

## Nominee: PernixData FVP™ by PernixData

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### Nomination title: PernixData FVP – Unique Storage Performance for Virtualised Infrastructure

PernixData FVP™ is the industry's first and only hypervisor for server side flash. This revolutionary software virtualises all server side flash into a clustered acceleration tier that enables IT administrators to quickly, easily and cost-effectively scale-out storage performance completely independent of storage capacity. The result is unprecedented read and write performance for all virtual machines (VMs), without the need to change existing server and storage infrastructure. With just a few clicks of a mouse, IT teams can aggregate available server side flash into clusters that are used to satisfy the storage performance needs of the virtual infrastructure.

#### Unique advantages of PernixData FVP include:

**Scale-out performance independent of storage capacity:** With PernixData FVP, increased storage performance across an entire data centre is as simple as clustering more server side flash. Performance can be architected based on specific VMs or application requirements rather than being exclusively tied to data store requirements. This enables storage performance that truly grows with a customers' virtual infrastructure and in conjunction with individual application needs.

**100% seamless deployment:** PernixData FVP technology leverages the investment in infrastructure that companies already have in place. The software is deployed in less than 10 minutes, with no changes or reboots required to VMs, servers or primary storage.

**Clustered platform compatible with all VMware operations:** PernixData FVP is the only solution that uses patent-pending Flash Cluster™ technology to enable any host to remotely access the flash device(s) on any other host in the cluster. This technology enables PernixData FVP to seamlessly support all VMware operations and products. Live migrations and distributed resource management functions continue to operate transparently with PernixData FVP, with no changes to workflows and no hits to application, network or storage performance.

**Full read and write acceleration with fault tolerance:** PernixData FVP is the only server side solution to support full read and write (write through/write back) acceleration for maximum performance across all virtual applications. Writes are replicated across clustered hosts to ensure complete fault tolerance. This ensures protection from data loss due to host failure or unavailability. PernixData FVP is enterprise-ready and can be used for all workloads, including mission-critical applications.

Hypervisor Based: PernixData FVP is deployed transparently as a hypervisor-only kernel module. Therefore, it does not have the limitations of guest OS agents or virtual appliances.

Additionally, PernixData FVP provides the following game changing advantages to both virtualisation and storage admins:

**10x faster VM response:** PernixData FVP dramatically cuts latency by serving read/writes from local flash. For example, one customer is seeing average latency reduction from 4 milliseconds to 50 microseconds with PernixData FVP in their VDI environment.

**Improved storage utilisation:** PernixData FVP dramatically improves storage capacity utilisation. For example, one customer is seeing over 40 times more IOPS with PernixData FVP, versus SAN alone. Even in small cluster environments, PernixData FVP supports a few hundred thousand IOPS, which is substantially larger than most high end SANs.

**Reduced SAN traffic:** By offloading traffic from the storage array, PernixData FVP reduces SAN load. One PernixData customer saw their SAN throughput drop from over 10 MB/s to less than 4 MB/s because PernixData was servicing all IOs.

**IOPS scale with hosts:** With PernixData FVP, storage performance scales linearly with host. For example, in a two-host environment, PernixData FVP delivers 125,000 IOPS compared to 60,000 on a native SAN. When the same environment moves to six hosts, PernixData FVP supports 350,000 IOPS, while the SAN supports only 50,000 IOPS.

For the first time ever, PernixData puts storage performance in the server tier right where it belongs – close to the application. Because it scales with compute and memory demands, PernixData FVP frees customers from the expensive shackles of storage arrays. PernixData FVP's enterprise class features and unparalleled benefits make it a strategic infrastructure investment that is fundamentally changing the storage and virtualisation industries and data centre storage design forever.

#### Supporting quotes:

“With FVP, we saw an average disk latency of only 1.7 ms, which was substantially lower than the 30 ms average disk latency prior. This made it much faster for our users to run routine database reports. In addition, we are getting 12x more IOPS from our existing storage, with 1200 IOPS per report coming from the local flash drive and only 100 IOPS per report from the HP array. With PernixData FVP, we can actually reduce the number of HP storage devices in our existing cluster. This lowers our maintenance costs, power consumption, and cooling, plus allows for a reduced footprint in our data centre. Based on that fact alone, flash virtualisation is absolutely the right way to go.” Chris Shaw, Senior IT Technical Specialist at WSP.

"Storage I/O bottlenecks are consistently the root cause of many of our application performance issues. In the past, our only recourse was to add additional storage capacity, which is a costly and time-consuming endeavor that does not always solve the underlying performance problem. With scale-out storage performance, PernixData enables us to finally stop throwing hardware at our storage performance problems." Chad Currier, IT director at Cardinal Innovations Healthcare Solutions

"In 20 minutes, we had our PernixData flash hypervisor up and running and supporting four times more VDI sessions than is possible on our SAN alone. But, the real beauty of the PernixData solution comes in its ability to grow. We can easily scale-out our storage performance needs using inexpensive server side flash, which creates a very predictable and efficient cost structure." Jason Rolla, CTO at Christopher Rural Health Planning Corporation

"PernixData FVP is now a key part of infrastructure that helps deliver value to our business. By relieving I/O pressure on our overwhelmed back-end storage, we have improved code compiling times for our Software Development team without requiring an expensive storage upgrade. In addition, we now have a flexible storage architecture that can be easily tailored for our unique workload requirements. Investing in more storage arrays, or upgrading expensive storage fabrics to address performance needs may be a thing of the past." Pete Koehler, IT manager and virtualisation architect at Tecplot

### Why nominee should win

- PernixData FVP™ is the industry's first and only hypervisor for server side flash.
- Unlike competitive caching products, PernixData FVP works on all workloads and hosts, with no changes to VMs, servers, or storage.
- PernixData FVP is the only server side solution to support full read/write acceleration for maximum performance across all virtual applications.
- PernixData is the fastest growing storage software startup and has received worldwide recognition, including two Best New Products awards at VMworld, Forbes Most Promising Company of 2014 and its 2 co-founders, Poojan Kumar and Satyam Vaghani, named to Silicon Valley Business Journal's "40 Under 40" List. The list recognises under 40's that have significantly impacted the business world.