

DATA SHEET

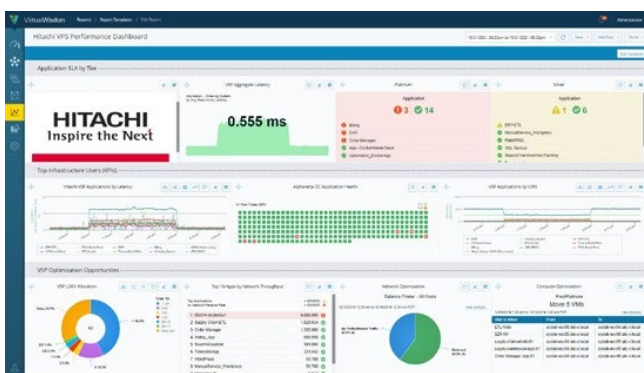
# Optimizing Hitachi Virtual Storage Platform With Virtana VirtualWisdom

## Ensure Uptime, Availability, and Performance Across Applications Running on Hitachi Virtual Storage Platform

Maximize customer experience with the agility, scalability, and enterprise-class performance enabled by Hitachi Virtual Storage Platform (VSP) and Virtana VirtualWisdom. Deliver insights via deep analytics and machine learning, powering the Virtana AIOps engine. This ensures you will have unique cross-domain visibility into performance, consumption, and overall service levels throughout your entire infrastructure stack.

Users gain visibility into which VSP resources an application is consuming, access to latency metrics at the host, volume, and application levels, and the ability to report on and see trends in replication metrics.

Together, VirtualWisdom and VSP enable organizations to get a complete perspective on application service delivery by capturing capacity, usage, performance, and health information from the physical and logical components of VSP architecture, with additional metrics from related, interconnected infrastructure.



## Single-Pane-of-Glass View for Your Hybrid Infrastructure

VirtualWisdom starts by mapping VSP components to the applications consuming their shared resources. This comprehensive understanding of your data supply chain provides the basis for rich dashboards that deliver visibility and control to administrators, architects, and executives.

## Essentials

### Optimize Hitachi Virtual Storage Platform Environments With VirtualWisdom

- Understand the overall health, availability, and performance of your storage resources in context of the application and entire infrastructure delivery stack
- Achieve real-time and historical performance visibility from application to database
- Forecast and manage capacity and utilization across ports, controllers, and volumes

### Assure Mission-Critical Environments

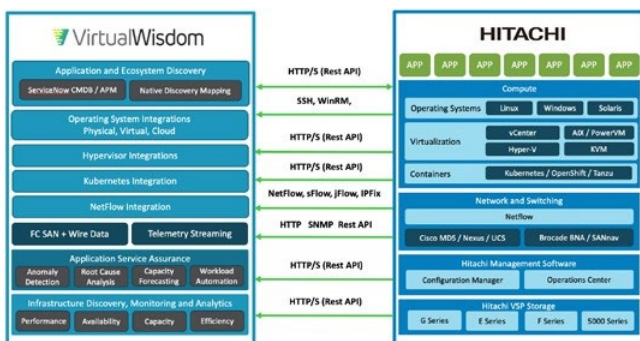
- Single pane of glass across shared infrastructure
- Discover and map application usage of VSP systems
- Data-driven insights based on application business value and service levels
- Out-of-the-box best practices dashboards, reports, and alarms
- Time-series database stores performance and capacity data for long-term trend analysis
- Automated investigations dramatically reduce mean time to resolution for the most challenging performance issues
- VirtualWisdom's Advanced Analytics Suite
  - Problem identification and remediation including, alerting and case management
  - Automated metric correlation across all infrastructure layers
  - Workload balancing to optimize performance and cost both on premises and in the cloud
  - Predictive capacity management and forecasting
  - Intelligent workload placement and right-sizing, including proactive optimization recommendations
  - Seasonal trending for baselining and dynamic alert thresholding

# Optimizing Hitachi Virtual Storage Platform With VirtualWisdom

## Hitachi Virtual Storage Platform Metrics Collection

VirtualWisdom will poll a variety of data sources dependent on what the customer has available:

- Directly to native API server (SVP, GUM)
- Hitachi Command Suite
  - Configuration management for topology, configuration and capacity
  - Tuning management for performance metrics
- Hitachi Ops Center
  - Ops Center Administrator
  - Ops Center Analyzer



**Ensure Performance:** VirtualWisdom combines dynamic, automatically applied best practice and custom monitoring to assure performance and availability — in real time, at virtually unlimited scale across storage systems, network, and compute infrastructure.

Base-level monitoring for VSP includes 200+ unique properties and metrics collected from the VSP array that can be analyzed both individually against expected baseline and collectively in context of metrics or events from external systems.

**Forecast and Proactively Manage Capacity:** Correlate short and long-term consumption trends and be proactively warned of potential capacity problems and time-to-zero resource issues across storage, network, and compute.

**Solve Problems Fast:** Automatically triage, diagnose, and provide actionable resolution recommendations before your operations teams are even aware of potential impacts on critical applications.

## The VirtualWisdom Solution

- Map applications and infrastructure components to their related VSP dependencies
- Monitor VSP internal and external KPIs
- Proactively assure performance, availability, capacity, and efficiency of VSP deployments

VirtualWisdom provides full-stack, end-to-end, application service delivery visibility for VSP systems and protocol flows, as well as the applications and servers consuming those resources. The result is comprehensive visibility and unparalleled correlation that makes identification and root cause analysis easy, even for the most challenging issues. VirtualWisdom assures the performance, availability, capacity, and efficiency of VSP storage regardless of configuration or protocol.

VirtualWisdom was built from the ground up as a machine-learning-powered analytics platform that goes well beyond the capabilities of traditional AIOps platforms to assure, manage, and balance workloads across VSP arrays and associated infrastructure.

## Combined Value: VirtualWisdom + VSP

The combination of Virtana and Hitachi delivers a best-in-class integrated approach to cognition-based AIOps. This VSP storage integration provides full-stack visibility with actionable insights based on cross-domain metrics and ML- and AI-based analytics from VirtualWisdom, highly granular system wide monitoring, and a shared understanding of the entire stack.

### VirtualWisdom enables you to:

- Understand how and which applications are suffering performance issues from noisy neighbors or resource hogs
- Proactively manage performance sensitive workload and storage capacity at industry-leading scale
- Apply automation to quickly identify, diagnose and solve the toughest performance issues

Virtana delivers unprecedented visibility and actionable insights into the performance, health, and utilization of hybrid IT infrastructure, while VSP storage solutions deliver enterprise-class performance and scale.

Together, Virtana and Hitachi empower you to cost-effectively ensure the performance and availability of mission-critical applications running on VSP storage and proactively prevent infrastructure-related application slowdowns and outages.



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