

# How to Enable Support for TRIM



How to enable the Windows 7 TRIM command to maintain optimal SSD performance.

# 1

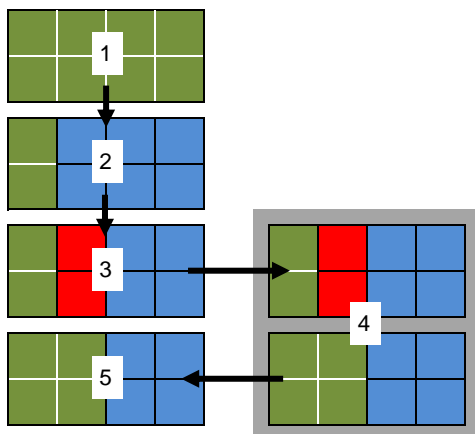
## TRIM Overview

### What is TRIM?

The TRIM command has been designed to maintain the performance of solid-state drives at an optimal level over the course of the lifetime of the drive.

### How Does TRIM Work?

TRIM actively deletes invalid data from the SSD's memory cells to ensure that write operations perform at full speed. Since a memory block must be erased before it can be re-programmed, TRIM improves performance by pro-actively erasing pages containing invalid data, allowing the SSD to write new data without first having to perform a time-consuming erase command.



- 1.) SSD pages contain no data
- 2.) User writes data to SSD pages
- 3.) User deletes some data. Pages are marked as 'not in use' by the host OS, but data remains on SSD.
- 4.) TRIM command tells SSD controller that pages contain invalid data. Pages with invalid data are cleaned.
- 5.) Data is written back to SSD memory cells. The invalid data has been cleaned and data is able to be written to the pages at full speed.

# 2

## How to Enable TRIM

For TRIM to function the operating system, storage drivers and solid-state drive must all support the TRIM command. Currently, only Microsoft Windows 7 operating systems support the TRIM command and only when the default Microsoft Storage Driver (MSAHCI) from Microsoft is used.

TRIM is only supported in single-drive configurations, since current RAID storage drivers also do not pass on the TRIM command from the operating system.



### TRIM Support Checklist:

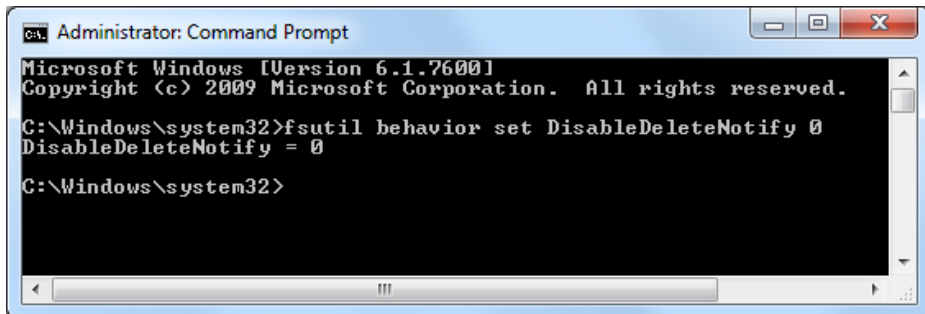
1. Microsoft Windows 7 operating system
2. SSD with TRIM-enabled Firmware
3. Storage Controller configured in IDE or AHCI mode
4. Default Microsoft Storage Driver (MSAHCI)

## 3

## How to Enable TRIM (Continued)

To enable TRIM, start a Command Prompt window (in Administrator mode, type “CMD” in the Search bar from the Windows Start Menu) and enter the following command:

***fsutil behavior set DisableDeleteNotify 0***

A screenshot of a Windows Command Prompt window titled "Administrator: Command Prompt". The window has a blue title bar with standard Windows window controls (minimize, maximize, close). The command prompt shows the following text: "Microsoft Windows [Version 6.1.7600] Copyright (c) 2009 Microsoft Corporation. All rights reserved. C:\Windows\system32>fsutil behavior set DisableDeleteNotify 0 DisableDeleteNotify = 0 C:\Windows\system32>". The text is white on a black background. The window has a scrollbar on the right side.

```
C:\Windows\system32>fsutil behavior set DisableDeleteNotify 0
DisableDeleteNotify = 0
C:\Windows\system32>
```

Once the value of “0” is set for this parameter, TRIM is enabled.

# Resources

Additional information about Corsair SSD drives can be found here:

[http://www.corsair.com/products/ssd\\_home.aspx](http://www.corsair.com/products/ssd_home.aspx)

The latest information and further discussion about Corsair solid-state drives can be found in the Corsair Solid-State Drive forum, which is available here: <http://forum.corsair.com/v3/forumdisplay.php?f=188>

