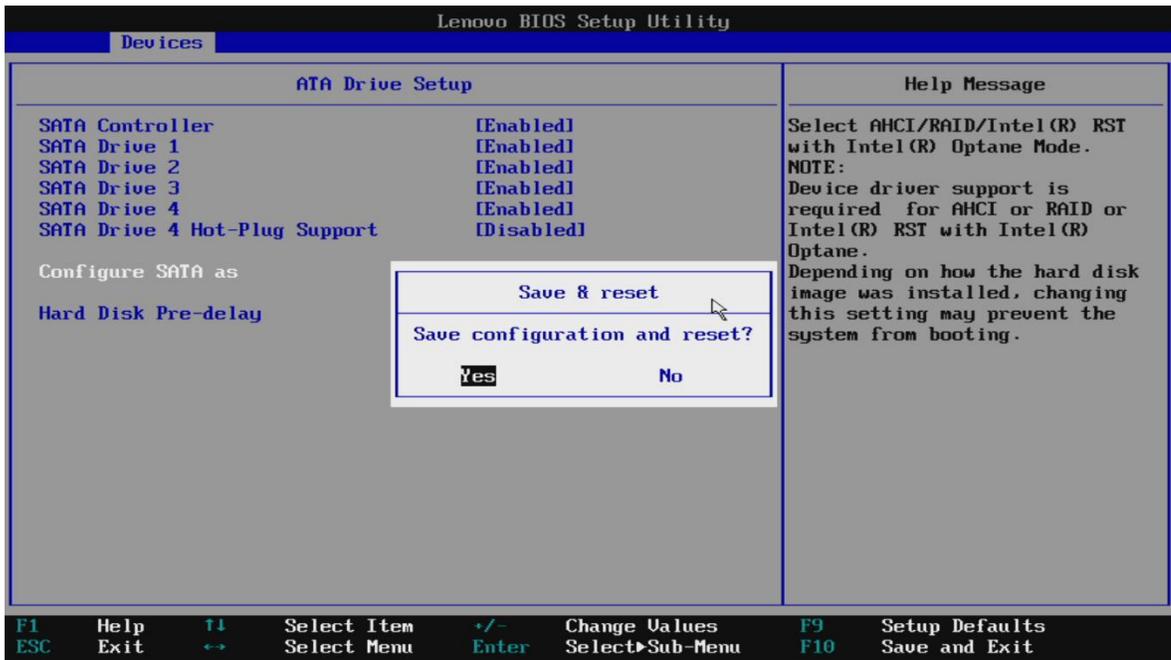


4. In the “ATA Drive Setup” menu, select “Configure SATA as” and change the option to “Intel® RST with Intel® Optane”.

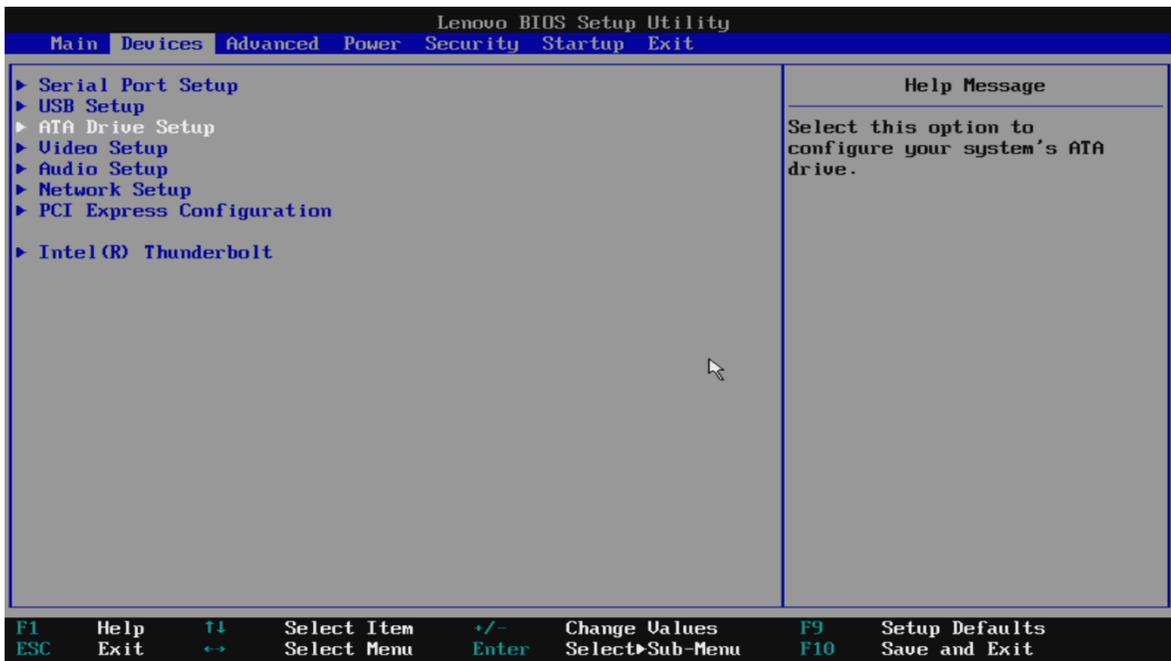


Note: In order to secure erase NVMe drives, the ‘Configure SATA as’ option must be set to ‘AHCI’ mode.

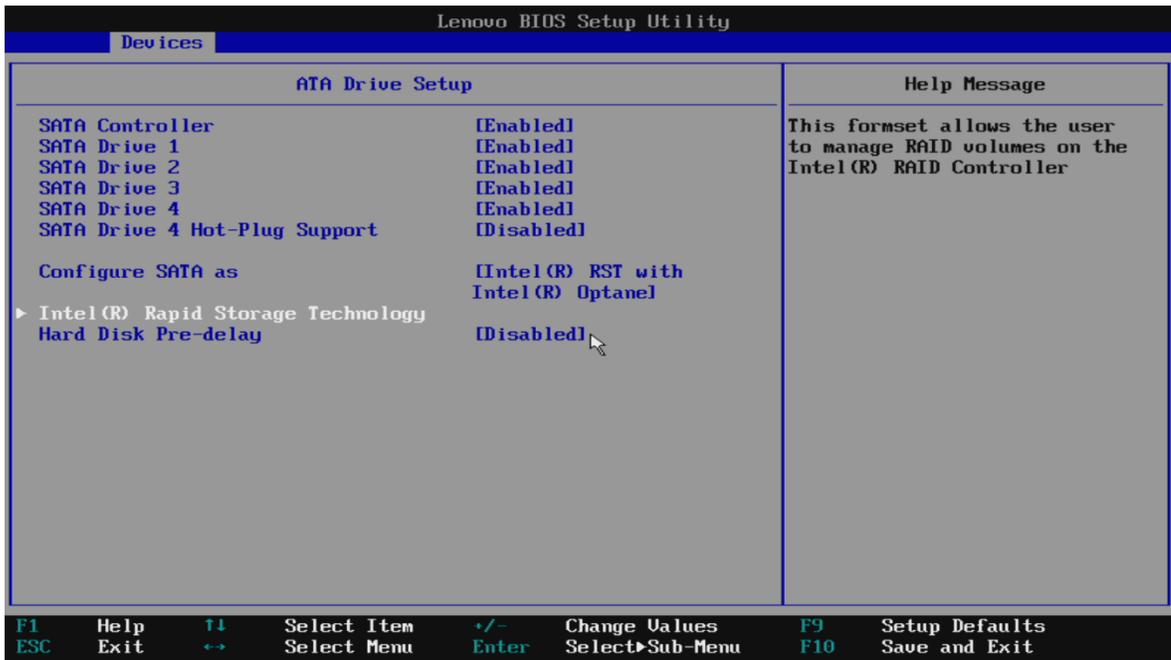
- Press F10 to Save and Exit BIOS setup.



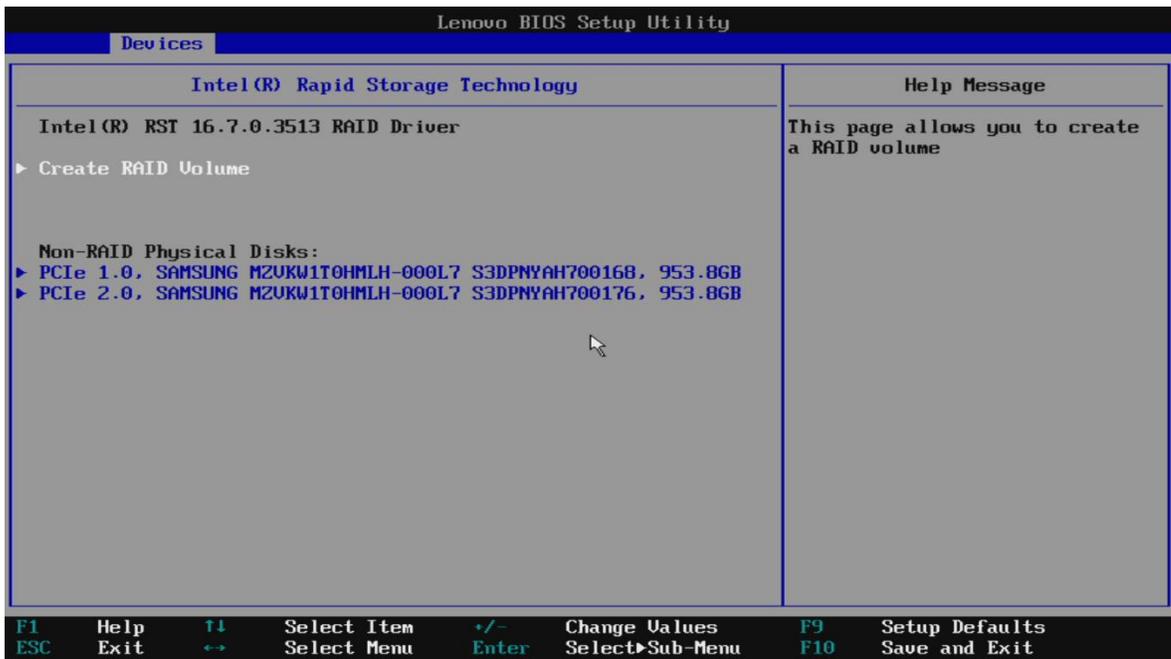
- As the system reboots, press the function F1 key to go back into BIOS setup. Select the "Devices" menu at the BIOS main screen setup utility and "ATA Drive Setup".



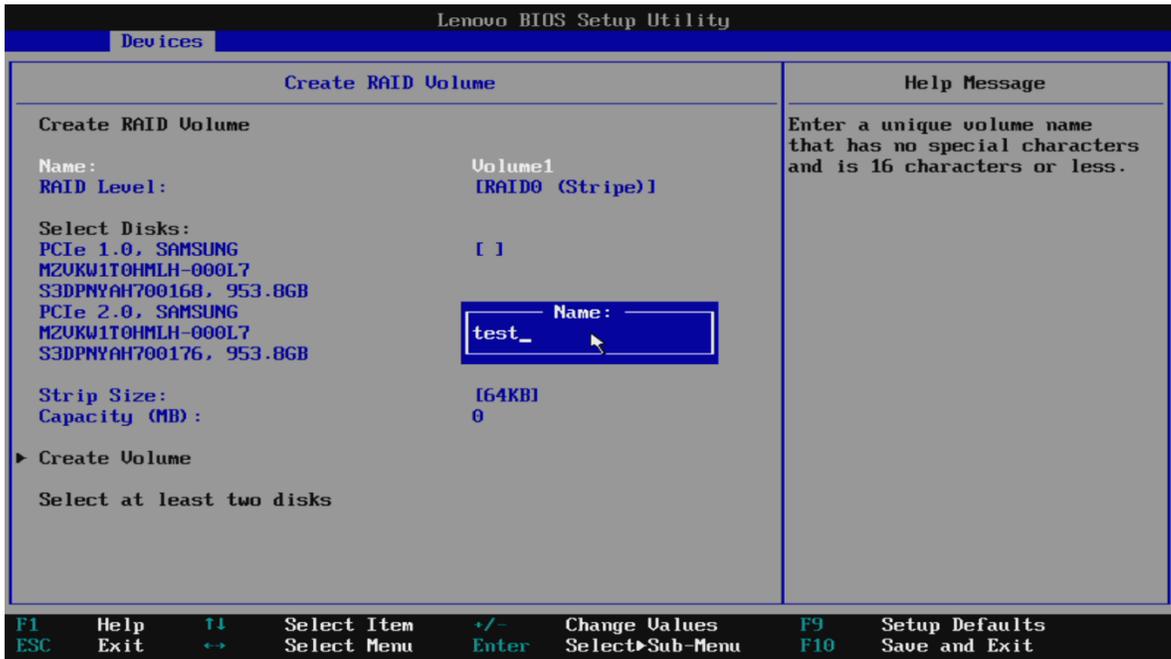
7. Select the “Intel® Rapid Storage Technology” option.



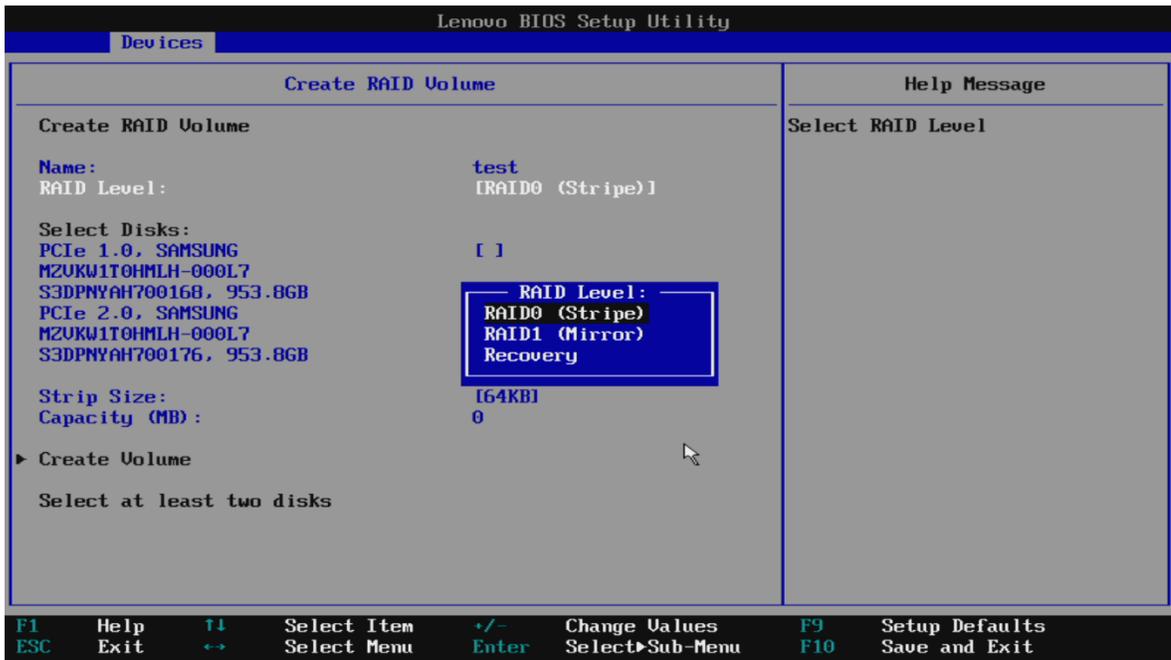
8. Select “Create RAID volume”.



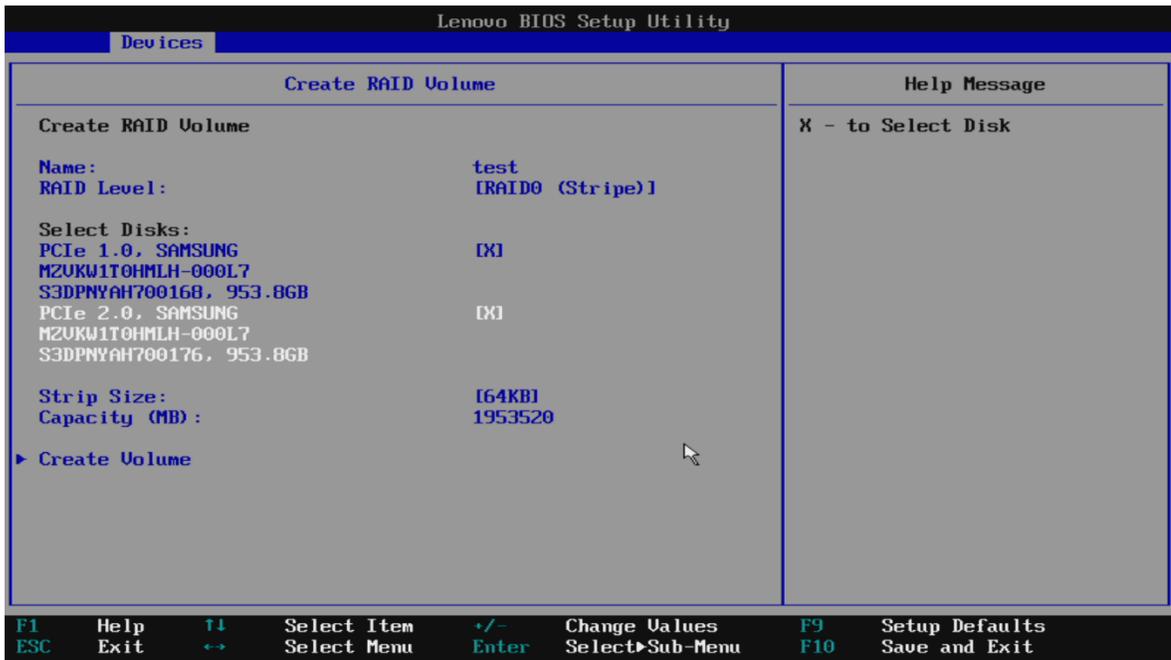
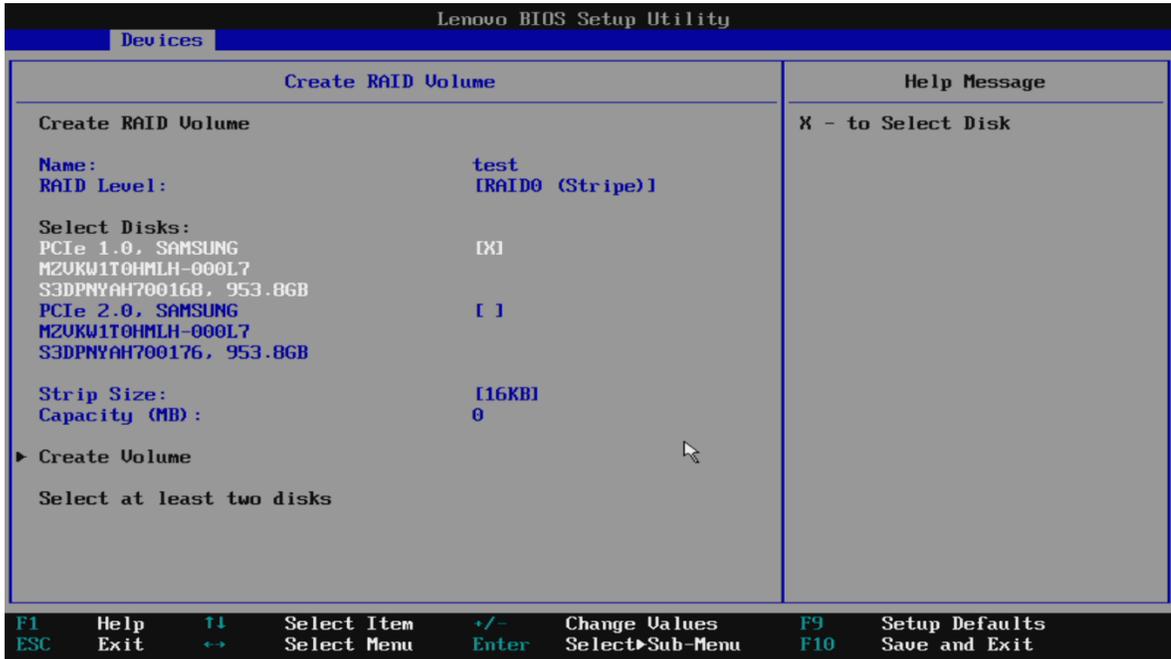
- At the “Create RAID Volume” menu, select “Name:” and enter a unique RAID array name.
Note: In this example, the RAID array is named “test”.



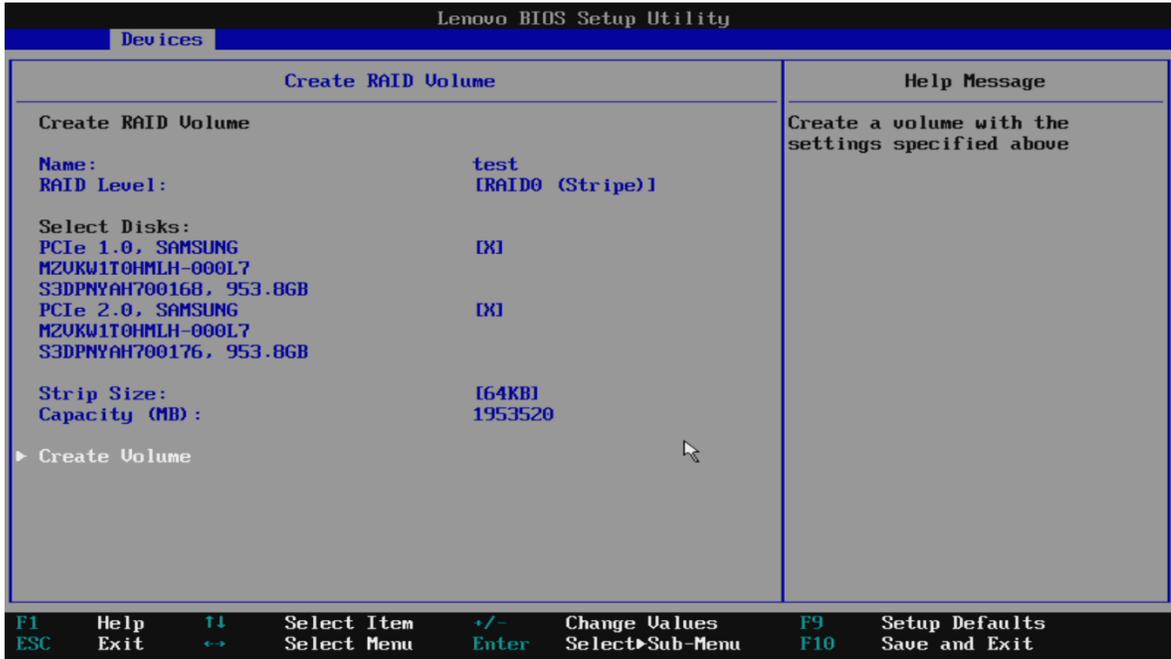
- At the “Create RAID Volume” menu, select “RAID Level” and choose one of the options listed.



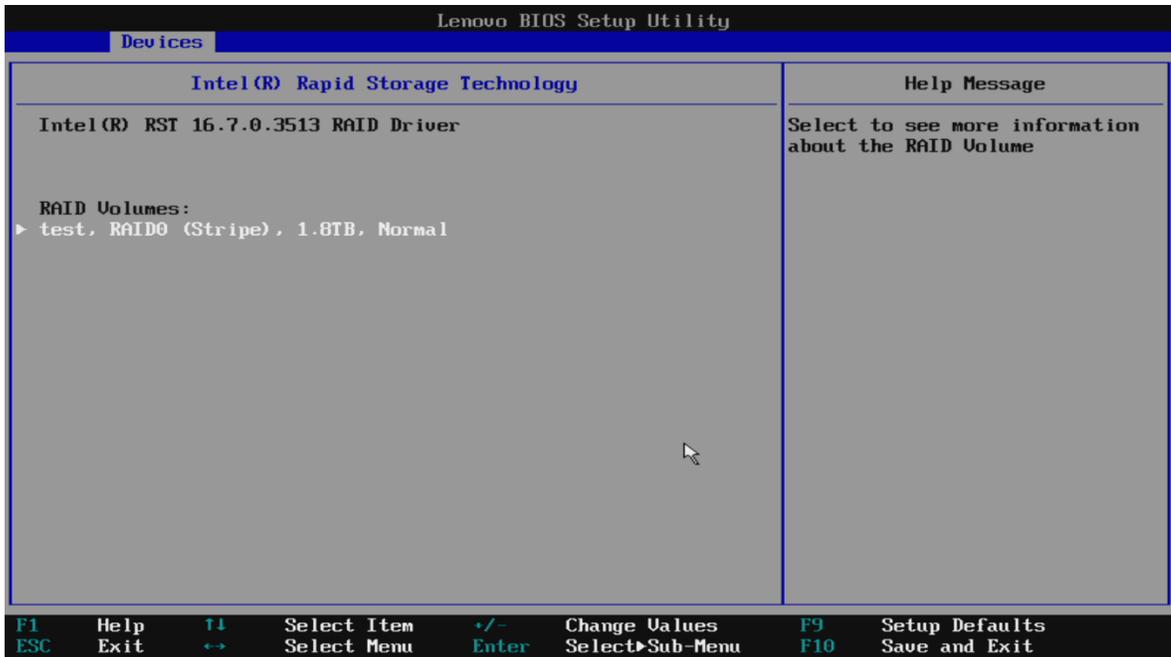
- At the “Create RAID Volume” menu, highlight each drive individually and press the keyboard space bar to “select” the drive. The brackets to the right of the drive option should go from [] to [X].



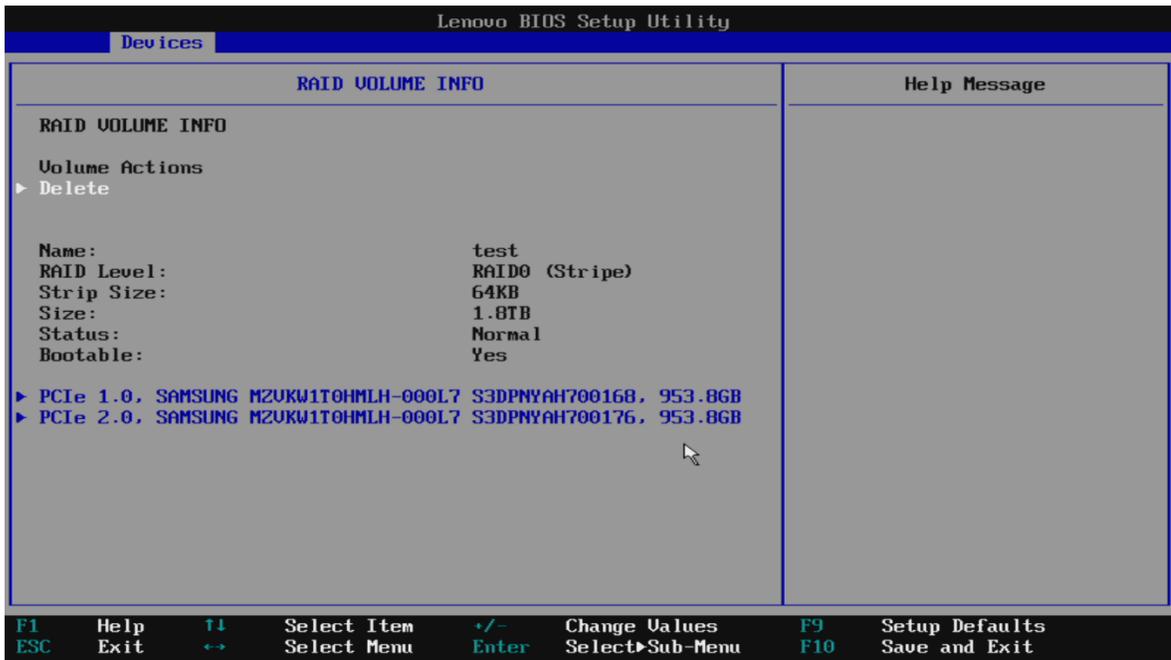
12. Select "Create Volume".



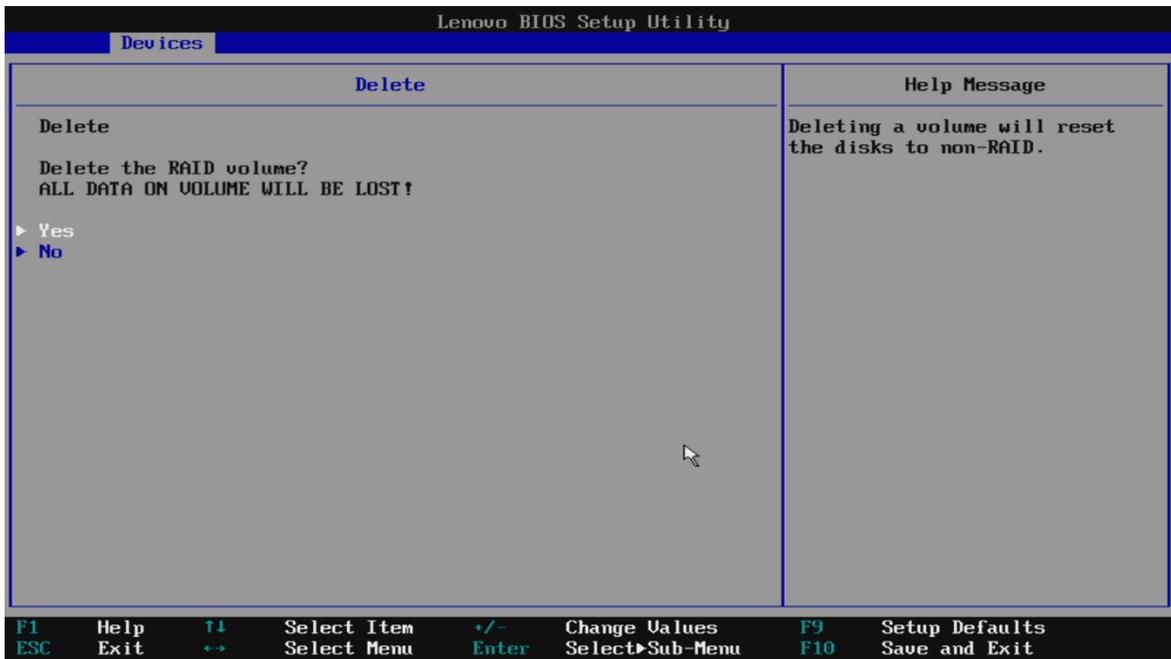
13. Verify the RAID volume created at the very next screen.



14. To view information about the RAID array, select the RAID array on the previous step.



15. To delete the RAID array, select “Delete” from the “RAID VOLUME INFO” from the previous step and confirm by selecting “Yes” at the very next menu option.

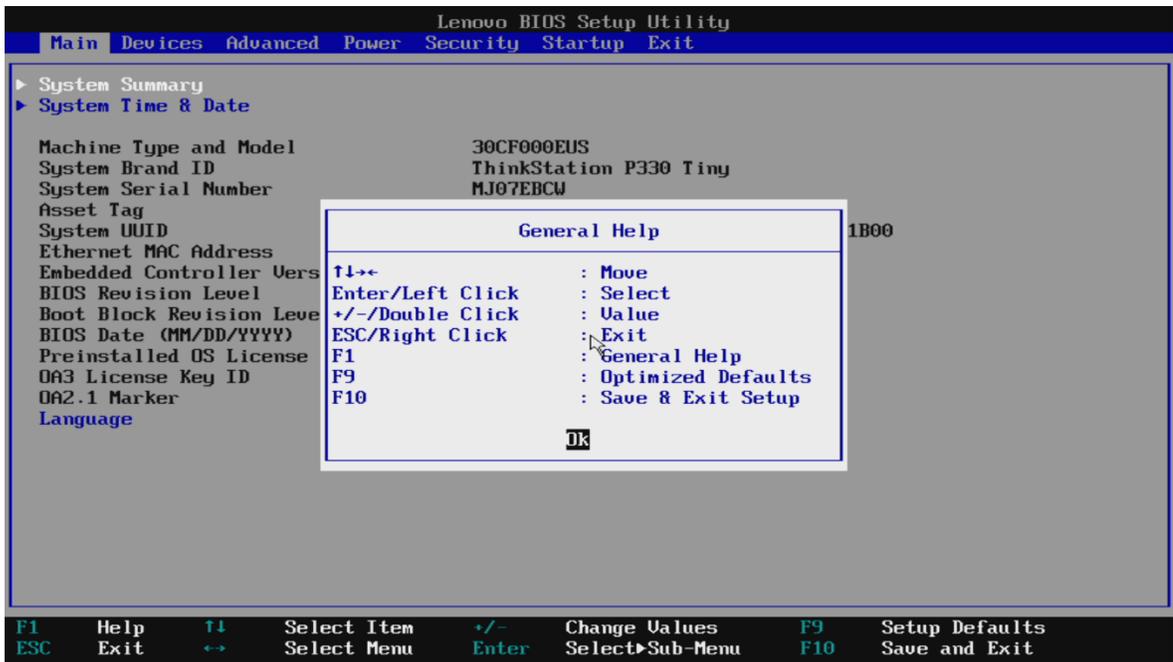


Note: The user may *not* see the RAID array show up in the BIOS boot sequence until after a bootable operating system has been installed on the RAID array.

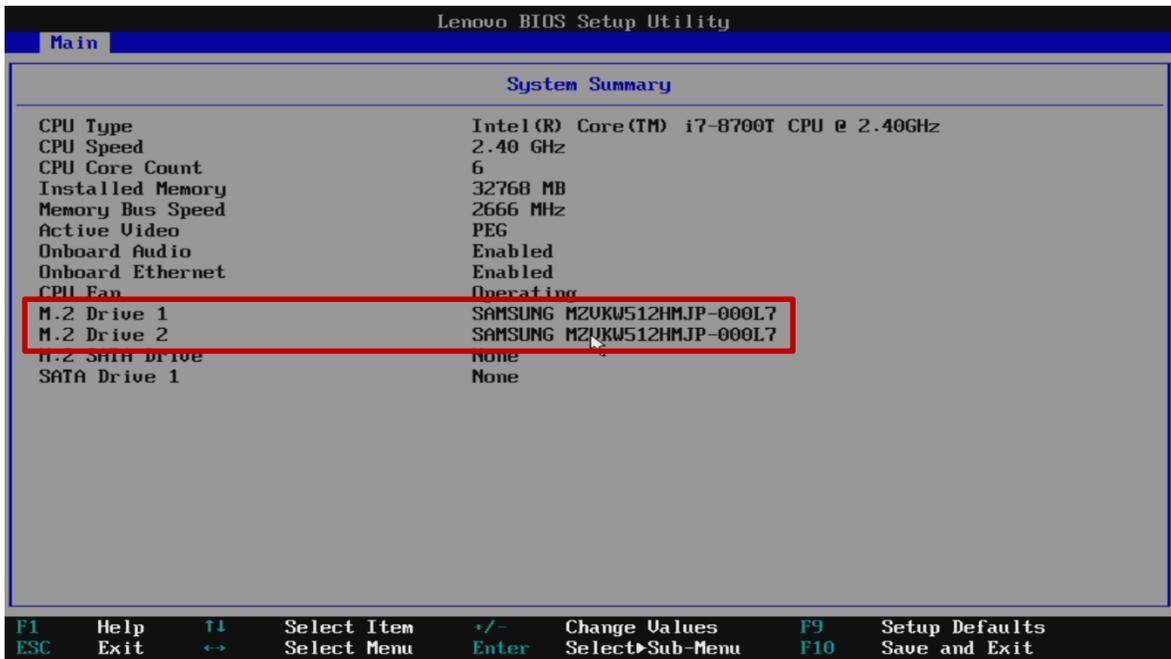
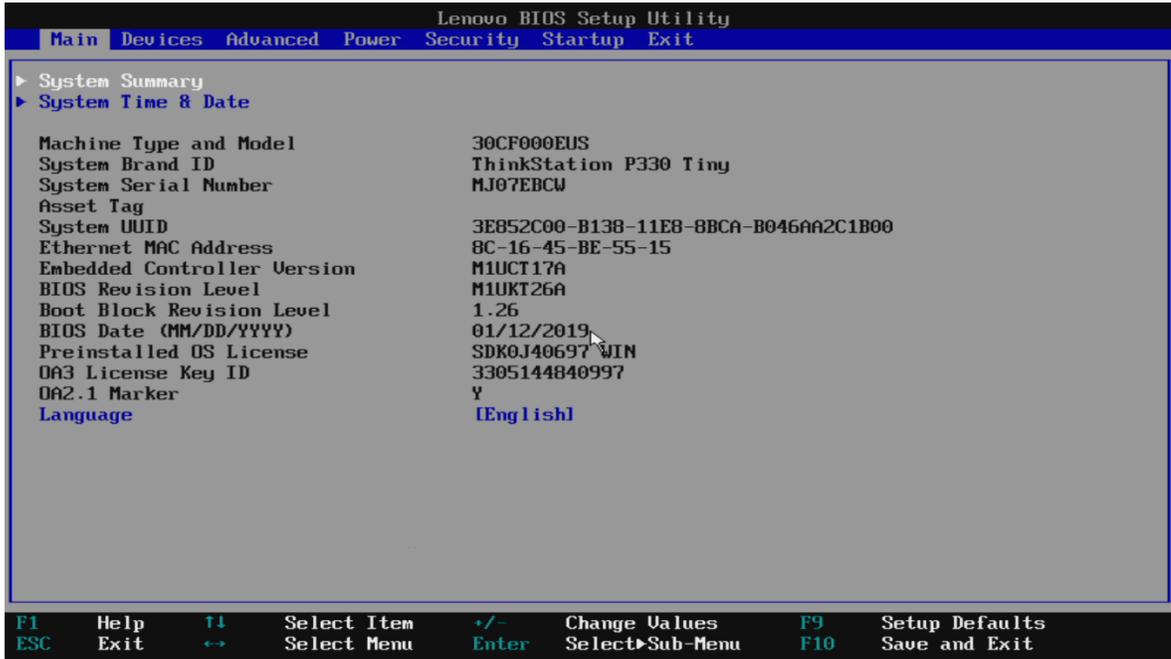
Section 3 – Configuring NVMe RAID for P330 Tiny

Please see the following steps to configure NVMe RAID.

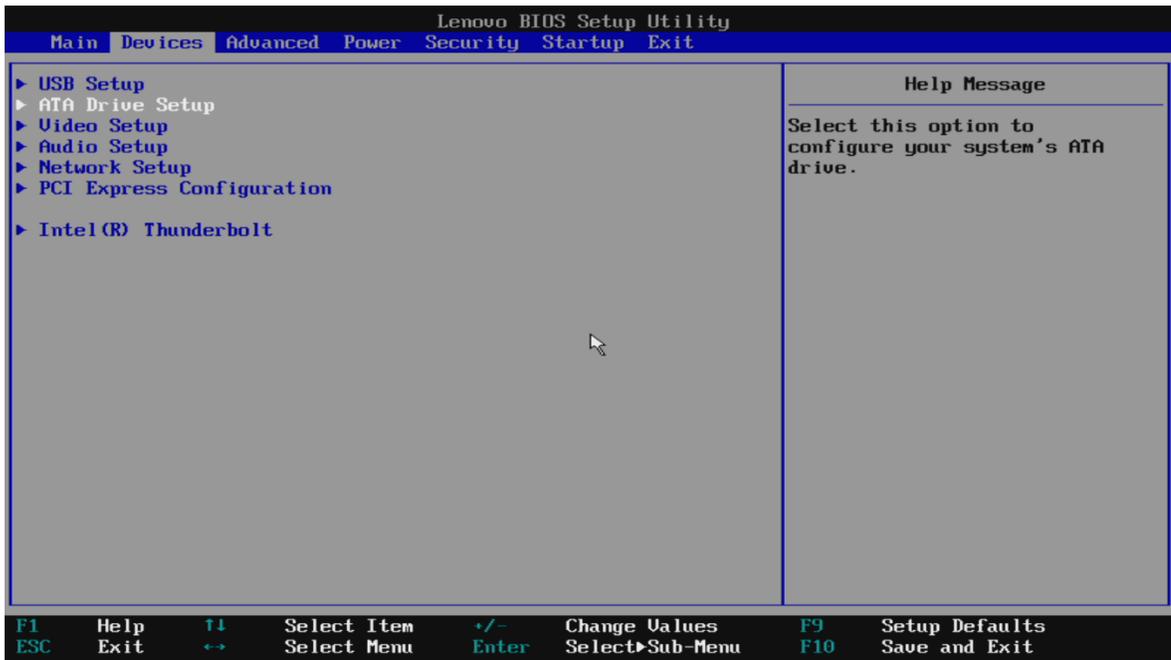
1. Boot into BIOS by pressing the function F1 key at the “Lenovo” splash screen.



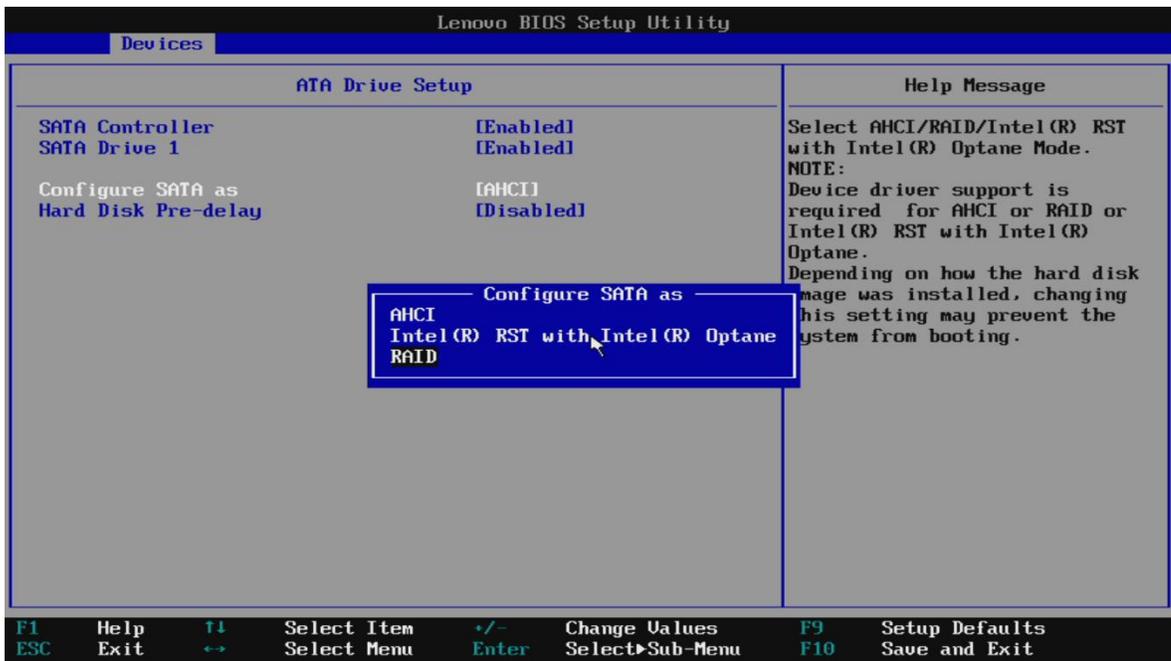
2. Select "System Summary" to verify BIOS is recognizing the NVMe drives.



3. Select the “Devices” menu at the BIOS main screen setup utility and “ATA Drive Setup”.

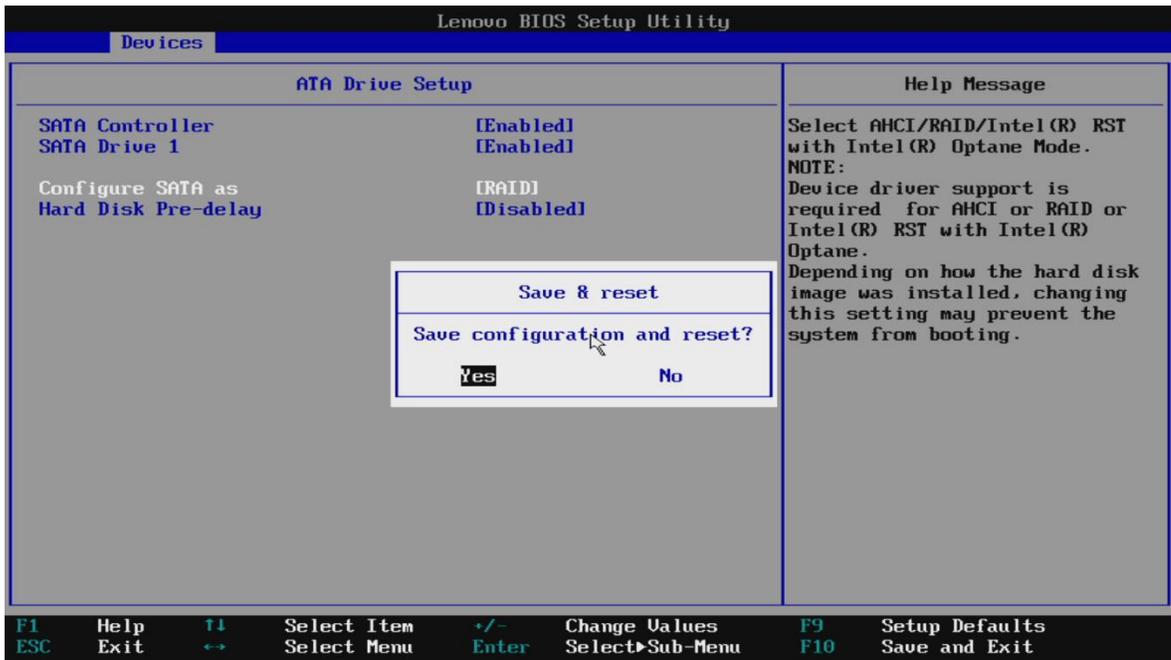


4. In the “ATA Drive Setup” menu, select “Configure SATA as” and change the option to “RAID”.

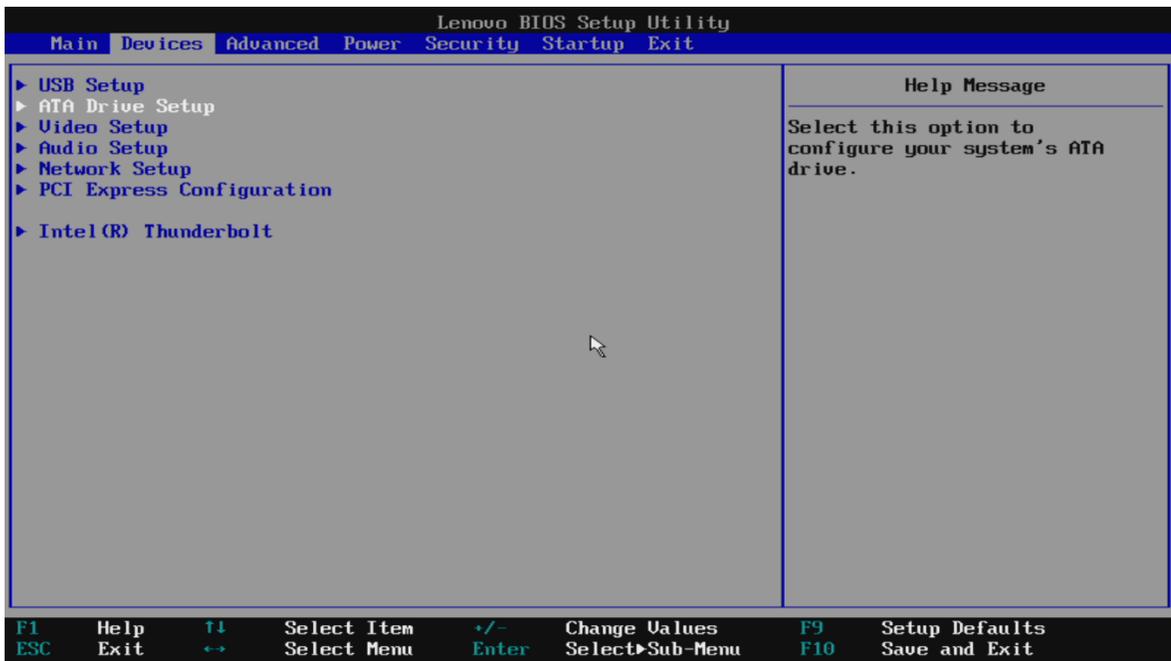


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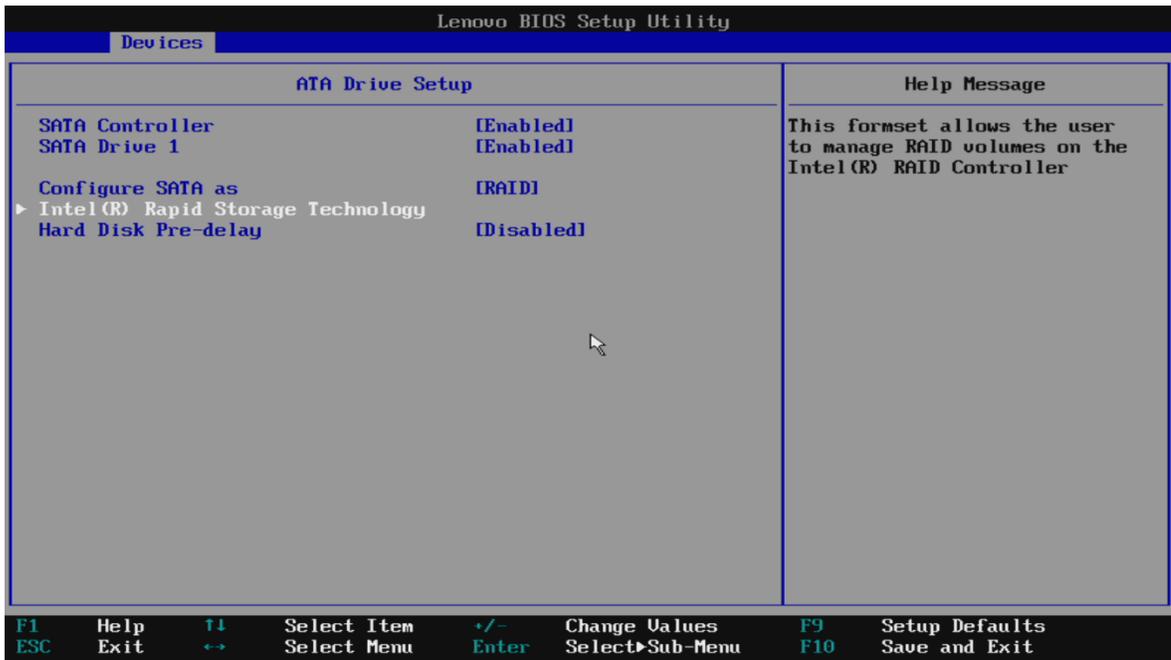
- Press F10 to Save and Exit BIOS setup.



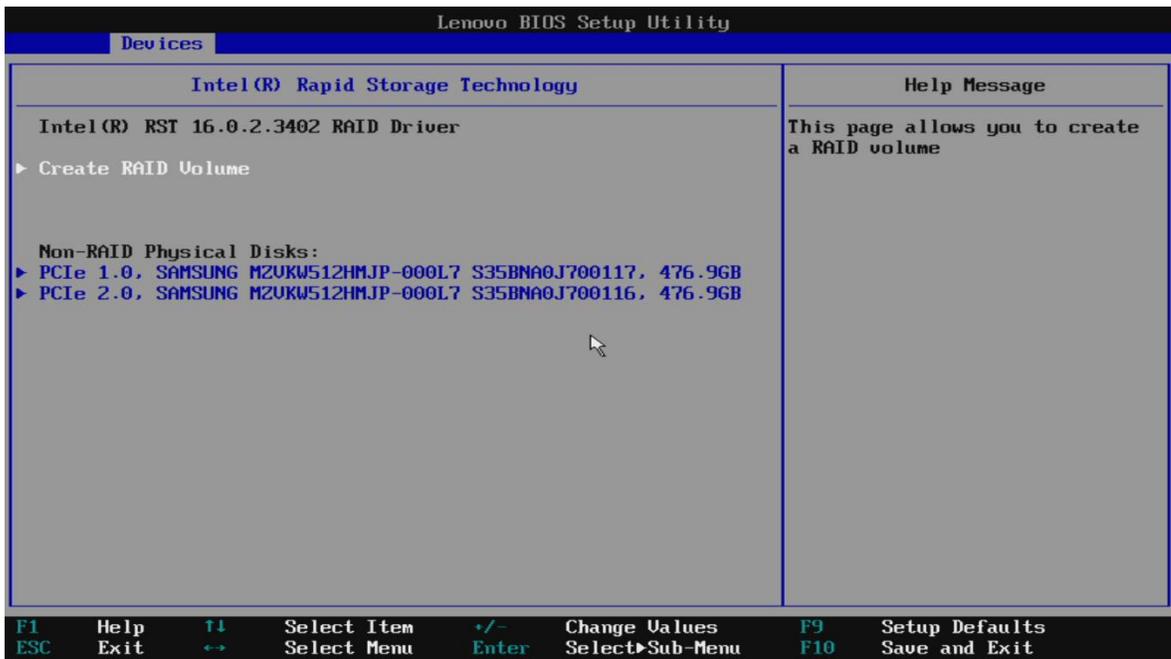
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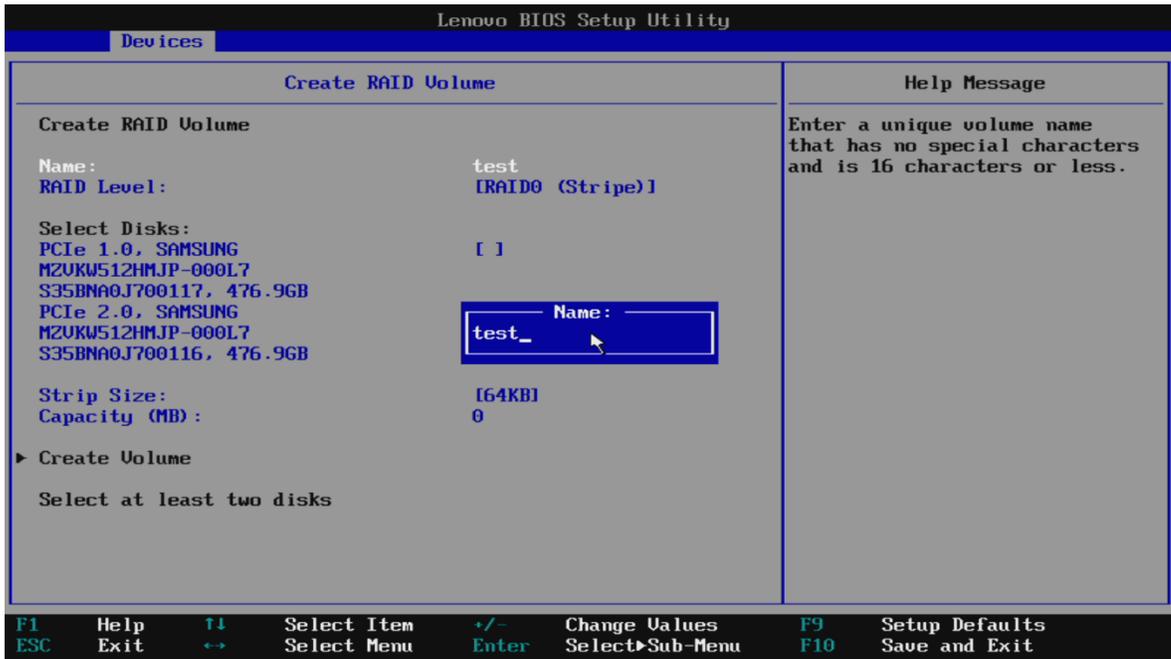
7. Select the “Intel® Rapid Storage Technology” option.



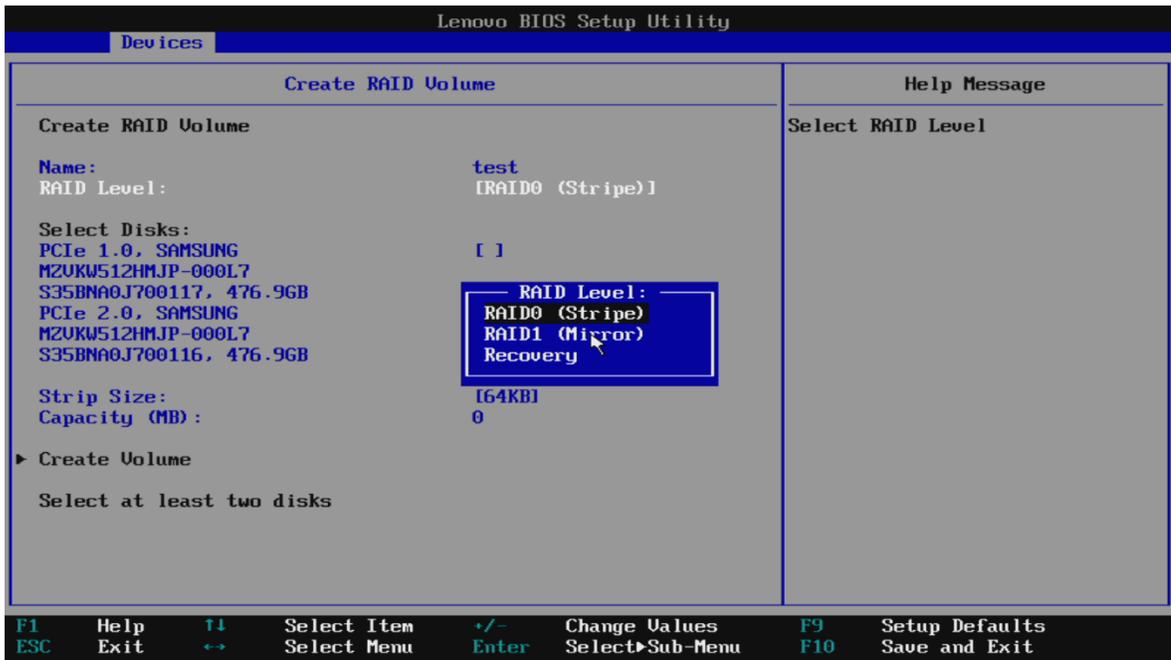
8. Select “Create RAID volume”.



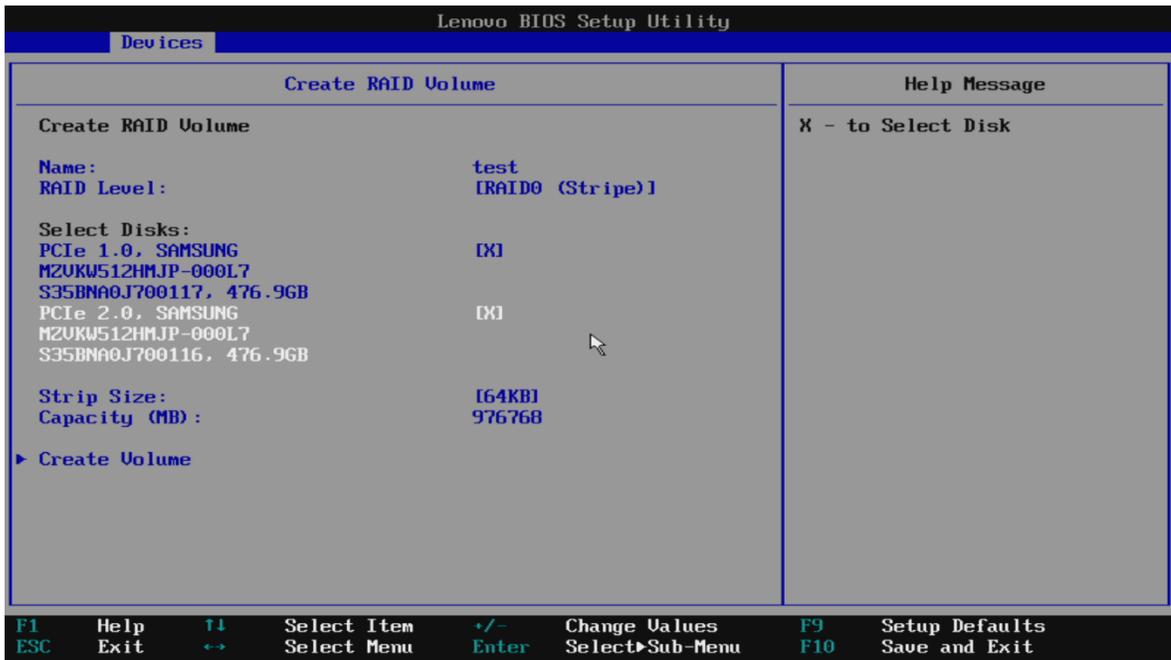
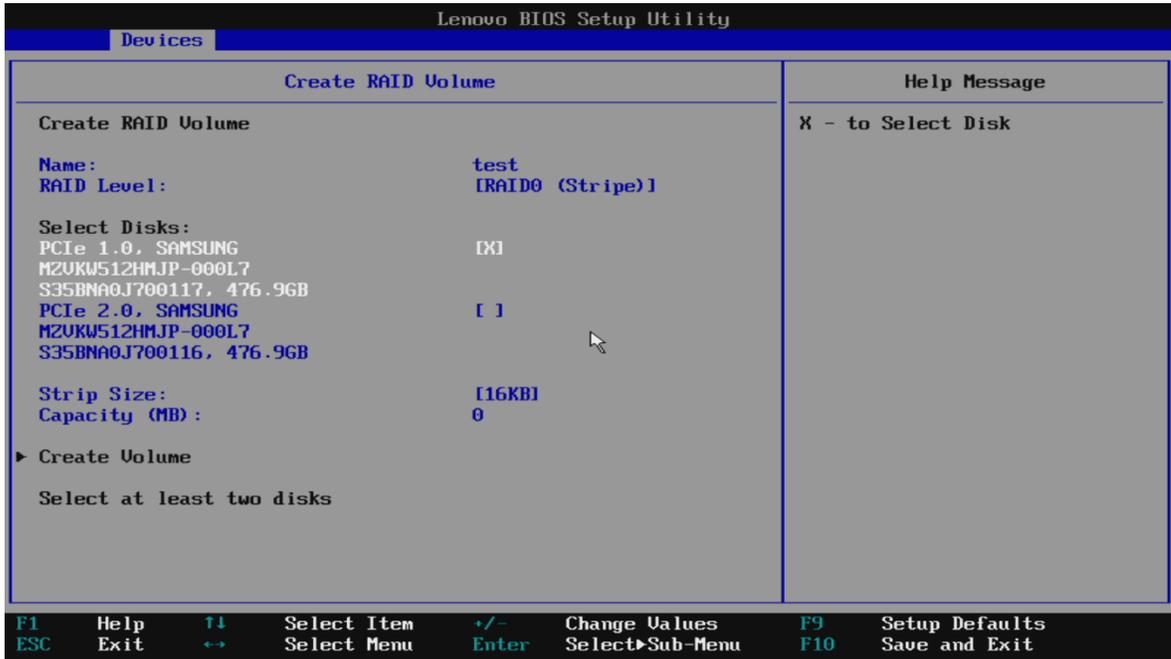
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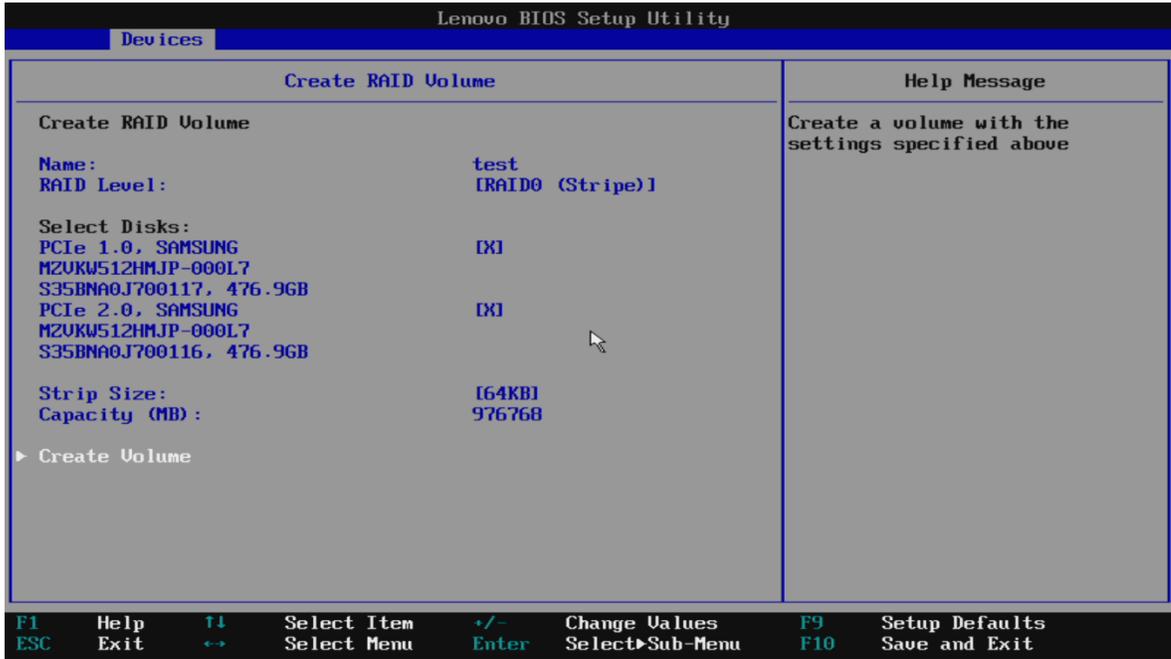
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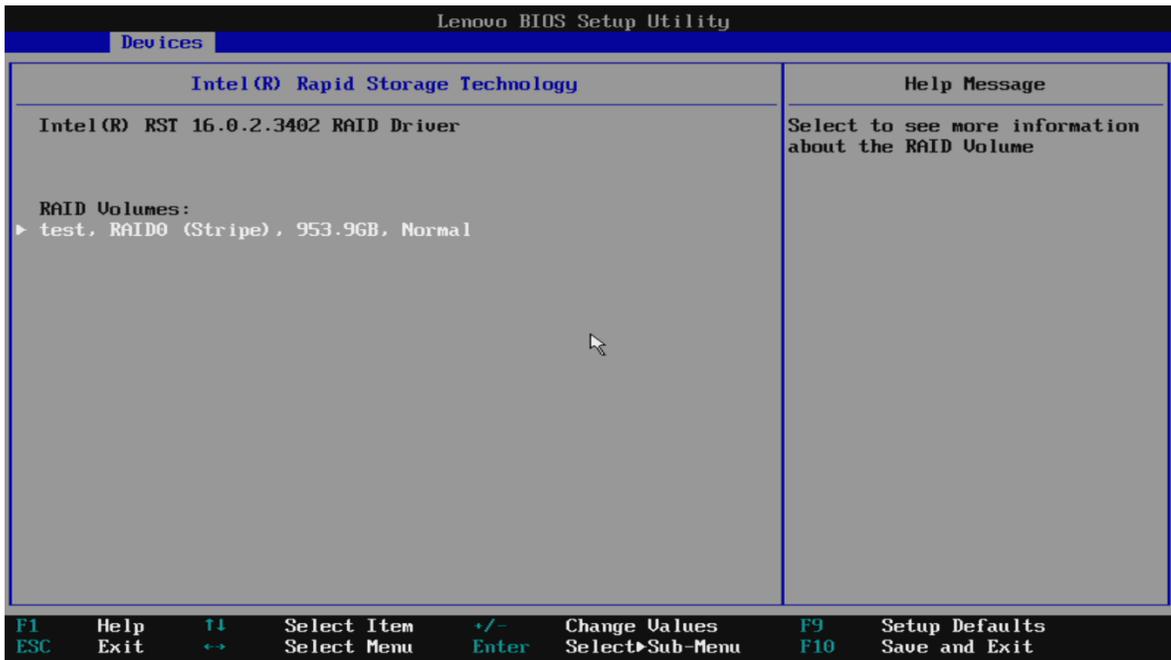
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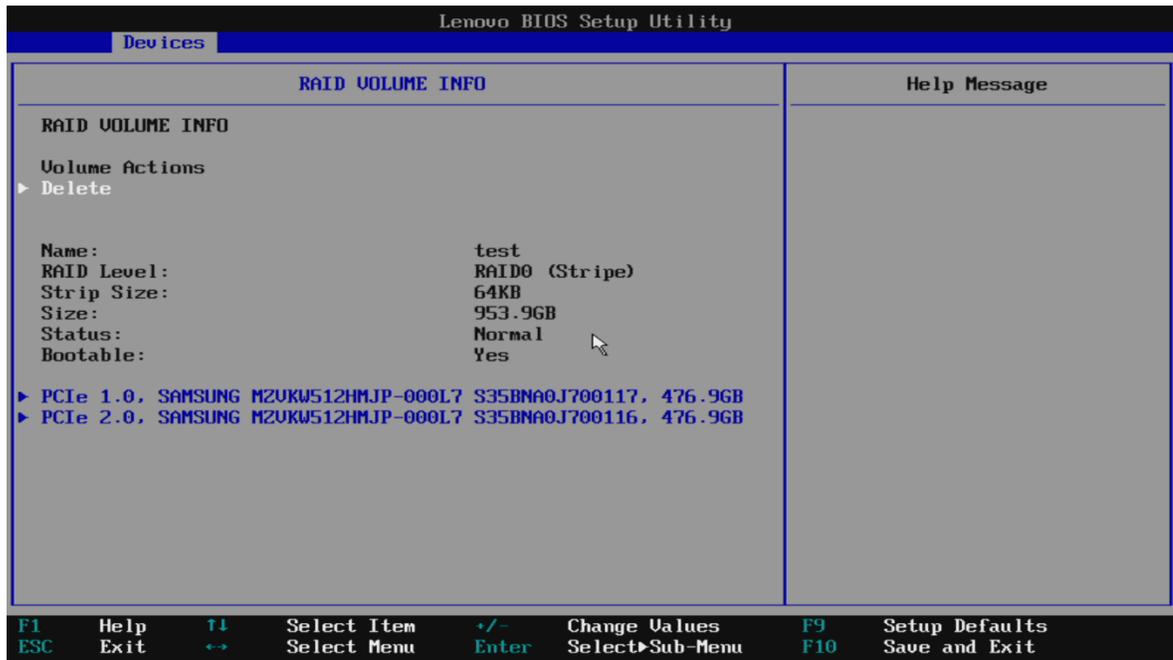
12. Select "Create Volume".



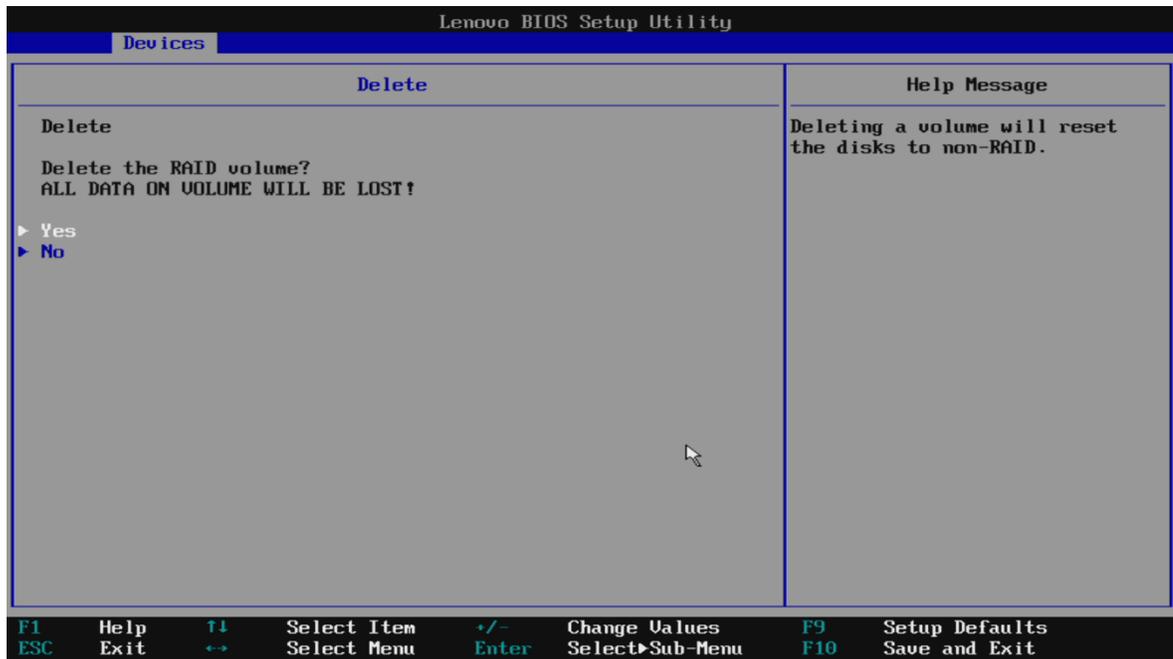
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15. To delete the RAID array, select "Delete" from the "RAID VOLUME INFO" from the previous step and confirm by selecting "Yes" at the very next menu option.



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Section 4 – Revision History

Version	Date	Author	Changes/Updates
1.0	1/22/2019	Jason Moebis	Initial launch release