Intelligent Adaptive Flash

Enabling the flash business case

Key benefits of Intelligent Adaptive Flash

- All-Flash or fully automated hybrid storage - you choose
- Media Affinity allows administrators to lock volumes to flash or disk
- Continuous Adaptive Data Placement allows administrators to deploy simple, automated data tiering

The importance of flash in enterprise IT

In today's consumer market, despite its higher cost, flash storage in the form of SSDs has become a popular option due to the performance benefits it provides for the entire desktop experience. Having access to applications 80% faster and obtaining results in the blink of an eye leads to greater productivity, and there is no going back to slower storage media.

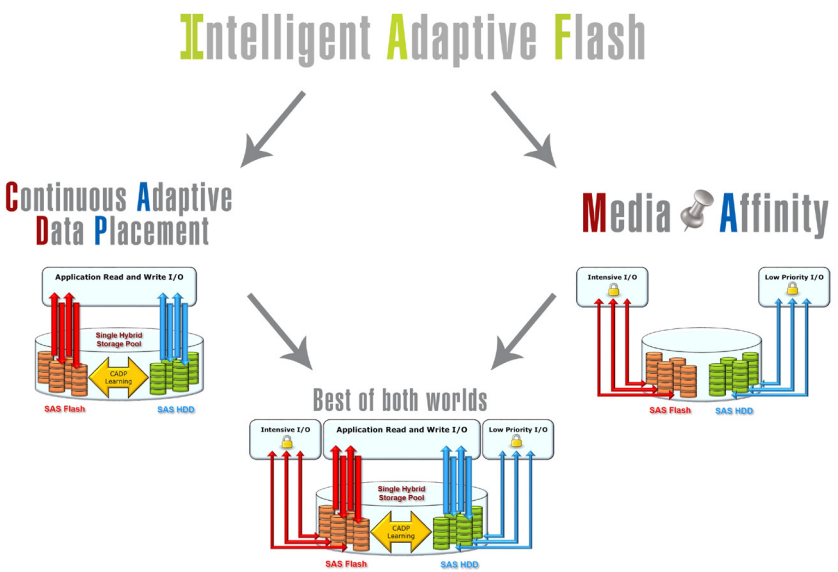
The same applies to flash storage in the enterprise and in some ways is related to the ramp up in the consumer market. Users, administrators, businesses and customers expect the same responsiveness.

What you need to know about flash media

While business growth in general can be somewhat predictable, risk associated with a new technology that is dependent on additional features to minimize the cost can cause unpredictable results and unplanned capital expenditures.

Maximize ROI

In addition to the initial capital cost of flash storage, delivering the greatest return on investment requires focused efforts to use flash storage where it is most needed, and keeping it from being used for warm or inactive data. Applying these practices takes time and operating expenditures.



Intelligent Adaptive Flash

Enabling the flash business case

Consistent and predictable investments

Flash memory behaves very differently from the majority of traditional storage used in IT today. One of the drawbacks of flash is that data cells can fatigue over time and become unusable. Coupled with the fact that flash memory must perform additional operations when new data is written, this can amplify how quickly it degrades. Fortunately the manufacturers of flash have found ways to eliminate a hot spot from being overused, and prematurely degraded by balancing wear across all memory cells. Enabling this endurance can come with performance drawbacks for high write workloads such as VDI and Database Management Systems. All of this can become increasingly more unpredictable as the array reaches maximum capacity and has less free space to manage preventative measures.

Intelligent adaptive flash

Intelligent Adaptive Flash is the solution for gaining the most efficient return of investment from flash, dramatically reducing the wear of flash and getting optimum and consistent performance for any workload, even when 95% of the capacity is used. Intelligent Adaptive Flash is enabled by the following ISE features and capabilities: Media Affinity, CADP, and Matrixed RAID.

Continuous Adaptive Data Placement

CADP provides fully automated storage tiering, placing only the hot data on flash and keeping warm or inactive data on high performance mission-critical HDD. This limits the amount of wear, happens in real-time, and provides greater efficiency without human intervention.

Media Affinity and All-Flash Volumes

Media Affinity gives control back to the storage administrators to decide where the flash capacity is to be used. For example, placing VDI linked-clones on all-flash volumes ensures the common system files can be accessed by the virtual desktops with no latency, improving productivity. Placing database transaction log files and temporary workspaces (such as tempdb) on all-flash volumes ensures the applications no longer feel the effects of latency that can impact revenue.

GISD

"Unlike other storage solutions, X-IO Hybrid ISE maintains excellent performance levels even when it's being worked hard. We can maximize usage of the device, giving it excellent performance in our VDI environment."

Shannon Rico
Network Services Manager
Garland Independent School District

Matrix RAID

Since 2008, X-IO has been installing disk arrays that are capable of delivering 300% to 400% more performance per disk, even when the array has reached maximum capacity. These benefits are as a result of advanced data layout techniques which spread the performance across the entire media pool, and in a way that increases the durability of any media used in the ISE, including flash. This results in consistent performance for business applications, for the lifetime of the array, which is a minimum of 5-years with ISE. This is backed by a no-cost 5-year standard hardware warranty.

To find out more about how Intelligent Adaptive Flash can work for you visit:
http://xiostorage.com/products/ise-storage-systems

9950 Federal Drive, Suite 100 | Colorado Springs, CO 80921. U.S. 1.866.472.6764 | International. +1.719.388.5500 | www.xiostorage.com
X-IO, X-IO Technologies, ISE and CADP are trademarks of Xiotech Corporation.
Product names mentioned herein may be trademarks and/or registered trademarks of their respective companies.
© Xiotech Corporation. All right reserved. Document number: SB-0023-20150126