

VirtualWisdom® ProbeVM for PowerVM®

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

Software-Based Virtual Server Probe

ProbeVM for PowerVM is an agentless solution that discovers the IBM® PowerVM environment and integrates fully with the VirtualWisdom platform to provide LPAR to disk LUN visibility. This provides PowerVM customers with greater insight into the virtualization stack to enable proper placement and balancing of workloads as well as the intelligence needed to properly size the LPARs. VirtualWisdom along with ProbeVM for PowerVM delivers objective, platform-aware monitoring and problem resolution using real-time, deterministic performance information. ProbeVM for PowerVM also reduces risk in large IT environments by using proactive trend alerts that indicate emergent performance problems.

With ProbeVM for PowerVM customers can:

- Show disk I/O Mapping and Performance Management
- Display the System CPU state across the entire PowerVM estate
- Ensure optimum use of server and storage resources
- Identify busiest LPARs by CPU
- Optimize LPAR CPU Entitlement

VirtualWisdom leverages performance and utilization data from the Hardware Management Console (HMC) and correlates and analyzes it against metrics collected from throughout the rest of the infrastructure. This correlation and analysis provides insights into your complex environment to help proactively provision and balance

Product Benefits

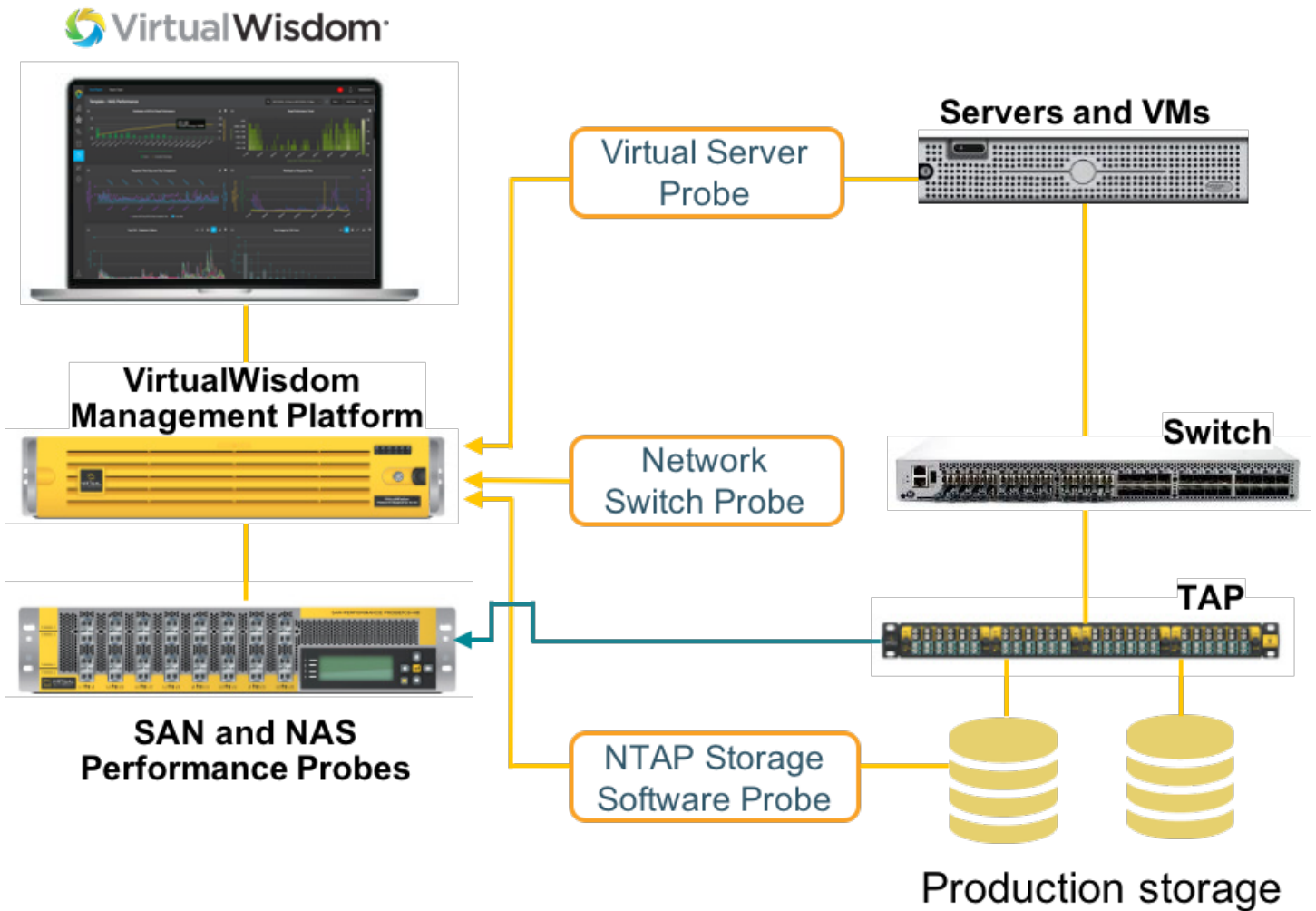
- Analyze performance values for CPU, memory, and disk I/O, for any partition during any time frame; all with a higher resolution of data to optimize workload placement
- Benchmark performance and monitor SLAs for your virtualized estate
- Reduce the number, frequency, and severity of infrastructure tickets through early detection of I/O performance bottlenecks and transmission faults
- Eliminate the need to manually map PowerVM LPAR to host to LUN relationships in order to monitor performance at every level
- Overachieve on cost to value by lowering overall operating and capital expenditures and increasing utilization of existing assets

applications across LPARs for the best performance. It also allows for monitoring and reporting on performance-based service level agreements (SLAs) to ensure performance levels.

Server and IBM Power Systems™ administrators who use ProbeVM for PowerVM 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, 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; from LPAR to host to LUN
- Discovers LUN mapping and enables reporting of storage performance by LPAR and LUN without having to manually manage LPAR to storage relationships
- User-defined data collection frequency from the Hardware Management Console



ProbeVM for PowerVM is agentless and can be configured to monitor and track I/O from any combination of LPARs or physical servers at any time. I/O data from the LPARs and servers are automatically correlated with platform data across the open-systems stack to enable trend analysis, performance modeling, and policy setting.

ProbeVM for PowerVM at a Glance

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

Entity Discovery: ProbeVM for PowerVM talks to the HMC and automatically discovers and generates the following entities:

- PowerVM Host(s)
- PowerVM VIOS(s)
- PowerVM Partition(s)
- HBA(s)
- NPIV port(s)
- vSCSI Disk(s)

Topology View

- Visualize end-to-end infrastructure and gain authoritative insights into PowerVM environments
- Quickly visualize the relationships between PowerVM virtual assets through to entities from the SAN/NAS layer

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 PowerVM environment is automatically discovered by VirtualWisdom through the Hardware Management Console
- ProbeVM for PowerVM is licensed by active CPU core

The Metrics Generated and Correlated

The VirtualWisdom ProbeVM for PowerVM automatically discovers and monitors hundreds of CPU, memory, and disk I/O metrics for IBM Power Systems running PowerVM, partitions, and Virtual IO Servers (VIOS). ProbeVM for PowerVM collects information specifically about the utilization and performance of partitions within the PowerVM environment via an SSH connection to the HMC. Metrics collected or generated include:

- Calculated Metrics: ProbeVM for PowerVM calculates additional metrics that give users greater insight into the health and utilization of the virtual server infrastructure.

For example, "Entitled vs. Consumed CPU units by LPAR" is calculated to lead users to a more optimized state, by avoiding the penalties associated with PowerVM's donate/borrow mechanisms for CPU usage.

- Host, VIOS, and Partition metrics: CPU, Memory, Disks, etc.
- Disk Metrics: Disk I/O can be viewed at the Partition level.



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