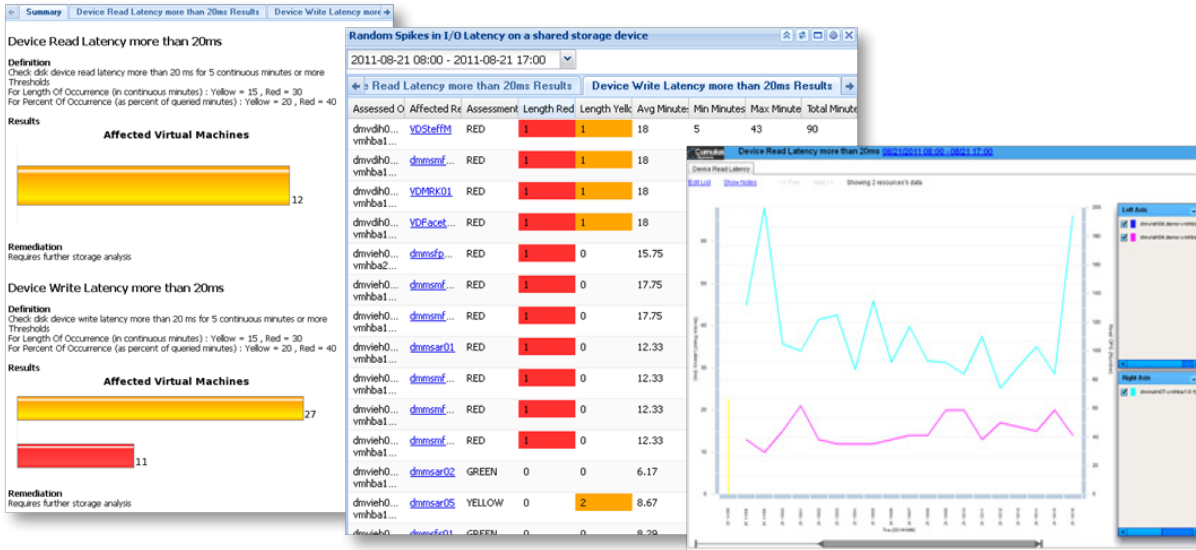


MARS Overview

MARS is a Virtual Infrastructure Optimization (VIO) Solution to Measure, Analyze and Recommend Changes to optimize both virtual and physical environments.

MARS is a lightweight agentless software solution that installs in minutes in a virtual machine. It captures real-time data from the servers, virtual machines, the storage and the network to provide analysis to isolate components that are impacting performance as well as adherence to vendor best practices and then recommends changes to improve the performance and reliability of the overall infrastructure.



Random Spikes in I/O Latency on a shared storage device

MARS is architected to analyze large amounts of time series data enabling it to easily handle large enterprise scale virtualization deployments. MARS collects data at a low time frequency (per minute), and is able to store this fine grained data for long periods enabling the creation of baselines for comparison from prior months or quarters.

Business Benefit for the Virtualization Administrator

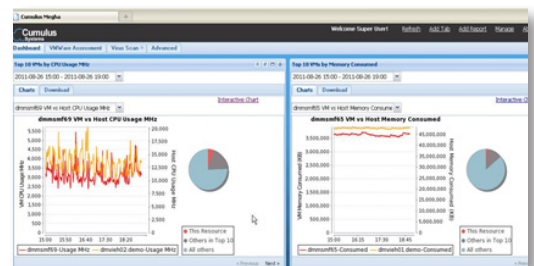
- Determine the performance of CPU, Memory, Swap Times, I/O across hours, days and months to see if there are bottlenecks, when they occur and on which servers, virtual machines or I/O paths
- Proactive analysis of more than 25 VMware recommended performance best practices to improve the overall performance of the virtual environment

Business Benefit for the Storage Administrator

- Determine if your existing storage is delivering the IOPS, throughput and latency required by your existing virtual environment
- Use recommended best practices to change the configuration or add additional storage to meet the needs of the current infrastructure

Example Use Cases for MARS

- Analyze bottlenecks during Backups, Boot storms, or virus scans
- Determine storage latency, IOPS, and capacity requirements by VM or application



Top 10 VMs by CPU and Memory Consumption

These Must Have Features are available in MARS Today

Independence

A VIO tool should be independent of vendor bias in every virtualized application tier (server, storage, desktop, etc.).

Depth

A technology that provides detailed metrics and offers multiple levels of depth to serve a wide range of needs. Also, it should provide real-time data management, metadata optimization and historical accuracy.

Breadth

It should span multiple virtualization domains and provide composite data that clearly identifies performance dependencies. It should also integrate with existing systems monitoring and management tools.

Impact

It should be out-of-band, passive and as nondisruptive as possible.

Usability

It should present actionable information. In addition, it should support decision-making processes from teams whose functions span an entire virtual environment.

Scalability

It should be scalable to support the largest enterprises, which may have tens-of-thousands of servers and tens of petabytes of storage.

MARS Advanced Features:

Recommendations

It recommends changes to improve overall performance.

Fine Grained Retention

It maintains the minute level fine grain data for months not days.

Base Lining

It can create new baselines at any point in time and allow for trending and comparison against this.

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Virtualization Environments Supported

VMware vSphere	Version 3.0 or later
Hyper-V	2008 R2 or later
KVM	RHEL 5.0 or later

Storage Systems Supported

NetApp	Ontap
EMC	SMI-S 1.5
HDS	
Other	Requires SMI-S support

Required Environment for MARS Installation

ESX Server	3.5 or above
Linux/Windows	Requires VMware's VMPlayer (free download)
Memory	2 GB
Storage Capacity	4 GB
For Cloud Based Service	SFTP or FTP Access to the cloud server

Contact Information

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