Finally Intel brings TRIM to SSDs in RAID arrays

November 28 2011, by Nancy Owano

(PhysOrg.com) -- Intel will add TRIM support for RAID0 in its upcoming drivers in Q2 next year. The TRIM feature will be enabled for RAID0 setups in Intel's upcoming RST (Rapid Storage Technology) 11.5 driver. For technologists working with SSDs, file under Great News. User forums for SSD users have had their share of polite questions and weary answers: "So is TRIM supported in RAID now?"

Answers have been well meaning but confusing: "Yes but" or "It Depends" or Nope. Users in the past had spread word that RST drivers supported TRIM on RAID but then there were clarifications that this was only if the user went for "AHCI" mode. All that blur and disappointing answers took another turn this month with a discovery by StorageReview of a certain note #2 on Intel's Release Notes for its RST

11.5.

2. This release will not enable the TRIM on RAID0 feature, but it will be added in the next RST 11.5 release. Contact your RST AE representative with questions.

TRIM is a command issued by an operating system to inform a solid state drive over which blocks of data are no longer in use and can be wiped internally. This frees up storage space on the SSD.

Observers explain the gains as follows: TRIM support for RAID0 in upcoming drivers is an advantage because it answers performance issues. The write performance of an SSD significantly degrades with time or as the drive fills out, without a feature to properly handle garbage-collection overhead. Without TRIM, the write performance of an SSD degrades in the long run.

Since Windows 7's release in 2009 and Intel's Rapid Storage Technology, SSD users have had TRIM support—but not in the case of users working with RAID configurations.

While SSD RAID 0 setups may be primarily enjoyed by the "performance-crazed enthusiast market", writes Joel Hruska for *ExtremeTech*, the upcoming support is an important first step towards extending TRIM support across multiple RAID levels.

Intel RST 11.5 is expected to arrive in Q2 of next year with support for Windows 7 and Windows 8 systems. Intel's RST 11.5 release date has not been confirmed but observers assume the release will be in step with the launch of Windows 8 in Q2 2012.

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