[How To] Intel Optane Memory

Intel Optane Memory can be seen as a cache memory for the SATA device; by moving frequently used data to the Intel Optane, it helps shorten the data access time for the matching device and accelerates the system performance significantly.

This guide shows you how to configure and check the status of Intel Optane Memory.

Notes:

- MSI Notebooks support 16GB and 32GB Intel Optane Memory module.
- Intel Optane Memory acceleration supports only Windows 10 64-bit system.
- PCIe NVMe devices and any SATA devices which created with the RAID volume are not supported for Intel Optane Memory system acceleration.
- A single SATA device which installed with multiple operating systems is not supported.

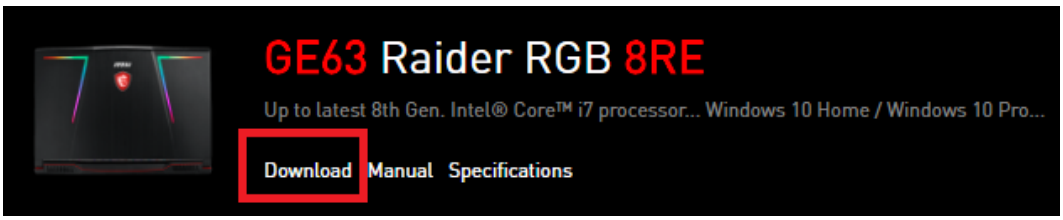
Outline

**To know more about Intel Optane Memory, visit Intel website:*
https://www.intel.com/content/www/us/en/support/articles/000024018/memory-and-storage/intel-optane-memory.html

1. How to setup Intel Optane Memory?

*Note: Notebook which originally bundled with Intel Optane Memory and has the pre-installed system, all settings are already applied and configured.
(To check the status, go to 3. How to check the status of Intel Optane.)

1.1. Update the latest BIOS released on MSI website.
Find the BIOS update file under product download page for your notebook model; enter the product name of your notebook on upper right search column of MSI website and select “Download” under your notebook model.



1.2. Update the latest Intel Rapid Storage Technology released on MSI website or download the “SetupOptaneMemory” utility released on Intel website.
System which has the RAID volume, use the Intel Rapid Storage Technology application for configuring the Intel Optane; otherwise, download and install the SetupOptaneMemory utility for the setups.
*Note: Intel RST driver is included in both tool's installation file, so you can only choose to use one of them installed on the system.
(Ref: https://www.intel.com/content/www/us/en/support/articles/000024385/memory-and-storage.html)

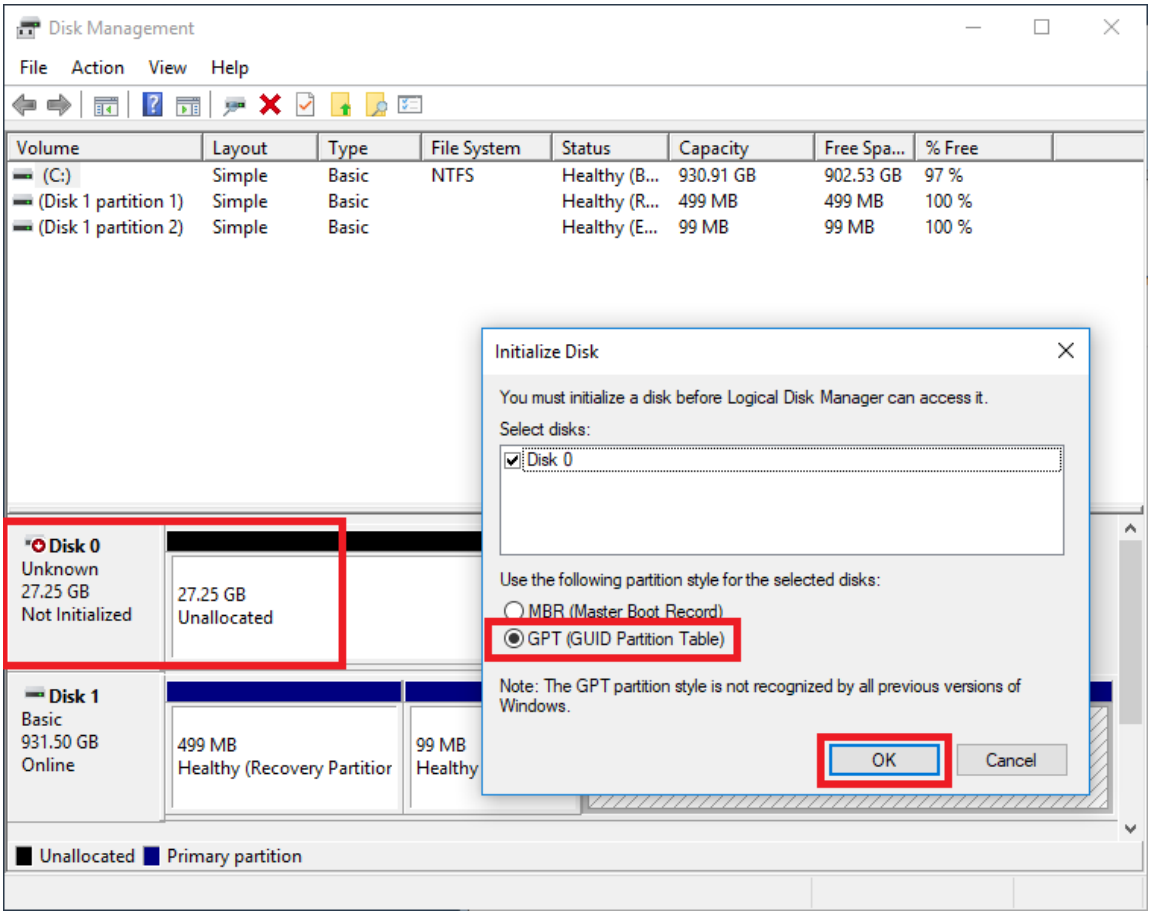
1.3. Install Intel Optane Memory on the M.2 **PCIe interface** slot.
*Note:
1. Before buying Intel Optane Memory, make sure an additional **empty** M.2 PCIe slot is available for the upgrade.
2. If you’re not familiar with your system configuration or disassembly, we suggest you contact with the MSI local service center or online support team and let our technicions help you with the upgrade.

1.4. Manually format the Intel Optane Memory to **GPT**.

*Skip this step if the Optane disk is properly recognized in the system.

*Note: Dynamic disk is not supported for Intel Optane.

Right click on the Windows icon and select “Disk Management”; Right click on the unknown disk, select the partition style “GPT (GUID Partition Table)” and click OK to initialize the Optane.

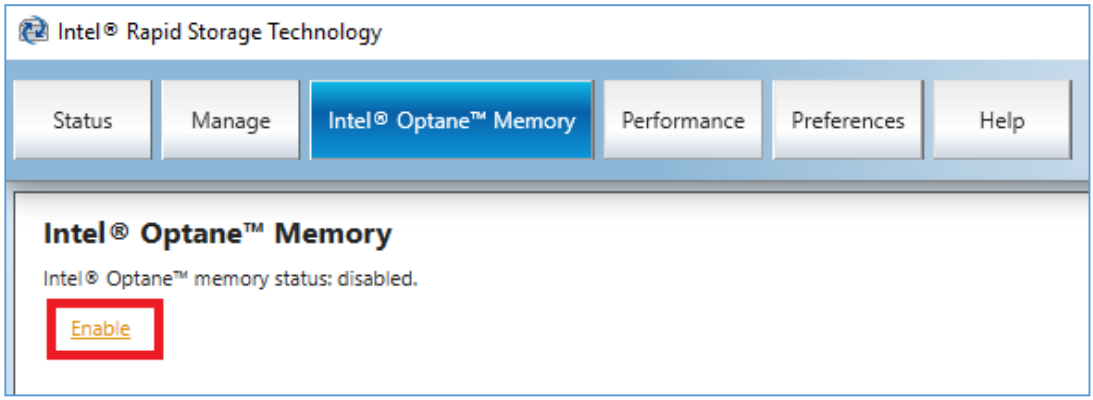


1.5. Enable the Intel Optane Memory on the system.

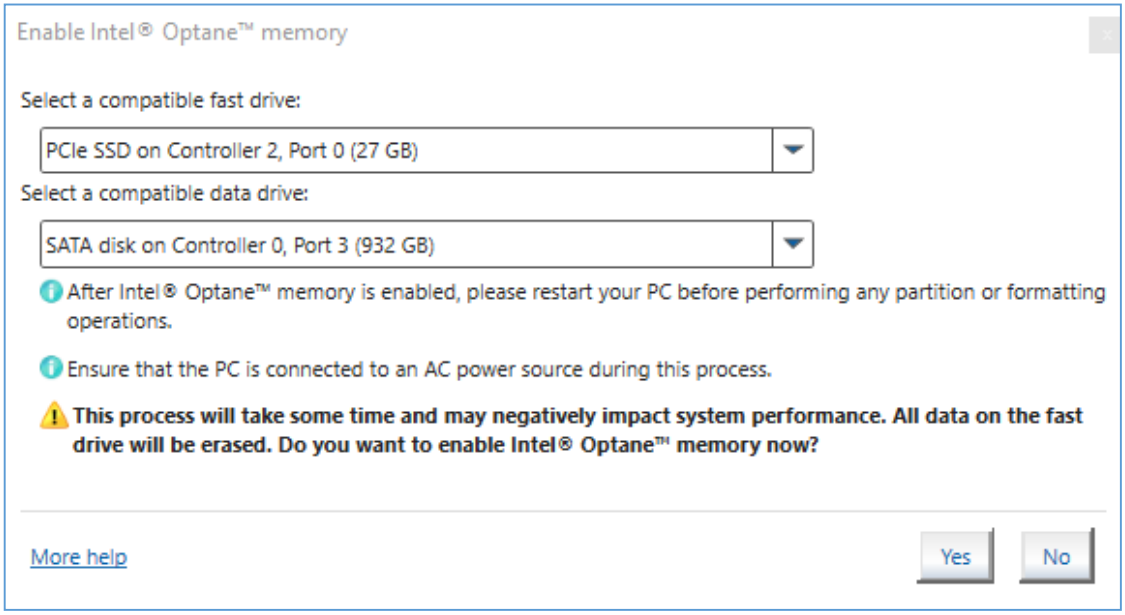
1.5.1. Intel® Rapid Storage Technology Utility:

*For the system which already has a RAID volume acceleration and wants to configure the Optane acceleration, run the Intel Rapid Storage Technology utility.

Run the Intel(R) Rapid Storage Technology application, select Intel® Optane Memory tab and click on “Enable” to create the RAID volume for Intel Optane Memory and the SATA devices.



Select the SATA device (here we use the 1TB hard drive for an example) which you choose to configure with the Intel Optane Memory.

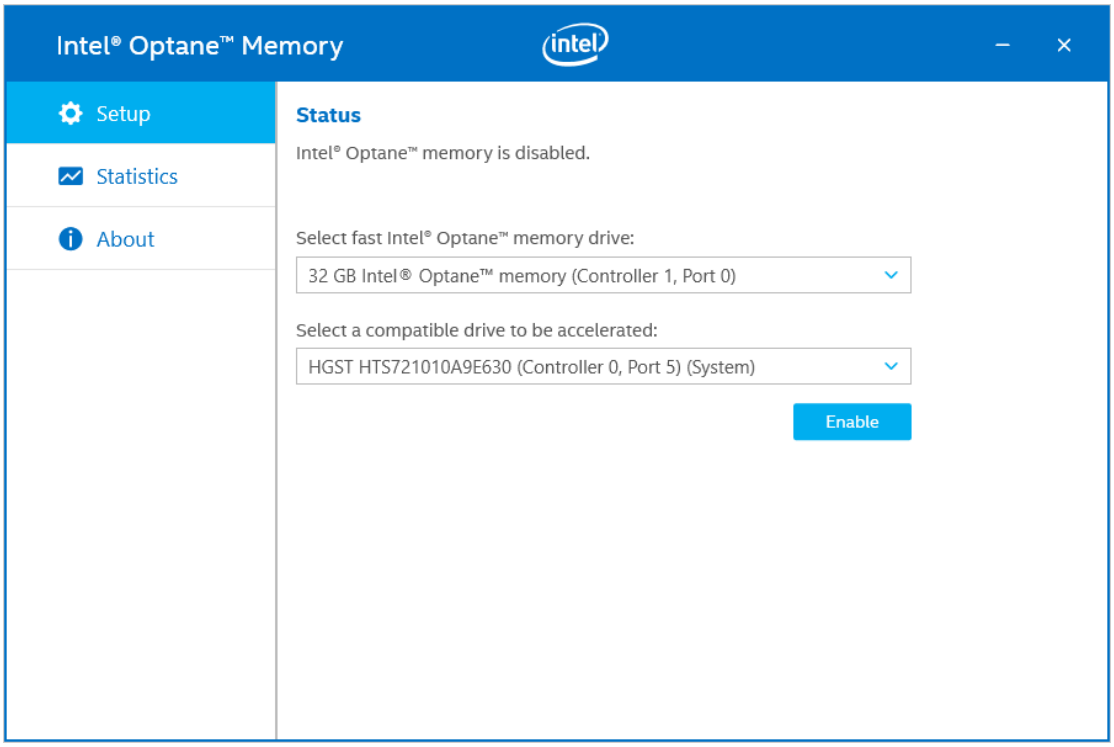


1.5.2. SetupOptaneMemory Utility:

*For the system which doesn't have the RAID volume, run the SetupOptaneMemory to configure the system acceleration.

Run the SetupOptaneMemory utility and under "Setup" page, select the SATA device (here we use the 1TB hard drive for an example) which you choose to configure with the Intel Optane Memory; click "Enable" to start the setups.

(It takes few seconds until the setup is complete)

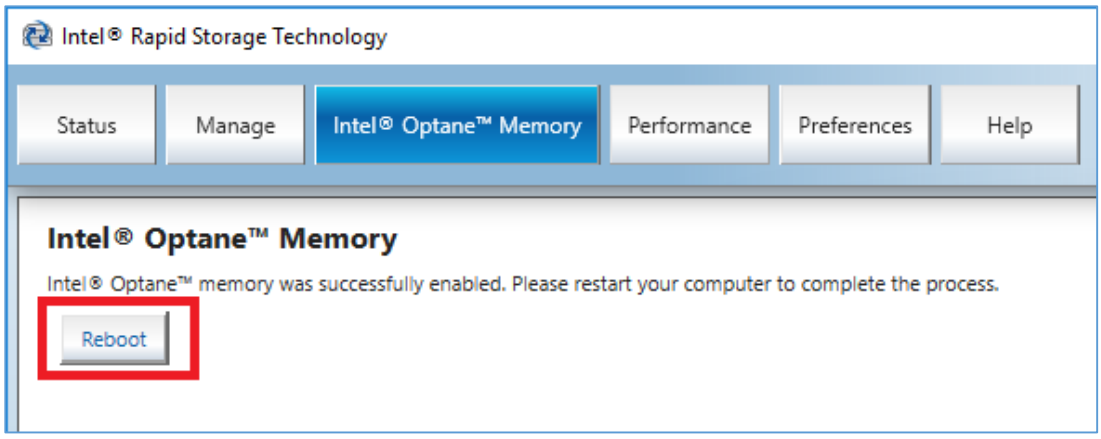


1.6. Reboot the system to complete the setup.

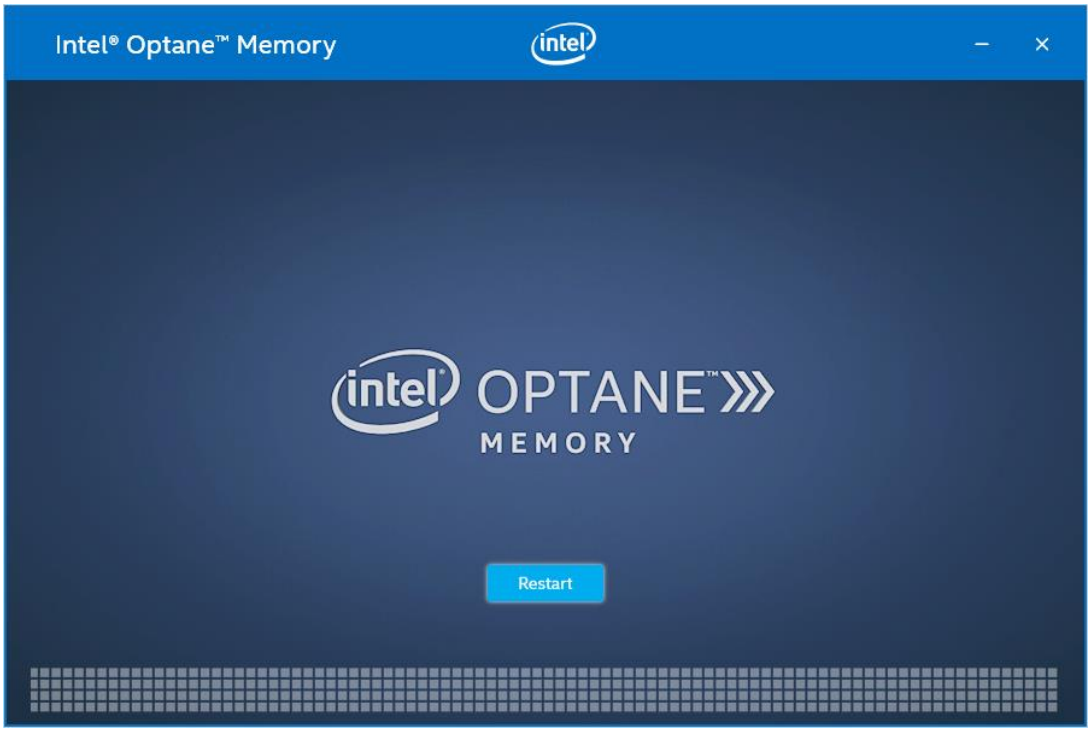
Warning

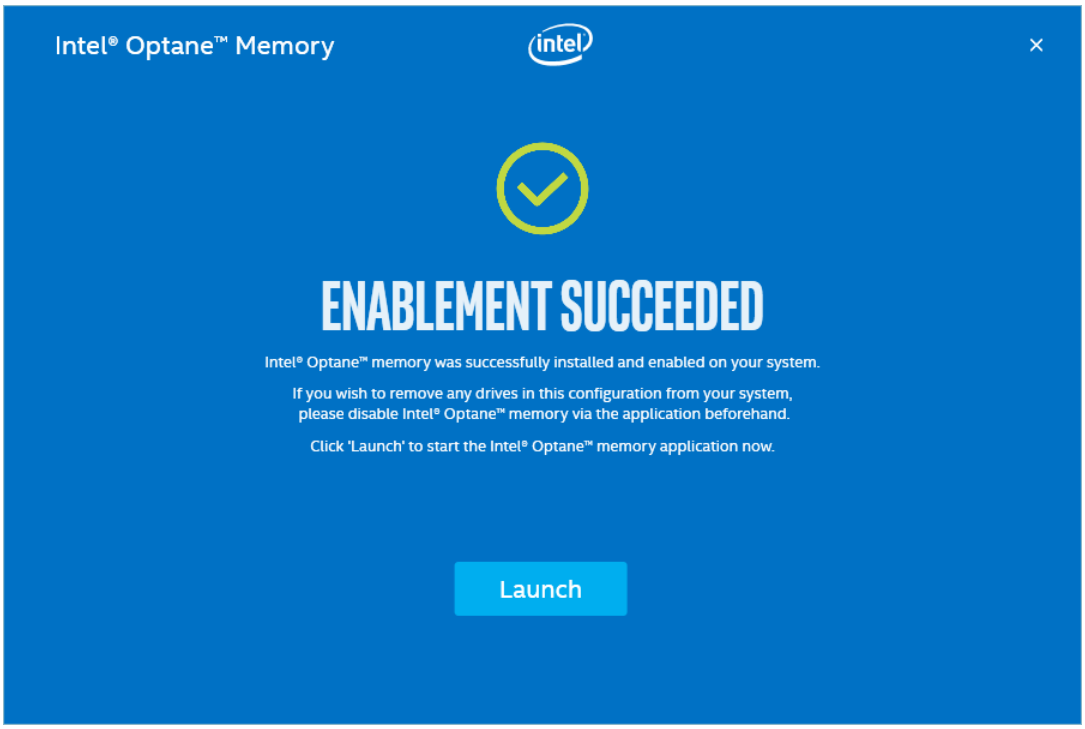
*A system **RESTART** is required after the setup completes, do NOT shut down and power on the system after the setup because there is a high risk that the system can be unstabled or not able to boot up without a proper system reboot after the setup.*

1.6.1. Intel® Rapid Storage Technology Utility:



1.6.2. SetupOptaneMemory Utility:



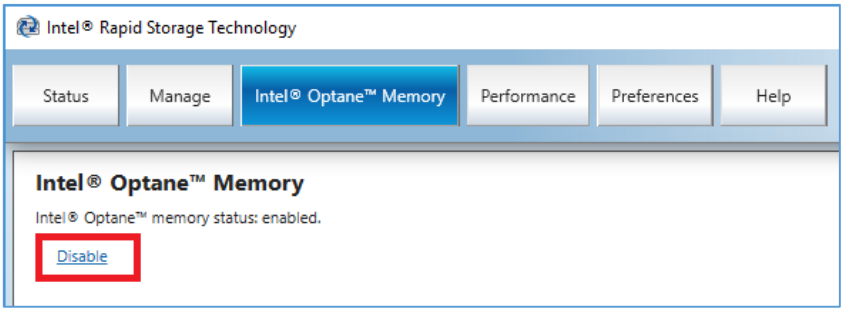


2. How to correctly disable Intel Optane Memory?

2.1. Intel® Rapid Storage Technology Utility:

2.1.1. Enter “Intel(R) Rapid Storage Technology” in Windows Search column and run the application.

2.1.2. Click the “**Disable**” button under Intel Optane Memory page.

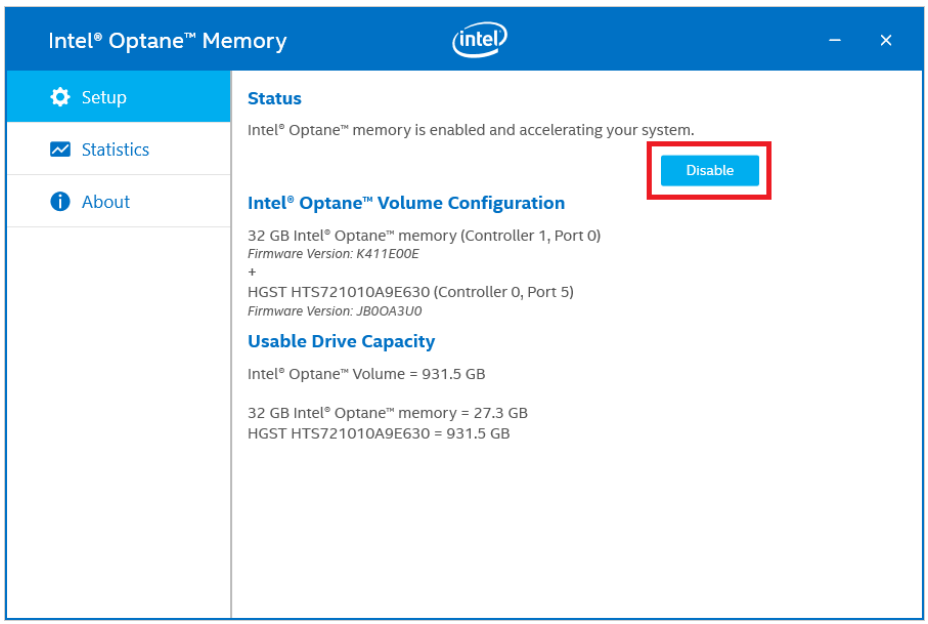


2.1.3. Wait for the setup and follow the on screen instruction to **RESTART** the system and complete the changes.

2.2. SetupOptaneMemory Utility:

2.2.1. Enter “SetupOptaneMemory” in Windows Search column and run the application.

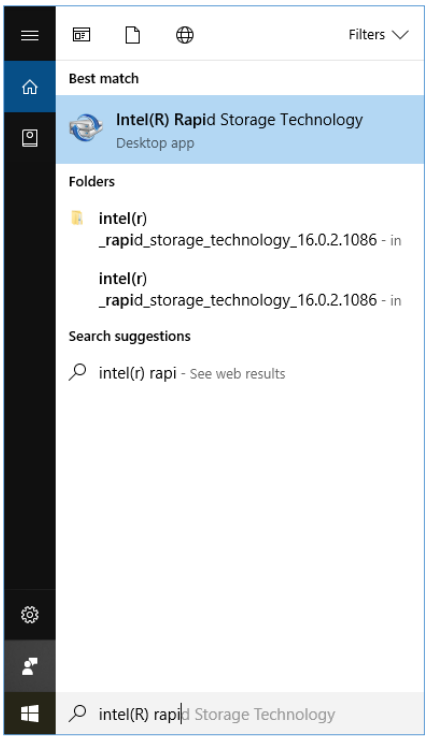
2.2.2. Click the “**Disable**” button under Setup page.

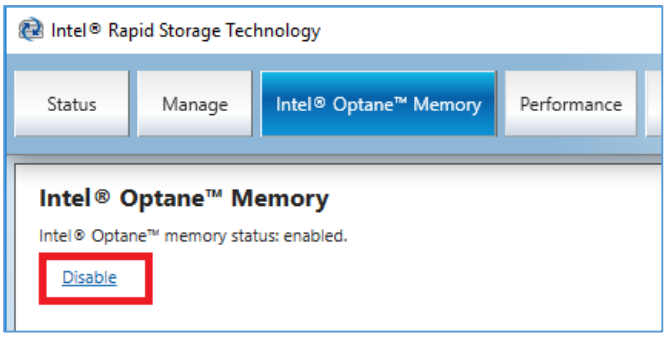


2.2.3. Wait for the setup and follow the on screen instruction to **RESTART** the system and complete the changes.

3. How to check if the Intel Optane is configured properly?

3.1. If you have the pre-installed system and Optane, enter “Intel(R) Rapid Storage Technology” in Windows Search column and run the application; click on Intel® Optane Memory button to check its current status.





3.2. If the Optane is configured by SetupOptaneMemory utility, enter “SetupOptaneMemory” in Windows Search column and run the application; select the Setup page to check the current status.