Solution Brief

virtana

Virtana iSCSI Observability Solution Brief

Summary

Virtana delivers comprehensive iSCSI infrastructure observability by uniquely combining storage target and host initiator perspectives. Unlike traditional monitoring solutions that only provide visibility into one side of the iSCSI connection, Virtana's holistic approach correlates data across the entire infrastructure stack. This complete view enables IT teams to accurately identify performance bottlenecks, troubleshoot connectivity issues, and optimize storage resource utilization across multi-vendor iSCSI environments.

Challenges of Observing iSCSI Environments

Organizations implementing iSCSI storage face several monitoring and management challenges:

- **Incomplete Visibility:** Traditional monitoring solutions typically only capture the storage array perspective, revealing only half of the iSCSI communication pathway.
- **Response Time Gaps**: Storage arrays only measure internal processing time from request receipt to response generation, missing the critical end-to-end latency experienced by applications.
- **Configuration Complexity:** Unlike Fibre Channel, where fabric switches manage initiator-target mappings, iSCSI configurations are distributed across hosts and storage targets with no centralized view.
- **Troubleshooting Inefficiency:** Without visibility into both the initiator and target sides, IT teams struggle to determine if performance issues originate in the storage array, host, or network infrastructure.
- **Multi-Array Environments:** Host systems often connect to multiple storage arrays, some of which may be outside the monitoring scope of siloed tools.

Benefits of Comprehensive iSCSI Visibility

Virtana's unified approach to iSCSI observability delivers significant operational advantages:

- **End-to-End Performance Analysis:** Correlate host-perceived response times with storage array metrics to precisely locate bottlenecks across the data path.
- **Rapid Problem Resolution:** Quickly differentiate between storage, host-side, and potential network issues by comparing metrics from both perspectives, reducing mean time to resolution.
- **Complete Infrastructure Mapping:** Automatically discover and visualize all iSCSI initiator-target relationships across your environment, even when hosts connect to multiple arrays.
- **Resource Optimization:** Identify overprovisioned or underutilized iSCSI resources to improve efficiency and reduce costs.
- **Predictive Analytics:** Leverage comprehensive performance data to forecast capacity needs and prevent service disruptions before they impact users.

Virtana's Unique Approach to Infrastructure Observability

Virtana transforms iSCSI management through a differentiated technical approach:

- **Dual-Perspective Monitoring:** Collects and correlates metrics from both storage arrays and host systems, providing a complete view of iSCSI communication channels.
- **Integrated Host Metrics:** Enhances storage visibility with critical host-side data, including CPU utilization, memory consumption, and environmental factors that impact application performance.
- **Network Path Analysis**: Measures actual latency between initiators and targets to identify network congestion or configuration issues affecting storage performance.
- **Cross-Domain Correlation:** Automatically connects iSCSI performance data with broader infrastructure metrics to understand complex dependencies.
- **Multi-Vendor Support:** Works across heterogeneous environments with support for leading storage arrays and operating systems, eliminating monitoring blind spots.

By implementing Virtana's iSCSI observability solution, organizations gain unprecedented visibility into their storage infrastructure, enabling faster troubleshooting, optimized performance, and more efficient resource utilization across the entire technology stack.

Currently supported on:

- Compute: Windows OS Integration
- Compute: Linux OS Integration
- Compute Virtualization: VMware vCenter Integration
- Storage: Netapp ONTAP Integration
- Storage: IBM SVC Integration (IBM FlashSystem)
- Storage: Infinidat Integration
- Storage: Pure FlashArray Integration

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