

Automated Self-Learning Performance Analytics for IT Systems and Business Processes

The Big Picture

- Automatically and continuously learn normal behavior patterns of any type of IT and Business Process data, even as the environment changes
- Automatically correlate this data in multiple ways to determine when you need to pay attention to a brewing problem and identify the root causes for that problem
- Sophisticated correlation analysis enables richer understanding of overall system health and optimization opportunities
- Integration with the EMC Ionix suite enables unified analysis of the performance data to extend Ionix best-in-class availability management to the application performance management domain
- Unify monitored data across multiple silos and tools by providing a “single-pane-of-glass” view, including analysis results
- Alive is easy to deploy and use within existing monitoring systems, with a common language and UI across multiple roles—from NOC operators to IT and business executives
- Alive features a fully automatic and extremely flexible next-generation BSM Dashboard developed with Web 2.0 technologies

Integrien Alive provides Automated Self-Learning Performance Analytics for IT systems and Business Processes. Alive sends a single, predictive Smart Alert™ that indicates when to pay attention to brewing problems, as well as what to pay attention to, allowing ample time to avert problems before users or business processes are impacted. Leveraging your existing monitoring landscape, Alive determines the normal behavior of your applications and services using multiple, sophisticated, and patented algorithms. In real time, Alive determines when observed abnormalities require the attention of IT operations and/or business owners. All of this is done completely automatically and without any user input.

When you integrate Alive into your EMC IT Operations Intelligence suite, the EMC® Ionix™ Global Console provides one-stop access to comprehensive performance and behavior data and realtime Alive analysis—enabling IT to act more proactively to avert problems and optimize system performance.

The EMC Ionix and Integrien Alive solution offers:

Automatically updated baselines for realtime reporting

Alive Automated Self-Learning Performance Analytics for IT Systems and Business Processes continuously analyzes IT and business performance metrics to establish normal behavior, then automatically adjusts the learned behavior as changes are introduced in the environment. This eliminates the need to maintain static thresholds while still providing the option to hand-pick key performance indicators (KPIs) and assign them specific thresholds.

- **Types of automatically identified behaviors include:** hour-of-day, day-of-week, day-of-month, non-daily and non-weekly cyclical patterns, slow long-term growth/decline, binary (on/off) and discrete patterns. The learning analytics use non-parametric methods, which do not rely on Normal (or Gaussian) distribution of data.
- **Types of detected changes include:** add/remove devices and business processes (as a result of provisioning changes), change role of devices (as a result of re-architecture of IT and/or business processes), and consistent change in performance characteristics of devices (as a result of increase/decrease in IT or business activity).

Sophisticated analysis capabilities with automated correlation algorithms

With realtime understanding of your IT system’s health, you can be proactive about performance optimization, instead of just reacting to emergencies. Correlation analysis plays a key role in developing this understanding.

- **IT-to-Business Correlation:** Correlate performance and behavior between IT and business metrics to identify the IT influencers on business KPIs.
- **Anomaly Correlation:** Correlate multiple individual metrics deviating from their normal behavior into a single alert.
- **Cross-Silo Correlation:** Correlate metric behavior across multiple IT and business silos, providing a single view for analysis.
- **Performance Correlation:** Correlate performance characteristics of metrics (both behaving normally and abnormally) to identify key dependencies between IT components.

Proactive Smart Alert system for advance notifications and problem identification

Through the Ionix Global Console, you will receive Smart Alerts only when significant abnormal behavior is present or when KPIs are about to be breached—indicating an application- or service-

affecting problem is imminent. The alerts specify the root causes of the problem and provide 1.5 to 3 hours advance warning on potential problems so they can be averted. Even first-time problems can be predicted through this system.

High performance and massive scalability, all from one server

A single Alive server supports the collection, analysis, and presentation of millions of metrics—from an unlimited number of monitoring sources—and retains collected raw data for several parallel uses:

- Realtime analysis and alerting; historical and post-mortem analysis; ad-hoc and periodic reporting; and presentation to multiple, concurrent clients.

The application is developed from the ground up to fully exploit 64-bit architecture CPUs and operating systems.

Open architecture and flexible data collection

As well as being deeply integrated with the Ionix suite, Integrien Alive is designed to work with a wide variety of existing architectures.

- Distributed, scalable architecture decouples data collection, analysis, and raw data storage.
- Lightweight data collectors can be deployed and placed close to monitoring data sources.
- Includes a collection of “out-of-the-box” adapters to common commercial and open-source monitoring solutions, including HP, IBM, Microsoft®, TeamQuest, Hyperic, VMware®, and more.
- Features an open adapter framework to enable quick integration of home-grown monitoring solutions.

Rapid deployment and ROI

When deployed in an existing Ionix environment, Alive can be installed, configured, and integrated in a week or less. There’s no need to develop, maintain, or modify any rules, templates, or correlation algorithms to fit the specific conditions in a customer environment, and operation is “hands-off” from that point forward.

Historical monitoring data can be used to seed the system so learning is instantaneous. The standard initial learning period is two weeks, after which the analysis and correlation algorithms begin to produce actionable reports.

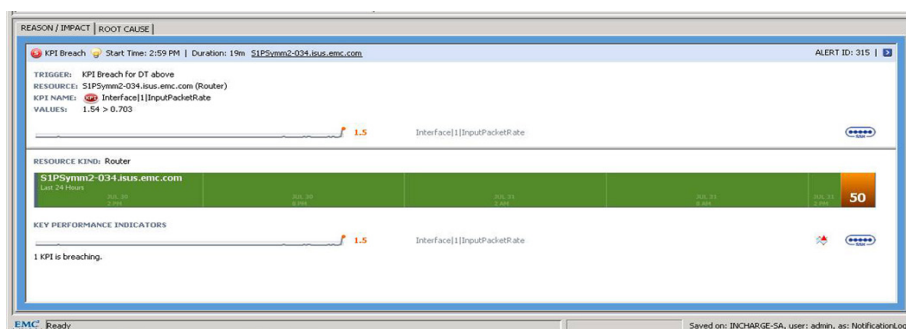
EMC IT Operations Intelligence (formerly Smarts®) and Integrien Alive

With EMC, you get out-of-the-box integration with Integrien Alive, featuring time series performance data collection from EMC Ionix IP Availability Manager (IPAM), IP Performance Manager (IPPM), Application Connectivity Monitor (ACM), and Server Manager. Integrien also receives business topology data from EMC Ionix Service Assurance Manager (SAM). Alive Smart Alerts can be sent to the Ionix Global Console as SAM notifications. When these notifications are selected in the Global Console, Alive-specific views display the impact and root cause of the alert. Clicking in the alert also launches Alive in the context of a notification/alert or an object (e.g., server, application, etc.).

Alive-specific view, called “Alert Summary”:

- Reason for alert
- Context of alert
- Root-cause determination

Also serves as launching point to switch to the Alive UI



EMC²
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EMC Corporation
Hopkinton
Massachusetts
01748-9103
1-508-435-1000
In North America 1-866-464-7381
www.EMC.com

Take the next step

To learn more about how you can get the most out of your performance and behavior data with the EMC Ionix suite and Integrien Alive, contact your EMC Ionix account representative.