

## SAN HEALTHCHECK AND SCAN SERVICE

Storage Area Networks (SANs) are the backbone for the rapid, uninhibited delivery of data to applications. As such, continuous SAN availability is a critical requirement for the business success in many market segments. SANs are also becoming increasingly complex virtualized, multi-vendor environments with imbedded services. This complexity coupled with frequently changing infrastructure has made “Fabric Blindness” a growing threat to information availability. Current SAN monitoring and management tools lack critical physical layer information essential to effectively diagnose, prevent and improve the SAN infrastructure by identifying hard to find and hidden issues and deteriorating devices and links.

By looking deep into the SAN infrastructure physical layer, Virtual Instruments’ SAN HealthCheck and Performance Scan Service, can quickly identify performance and behavior anomalies and trouble spots on any SAN. The service scans all levels of connectivity to identify potential communication issues on the Fibre Channel network and points out potential issues that are on the verge of or have exceeded the “Fibre Channel rules of thumb” SAN infrastructure behavior. A comprehensive report of analysis and findings is provided at the conclusion of the service. The customer may then choose to request additional services to provide detailed capacity planning or to assist in the resolution of issues found during the SAN HealthCheck and Performance Scan Service.

The Virtual Instruments SAN HealthCheck and Performance Scan Service utilizes the most advanced SAN monitoring and analysis tools available, which are the same market-leading tools used by leading SAN storage and switch vendors to develop and support their SAN devices. Completely invisible and non-intrusive to the SAN, fault-tolerant Traffic Analysis Points (or TAPs) provide access to the links. The TAPs installed during the service can remain in place for future use, providing a powerful new permanent non-disruptive diagnostic layer. This service is offered on demand or at regular predetermined intervals based on need.

### KEY DELIVERABLES

- Identify performance and behavior anomalies and potential trouble spots
- Characterize existing and potential SAN infrastructure issues with comparison to best practices
- Recommendations for future actions

### BENEFITS

- Quickly identify any potential SAN performance or availability issues
- Reduce risk by identifying any evolving issues before they become real problems
- Detailed Fibre Channel latency analysis



## Focus Areas

### Connectivity

- Physical Layer Errors
- Frame errors
- Loss of sync or signal
- Canceled transactions and associated devices
- Failed Communications
- Communication aborted by servers
- Canceled transactions and associated devices
- Other events
- Server reboots
- Storage array resets
- Fabric logins/logouts and resets
- Code violations
- Check conditions

### Configurations

- Load Balancing
- Active/Active load comparison
- Active/Passive link failovers
- Queue Depth Settings
- Server Queue Depth configuration optimization
- Storage Array Resource Level port analysis
- Storage LUN Resource Level assessment

### Performance

- Latencies
- Read data access times – worst and average
- Write data times – worst and average
- Latency time-of days trends
- Latency-to-load relationships
- Responsiveness
- Array response times to read requests
- Performance time-of-day trends
- Performance-to-load comparison
- Applications
- I/O Read & write request sizes

### Capacity Planning

- Server assessment
- Most demanding servers
- Least active servers
- Storage Array Port assessment
- Most active storage ports
- Underutilized storage ports
- Storage LUN Assessment
- Most active and least active LUN



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