

Application Performance Monitoring (APM), 2015

Industry Challenges, State of the Art, and the Case for Unified Monitoring

An ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) White Paper
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*IT & DATA MANAGEMENT RESEARCH,
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Overview

In today's digitally-driven world, applications are at the center of the universe. They are the point atop the pyramid where code, data, and modern technologies such as cloud and the Internet of Things (IoTs) interact to enrich the lives of consumers, perform useful scientific and medical work, and drive business value.

Because of the fact that applications are the sum total of the "pyramid," managing and maintaining them is as much art as science. The elements underlying modern applications are becoming increasingly elastic, with code, data, hosting platforms, and external inputs/interactions constantly changing. Often, the underlying elements are only loosely aligned, with the definition of "transaction execution" increasingly fluid and often extending across multiple platforms and geographies.

At the same time, while many IT organizations still lack a good answer for managing on-premises-delivered applications, the extension of application execution into the cloud fosters additional management concerns. In short, each new technology added to the mix increases the risk factors associated with application delivery.

In the spring of 2015 AppDynamics, a leading provider of APM solutions, commissioned Enterprise Management Associates (EMA) to conduct a survey targeting application management professionals and managers. The goal was to determine exactly what IT organizations want and need from APM providers, and more than three hundred application delivery professionals from across the world gave us their answers.

This EMA white paper discusses the top findings of this study. It provides a snapshot of the key challenges and "must haves" associated with automating the management, performance, and availability of complex, modern applications, as voiced by the IT professionals themselves.

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Who We Surveyed

Data is virtually meaningless without an understanding of the context in which it was gathered. For this study, EMA analysts surveyed IT professionals from companies of all sizes across both North America and EMEA. Potential respondents were filtered to include only those actively involved in enterprise application development/management/delivery at the executive, middle manager, or "hands on" line staff levels.

The respondent mix was approximately:

- 1/3 EMEA and 2/3 North America
- 20% small, 25% large, and 55% mid-sized companies (see Figure 1)
- 45% executives (Director or above), 25% middle managers, 30% line staff.

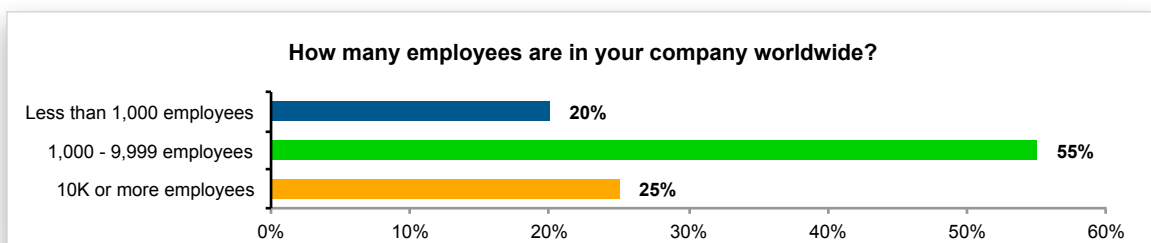


Figure 1: Most Respondents from Mid-sized Companies; 25% Large and 20% Small

APM—or Lack of It—In the Enterprise

A key problem identified by this research is the fact that only approximately 30% of companies report ownership of application-specific solutions—application management platforms *or* consolidated platforms capable of monitoring infrastructure and applications in context (see Figure 2). This number is reinforced by prior EMA research which yielded similar results.

In addition, the tools they *do* have in place are silo-focused and often underutilized.

- **Silo Tools versus Application-specific Tools** – While most companies have made significant investments in enterprise management tools (see Figure 3), only a fraction of those tools support *application* execution. The vast majority support management of silo technologies such as networks, servers, and databases.
- **Tools that Are in Place Are Often Underutilized** – As Figure 4 shows, almost half of the respondents surveyed indicate that 50% or fewer of the tools their companies have purchased are actively being used. It appears that enterprise management tool choices in general are being finalized at the silo level, with tools often ending up “on the shelf” versus in active use.

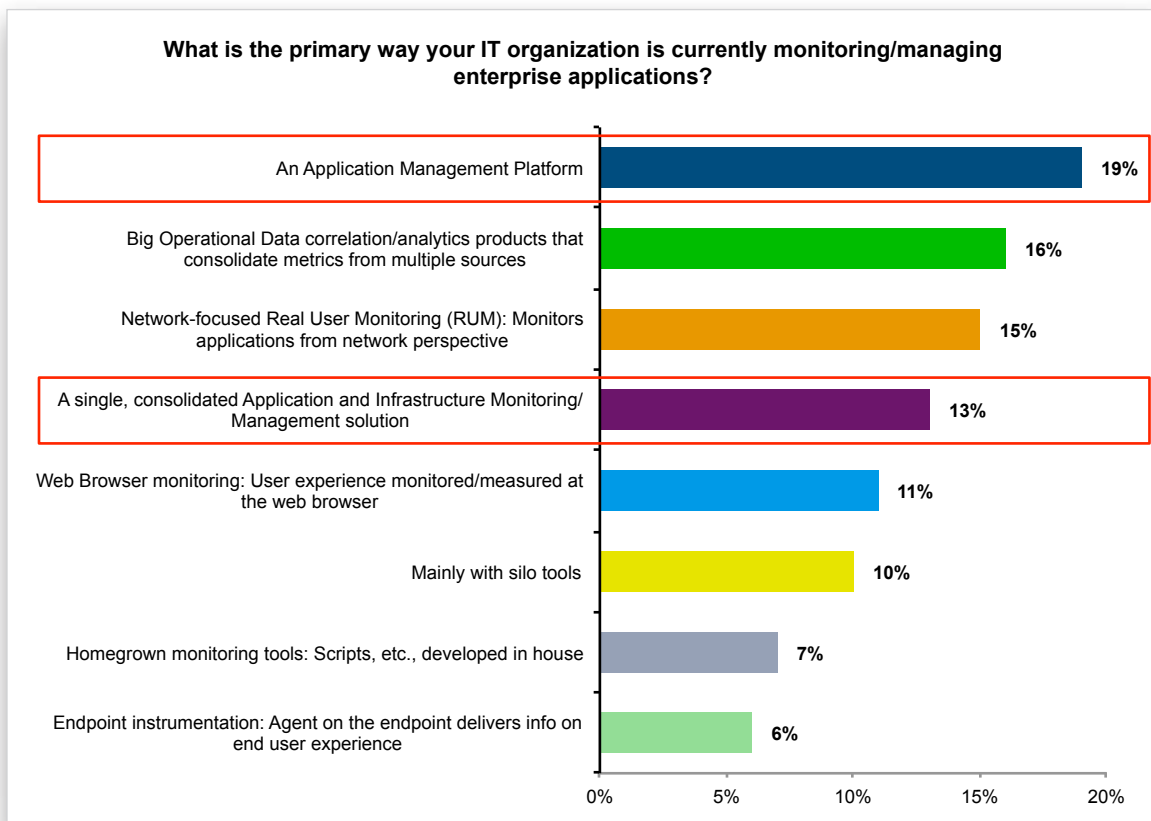


Figure 2: Only About 30% of Companies Have Application-specific Solutions

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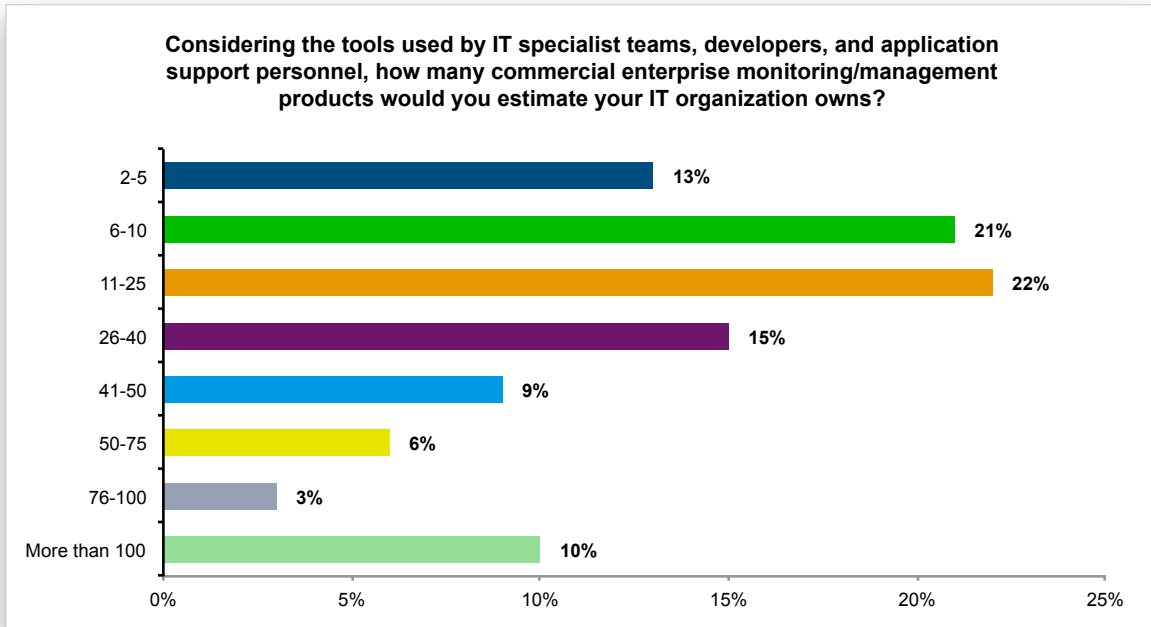


Figure 3: Companies Investing Heavily in Silo-specific Solutions

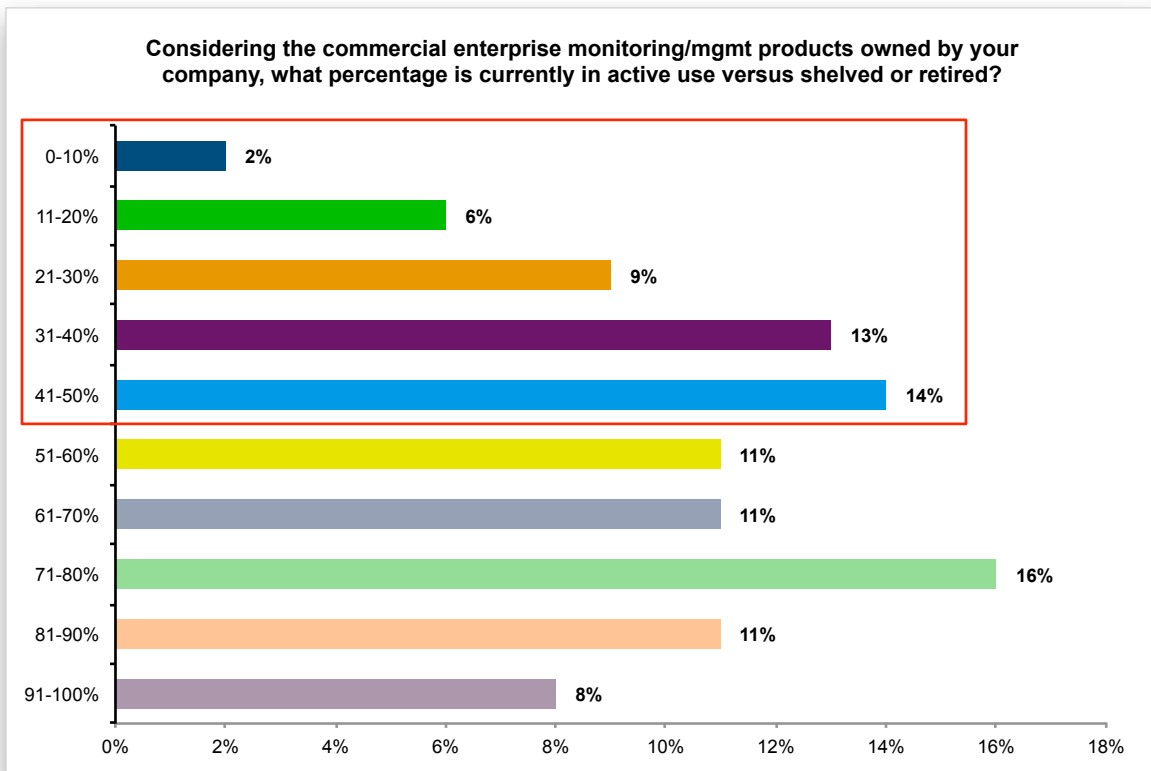


Figure 4: Despite Heavy Investments High Percentage of Tools are Shelved or Not Used

Challenges and Gaps in Enterprise Application Monitoring

Many of the top challenges identified by IT professionals in the survey appear to be related to the *lack* of application-focused solutions as shown in Figure 2. For example, the research indicates that only about 27% of application-related problems are detected by monitoring tools. To compound the problem, IT finds out about application-related issues via *user calls* approximately 25% of the time (see Figure 5).

The latter percentage varies considerably depending on role. Line staff, those doing actual, hands-on application support, report that user calls are their first “heads up” 35% of the time. This larger number is also confirmed by prior EMA research, which indicates the percentage to be as high as 60% within some companies.

The research also shows that IT organizations are expending extensive amounts of time and resources on application support.

- Mean time to repair (MTTR) on application-related problems is most often between 3 and 6 hours
- If an application-related problem is escalated beyond Level 1 support, 3-4 people are most commonly required to solve it. Almost 15% of the time, more than 10 people are necessary.
- Finally, the total number of “people-hours” necessary to solve a single problem is most commonly between 5 and 7 hours (see Figure 6). However, in many cases, the process takes much longer. Twenty percent of the time the number is 8-10 hours, and in 8% of cases the process requires more than 20 man-hours.

An examination of these numbers makes it clear that the majority of companies are still trying to manage complex applications with a combination of “all hands on deck” interactive marathons and tribal knowledge.

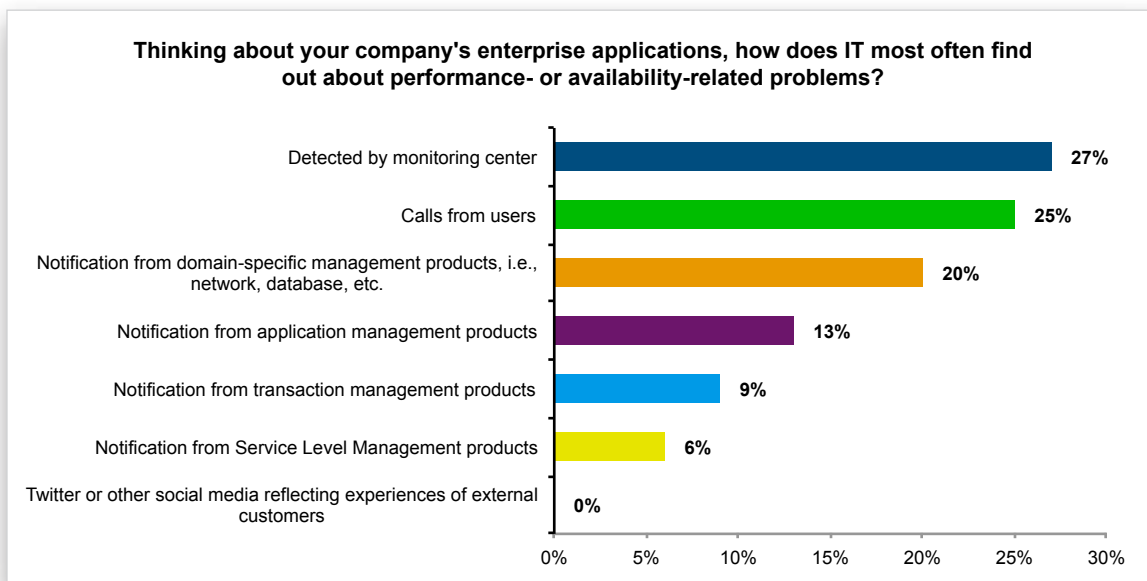


Figure 5: Only 27% of Application Problems Detected by Monitoring Centers

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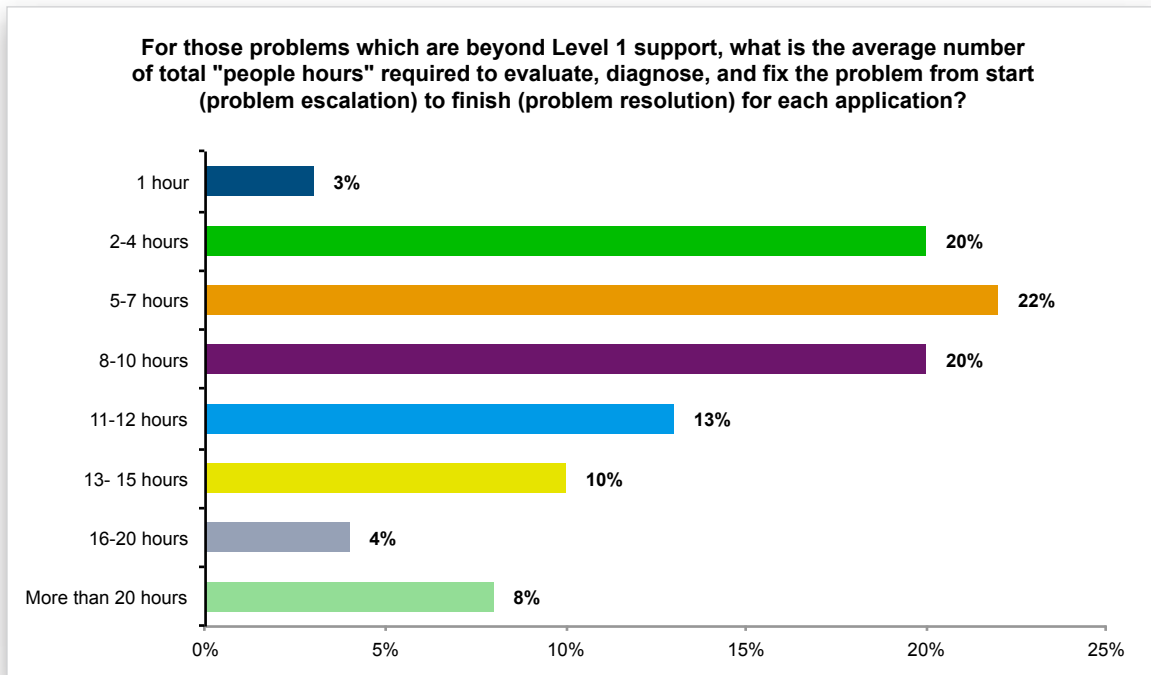


Figure 6: Most Application Problems Require Between 5 and 7 Man-Hours to Solve

Unified Monitoring Comes Into Its Own

So while it is clear that most companies have under-invested in application-focused tools, the survey also makes it clear that respondents have strong preferences regarding their APM “must haves.”

- Almost 75% identify “flexible deployment options” (supporting SaaS, on-premises, and/or hybrid deployments) as being either “Critical” or “Important” factors in making APM purchasing decisions.
- More than 70% identify “ability to monitor infrastructure as a service (IaaS) public cloud” as being either “Critical” or “Important.”
- Perhaps the most compelling outcome of the entire survey was the clear choice for a “unified monitoring” platform. Defined for the purposes of the survey as an “Integrated monitoring platform consolidating application and infrastructure monitoring in one solution,” respondents identified this as the most important feature consideration in making an APM acquisition (see Figure 7).

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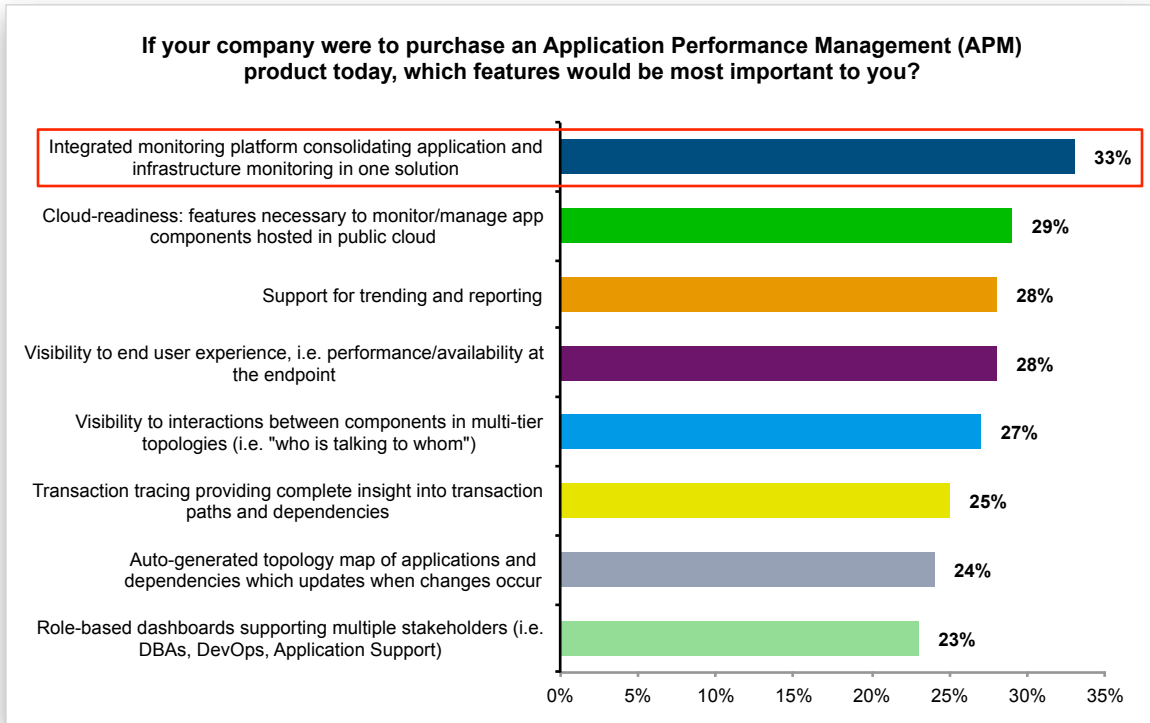


Figure 7: Respondents Indicate a Clear Preference for a “Unified Monitoring” APM Platform

EMA Perspective

While adoption of APM tools has clearly lagged that of silo-focused tools, it is also clear that interest in application-focused automation is gaining momentum. Applications have become far too complex to manage with silo tools and primarily manual correlation.

At the same time, a new wave of APM solutions is coming to market. AppDynamics, for example, features unified monitoring, flexible deployment options, intelligent analytics, and role-based dashboards, among other features. The new generation of products represented by AppDynamics also operates with an application-centric focus while supporting the latest technologies and platforms. The features are robust enough to support both first line staff—those typically taking user calls—and Level 2+ support teams whose task it is to maintain the stability of complex, but fragile, production environments.

This survey demonstrates the fact that unified monitoring supporting both application and infrastructure is the APM form factor of choice. EMA analysts believe the reputation of APM platforms as being complex to install, time-consuming to maintain, and requiring experts to “manage the management tools” have all been factors slowing adoption of such products. Unified solutions such as AppDynamics should minimize these concerns because the unified form factor means there are fewer components to install and maintain.

AppDynamics’ combination of unified monitoring, deployment options (with the central core of the product available as SaaS, but also capable of running in the cloud or on-premises), *and* popular features put it among the front runners of this new wave of APM.

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About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on [Twitter](#), [Facebook](#) or [LinkedIn](#).

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