

## VIRTUALWISDOM® ProbeV

As a component of the Virtual Instruments' VirtualWisdom solutions, the ProbeV is a non-agent based software probe that utilizes the MIB (management information block) from Fibre Channel switches via SNMP to gather switch performance and link error statistics in a non-intrusive manner. These critical switch statistics are collected by VirtualWisdom's Server software and presented to the user in an easy to use configurable, graphical user interface.

Use of VirtualWisdom ProbeV results in significantly higher infrastructure utilization and helps administrators substantially improve data availability and application performance through correlation techniques that help quickly troubleshoot, or even avoid problems .

ProbeV supports all Fibre Channel switch manufacturers, creating a vendor-agnostic view of switch port performance.

VirtualWisdom utilizes the data collected by ProbeV to track switch performance, identify oversubscribed resources, conduct historical trending analysis, and quickly alert administrators of link error problems or performance bottlenecks.

ProbeV runs on the VirtualWisdom Server. The Server collects real-time data and correlates server, network, and I/O metrics from ProbeV, and optionally, ProbeVM, and ProbeFCX, into a complete view of the data path between hosts and/or virtual machines and SAN storage. Performance deviations, link errors, and improperly configured multi-pathing are quickly diagnosed utilizing real-time and historical trends and reports. The number of problems and time spent on resolving performance issues or network faults are systematically and dramatically reduced.

If more detailed performance analysis is needed, the software ProbeV can be used with the hardware based Virtual Instruments SANInsight™ ProbeFCX. The ProbeFCX is inserted into the network using Traffic Access Points (TAPs), so it does not affect the network it's monitoring. This full line rate hardware probe can calculate real-time performance metrics from the SAN, providing the most accurate SAN performance statistics by tracking all individual end device conversations. For comprehensive diagnosis and troubleshooting of performance bottlenecks, VirtualWisdom can be used in conjunction with VirtualWisdom's SANInsight Protocol Analyzer to capture a "trace" of the culprit for complete root cause analysis.

### ProbeV Features

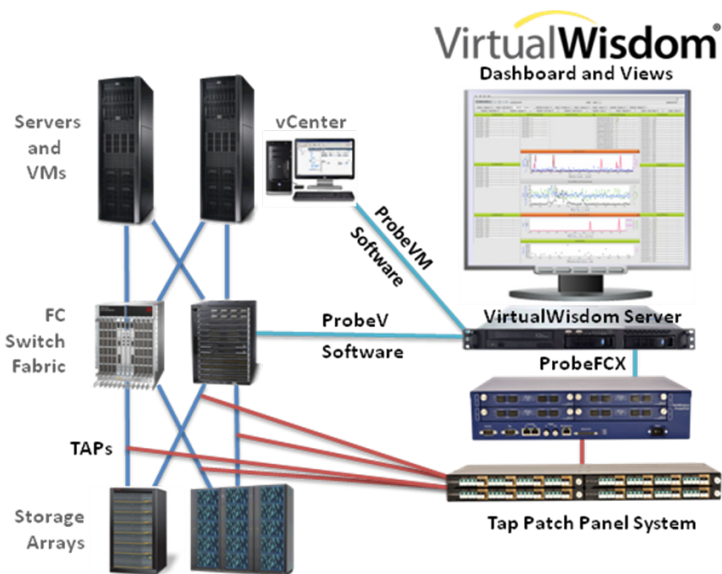
- Provides a dedicated, real-time SAN monitoring solution with flexible thresholds and alerts
- Gathers Switched Fabric Performance Statistics with a non-agent based software probe
- Provides overall view of fabric health through centralized switch event monitoring
- Offers vendor-agnostic view of Fibre Channel switch statistics with no impact on switch performance
- Identifies highly utilized and underutilized ports and links
- Detects failed multi-pathing links
- Identifies sub-optimized links (passive vs. active multi-pathing)
- Generates trend analysis for capacity planning
- Records & plays back metrics to pinpoint Intermittent Issues
- Provides historical performance trending over time
- Detects degraded Inter-Switch Links

### ProbeV Benefits

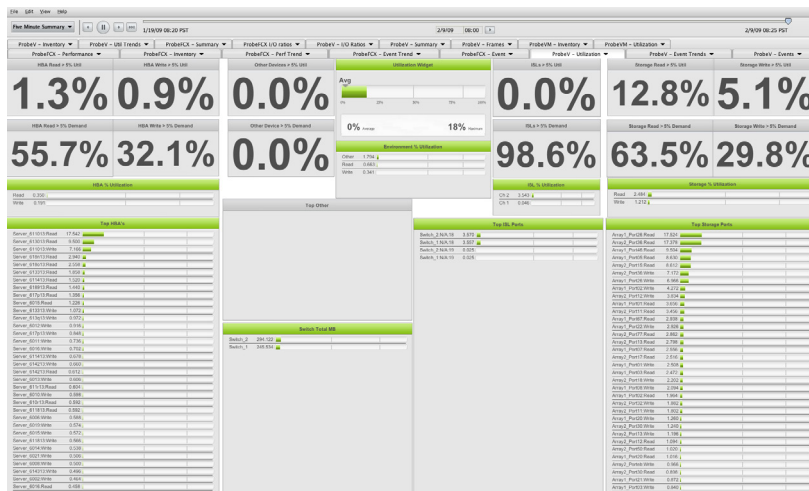
- Dramatically reduces the time to identify and resolve SAN-related problems, reducing downtime and improving IT staff productivity
- By highlighting over-utilized resources, helps to prevent outages and performance problems
- Historical trending analysis enables proactive fault identification, reducing the number of trouble tickets and reducing downtime by up to 75%
- Enables greater data availability by proactively finding multi-path failures before they affect end users.
- Enables greater throughput by finding opportunities to tune the use of multi-path links, ISLs, and storage virtualizers
- Reduces overall SAN-related capital and operating costs by identifying over-provisioned links ad helping you avoid unnecessary future expenses.

## ProbeV Compared:

Compared to the most common switch fabric management tools, ProbeV provides more complete trend analysis for capacity planning, a virtually unlimited record & playback of metrics to pinpoint Intermittent Issues, and supports a wider range of vendor devices. And significantly, ProbeV provides for a seamless upgrade path to more robust instrumentation, monitoring, measurement, and infrastructure optimization available through VirtualWisdom, ProbeVM and the ProbeFCX hardware probe.



## VirtualWisdom Dashboard



The VirtualWisdom Dashboard software is a real-time summary display that provides an overview of SAN infrastructure, based on the metrics available from probes. It provides a simple, customizable view of I/O from the application on the host to the LUNs on the storage arrays. Metrics, fault warnings and policy deviations are continually updated with quick drill-down reports. Reports are user-definable and can easily be exported for use in other management solutions to ensure maximum performance on mission-critical applications.

## TECHNICAL SPECIFICATIONS

### The Metrics collected or generated by ProbeV include:

- **Switch Port Information:** Worldwide names of attached devices, manufacturers of attached devices, link rate, port type, nickname, FCID
- **Switch Metrics:** received/transmitted bytes and frames, CRC errors, link resets, link failures, loss of signal, loss of sync, Class3 Discards
- **Switch LED:** Error state, signal state

**Standards:** ProbeV supports SNMP versions 1, 2c, and 3.



100 Enterprise Way, Suite C-3  
Scotts Valley, CA 95066  
Phone: 831-439-4000

Sales Information  
sales@virtualinstruments.com  
Phone: 831-439-4080

Customer Support  
support@virtualinstruments.com  
[www.virtualinstruments.com](http://www.virtualinstruments.com)