

# Say Goodbye to Old Traditional RAID Technology

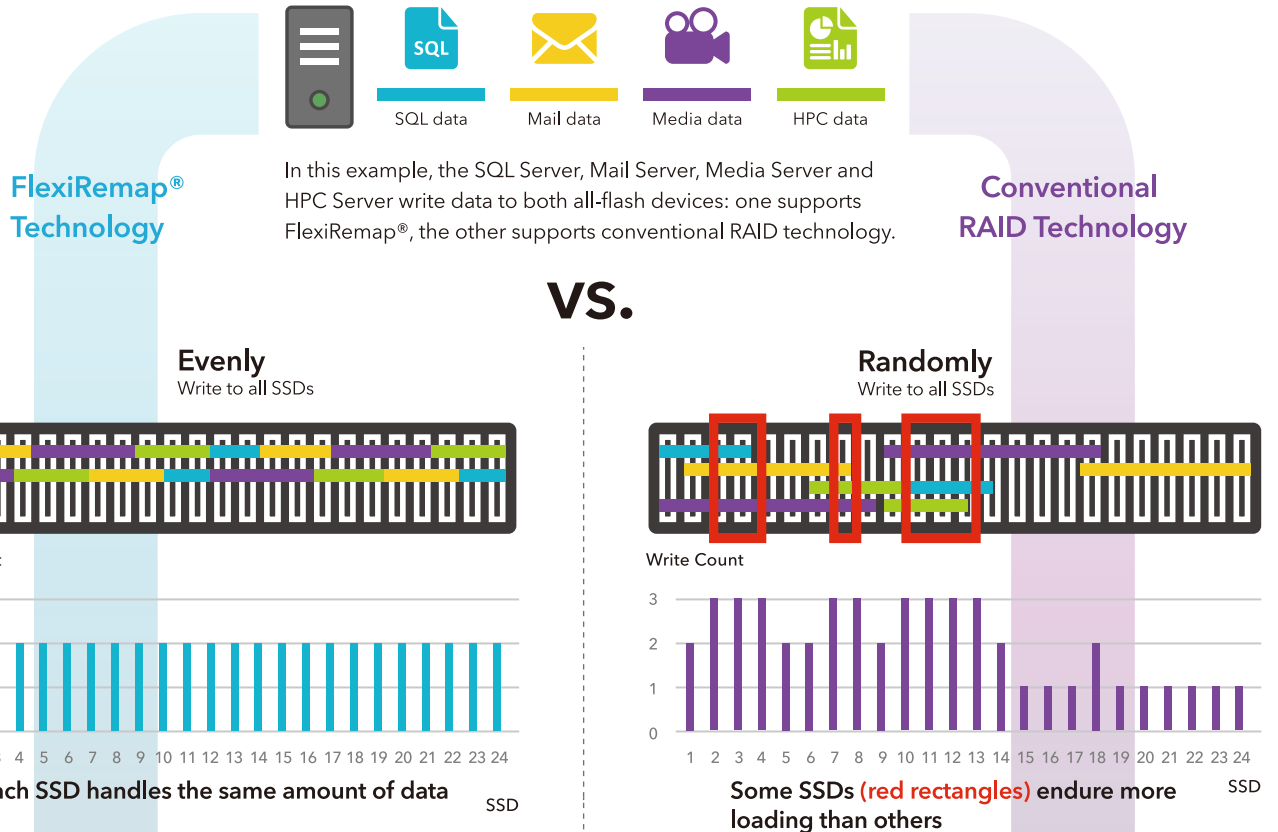


Experience Faster Performance, Longer SSD Lifespan and Robust Data-Protection features with AccelStor's Award-Winning Technology: FlexiRemap®



## Most Innovative Flash Memory Technology

AccelStor FlexiRemap® Wins "Most Innovative Flash Memory Technology" at Flash Memory Summit 2016



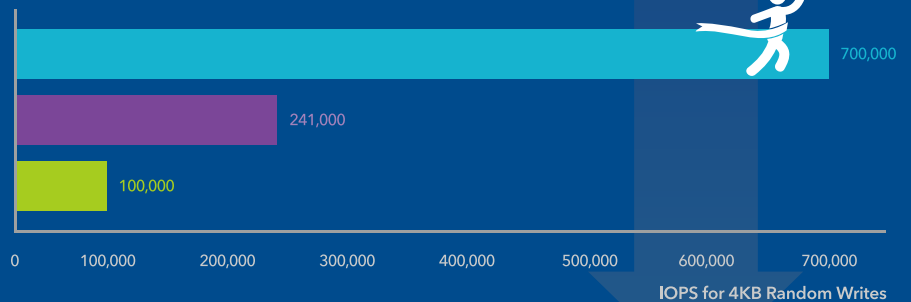
**Higher performance**  
- Fully utilize SSD Performance without bottlenecks



NeoSapphire AFA (FlexiRemap® Technology)

Vendor A's AFA (RAID Technology)

Vendor B's AFA (RAID Technology)



**Lower performance**  
- Heavily loaded SSDs become a performance bottleneck



**Maximize SSD lifespan**  
- Ensure that each SSD stores a similar amount of data and this will extend SSD endurance

**Shorten SSD lifespan**  
- The most-used SSD will suffer a higher failure rate than other SSDs

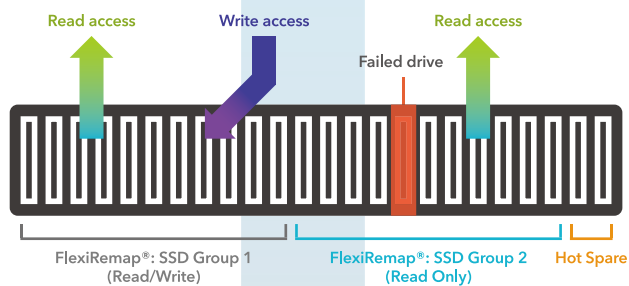
Comparative Metrics	FlexiRemap®	RAID 5
<b>Endurance:</b> Total bytes written before solid-state drives get worn out (The higher the better)	> 4.8PB	< 2.8PB
<b>System Lifespan:</b> Sustainability under workload of 3 DWPD (The higher the better)	> 4.5 Years	< 1.7 Years

Note: Comparisons between FlexiRemap® and RAID 5, running on exactly the same 1U rack-mount platform with 8 standard 2.5" SSDs of 200GB each

## Question: From data protection point of view, what is the difference between FlexiRemap® and traditional RAID 50/60?

### Latest FlexiRemap® Technology

**😊 Robust data protection mechanism**  
 - If one SSD fails in SSD group 2, this group will then enter read-only mode to avoid the heavy load of further writes. This decreases the chance of failure on the second drive in the same group during rebuild.

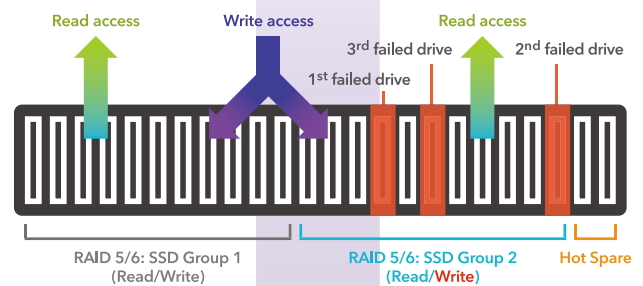


**✓ Full protection!**

**🏋️ Thanks to FlexiRemap® with read only mode to avoid 2<sup>nd</sup> drive failure led to data loss. Your data is intelligently protected.**

### Conventional RAID Technology

**☹️ Higher risk to cause data loss**  
 - If one SSD fails in SSD group 2, the group still keep handling coming write data, that will increase the probability of SSD group 2 suffering a fatal failure when 2<sup>nd</sup> / 3<sup>rd</sup> drives fail before recovering all failed drives.



**⚠️ Keep writing? So dangerous!**

**🚶 Potential loss of critical data due to SSD Group 2 suffering a fatal failure. RAID 50/60 doesn't have any protection mechanism to prevent drive failures in the SSD group if a drive failure has been detected!**

## Question: From data protection point of view, what is the difference between FlexiRemap® and traditional RAID 50/60?

### Latest FlexiRemap® Technology

**😊 Synchronous write with stunning performance**  
 - Transfer random write to sequential write and evenly write into all SSDs.

### Traditional RAID Technology

**☹️ Synchronous write with low performance**  
 - Randomly write into SSD's causing some to handle more writes than other's. Furthermore, it will lead to a performance bottleneck.

Write Protection Type	FlexiRemap® Technology	RAID 5 / RAID 50 / RAID 6 / RAID 60
<b>Synchronous write</b>	<ul style="list-style-type: none"> <li>✓ Great performance</li> <li>✓ 100% data write protection even when disaster strikes</li> </ul>	<ul style="list-style-type: none"> <li>✓ Low performance</li> <li>✓ 100% data write protection even when disaster strikes</li> </ul>
<b>Asynchronous write</b>	<ul style="list-style-type: none"> <li>✓ Excellent performance</li> <li>✓ Protect write cache by BBP (Battery Backup Power) if power outage</li> </ul>	<ul style="list-style-type: none"> <li>✓ Good performance</li> <li>✓ Protect write cache by BBU (Battery Backup Unit) or supercapacitor if power outage</li> </ul>