pernixdata

DATASHEET

FVP SOFTWARE

A NEW ERA OF SERVER-SIDE STORAGE INTELLIGENCE

PernixData FVP™ software is a fault tolerant platform for scale-out server-side storage acceleration. By putting storage intelligence into high-speed server media, FVP minimizes VM latency and provides storage performance that predictably scales with compute resources. Any shared storage platform can be used for capacity, creating a decoupled storage architecture that maximizes design flexibility and minimizes storage hardware costs.

Accelerate any workload, on any server, with any storage

FVP accelerates both reads and writes to any primary storage using server flash and/or RAM. Increasing storage performance with FVP software is as simple as clustering more high speed server resources. This enables storage performance to easily and predictably scale with compute, and to cost effectively grow with the needs of your business.

100% non-disruptive

FVP software integrates seamlessly with existing servers, storage, hypervisors and VMs, eliminating the need to rip and replace existing infrastructure. This includes all variants of server flash (PCIe and SSD) and RAM, as well as any file (NFS), block (iSCSI, fibre channel, FCoE), or direct attached storage device.

Deployment of FVP software takes less than 10 minutes, with no reboots or changes required to VMs. Once installed, IT administrators simply create FVP clusters and assign the VMs to each pool of resources. As a VMware certified solution, PernixData FVP software resides within the hypervisor, avoiding performance and management challenges that come with virtual storage appliances (VSAs) and guest agents.

Compatible with all VMware operations

PernixData FVP software uses patent-pending FVP Cluster™ technology to allow a VM resident on any host to remotely access the flash or RAM on a different host within the cluster. This enables FVP software to seamlessly support all VMware features and products (such as vMotion, HA and DRS) without requiring changes to workflows or impacting application, network or storage performance.

Fault-tolerant write acceleration

PernixData FVP is the first in the industry to accelerate write operations using both server flash and RAM (in Write Back mode) in addition to read acceleration (with Write Through). To ensure that FVP can support all workloads, including mission-critical applications, data can be synchronously replicated to 1 or 2 other hosts in an FVP cluster for fault tolerance.

The Premier Platform for Storage Acceleration

- Fast: Low latency reads and writes using server flash/RAM
- Flexible: Decouple storage performance from capacity
- Seamless: 100% software – No changes to VMs or storage

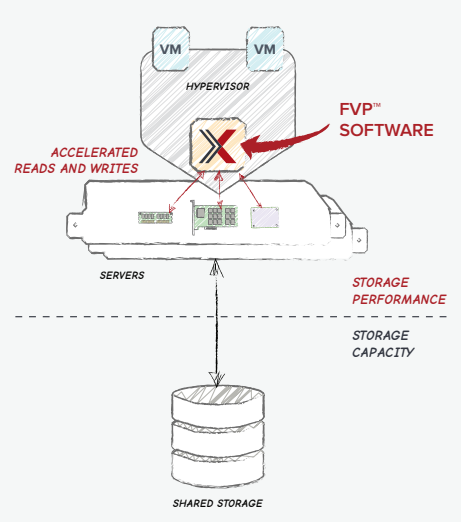

Figure 1: *PernixData FVP software accelerates VM performance using server flash and RAM, enabling storage performance to be decoupled from capacity.*

This is especially useful when accelerating writes using RAM, where FVP's Distributed Fault Tolerant Memory (DFTM) feature prevents data loss even in the event of host, device, or network failure.

Automated resource optimization

PernixData FVP software's DFTM-Z feature transparently reduces the data footprint required when utilizing RAM to accelerate virtualized applications. Leveraging compression with minimal CPU overhead, DFTM-Z offers the performance of RAM at the price of flash with no user intervention needed.

Similarly, Adaptive Network Compression detects bandwidth-limited conditions and transparently compresses write data before transmitting. This enables the benefits of FVP software to be realized without the need for a costly network upgrade.

Intelligent I/O profiling helps identify workloads that are not good candidates for acceleration and allows it to be automatically bypassed to prevent server-side resource pollution.

By ensuring that the more performance sensitive data remains server side, applications are guaranteed excellent and predictable performance.

Enterprise class

Using topology-aware Write Back acceleration with fault domains, the PernixData FVP server-side storage intelligence platform can be aligned with existing data center architecture and best practices (including various clustering options). FVP also features built-in fault tolerance that allows a decoupled storage deployment to withstand any kind of outage, be it a host, server device, or network. In addition, PernixData FVP is VM-aware, allowing you to configure, manage, and monitor VMs in an unprecedented way with sophisticated resource management.

Supported platforms and interfaces

SERVER		
Server Platforms	• Cisco UCS series • Dell PowerEdge series • HP DL and BL series	• IBM xSeries platforms • Any other server platform on VMware HCL*
Flash Devices	• Cisco, Dell, HP, and IBM SSD • HGST Enterprise SSD • Intel DC Series SSD	• Kingston SSDNow Enterprise SSD • Micron Enterprise SSD • Any other flash device on VMware HCL*
Storage Protocols for Backing Datastores	• FC and FCoE • iSCSI	• NFS
Storage Adapters	• Any 4, 8 and 16 Gbps FC adapter on VMware HCL*	
Network Adapters	• Any 1 GbE, 10 GbE or 40 GbE adapter on VMware HCL* (Including Cisco, Dell, HP and IBM OEM adapters)	
STORAGE		
Storage Systems	• Any NFS, iSCSI, FC, FCoE, and local storage system on VMware HCL* (including Cisco, Dell, EMC, HDS, HP, IBM and NetApp)	
SOFTWARE		
Hypervisor	• ESXi 5.1.x, ESXi 5.5.x, ESXi 6.x, VMware Partner Verified and Supported	
VMFS	• VMFS-3 • VMFS-5	
Guest Operating Systems	• All guest operating systems and virtual storage adapters compatible with aforementioned hypervisor versions.	
Management Server Database	• Microsoft SQL Server 2012 (all editions) and Microsoft SQL Server 2014 (all editions)	

* VMware Hardware Compatibility Guide: http://www.vmware.com/resources/compatibility/search.php

Award Winning Technology

Forbes 2014 America's Most Promising Companies · Gartner 2014 Cool Vendor · CRN Data Center 100 2014 · InfoWorld.com Test Center Editor's Choice · CRN Emerging Vendors 2014 · InfoWorld.com 2014 Awards Technology of the Year · Virtualization Best New Product Winner 2013 · Best of VMworld 2013 Finalist Award · Tech Trailblazers Winner

The right FVP solution for you

PernixData's award-winning FVP software spans a range of features and prices to accommodate any data center environment:

Server Resources Supported	Licensing Options	Deployment Criteria	Features
FVP Enterprise			
All flash, all RAM, or hybrid	Perpetual (by physical host) Subscription	• No limit on number of physical hosts and VMs	• Read and write acceleration • FVP Cluster™ technology • Optimize any storage device • Hypervisor deployment using public APIs • Adaptive network compression • Topology aware write back acceleration via fault domains • Built-in adaptive resource management • Disaster recovery integration
FVP Standard			
All flash or all RAM	Perpetual (by physical host)	• No limit on number of physical hosts and VMs • Up to 2 sockets per host	• Read and write acceleration • FVP Cluster technology • Optimize any storage device • Hypervisor deployment using public APIs • Adaptive network compression
FVP Essentials Plus			
All flash or all RAM	Perpetual (purchased as a bundle)	• Up to 3 hosts and 100 accelerated VMs	• Read and write acceleration • FVP Cluster technology • Optimize any storage device • Hypervisor deployment using public APIs • Adaptive network compression
FVP for VDI (Enterprise or Standard)			
All flash, all RAM, or hybrid (Enterprise)	Perpetual (by desktop)	• No limit on number of physical hosts and VMs	• Read and write acceleration • FVP Cluster technology • Optimize any storage device • Hypervisor deployment using public APIs • Adaptive network compression • Topology aware write back acceleration via fault domains • Built-in adaptive resource management • Disaster recovery integration
All flash or all RAM (Standard)		• No limit on number of physical hosts and VMs • Up to 2 sockets per host	• Read and write acceleration • FVP Cluster technology • Optimize any storage device • Hypervisor deployment using public APIs • Adaptive network compression
FVP Freedom			
RAM only	Perpetual (free forever)	• No limit on number of physical hosts and VMs • Supports up to 128 GB RAM	• Read acceleration • FVP Cluster technology • Optimize any storage device • Hypervisor deployment using public APIs • Community support only

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