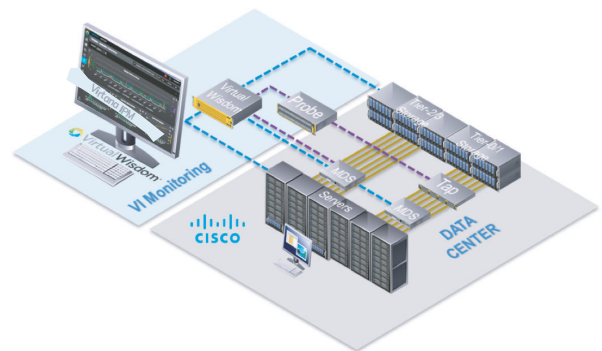


WisdomPack for Storage Wire Data

The Only Choice for Assuring Data Performance

The Virtana IPM WisdomPack for storage wire data is the industry's gold standard for high-fidelity data collection supporting the big data generated by the world's most critical applications.

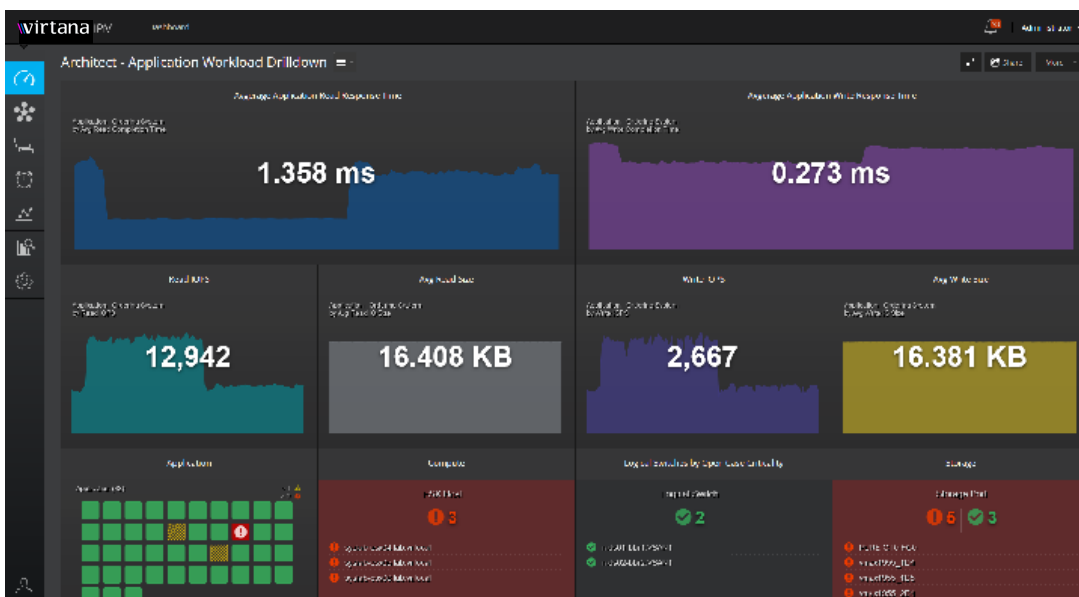
- Monitor wire-level application conversations over a Fibre Channel SAN with an ultra-high performance hardware probe
- Agentless wire-level monitoring of Cisco 32G Fibre Channel fabric



WisdomPack for Storage Wire Data

- Monitor hundreds of storage links in real-time with unparalleled dataingest capabilities

Figure 1: Actual deployment with optical TAPs and Performance Probes.





Cisco SAN Analytics integration support

Cisco chose to partner with Virtana as the leading application-centric storage wire data monitoring vendor. Cisco SAN Analytics provides software-only wire-level performance monitoring of every application conversation in a 32G Cisco MDS SAN without the need for any optical hardware TAPs.

Virtana IPM ingests data from multiple Cisco switches to bring fabric-wide end-to-end visibility into a single pane of glass. Virtana IPM also provides long term metric storage, trending, correlation and predictions.

Virtana IPM Performance Probes

Virtana IPM's Performance Probes are the industry's first and only real-time, full line rate family of monitoring solutions for Fibre Channel Storage Area Networks (SANs). Working completely out-of-band, the Performance Probes analyze every frame on monitored ports, and report hundreds of metrics every second to provide comprehensive, accurate, and vendor agnostic monitoring at the protocol level. The Performance Probe accesses wire data using non-intrusive optical TAPs.

The Performance Probes are typically deployed on the links between storage ports and next-tier switches, or on both sides of fabric-based storage virtualizers. Connectivity to the live links is provided by traffic access points (TAPs), which use passive optical couplers to access the optical signal on both channels of the link. A TAP diverts a small amount of the optical power on each channel to a full line rate monitoring output for out-of-band access by the Performance Probes. TAPs certified for compatibility with the Performance Probes are available from both Virtana and a growing number of leading physical infrastructure providers. The Performance Probe has no data payload out of the FPGA accessible memory. The Performance Probe removes all data from the signal and processes only the frame headers themselves, so the Virtana IPM server and its repository never see the data payload. Only traffic metrics are communicated from the Performance Probe to the Virtana IPM Server.

Monitoring Cisco or Brocade SAN fabrics using the Virtana IPM FC Performance Probe

- For the most mission critical application monitoring, the FC Performance Probes monitor application conversations in real time using 24 ports of 32/16/8/4G Fibre Channel
- Over 400 Fibre Channel and SCSI metrics covering light loss, synchronization, flow control, IOPS, throughput, queue depth, logins/logouts, read/write latency, SCSI status messages, events, failures/ aborts and more at the highest fidelity available in the industry

WisdomPack for Storage Wire Data

WisdomPack for Storage Wire Data includes discovery, monitoring, visualization (dashboards and reporting), alarming and guided investigation workflows to provide a run-book style of automation.

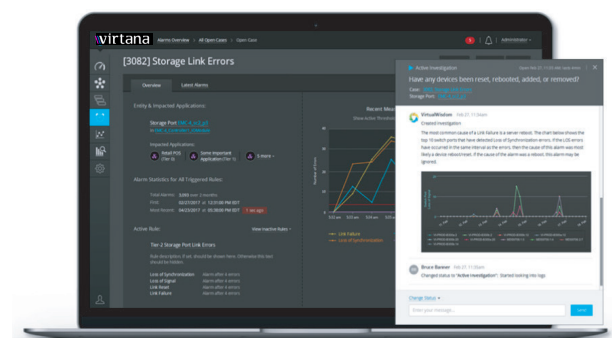


Figure 2: Investigations enable any user to quickly triage, diagnose and resolve issues to avoid outages

WisdomPack for Enterprise Storage

KEY FEATURES

	NetApp	DELL EMC VMAX/ PowerMAX	Dell EMC Isilon	IBM SVC	Pure FlashArray
Infrastructure Discovery and Application Mapping	Automatic	Automatic	Automatic	Automatic	Automatic
Agentless Software-only Monitoring	✓	✓	✓	✓	✓
Access Method	API access (cluster- mode ONTAP supporting NFSv3)	API access (to Dell EMC Unisphere storage manager)	API access (to Dell EMC OneFS API ver. 8.0.0 or later)	SSH and FTP (into SVC master node running SVC ver. 7.7.1.8 or later)	RESTful APIs, 1 minute polling interval, 30 second granularity. Pure Storage Purity environments
Health Metrics	✓	✓	✓	✓	✓
Capacity Metrics	✓	✓	✓	✓	✓
Performance Metrics	NA	✓	✓	✓	✓
Best-practice Alerting NA	NA	✓	✓	✓	✓
Intelligent Problem Resolution	✓	✓	✓	✓	✓