

VirtualWisdom® ProbeSDS for Dell EMC ScaleIO

VirtualWisdom allows you to monitor the performance of your Hyper-Converged or Converged environments; investigating and remediating potential problems before they cause outages.

As a VirtualWisdom Integration, ProbeSDS captures ScaleIO metrics, through the ScaleIO Gateway and sends them to the VirtualWisdom appliance to apply problem solving analytics across 100's of metrics. Use VirtualWisdom to get control over cache and capacity utilization, optimize application performance, and quickly troubleshoot problems.

Introduction

VirtualWisdom maintains the health, performance and utilization of your ScaleIO deployments. Application performance SLAs are now simple and intuitive with VirtualWisdom' Tier level Application alarm system. No more worrying about what infrastructure supports which application, let VirtualWisdom handle application mapping, with true application SLA visibility. Companies can save substantial CAPEX and OPEX dollars with the combined solution installed.

Typical VirtualWisdom use cases include:

- Is my cache and disk capacity balanced?
- Are my Application SLAs meeting spec?
- What HDD or SDD is impacting my system health?
- Are ScaleIO application services impacting other tiers of applications?
- I want to see the impact of increasing workloads in my ScaleIO clusters

How VirtualWisdom is Different

ScaleIO takes 5-second samples, every 5 seconds. Other monitors usually ingest the samples every 5 minutes. So you miss 4 minutes and 55 seconds of activity. VirtualWisdom ingests 5-second samples of ScaleIO metrics every 5 seconds, so you effectively see everything, every event, even the outliers. You are actually monitoring the data, not just samples. VirtualWisdom can do this because our engine is built to process a constant stream of I/Os.

Product Benefits

- *ScaleIO integration with VirtualWisdom, for single-pane-of-glass ScaleIO optimization
- ProbeSDS and ProbeNetFlow use correlated IP traffic across the supporting networks to pinpoint and analyze traffic congestion that impacts the supporting ScaleIO network services that mission and business critical applications depend on.
- Detect and resolve ScaleIO slow application responses.
- Determine if the SDS disks are impacting application performance
- Run reports on SCSI disk latency metrics filtered by VM
- Detect cache usage inefficiencies
- Monitor and be updated when rebalancing or rebuilding occurs
- Storage capacity alerts
 - Including: Storage device, storage pool, protection domain, system, device server

*Must enable ScaleIO Gateway for communications to VirtualWisdom Appliances

ProbeSDS for ScaleIO Metrics

Other vendors can only sample, VirtualWisdom' comprehensive 5-second infrastructure summaries are derived from over 400 ScaleIO-specific metrics including:

ScaleIO Cache Usage

- Cache Entry Eviction Count
- Cache Big Bloc Eviction Count
- Cache No Eviction Count

SDS Capacity

- Capacity Used

SDS Latency

- DOM Client Avg Read latency
- DOM Client Avg Write Latency
- DOM CompMgr Avg Read Latency
- DOM CompMgr Avg Rec Write Latency
- DOM CompMgr Avg Write Latency

Analytics

- **Event Advisor** provides a prioritized list of relevant events (spikes, relevant performance issues, anomalous behavior, etc.) and time periods requiring attention, ranked by magnitude and duration.
- **Trend-matcher** Leverages baseline trends and target metrics, compares against every device over specified timeframes and provides lists of correlated matching devices.

ScaleIO Entities (Reporting Levels)

- ScaleIO System
- Protection Domains
- Fault Sets
- Storage Pools
- ScaleIO Data Servers
- ScaleIO Data Client
- ScaleIO Volumes and Volume Trees
- ScaleIO Devices aka disks

Alerting through Thresholds

- ScaleIO Cache Usage
 - Alerts users when cache is not handling workloads efficiently.
- SDS Capacity
 - Alerts users before storage capacity issues can impact application users.
- SDS Latency
 - Users can identify expected response times, and be alerted when storage begins to slow down.

Licensing

ProbeSDS is licensed per storage node, but is subscribed on a per cluster basis. Subscribe to the entire cluster, not individual storage nodes.

