DATASHEET

PrimaryIO APA for VMware

primaryio

Smart solutions to resolve Storage-IO bottlenecks in your Virtual Data Center

Virtualization has revolutionized datacenters with consolidated compute resources and shared storage arrays. The challenge is that efficient compute needs to be matched with high performance storage to prevent IO bottlenecks. Some datacenters have adopted a brute force approach by replacing rotational storage with All-Flash Arrays (AFAs) to overcome these performance issues. Since storage must be provisioned to meet peak demands, not only are periods of under-utilization frequent, but they vary within the datacenter's diverse set of workloads.

The PrimaryIO Application Performance Accelerator solves these challenges using an intelligent, data-driven, real-time analysis of IO usage of individual workloads. In fact, it analyzes at the level of individual virtual machines.

Solution: Application Performance Accelerator (APA)

The PrimaryIO APA 2.0 combines an integrated IO analyzer with a server-side SSD cache to resolve the storage IO bottlenecks in VMware powered datacenters to deliver higher VM density and superior performance. The two components of APA 2.0 – Smart IO Analyzer and server-side SSD caching combine to deliver up to 10x performance enhancements.

The PrimaryIO APA technology dynamically writes only the most relevant transaction data to maximize application performance and minimize expensive flash usage. APA is an application tier plug-in that identifies component I/O blocks such as tables, collections and indexes in the PrimaryIO stream that are important to tuning the performance of a data store.

Key Features of Release 2.0:

- Fully vCenter Integrated and fully VMware VAIO certified
- Storage Policy Based Management
- Future proofed for ESXi 6.x+
- Storage-agnostic and works with any back-end, flash or combination of flash and hard disk
- Full support for Snapshots, VMotion, DRS, and more

Benefits

Provide real-time recommendations for server-side SSD caching (with optimum cache sizes) to resolve storage health issues

Deliver predictable performance, cluster-wide cache pooling and node caching, even without local SSDs

IO Analyzer

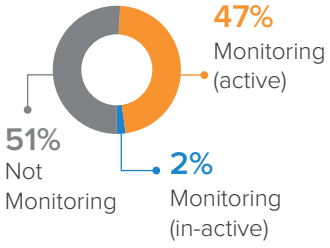
The IO Analyzer works in a non-intrusive way to continuously monitor all IO traffic across multiple vCenter environments and provide a high-level view of the datacenter's storage utilization and IO health.

Key Features:

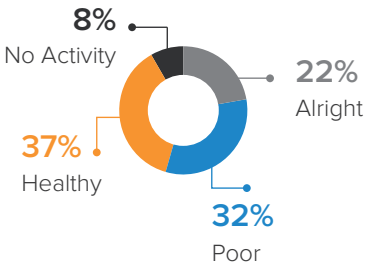
- Continuous monitoring across varied datacenter workloads
- Collect and analyze IO Data
- Determine storage utilization to predict IO bottlenecks
- Recommend ideal server-side cache sizes

Storage Used (232.0 TB of 164.3 TB)

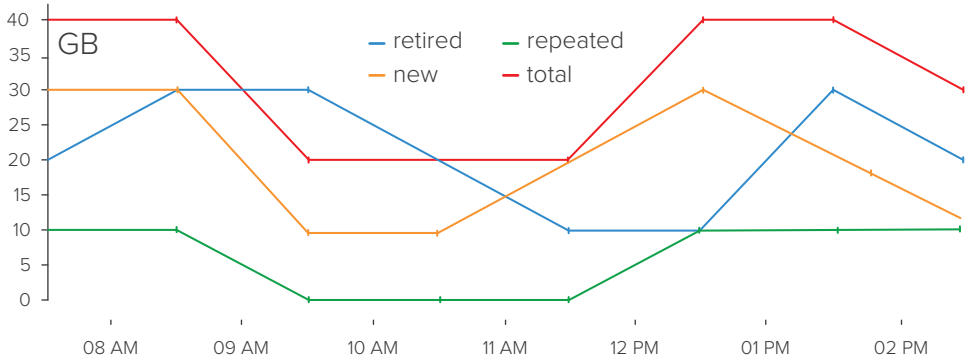
Active Dataset (69.9 TB of 164.3 TB)



Active Dataset Health



Active Dataset Change for 8 hours



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Benefits

10x performance enhancement

Fault tolerant with automatic failover

Data-driven, configurable, application-level IO acceleration

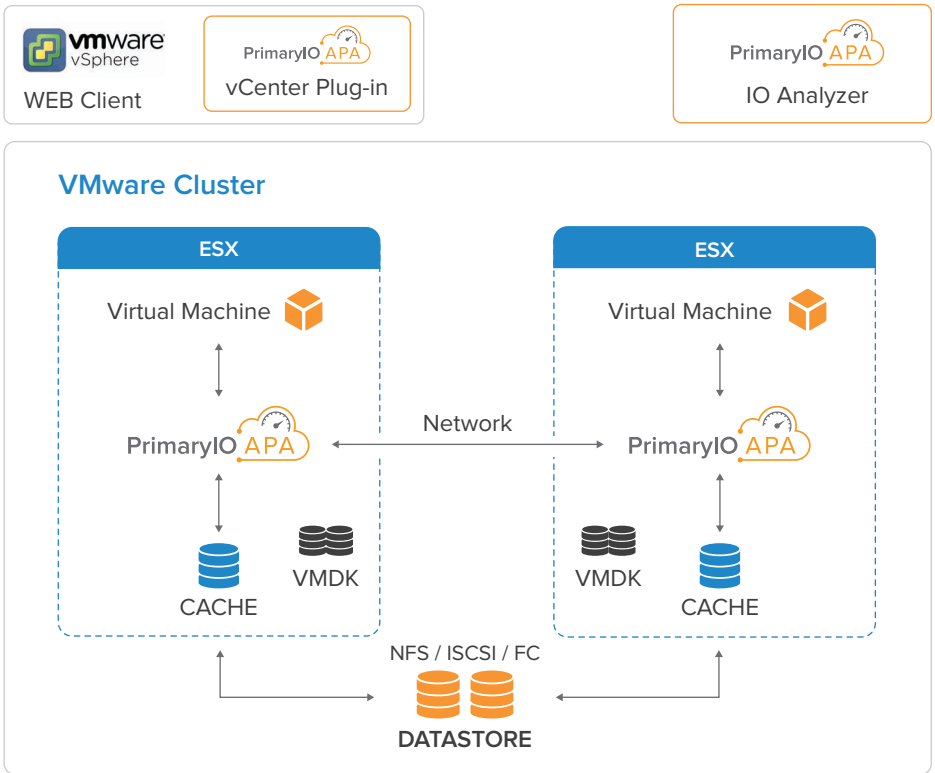
Cluster-wide cache pooling

SSD Caching

The SSD Caching component transparently moves frequently accessed application data to an SSD cache to achieve up to 10x performance acceleration. It supports read as well as write-back caching. IO bursts are handled at SSD speeds supported by HDD's in background to achieve an optimal balance of cost and performance.

Key Features:

- High-availability uses redundant caches in the cluster
- Supports remote caches – does not require local SSDs on each ESX host
- VMDK-level cache isolation
- Fully integrated with vCenter using VAIO APIs
- SSD installation does not require ESXi hosts to be put in maintenance mode
- Supports all VMware certified hardware and SSDs



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Minimum System Requirements

Item	Requirement
ESXi version	ESXi 6.0, update 2
RAM	4 GB or more
Network	10 Gbps or higher
SSD	Any SSD supported by VMware
vCenter Web Client	Version 6.0u2
PIO Appliance	VMware 6.0u2
Supported Browsers	Chrome v50 or higher, Firefox v40 or higher

Request a trial download of PrimaryIO APA 2.0 for VmWare

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Supported Platforms

Item	Requirement
Server Platforms	• Cisco UCS Series • Dell PowerEdge Series • IBM xSeries platforms • HP DL380 xxx • All other server platforms supported by VMware
Flash Devices	• Fusion-io, ioDrive and ioDrive2 • Intel DC S3700 Series SSD • Any other Flash device supported by VMware
Storage Systems	• All storage systems supported by VMware (iSCSI, FC &FCoE)
vCenter Versions	• ESXi 6.0u2 and ESXi 6.0u2a
Hypervisor Versions	• ESXi 6.0u2
VMFS Versions	• VMFS 5
Hypervisor Versions	• ESXi 6.0u2
Guest Operating Systems	• All guest operating systems compatible with ESXi 6.0u2
Management Server Database	• Microsoft SQL Server 2012, 2008 • Microsoft SQL Server 2008 Express • Microsoft SQL Server 2012 Express
PrimaryIO APA Licensing	• Per ESX host licensing for the entire product. The IO Analyzer component comes bundled with PrimaryIO APA without any extra charges.