pernixdata

ARCHITECT SOFTWARE

UPGRADE TO A HYPER-INTELLIGENT DATACENTER

PernixData Architect™ is the first infrastructure analytics platform that provides the hyper-intelligence you need to design and run your datacenter. It crunches through real-time VM and storage data from the hypervisor to turn big data into valuable insights. With analytics-driven storage, you can optimize operations, maximize performance, and minimize costs - regardless of the storage you already have.

Say goodbye to ad-hoc and reactive tools for managing the IT life cycle. Say hello to a new, proactive, analytics-driven platform for architecting the perfect data center.

A Holistic Approach to IT Lifecycle Management

Traditional data center management tools focus on the deployment and monitoring of applications or infrastructure. They rarely correlate the two effectively into a cohesive and holistic picture across the data center. The result is a reactive approach to data center design that wastes money and IT resources. For example, without the right tools in place, you might address database performance problems by blindly adding more capacity to your storage array, and it may not fix the problem. With the right tools, however, you might see that alternative options exist that offer better performance at a lower cost (e.g. server-side storage acceleration).

Hyper-intelligence in Real-Time

Architect collects and analyzes real-time VM and storage data from the heart of your data center that sees everything – the hypervisor. You can see what matters instantly through intuitive analytics that correlate information across VMs, servers, and storage. This saves 1,000s of hours on tedious data gathering, tabulation, and analysis.

Eliminate the Guesswork with Analytics-Driven Decision Making

From application block sizes to read/write mixes to IOPS bottlenecks, Architect gives you the VM-storage insights you need to properly design, deploy, manage and optimize your storage environment. You can fix performance and configuration issues before they impact your business with specific recommendations for optimizing working set size, configuration choices, and RAM use. And Architect's event-correlated analytics lets you drill-down to VM-level granularity, and roll back in time as far as needed, to quickly find the needle in the haystack and fix unforeseen issues.

For example, Architect can easily identify the VMs acting as a "noisy neighbor", and the best course of action to correct this problem.

Unsurpassed Visibility and Control of your Data Center

- Descriptive, prescriptive and predictive analytics
- VM and storage design recommendations
- 100% hardware agnostic
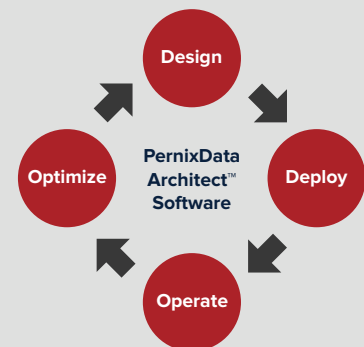
The Power of Big Data Analytics

Traditional data center management tools are good at identifying problems – i.e. they create alerts when there is a discrepancy. But they do very little to identify why the problem is happening and what you can do to fix it.

PernixData Architect software uses big data to address this issue, taking data center design and management to a whole new level. In addition to descriptive analytics, Architect provides prescriptive and predictive analytics for optimum design recommendations.

Below are several examples of how Architect turns big data into big knowledge:

Descriptive Analytics – Identify and profile the top 10 VMs on latency, throughput and IOPS.

Predictive Analytics – Calculate server-side resources needed to run a VM in Write Through versus Write Back mode, ensuring optimal hardware is allocated before a problem arises.

Prescriptive Analytics – Recommend ideal server-side resources based on application patterns.
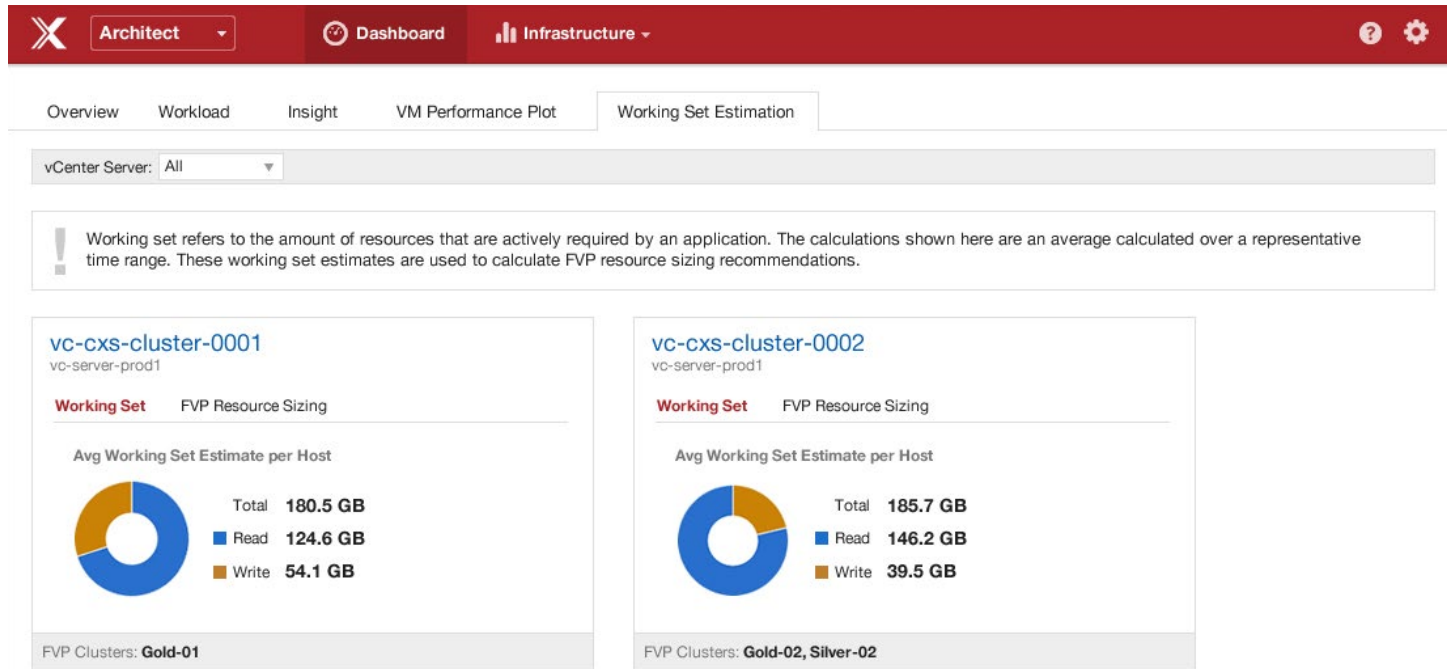

Figure 1: *Prescriptive analytics help administrators accurately size working sets and other strategic resources.*

Information Without Overload

PernixData Architect software uses a progressive disclosure user experience to data center design and management. From a single pane of glass, you get a view across all of your data centers, with all pertinent application and infrastructure details at your fingertips. Yet, the most relevant data and insights are intuitively presented for accurate and efficient decision making. Ad-hoc analytics, such as drilldowns and pivot tables, are available on the fly for more detailed analysis. Architect also allows you to share your learnings easily by exporting key reports.

Ingenious Simplicity

PernixData Architect is a 100% software solution that installs in minutes inside the hypervisor kernel. No changes are required to existing VMs, servers or storage.

Architect can be deployed with or without PernixData FVP software, the premier platform for server-side storage acceleration. As a standalone platform, Architect provides all of the visibility and management functions listed above for any server and storage platform compatible with the VMware vSphere hypervisor.

When FVP is deployed with Architect, you get even more functionality. In addition to providing design recommendations, you have an integrated platform for executing them. For example, if Architect determines that one VM can benefit from Write Back acceleration while another is best placed in Write Through mode, FVP can act on these suggestions and configure the data center appropriately.
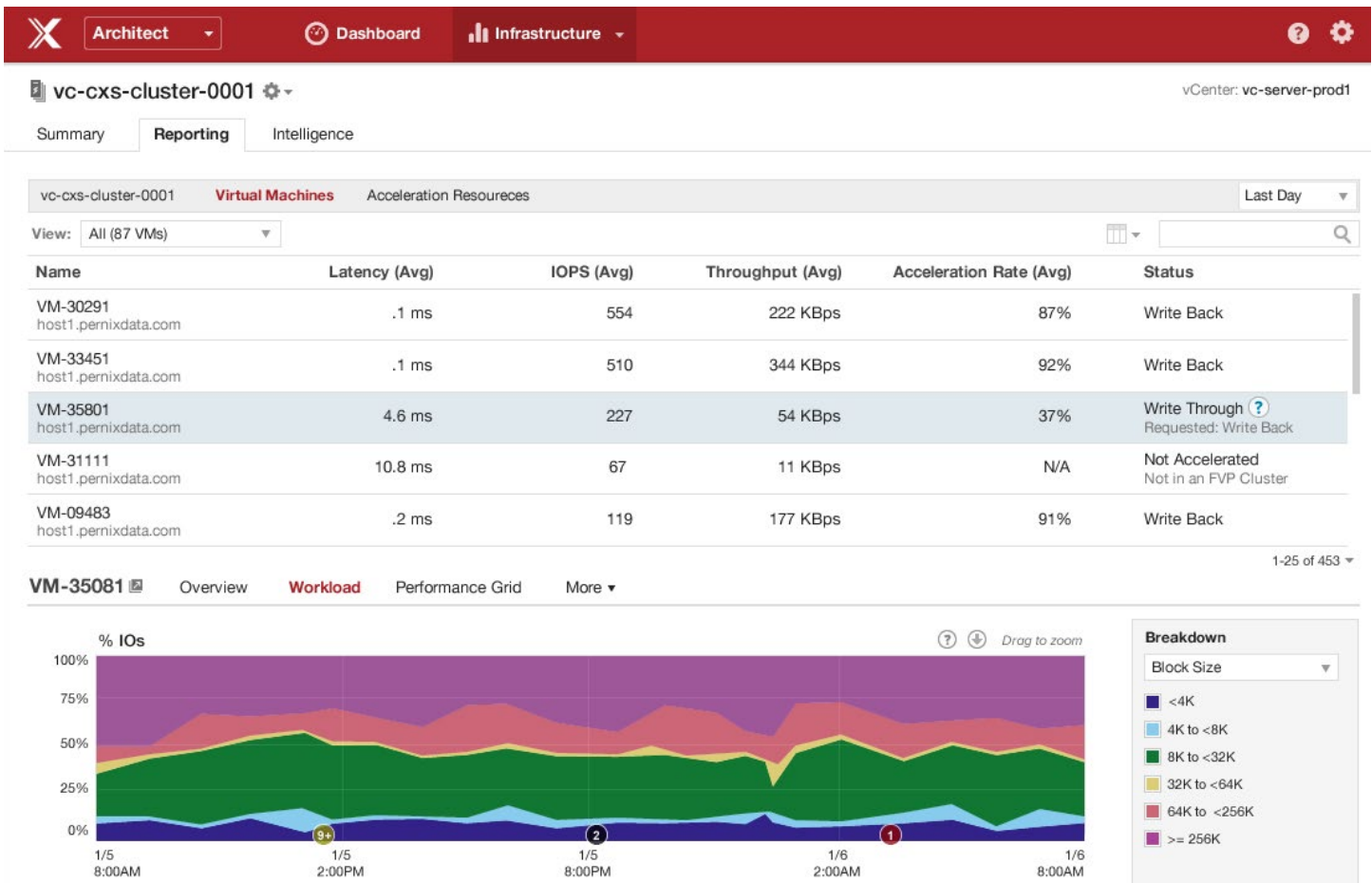

Figure 2: *Relevant information is intuitively displayed for accurate decision making and reporting.*

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*
Storage Protocols for Backing Datastores	• FC and FCoE • iSCSI	• NFS
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.
Database: **(Two options)**	• Self-contained virtual appliance • Windows install supports 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