VirtualWisdom®
ProbeVM for vSphere®

VirtualWisdom correlates and analyzes vSphere data with other physical and virtual infrastructure metrics to improve application and system-wide performance

Software-Based Virtual Server Probe

ProbeVM for vSphere is an agentless solution that discovers the VMware® estate, and integrates vSphere metrics into the VirtualWisdom platform, optimizing all VM workloads. ProbeVM for vSphere adds deep SAN NAS I/O intelligence and operational visibility to VMware deployments, enabling administrators to model and benchmark ESX™/ESXi™ server performance and optimally balance the deployment of virtual machines based on real-time measurements and I/O performance feedback. ProbeVM for vSphere is unique in its ability to eliminate the risk of using virtualization with I/O-intensive Tier 1 applications.

VirtualWisdom is the perfect complement to vCenter™ as it correlates the vCenter information from the ProbeVM for vSphere in real-time with actual I/O performance data measured by the Virtual Instruments Performance ProbeFC family directly from the SAN infrastructure. Actual measured data from VirtualWisdom enables IT managers to proactively balance application provisioning on virtual machines for maximum performance. This high level of virtual I/O visibility makes risk-mitigated optimization and ESX/ESXi server performance modeling possible, enabling mission-critical deployment of virtualized applications possible by verifying performance-based service level agreement (SLA) metrics in real-time.

Server and VMware administrators who use ProbeVM for vSphere are able to reduce and control server and storage related costs. Unlike vendor tools that are device-specific and report on only one aspect of performance, VirtualWisdom looks across the interrelated device landscape—partitions, servers, host bus adapters (HBAs), switches,

Product Benefits

- Analyze performance values for CPU, memory, and disk I/O, for any partition during any time frame; all with a higher resolution of data to optimize workload placement

- Achieve a better adherence to, and monitoring of, performance and availability SLAs throughout the virtualized infrastructure

- Reduce the number, frequency, and severity of infrastructure tickets through early detection of I/O performance bottlenecks and transmission faults

- Overachieve on cost to value by lowering overall operating and capital expenditures and increasing utilization of existing assets

cables and storage—to optimize application performance and overall utilization of the IT infrastructure.

Product Features

- Agentless architecture enables quick deployment with real-time monitoring of partitions, VIOS, and physical hosts

- Correlates and analyzes hundreds of metrics including CPU utilization and status, memory utilization, disk I/O requests and capacity, and utilization; Correlates and analyzes hundreds of metrics including CPU utilization and status, memory utilization, disk I/O requests and capacity.

- Enables monitoring, benchmarking, and optimization of VMware vMotion® and Distributed Resource Scheduler (DRS™) for performance and availability based on historical data and trends

- User-defined data collection frequency from VMware vCenter

- Policy-based event notifications

ProbeVM for vSphere at a Glance

VirtualWisdom's enhanced entity-centric discovery, user-interface, reporting, and analytics enables IT managers to proactively balance application provisioning for maximum application performance. This provides the confidence that systems will not slow down or fail.

Entity Discovery: ProbeVM for vSphere will talk to the vCenter API and automatically discover and generate vApps.

Datastore Entities: VirtualWisdom4 discovers and auto-generates the datastore entities, and gets vCenter metrics for the datastore. A datastore is the virtual file system on which a VM creates its disk(s). A datastore can map to one or more LUNs on the storage array.
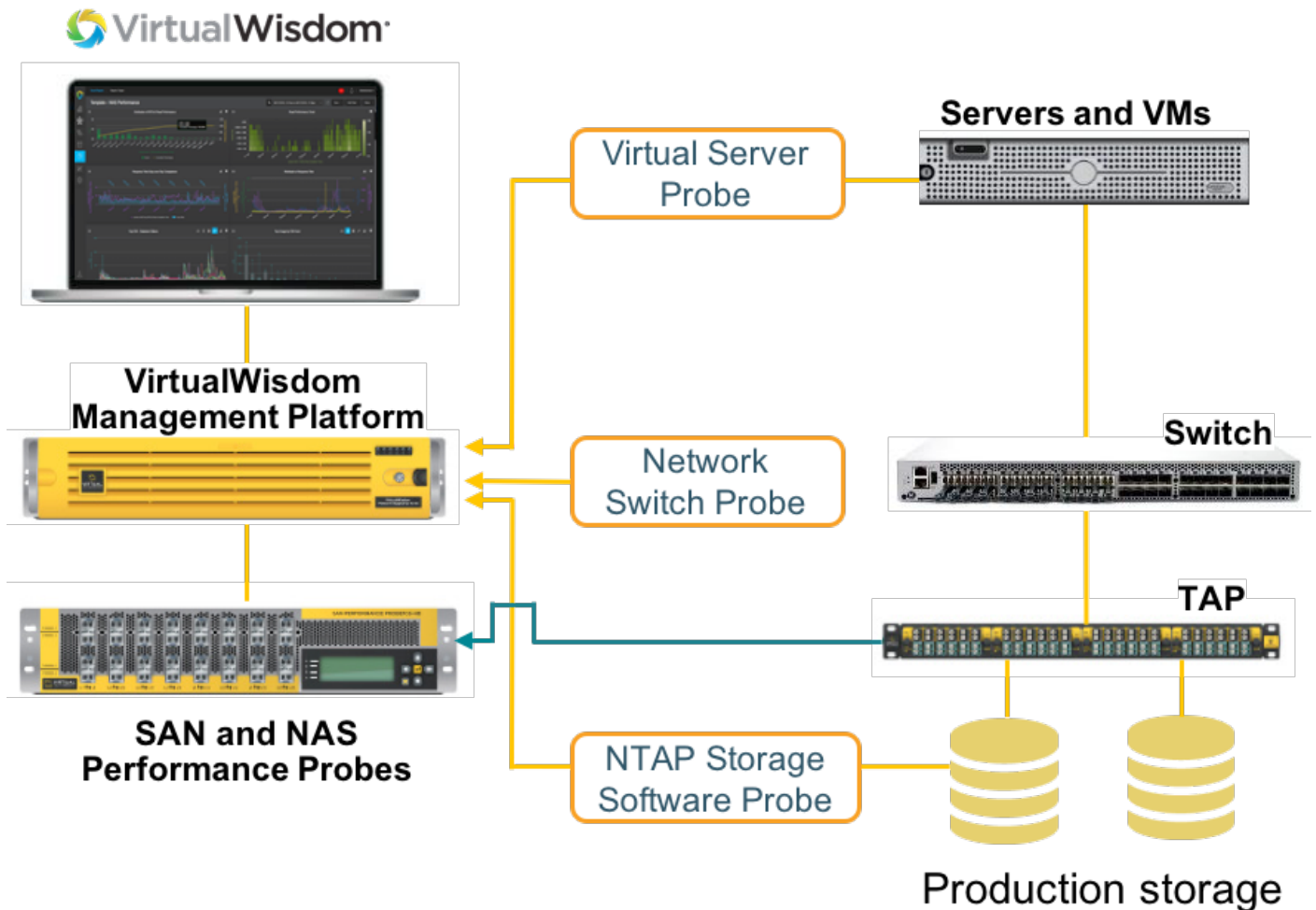
The ProbeVM for vSphere is agentless and can be configured to monitor and track I/O from any combination of virtual machines or physical servers at any time. I/O data from the virtual machines and servers are automatically correlated with platform data across the open-systems stack to enable trend analysis, performance modeling, and policy setting.

ProbeVM for Hyper-V at a Glance

VirtualWisdom's enhanced entity-centric discovery, user-interface, reporting, and analytics enables IT managers to proactively balance the application provisioning on virtual machines for maximum application performance. This provides the confidence that systems will not slow down or fail.

Entity Discovery: ProbeVM for Hyper-V discovers the Hyper-V virtualization infrastructure through the Windows® Management Instrumentation (WMI), and automatically generates the following entities

- Hyper-V Cluster(s)
- Hyper-V Host(s)
- Hyper-V VM(s)
- Host HBA port(s)
- FC Port(s)
- NAS Source IP
- NAS Destination IP

Microsoft's DCOM (Distributed Component Object Model) is used between the ProbeVM and Hyper-V Hosts in order to communicate, allowing discovery of relationships between Hyper-V entities and SAN/NAS layer entities such as HBA, FC Port, IP addresses and WWN.

Topology View

- Visualize end-to-end infrastructure and gain authoritative insights into Hyper-V environments

- See all virtual and physical infrastructure components from a Hyper-V guest, through to its storage LUN

Reports

- Data from multiple sources can be combined into a single dashboard/report, making trends easy to visualize

Alarms

- Case Management framework that enables you to take action based on frequency and urgency of alarms

Probe Management

- The Hyper-V environment is discovered by VirtualWisdom via WMI, removing any need for Microsoft licenses

- ProbeVM for Hyper-V is licensed per Hyper-V Host

The Metrics Generated and Correlated

The VirtualWisdom ProbeVM for Hyper-V automatically discovers and monitors hundreds of CPU, memory, network, and disk I/O metrics for Hyper-V virtual machines, physical hosts, and clusters. The Probe collects information specifically about the utilization and performance of virtual machines within the Hyper-V environment through WMI to each host. Metrics collected or generated include:

- Metrics: for ProbeVM for Hyper-V calculates additional analytic metrics that give users greater insights into health and utilization of virtual server infrastructures, aligning workloads to hosts, and tuning environments to balance resource back pressure.

- Virtual Machine, Hyper-V Host, and Cluster Metrics: CPU, Memory, Network, Disks, etc.

- Disk Metrics: Read/Write latency and frequency, and I/O latency and throughput

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