

IntelliMagic

Availability Intelligence



# IntelliMagic Vision for EMC SAN

**Availability Intelligence to avoid service disruptions, accelerate problem resolution, and improve efficiency**

Infrastructure performance problems impact the availability of production applications far more frequently than disasters do. Yet, reactive firefighting rather than proactive prevention still rules the day.

When it comes to availability, most people think only about disaster recovery and topics like secondary data centers, redundant servers, redundant mirrored storage systems, etc.

But today's businesses need more than 7 x 24 availability. They need 7 x 24 availability at the appropriate service levels.

Because most disruptions to the availability of storage service levels are due to performance problems and not disasters, a new way to protect the continuous availability status against these disruptions is needed. Avoidance of many of these service disruptions, and also accelerated problem resolution, are the primary benefits of the Availability Intelligence generated by IntelliMagic Vision.

The "Magic" in IntelliMagic Vision comes from the built-in knowledge in the software that is used in interpreting the metrics. One example is the built-in knowledge about the saturation points of the components in your specific hardware configuration (both storage arrays and fabric). By automatically comparing the collected and enriched (with additional calculations) workload metrics with this detailed hardware knowledge, IntelliMagic Vision is able to provide an accurate picture of true risk in the environment.

Even large, complex SAN environments can be quickly assessed and continuously monitored for early warning of risk that is likely to impact the performance of end-user applications. Investigating current and upcoming bottlenecks is also easy with built-in intelligence for quick isolation of root causes and potential solutions.

IntelliMagic Vision for SAN provides different views to the performance of your SAN storage systems. One view is a generalized view that covers all the different storage architectures from all the different vendors. In addition, it provides views that are very specific to the architecture of EMC DMX, VMAX and VNX storage systems. With that, we supply the terminologies that are very specific to these storage platforms and also cover the metrics for the remote replication (SRDF/S, SRDF/A) and the implementation of EMC's multi-tiering FAST in its various flavors.

In addition, deep health check dashboards and intuitive drilldowns increase the capabilities of your team in optimizing the performance, availability, and efficiency of your storage infrastructure. Without this kind of visibility, storage arrays and storage network devices are often a "black box" making it impossible to answer questions such as:

- What is the risk of missing the SLO's for current and future workloads?
- How do I know if storage is affecting application performance?
- What are my key metrics and what thresholds should I set?
- Where is the "knee in the curve" for my storage array(s) and have I crossed it?
- Which storage components are most stressed and during which time periods?
- Do I really need to migrate to new hardware to improve performance?
- Is my storage hardware being used as efficiently as it should be?



IntelliMagic Headquarters

Leiden, The Netherlands

T +31-71-579-6000

IntelliMagic Germany

Munich

T +49-89-628337-720

IntelliMagic USA

Southlake, Texas

T +1-214-432-7920

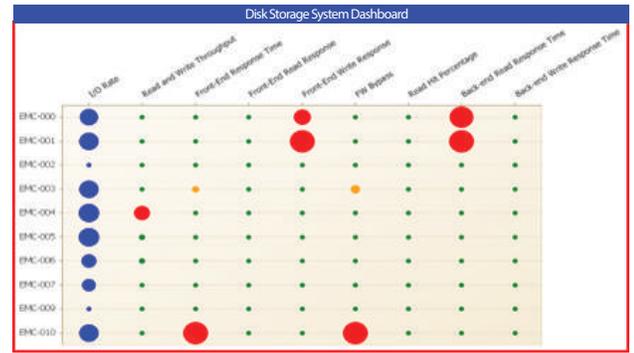
sales@intellimagic.com

www.intellimagic.com

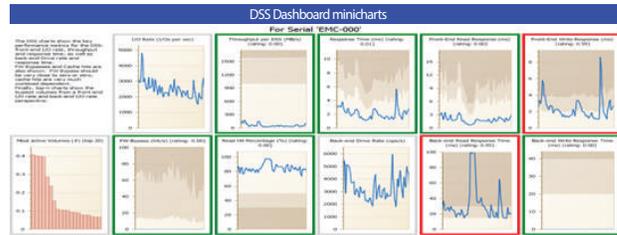
IntelliMagic Vision for EMC SAN environments provides the answers to these questions and more, enabling you to safely get the most value out of your storage infrastructure. Examples of some key features are provided below.

**Instant Assessment of Performance Health and Risks:** IntelliMagic Vision dashboards show all storage arrays on one pane of glass. IntelliMagic Vision has multiple techniques for performance problem avoidance.

At first we analyze key performance indicators (KPIs) and key risk indicators (KRIs). KPIs include performance metrics like I/Os per second (IOPS), response time, etc. KRIs analyze the utilization of the involved components like throughput per port, processor utilization, etc. IntelliMagic leverages a deep understanding of the capabilities of the storage hardware and configuration to interpret the KPIs and KRIs in such a way that the user knows the level of risk in the environment. We refer to this interpretation as Availability Intelligence.

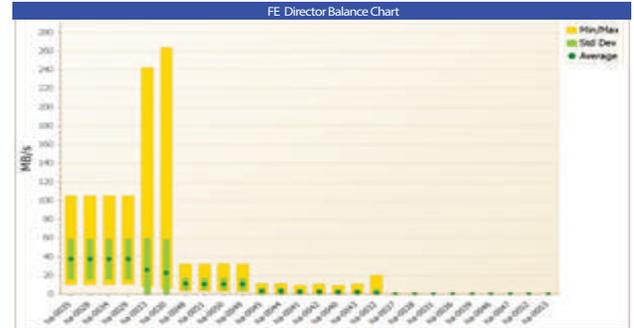


The built-in knowledge rates and correlates metrics to the specific hardware capabilities in order to minimize false positives. Other dashboards focused on host views can let you know which systems are experiencing poor I/O performance and will help isolate root causes.

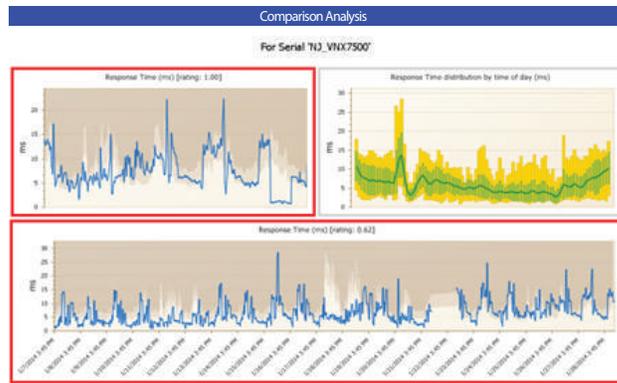


**Intelligent Drilldowns:** IntelliMagic Vision dashboards enable one click drilldown to an intelligent grouping of “minicharts” that show the relevant metrics that help you quickly determine root cause. Other drilldown options are provided for deeper analysis. Related charts are placed side-by-side in order for a customer to get a full diagnostic view. Every mini chart can be clicked on for deeper views to isolate further in a variety of dimensions.

**Balance Charts:** The IntelliMagic Vision balance charts show at-a-glance where resources need to be re-allocated to achieve maximum performance and the most efficient utilization of hardware resources. In this balance chart example, only a subset of available Front-end adapters is being utilized. This suboptimal use of resources is commonly seen in enterprise storage environments. This report can be used to proactively make storage provisioning decisions or to rebalance workloads to avoid purchasing additional hardware. Drilldowns are provided to allow a customer to determine which hosts to migrate.



**Workload Visibility:** Identify heavy and poor performing resource users at Storage System, Storage Group, Masking View and LUN levels. Top “n” reporting filters identify the most active workloads. Metrics for these workloads are rated to assist a customer in deciding which workload to address first.



**Historical Trending:** Specialized performance trend reports are provided. There are robust capacity reports that can be used in planning the next purchase. Configuration changes are tracked at the array, port, volume, host, and disk level. Configuration tracking reports allow for performance issues to be correlated with environmental changes.

**Troubleshooting Tools:** Any report can also be compared side-by-side by day, week or year. This feature is useful in determining what changed and may be causing performance degradation. Performance charts come with a drilldown custom report feature that is used to compare dozens of metrics for problem correlation. Thresholds and charts are customizable. Reports can be scheduled to run in batch mode, which includes an automated delivery feature. Reports can be tailored and easily exported in several common formats.

**Capacity Reports:** IntelliMagic Vision provides detailed capacity reporting at the Storage System, Storage Groups, Masking Views, LUN, and application group levels, including how much space is allocated to each tier.

IntelliMagic Vision is available as software to install on premise and also as Software as a Service (SaaS). For a customized demonstration of IntelliMagic Vision, please contact us at sales@intellimagic.com.