

The Path to Proactivity: Netuitive Customer Value Study

Executive Summary

ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) analysts conducted in-depth interviews with IT managers at four different Netuitive customer sites to determine the impact of self-learning performance management software on their service delivery capabilities. EMA observed a common thread across all of these users, particularly with regard to reduced management administration, reduced Mean-Time-To-Repair (MTTR) and extended Mean-Time-Between-Failure (MTBF). The results for these organizations, including the unanimous positive outlook on future ROI, bring EMA to conclude that this technology has achieved mature, mainstream status and should be considered by IT organizations seeking improved control of operations and greater operational efficiency.

Revisiting Netuitive Products and Customers

As the focus of IT operations moves steadily from reactive “break-fix” to proactive “optimize and protect,” IT teams will need to move the concepts and technologies of performance management from the planning and engineering realm into the real-time operations theater. Netuitive is representative of IT management automation technology that can help organizations deliver proactive service management.

Highlights

Netuitive has extended its solution beyond infrastructure to also embrace the service layer.

Customers deploying the solutions have experienced significant savings in three areas:

1. Reduced monitoring administration overhead
2. Reduced processing of false positive threshold alarms
3. Improved uptime for systems and services via reduced MTTR and increased MTBF

EMA estimates payback on depreciated costs of less than two months, with three-year ROI potential of nearly 700%

In EMA's opinion, Netuitive's technology is mature and appropriate for any IT organization seeking to improve operations efficiency and improved protection of business-critical services.

EMA first chronicled the value of Netuitive's offerings back in 2004 based on a survey of customers using Netuitive SI software, and estimated an impressive payback of less than two months. The latest survey considers both Netuitive SI and Netuitive Service Analyzer. While Netuitive SI analyzes standalone servers or devices only, Netuitive Service Analyzer supports end-to-end service views and metric correlation, including customer experience metrics (application response times, etc.) and Business Activity Monitoring (BAM) metrics.

EMA sought to determine where customers perceived the greatest values, including saving operational expense in administering the management architecture and improving effectiveness in proactively managing service quality by finding problems early (often before failure) and accelerating troubleshooting when problems do occur. Each participant in the study came from a unique environment, organization and set of circumstances, and each participant has had Netuitive's products operational for a long enough period to validate the several themes that emerged regarding the core operational cost and service integrity advantages realized by deploying Netuitive's solutions.

The Business Case for Advanced, Intelligent Monitoring

Based on the aggregate experiences related by participants in this study, EMA assembled the business case example for deploying intelligent monitoring and analysis tools like Netuitive. For this example, EMA profiles operational cost factors for a typical organization, along with conservative estimates of solution costs and operational expense and loss reductions.

Example organization

Nation-wide commercial organization with two regional data centers and 300 servers under management, 8 business-critical applications, an average cost of downtime of \$50,000 per hour and average loaded headcount cost of \$100,000 per year across all levels of the operations team.

Solution Deployment Cost

Acquisition and deployment of perpetual licenses for Netuitive SI and SA products for this scenario are estimated at \$490,000, including training, services, and support.

Operational Expense /Loss Reduction

Personnel efficiency – Savings associated with reduced administrative for configuration/upkeep of alarm thresholds and business service models plus reduced time to process and analyze false positive alarms: \$510,000/year

Business protection (shorter MTTR, longer MTBF) – reduction in downtime and periods of degraded performance: \$950,000 /year.

Financial analysis

Time to recoup first year's investment (depreciated over 3 years) = less than 2 months

Time to recoup entire initial investment (no depreciation) = less than 4 months

Total ROI over three years = 695%

EMA interviewed four Netuitive customers to understand how they have applied the Netuitive solution. The interviewees will remain anonymous in this report:

1. One participant is an IT Engineer for a telecommunications company with operations spanning the U.S. They use Netuitive to monitor more than 300 mission-critical applications, both internal and external, spanning 8 major data centers and several thousand servers. For the purposes of this report, we'll refer to this customer as the "Telecom Engineer."

2. A Systems Engineer for a regional healthcare insurer serving over 5 million customers uses Netuitive to monitor over 400 servers, spanning Windows, UNIX and Mainframe. We'll refer to this customer as the "Healthcare Engineer."

3. Another participant is an Infrastructure Operator for a U.S.-based national property and casualty insurer, responsible for overseeing operations of the more than 500 Windows and UNIX servers in their main data center. For the balance of this report, we'll refer to him as the "Insurance Operator."

4. The final participant is a Senior Manager of Enterprise Systems Management for an international banking and finance company. The Financial Manager is part of a team that manages 4000 UNIX and Windows servers. For the purposes of this report, we will refer to him as the "Financial Manager."

The four professionals interviewed shared a wide range of benefits. These include operational cost savings via reduced administrative overhead and improved ability to deliver on IT service quality goals both by reducing the time taken to troubleshoot problems, as well as extending uptime via early problem indicators which enabled preventative remedial actions.

Prudent Cost Control – Controlling Administrative Overhead

Virtually all performance monitoring solutions available today provide a form of "static" threshold monitoring and alarming. For any particular type of monitored element (server, database, router, etc.), the challenge with this approach is twofold:

- Tuning the alarm settings to the appropriate levels can be more art than science – especially when taking into account the complexity of metric interactions when problems occur.
- The sheer volume of thresholds that need to be managed when the environment grows beyond a few dozen systems.

Netuitive's software is designed to address both of these challenges – eliminating the need for tuning thresholds by leveraging automated, self-learning algorithms to produce dynamic performance

bands, modeling “normal” system behavior by hour and day of week. Netuitive then automatically aggregates and correlates these deviations yielding fewer, more accurate alerts.

The Telecom Engineer saw dramatic results with this technology. His team was able to reassign several full time management technicians from performance threshold management tasks, including setting, tuning, and managing work tickets associated with threshold configurations, towards other, higher-value work. Based on an industry average loaded salary of \$80,000 per operator, the labor savings can add up rapidly.

The Insurance Operator also recognized significant savings in this area. For just one of the many applications that his team is entrusted with supporting, his team identified over 1500 metrics spanning 150 CIs (configuration items) requiring threshold definition and ongoing tuning. Even if the initial analysis/definition and configuration of these metrics was held to an average of five minutes each, this represents more than three man-weeks of effort for each threshold tuning cycle. The labor savings remain significant even if subsequent tuning cycles are more efficient.

The Insurance Operator was able to avoid this cost by eliminating the use of static thresholds in his primary monitoring platform and shifting all alarms to Netuitive’s dynamic, self-learning alternative.

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Protecting the Crown Jewels – Assuring Service Quality

While administrative cost reduction is primarily a bottom-line issue, the long-term strategic role of IT is to impact top line revenues. This is accomplished most directly by ensuring the availability and performance of business-critical applications and services.

Two common metrics to measure effectiveness in accomplishing this are maximizing MTBF and minimizing MTTR.

MTTR

Let’s first examine MTTR. While proactive monitoring and prevention are excellent objectives, the reality is that outages do happen, and businesses want problems isolated and resolved as quickly as possible.

Netuitive showed great value in these situations, according to our participants. The Financial Manager noted a case where one of his servers spiked to 60% CPU usage at a time of day when loads were normally 20%. “Netuitive’s product flagged this, and it had been missed by all of our other monitoring tools.” Further investigation revealed that the server was trying unsuccessfully to reconnect to an external server, across a failed network link for which a business partner was responsible.

“With this info, we approached our partner, they fixed the problem, and we got transactions flowing again.” He also noted another case, where Netuitive’s tools were tracking a server hosting a high-profile desktop management application which periodically harvests management data from about 30,000 desktops.

“Netuitive noticed that file size growth rates slowed to about 40% of normal and raised an alarm. We found that a network technician had accidentally introduced a duplicate IP address into DNS, which was conflicting with the desktop monitor’s collector. We were able to get the problem fixed quickly and recover all the data harvesting that had been missed. Without the trusted alarm from Netuitive, we would have lost important data.”

MTBF

Extending or maximizing MTBF can be more challenging. There is no foolproof way to eliminate outages, however IT teams can take substantive steps toward reducing this risk. One of the most promising areas of management technologies is the ability of intelligent analysis tools like Netuitive's SI and Service Analyzer to recognize or forecast significant early indications of problematic situations or trends, and alert operations teams so that preventative measures can be taken.

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The Telecom Engineer experienced this when an important new service was recently rolled out into production. "About eight in the morning, Netuitive raised an alarm that there were higher than normal JMS message counts on a couple of core database servers. That was more than an hour before our primary monitoring system started raising alarms that processes were starting to fail, which gave us a huge head start on correcting the issue. We were able to gracefully fail over services to another data center and fix the problem without impact to our subscribers."

In another case, the Telecom Engineer had two-and-a-half hours advance notice thanks to the Netuitive solution.

"With the head start that Netuitive gave us, we were able to get the application fully restored before normal business hours. Alarms from our monitoring platform tools didn't come until the application crashed – if that had been our first notice, we would have been in a much more difficult situation."

Collaboration

Regardless of whether you are trying to reduce MTTR or extend MTBF, an essential element of success is effective incident and problem resolution. This often involves efficient collaboration across tiers (application, network, storage, database) and functions (engineering, operations, service management) for triage, analysis, and corrective action.

Several of the participants in this study specifically mentioned how Netuitive's solutions helped promote collaboration. The Healthcare Engineer noted "the reporting tools, especially the dashboard views, are very intuitive, and everyone loves them, from the operations teams all the way up to the executives."

The Healthcare Engineer also noted that alarms coming from Netuitive's products carry more credibility than his underlying system monitoring products. "The application managers pay more attention to them – they trust them more than the alarms from our primary monitoring platform, because they consolidate what would otherwise be many alarms into a single indicator, with very few false positives."

Hidden Gems - Unexpected Values

Besides reducing administrative labor and more proactive service assurance, the participants in this study found other, unanticipated Netuitive solution benefits.

Three of the four interviewees noted that Netuitive's products enabled them to realize better returns on their investments in their primary monitoring platforms (e.g., BMC PATROL, NetIQ AppManager, Microsoft Operations Manager, etc.). According to the Financial Manager, "the more data you put into the system, the more value you get out of the Netuitive tools and the more value you get from the collection tools. It's a kind of compounding interest situation."

The Healthcare Engineer also saw value in using Netuitive's reporting capabilities as a means for improving asset management. The Netuitive reports can track and expose actual system resource usage, providing insights into candidates for server consolidation and virtualization, in the lab or production environment.

EMA Perspective

Netuitive delivers products that leverage existing management tools and provide substantial additional value by applying patented, time-aware behavior analysis to reveal sometimes subtle but important changes and trends that can indicate the need for corrective action. The technology has been in the field for many years, and the number of success cases continues to grow.

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Netuitive has evolved their solution to apply their intelligent, dynamic performance analysis "up the stack" with the introduction of the Service Analyzer product. This move is consistent with the EMA tenet that management technology and practices must evolve in two essential directions – increased automation and increasingly direct business relevance.

Overall, the results were compelling. While specific quantitative measures were not available, participants estimated that they saved as much as 70% of the labor for administrative tasks by switching to Netuitive's automated, dynamic thresholding approach. They also estimated that alarm accuracy (in terms of whether or not action could be taken on an alarm) improved by 5 to 10 times over current tools and policy methods, favorably improving both MTTR and MTBF.

Only one technical concern was raised during the assembly of this research – that there were some situations, such as long slow drift in key metrics, which still required the use of static thresholds.

In summary, the IT professionals who have rolled out Netuitive's solutions are enjoying clearly improved abilities to fill their roles on behalf of the organizations they serve. The technology represents the cutting edge of what EMA believes all management solutions should provide – immediate and measurable tactical value as well as longer-term strategic benefits for raising IT's ability to become a true asset to the business.

Many IT professionals understandably start out being skeptical of the benefits claimed by IT management automation technology. In today's environment, however, these technologies hold the key to doing more with less while maintaining – or even improving – IT service levels.

Two participants in this study initially needed to "test" Netuitive software in their live environments before embracing the solution, but all four now can't imagine life without it.

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1827.021309

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