

# Closing the End-User Experience Gap in APM

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# Introduction

The advent of digital business has given customers more power than ever over how, when and where they interact with businesses. Successful businesses keep customers happy and engaged and coming back to spend more.

In the application performance management context, your customer is the user of your applications, either internal or external. Those users expect your applications to be fast and reliable. Waiting more than a few seconds for a webpage to load or a transaction to complete is unacceptable.

But 100% availability and sub-second page load times don't happen in a vacuum. They require having full visibility into everything that can affect end-user experience, whether that's web objects, browser code, third-party services or Internet infrastructure. You need to be able to monitor how fast applications are responding for end users and everything that affects that performance.

While back-end metrics like server, operating system and memory are nice, they're of little value without the context of end-user experience. As the end user goes, so goes your business. An APM strategy that doesn't take into account the end-user experience, that lacks visibility into the many factors that affect end-user experience, is a broken model.





## Gartner: End-User Experience Monitoring is the Critical Dimension for Enterprise APM Customers

A recent Gartner survey of enterprise IT leaders concluded that end-user experience monitoring (EUM) was the most critical dimension of APM. A majority of respondents (61%) identified APM as either important or critical. Of those, 46% cited end-user experience monitoring as the most critical dimension of APM, outpacing IT operations analytics (33%), application component deep-dive (10%), application topology discovery and visualization (8%), and user-defined transaction profiling (3%).

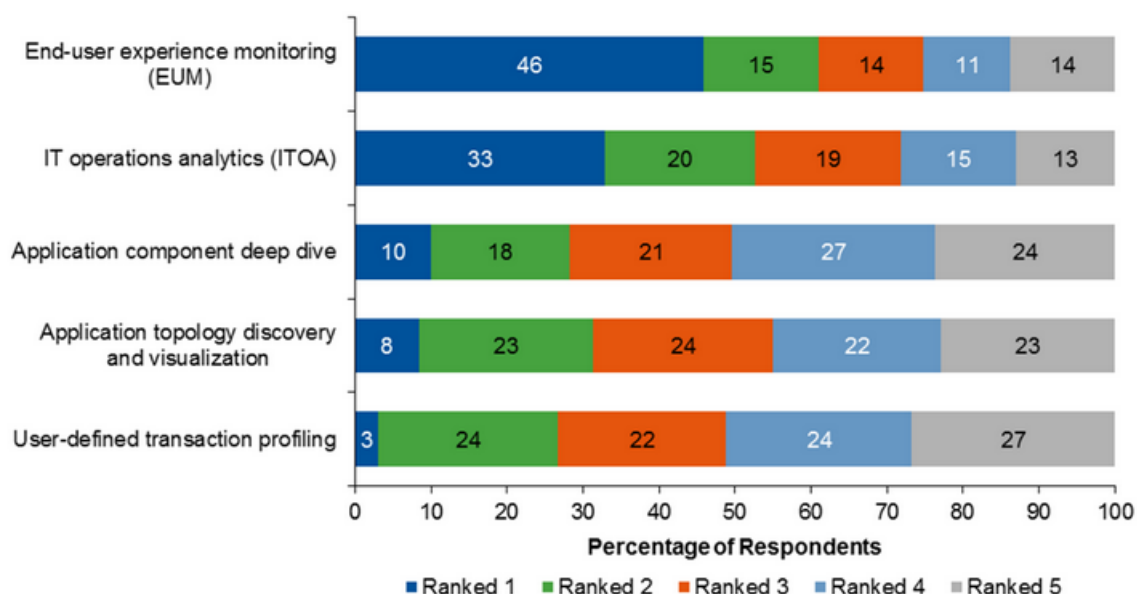
The preference for EUM aligned with the most important feature of APM, as 49% of survey respondents chose “enhance customer experience quality” as their first choice for rationalizing APM purchases. Other choices included “improve troubleshooting capabilities (24%), “optimize resource utilization” (10%), “reduce IT labor costs” (9%) and “increase revenue and conversions” (5%).

When it comes to the vendors that customers turn to for these offerings, 59% of survey respondents indicated a preference for best-of-breed tools or services vs. 39% that preferred buying APM tools as part of an integrated offering from a single vendor.

For your convenience, the full Gartner report is included at the end of this newsletter.



## Most Critical Dimensions of APM



Source: Gartner (June 2015)

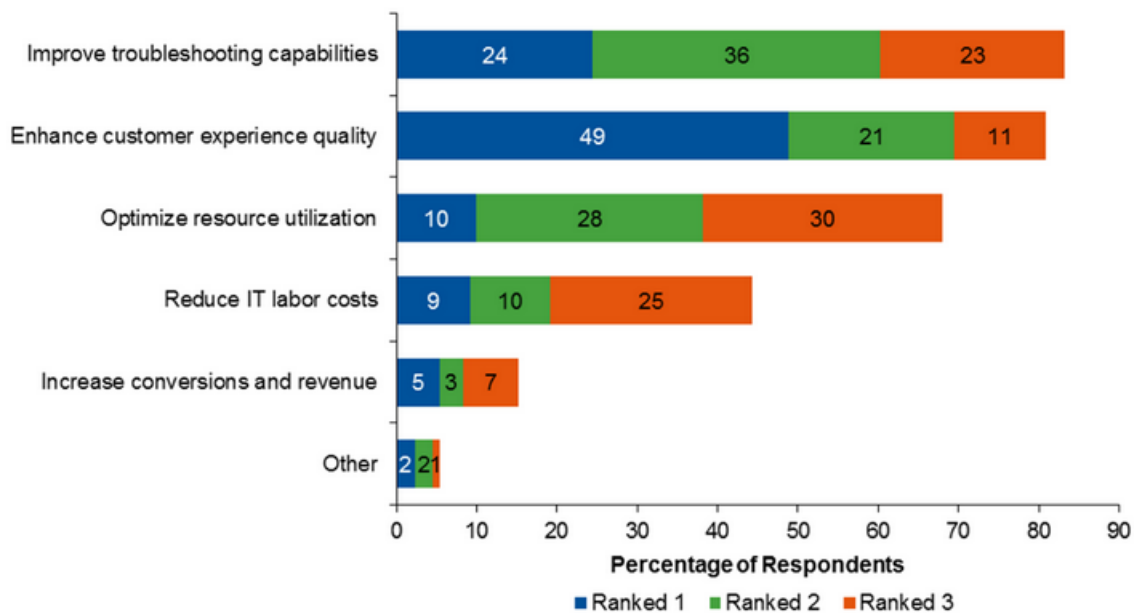
## Synthetic Monitoring vs. Real User Measurement

So how do you monitor the end-user experience of your applications? The two most common techniques are synthetic, or active, monitoring, and real user measurement, or passive monitoring.

Synthetic monitoring simulates user interactions with your online applications, including fully scripted transactions, from any location around the globe. By simulating user interactions in this way, you can constantly test applications for availability and response time.

But synthetic monitoring doesn't just return performance metrics, it provides detailed information on what's causing application performance to degrade. This can be a problem with one of the web hosts supporting the application, third-party tags for advertising, personalization, or social media, API calls between applications, or the Internet infrastructure supporting the applications, including domain name servers, content delivery networks, Internet service providers and cloud service providers. By testing constantly using synthetic monitoring, you can pinpoint performance issues before your users are impacted. See Section 6 for some examples of how our customers pre-empted performance issues and kept their applications available and fast.

## The Most Important Reason(s) for APM Investments



Source: Gartner (June 2015)

Synthetic monitoring can be used to monitor application performance from around the world, using Catchpoint's network of more than 500 Internet backbone, mobile and last mile nodes, or internally, behind the firewall, using Catchpoint's OnPrem Agent. While the former is ideal for customer-facing web applications, the latter is typically used for "first-mile" monitoring of SaaS applications before they hit the Internet, in-store applications for retailers, and applications used in branch offices and call centers.

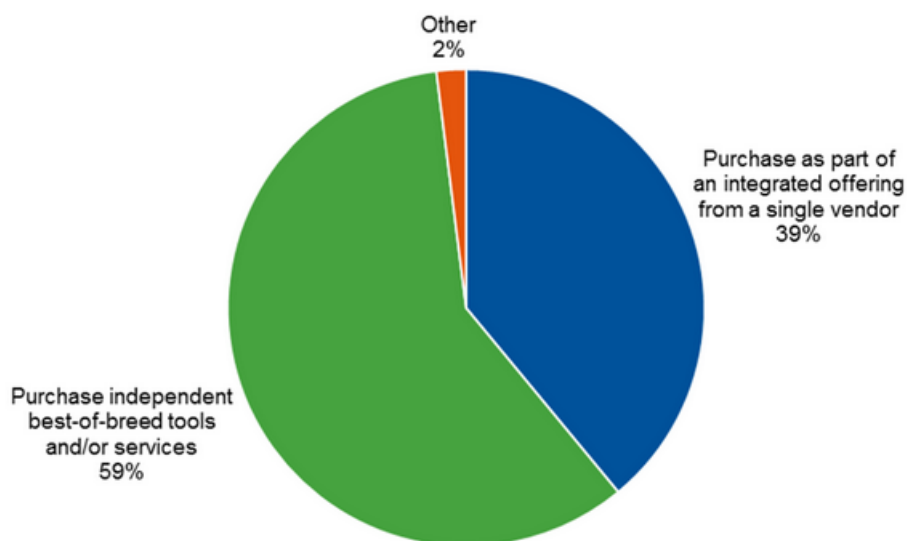
Real user measurement, or RUM, allows you to observe actual end-user interactions with your applications. You can observe how users navigate the application, what their behavior is on the application, where they

drop off, etc. This can not only help you drill-down into specific application issues, but can also show you what interactions to script using synthetic monitoring. Correlating synthetic metrics with RUM data can show how users are potentially affected by detected performance issues, or whether users dropping off, such as with shopping cart abandonment, has more to do with a design flaw. You can also gauge how fast your site needs to be to keep your customers engaged.

## What We Monitor

Modern web applications depend on a complex mix of code, infrastructure and services. A breakdown anywhere in this mix can slow your application's performance or take it offline altogether.

## APM Product Buying Preferences



*n=131*

*Source: Gartner (June 2015)*

Digital businesses need to know not just how long it takes applications to load and respond but also to know and have visibility into all of the variables that affect that performance, including DNS, third-party tags, objects on the page, APIs, web hosts and more.

To illustrate the breadth and depth of our monitoring capabilities, let's look at some recent errors our benchmark tests have caught:

### DNS

DNS is the address system of the Internet, mapping Web URLs to their corresponding IP addresses. It needs to resolve not just for your own web domains, but for any other web domains that support your site.

In Figures 1 and 2, HomeDepot.com experienced a spike in response time after DNS was slow to resolve for res-x.com, a third-party tracking analytics service.

### Third-party tags

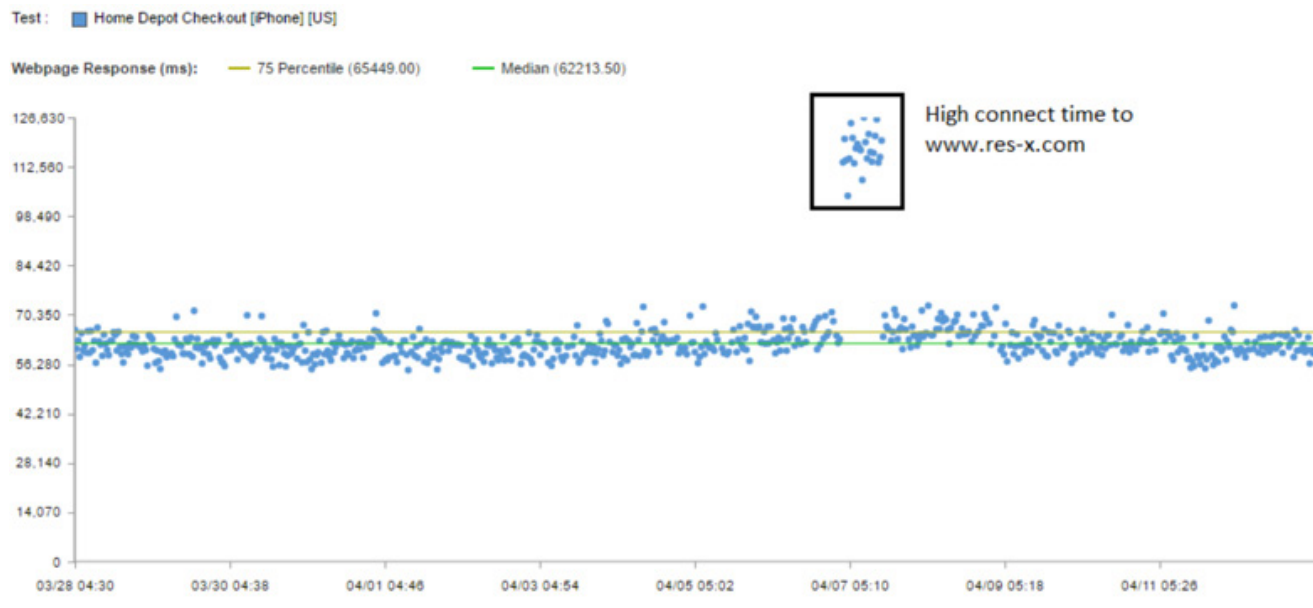
Most web applications make calls to third-party services for personalization, advertising, social media or visitor tracking. In Figure 3, Nordstrom.com experienced a week-long slowdown because of slow connect times to an online advertising service.

### Heavy images

Catchpoint can provide you with object-level performance data, meaning we tell you not just how fast your web application is loading, but how fast every

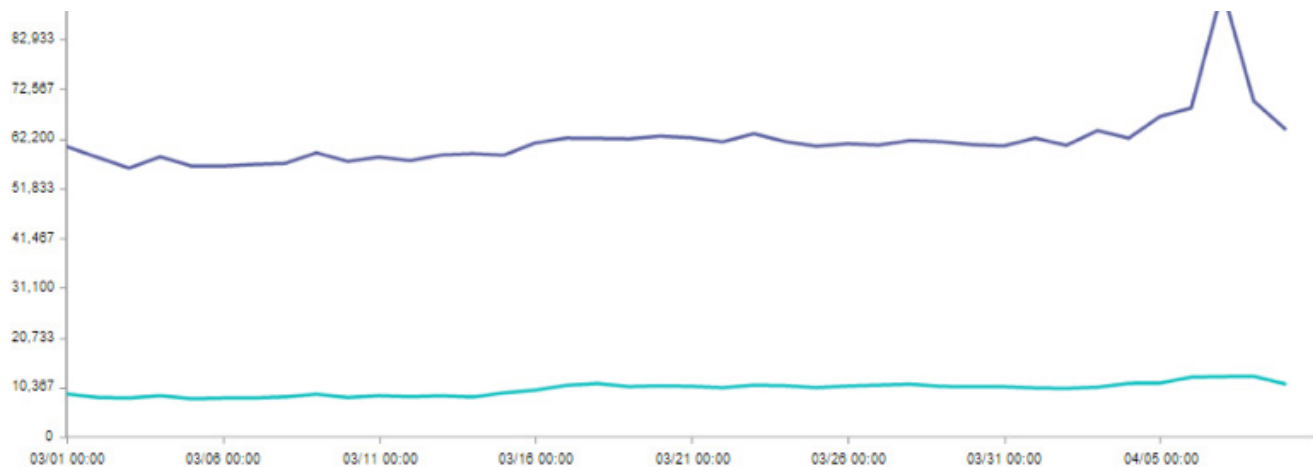


**Figure 1. High DNS resolution time for third-party tracking service**



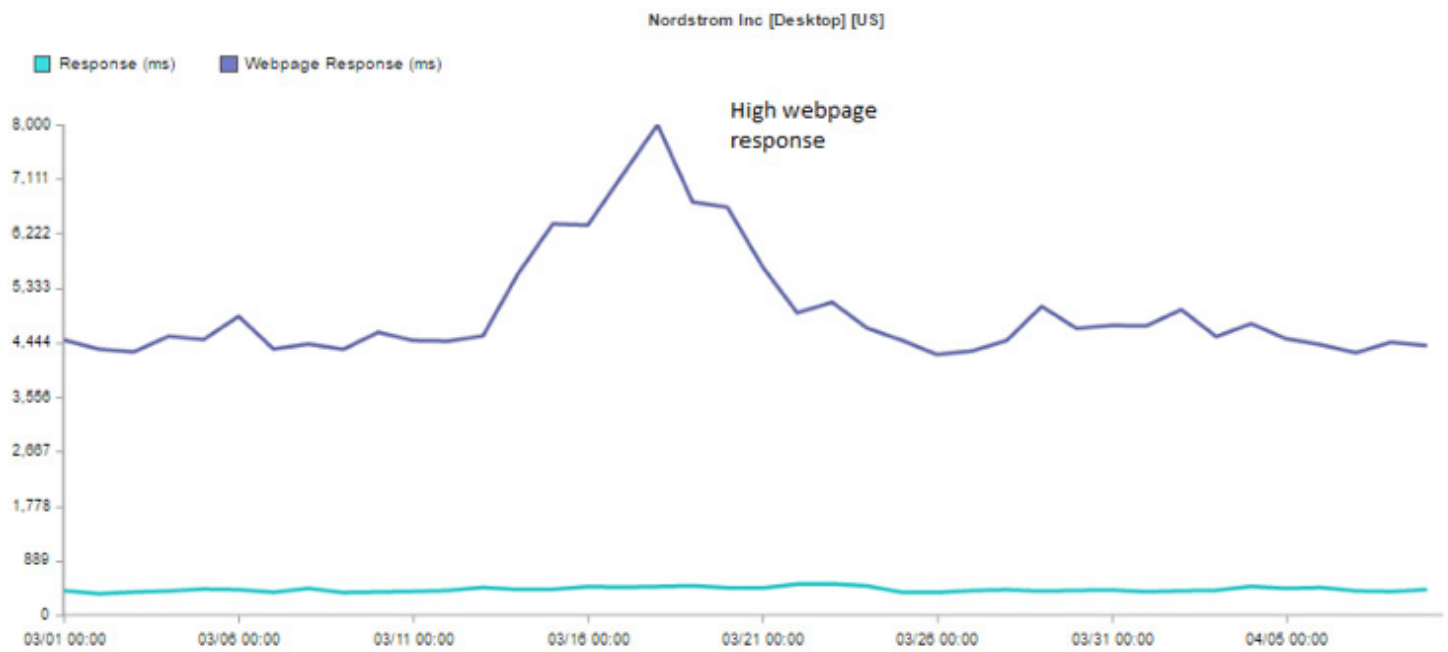
Source: Catchpoint

**Figure 2. Corresponding spike in webpage response time**



Source: Catchpoint

Figure 3. Week-long slowdown in webpage response time



Source: Catchpoint

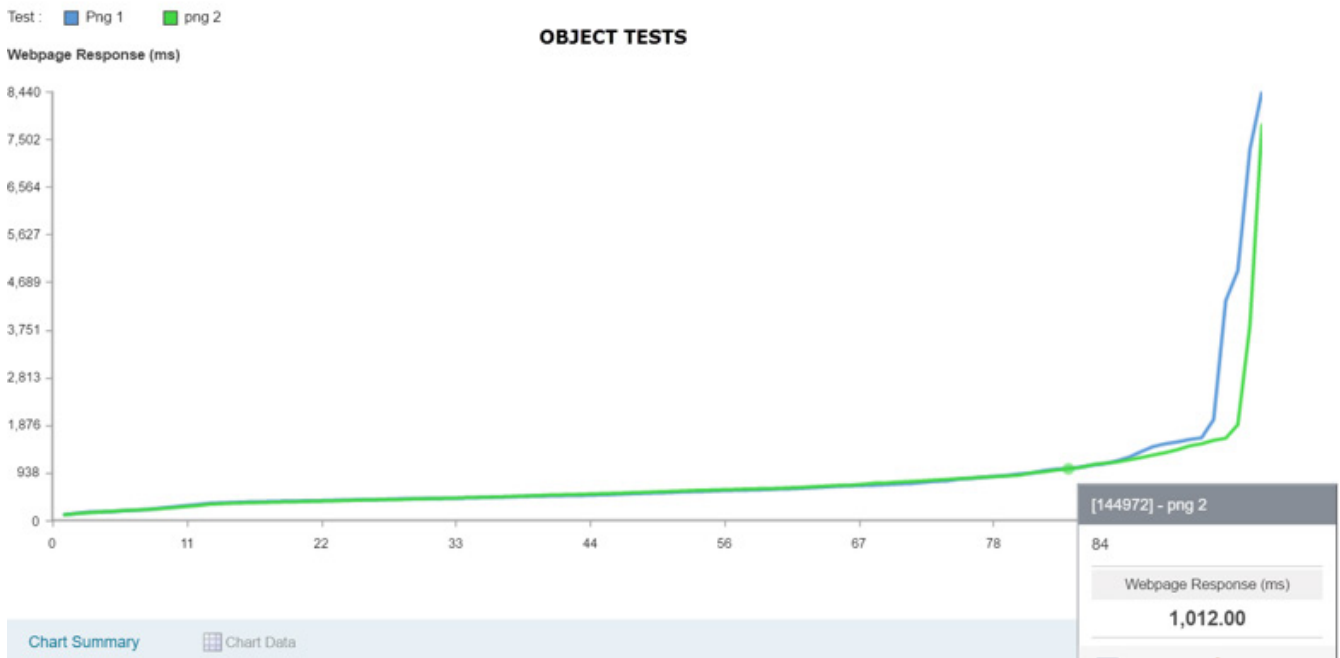
Figure 4. Two large images detected on site

#	Path/File	Host	IP Address	Connection Id	Response Code	Content Type	HTTP Info	Initiator URL	Header Size	File Size	DNS
52	24/2034104_assets/Hawaii_BG.png	www.bathandbodyworks.com	23.76.131.8	2	200	image/png	200 OK	http://www.bathandbodyworks.com/	338	3,494,053	0
79	27/2627358_assets/Hawaii_BG.png	www.bathandbodyworks.com	23.76.131.8	3	200	image/png	200 OK	http://www.bathandbodyworks.com/	337	3,494,053	0
42	4104_assets/Hawaii_main_xoaf.png	www.bathandbodyworks.com	23.76.131.8	6	200	image/png	200 OK	http://www.bathandbodyworks.com/	336	490,350	0
53	34104_assets/Hawaii_main2_BO.png	www.bathandbodyworks.com	23.76.131.8	4	200	image/png	200 OK	http://www.bathandbodyworks.com/	336	421,803	0
91	27358_assets/Hawaii_main2_BO.png	www.bathandbodyworks.com	23.76.131.8	5	200	image/png	200 OK	http://www.bathandbodyworks.com/	335	421,803	0
41	2034104_assets/Hawaii_main1.png	www.bathandbodyworks.com	23.76.131.8	4	200	image/png	200 OK	http://www.bathandbodyworks.com/	336	345,259	0
38	29034104_assets/Hawaii_main7.png	www.bathandbodyworks.com	23.76.131.8	1	200	image/png	200 OK	http://www.bathandbodyworks.com/	336	345,259	0

Source: Catchpoint

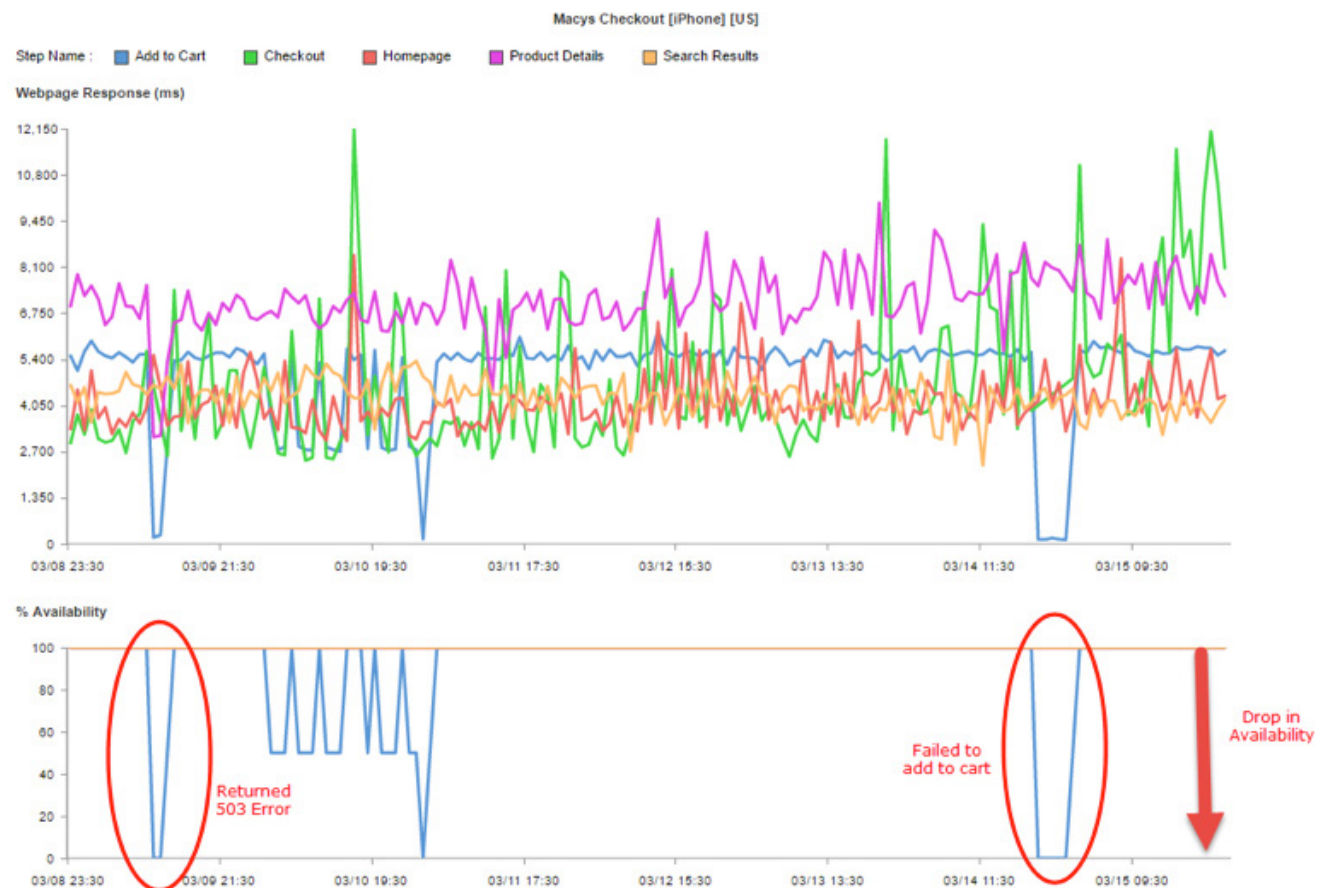


**Figure 5. High object response times caused by large images**



Source: Catchpoint

**Figure 6. High response times, loss of availability during checkout process**



Source: Catchpoint

object on the page is loading. In this case (see Figures 4 and 5), Bath & Body Works' site saw a response time spike because of two large images on its site that each took more than 1 second to load.

### Transactions

Multi-step transactional applications, such as for ecommerce, can introduce a whole new set of complexities. It's necessary to test these transactions step-by-step to make sure they are working as intended. In the example in Figure 6 above, Macy's had both high response times and even a total loss of availability during the add-to-cart process.

While the site came back up, the product was not added to the cart (see Figure 7):

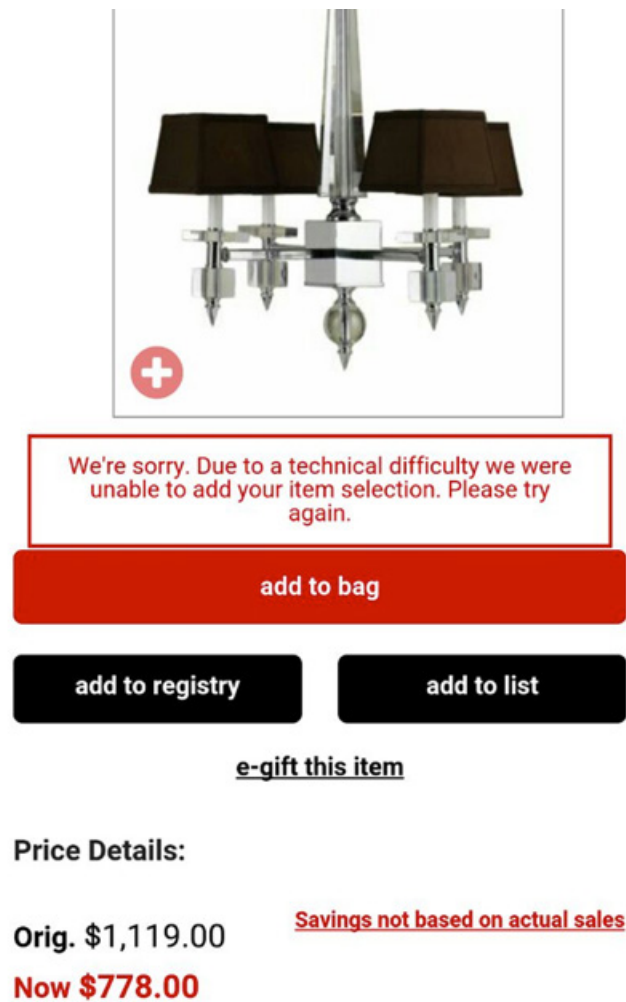
### 1st Party Webhost

Media site TheNextWeb serves content from multiple webhosts. During one three-day period, one of those hosts (<http://lilbro.thenextweb.com>) had long connect times and eventually timed out, causing the entire site to have slow response times and loss of availability (see Figure 8, 9, and 10).

### Online events

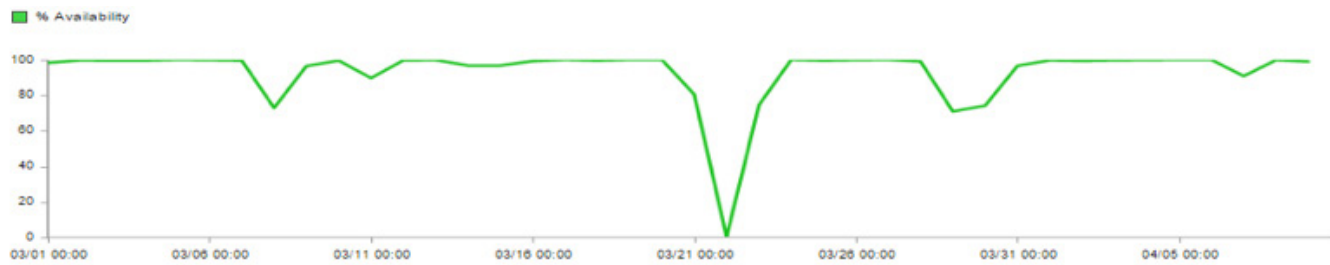
Online events, whether they are major online shopping days (Cyber Monday, China Singles Day, etc.), sales or promotions for a particular site, or major news or sporting events can drive more traffic than your site can handle. In Figure 11, we see a performance chart for multiple UK betting sites in the days leading up to the 2016 Grand National horse race. Three betting sites

**Figure 7. Site error message**



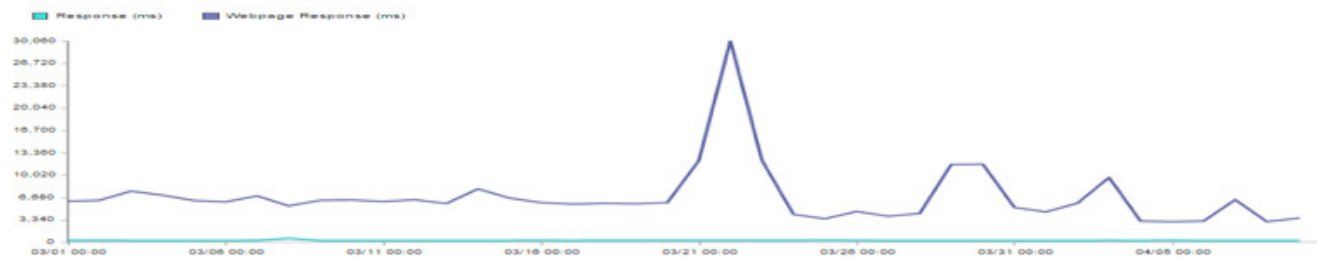
Source: Catchpoint

**Figure 8. Loss of availability**



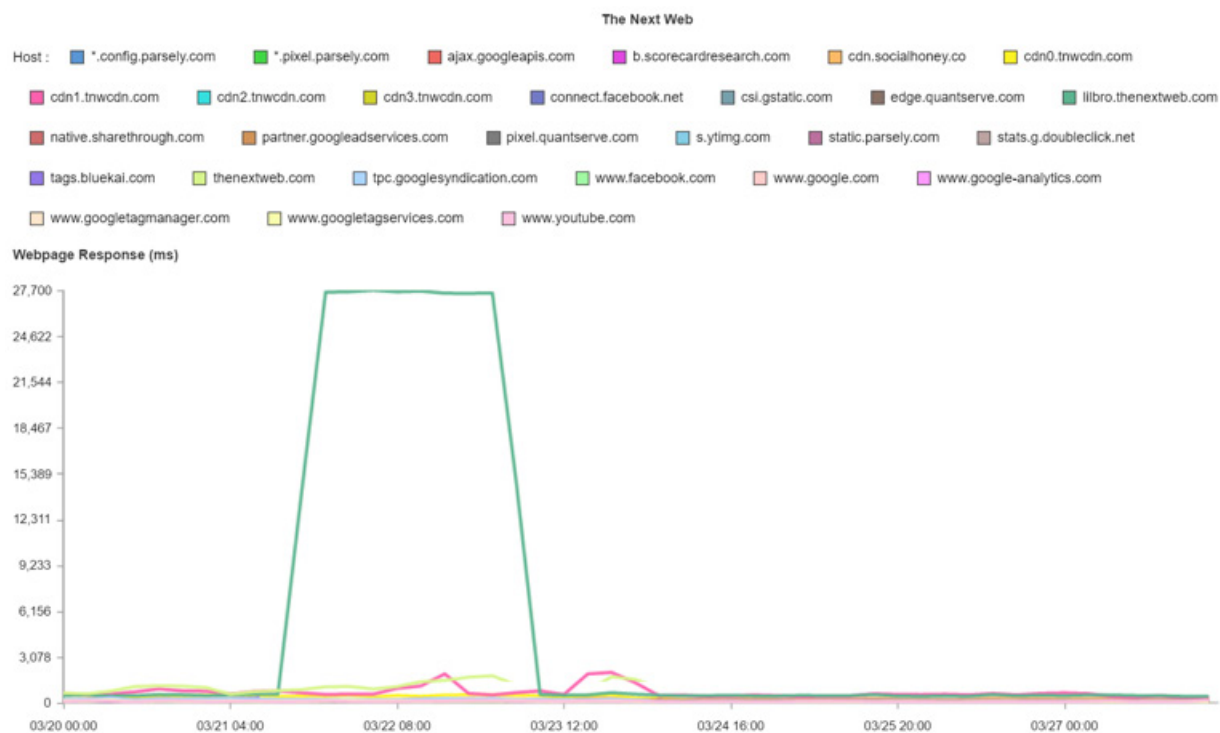
Source: Catchpoint

**Figure 9. Corresponding spike in response times**



Source: Catchpoint

**Figure 10. Culprit is libro.thenextweb.com host**



Source: Catchpoint

**Figure 11. UK betting sites before, during and after Grand National horse race**



Source: Catchpoint

had spikes in response times, especially in the last few days before the race and on the day of the race. An estimated 25% of the UK's population places wagers on the race, according to the Grand National's website.

## Back-end Integration and Alerting

Of course not every application performance issue can be traced to web hosts and objects or third-party Internet infrastructure and services, as important as these factors are. The chart in Figure 12 shows how Bed, Bath and Beyond's mobile site had high response times and eventually timed out with webpage response times mirroring server response times.

In the accompanying screen capture, the company even acknowledged a server issue on its site.

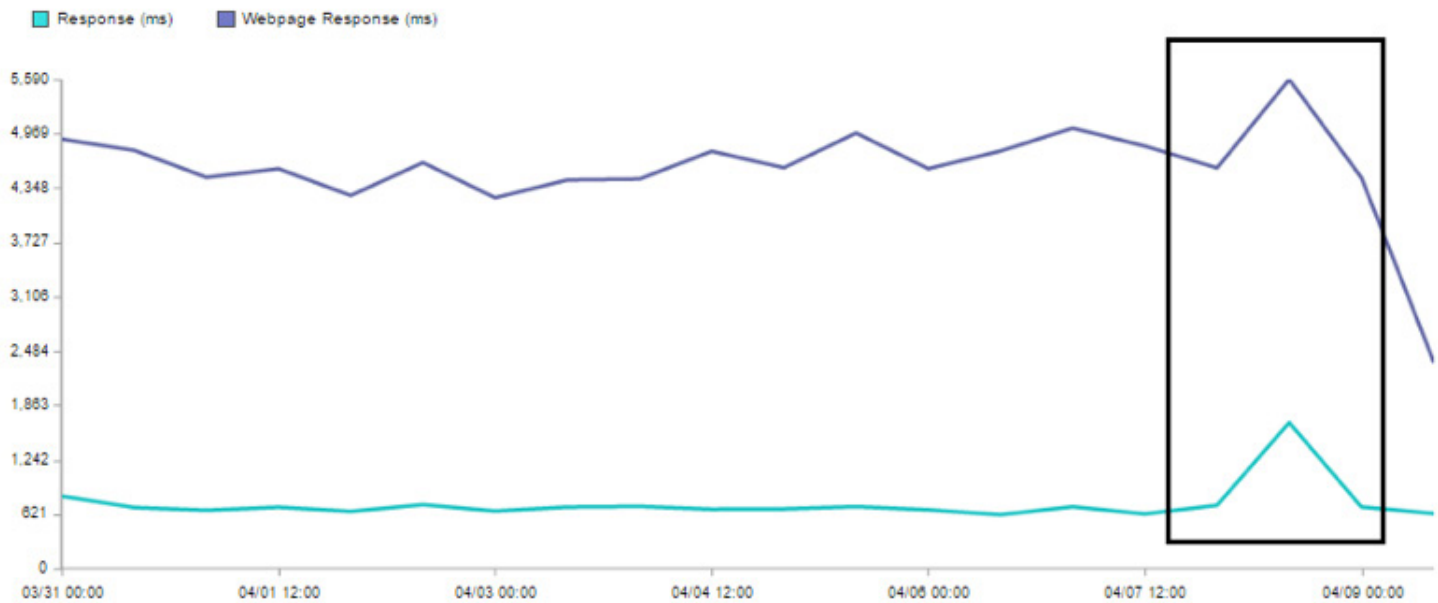
Sometimes telling a customer what isn't causing a performance or availability issue is just as important as telling them what is causing it. When the usual web and internet-related suspects can be eliminated,

customers have to look more at the internal application, server and network infrastructure that supports their applications. In the above case, a Catchpoint alert of a spike in response times or server timeout could be integrated with alerts from a server monitoring tool. That way the customer sees how its end users are impacted and what happened on its own back end that caused the problem.

It's no surprise then that the most popular integration request we get from customers is for alerting tools. We integrate with alerting platforms like AlertOps, OpsGenie and PagerDuty. These platforms can consolidate your various alerts and manage who gets notified by them and by what channel. We have a similar integration with communications platform Slack. For more advanced alert correlation and analytics, we integrate with BigPanda. This allows you to correlate multiple alerts into events, reducing alerting noise and speeding mean time to resolution (MTTR).



**Figure 12. Internal server error**



Source: Catchpoint

## Internal Server Error - Read

The Server encountered an internal error or misconfiguration and was unable to complete your request.

Reference #3.ce384317.1460172866.50cbff4

We can also integrate directly with other monitoring platforms like Datadog, helping to provide a single, integrated view of what's causing your performance problems and how your customers are impacted, or even which customers are impacted. Best-of-breed does not, and should not, mean siloed.

## Customer Use Cases

### IAC

IAC is the digital media company behind leading Internet brands such as Ask.com, About.com, Match.com, Tinder, HomeAdvisor, Daily Beast and Vimeo. Its whole business depends on delivering fast, engaging and satisfying online customer experiences. It turned to Catchpoint Synthetic to monitor all of its digital brands. The result? Triage of performance issues became 6X faster. And 95% of issues were preempted before customers were impacted.

## US Auto Parts Network

US Auto Parts Network is a leading online provider of aftermarket auto parts, including body parts, engine parts, performance parts and accessories. The online retailer needed to proactively monitor its ecommerce applications and quickly uncover performance bottlenecks. Using a combination of Catchpoint Synthetic Monitoring and Glimpse real user measurement, US Auto Parts is able to gain deep visibility into how its site is performing from an end-user perspective. It's seen a 4X decrease in the time to triage performance issues with 99% of performance issues pre-empted. And the company's revenue is protected.

## Verizon Digital Media Services

Verizon Digital Media Services provides a next-generation digital content platform, streaming 150m hours of video every month and powering 7% of the Internet. The websites and digital media it hosts have to be fast and accessible through multiple devices, in any location, with no loss in quality. Verizon Digital Media Services include video content management, web acceleration and commerce acceleration.

The company needed to proactively monitor its platform and services from around the globe to ensure high performance and validate the service level agreements it signs with its customers. At the end of the day, it needs to provide its clients with the ability to deliver high-quality digital experiences.

Verizon uses a combination of Catchpoint Synthetic and Glimpse to monitor web performance, including FTP and HTTP requests, APIs and multi-step

transactions. It particularly likes being able to slice and dice data any way it needs to in order to identify performance issues faster.

With Catchpoint, Verizon reports it can identify problems 4X faster and pre-empt 99% of performance issues. It has also reduced false alerts by 90%, something of paramount importance considering the vast global infrastructure network this Verizon group must manage.

## AppNexus

Online advertising platform AppNexus has to closely monitor its own performance so that the online advertisements it serves don't slow down or take down its clients' websites. This allows publishers to monetize their content and advertisers to promote their products and services without harming end-user experience. Performance issues have to be detected and remediated before end users are impacted.

AppNexus found that Catchpoint Synthetic was invaluable to this effort, pre-empting 99% of performance issues and validating that its services were not harming performance of clients' sites

## Honeywell

Honeywell is a very large, multinational manufacturing company with businesses in many industries including life sciences, energy, chemical engineering, oil and gas, and aerospace. The company has more than 150,000 employees spread around the globe plus contractors and sub-contractors. With global IT infrastructure to support these employees, including

applications, databases, servers and network infrastructure, the company made monitoring of customer, or end-user experience its No. 1 priority.

So after using Catchpoint Synthetic Monitoring to solve web performance issues in China, the company deployed OnPrem Agent in its remote locations to monitor application performance for its employees. OnPrem Agent allowed Honeywell to see how applications performed in different regions of the world at different times of day. For example, it was able to see how performance of ERP applications in EMEA held up as US east coast users came online.

Honeywell then went one step further. It deployed OnPrem Agent on its fleet of corporate jets to help solve performance issues with its in-flight Internet services.

With OnPrem Agent installed on planes and at satellite communications ground stations, Honeywell was able to quickly determine that its slow in-flight Internet was caused by oversaturated satellite spotbeam services at peak travel times. The service provider was providing the contracted level of service, but Honeywell found that that level of service didn't meet its needs. The company needed to subscribe to a better quality of service during peak usage times.

Honeywell solved its inflight Internet service issues and proved that OnPrem Agent can go wherever you need it to go, wherever there's network connectivity, and give you precision performance metrics on customer experience from those locations.

## Conclusion

As Gartner research shows, end-user experience is the most important dimension of APM, and enhancing the quality of the customer experience is the most important reason for investing in APM tools. Back-end metrics are important and can tell you a lot about the health of your online systems, but mean little without the context of what the end user is experiencing.


Modern online applications depend on multiple infrastructure layers and services, both internal and external to an organization. Enterprises need visibility into all of these infrastructure layers and servers and need to be able to see how they affect end-user experience. By constantly monitoring end-user experience in this way, enterprises can respond to performance issues before end-user experience is impacted, keeping customers happy and coming back for more, and protecting their brands.

With its mix of Synthetic Monitoring and real user measurement, Catchpoint can provide digital performance analytics on the end-user experience of all your online systems, both inside and outside the firewall. These analytics can be correlated with alerts from your other monitoring systems to close the performance management loop and ensure amazing end-user experiences for all of your customers.

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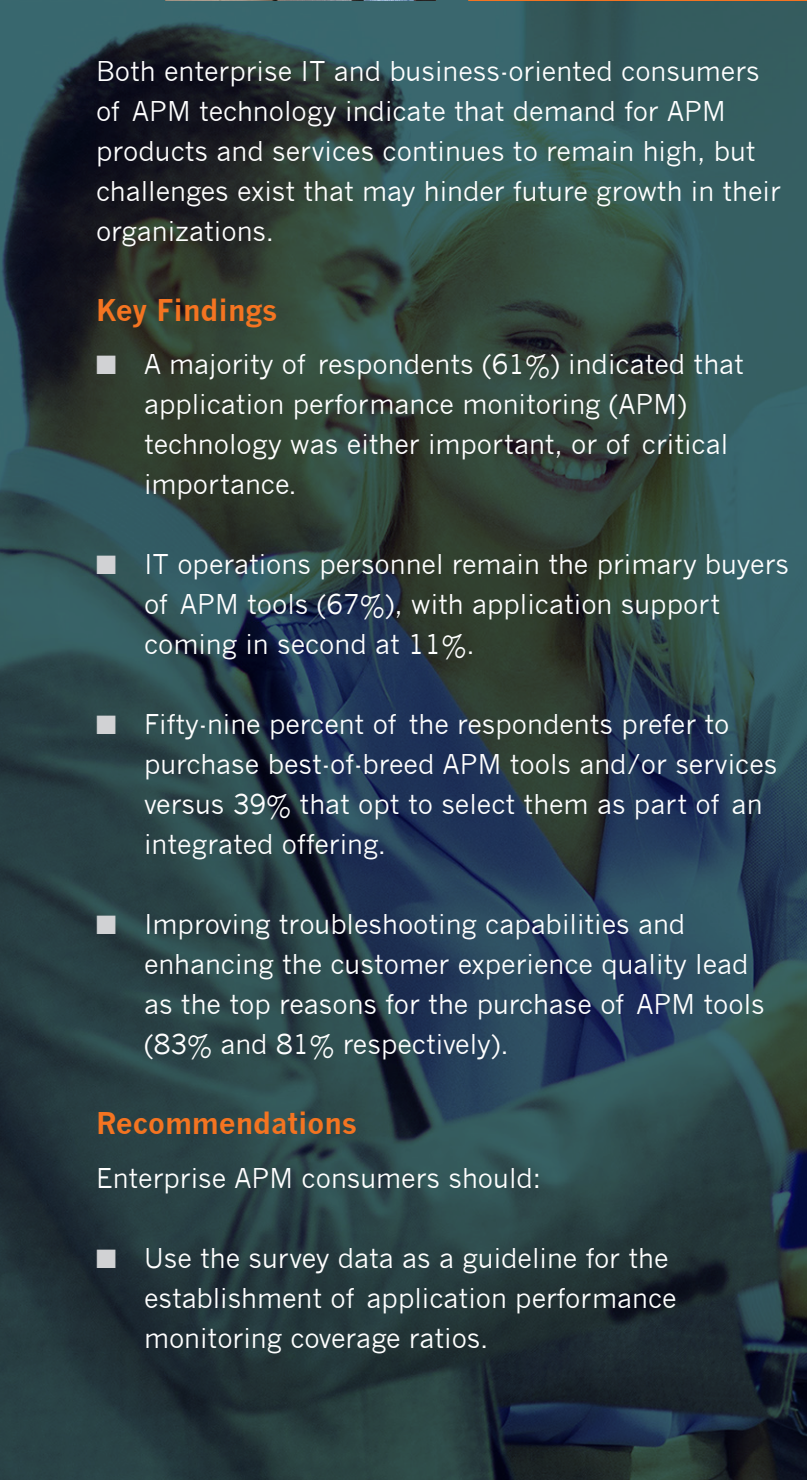
*Source: Catchpoint*





Research from Gartner:

# Survey Analysis: End-User Experience Monitoring Is the Critical Dimension for Enterprise APM Consumers



Both enterprise IT and business-oriented consumers of APM technology indicate that demand for APM products and services continues to remain high, but challenges exist that may hinder future growth in their organizations.

## Key Findings

- A majority of respondents (61%) indicated that application performance monitoring (APM) technology was either important, or of critical importance.
- IT operations personnel remain the primary buyers of APM tools (67%), with application support coming in second at 11%.
- Fifty-nine percent of the respondents prefer to purchase best-of-breed APM tools and/or services versus 39% that opt to select them as part of an integrated offering.
- Improving troubleshooting capabilities and enhancing the customer experience quality lead as the top reasons for the purchase of APM tools (83% and 81% respectively).

## Recommendations

Enterprise APM consumers should:

- Use the survey data as a guideline for the establishment of application performance monitoring coverage ratios.





- Deploy best-of-breed approaches as skills and finances dictate, but make sure to account for the potentially higher costs of integration.
- Continue to monitor for improvements in areas such as security and data privacy as well as integration, and consider APM as a service where conditions and policies warrant if you are enterprise customers of on-premises APM tools.
- Select products that enable not only the understanding of the end-user experience, but also the context of the business impact of poor performance.

### Survey Objective

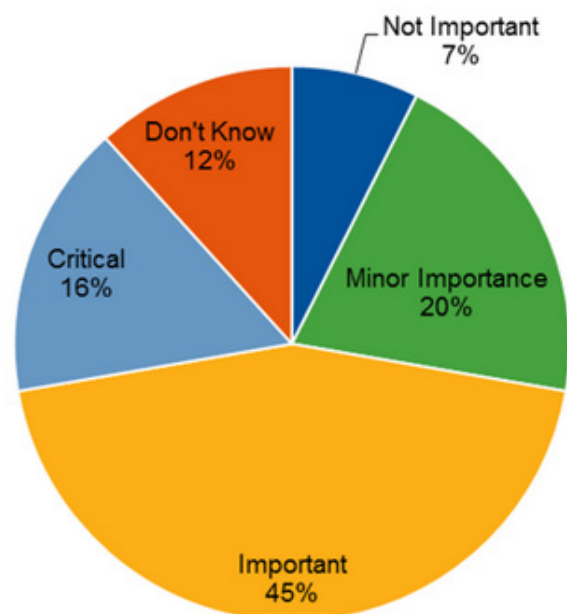
The goal of the APM market analysis survey, conducted 11 March 2015 through 25 March 2015, was to better understand the current sentiment, as well as market requirements related to the enterprise consumption of APM products and services. Gartner was specifically interested in understanding the primary inhibitors to increased enterprise APM product (or service) adoption.

### Data Insights

#### APM Is Important but Penetration Remains Modest (and Uneven)

In this section of the survey, we wanted to understand the degree of APM penetration, as well as to establish whether or not there were any correlations to APM usage and the “mission-criticality” of the application. First, however, we sought to establish the importance of APM tools overall (see Figure 1).

**Figure 1. Importance of APM Tools for the Management of Enterprise Applications**

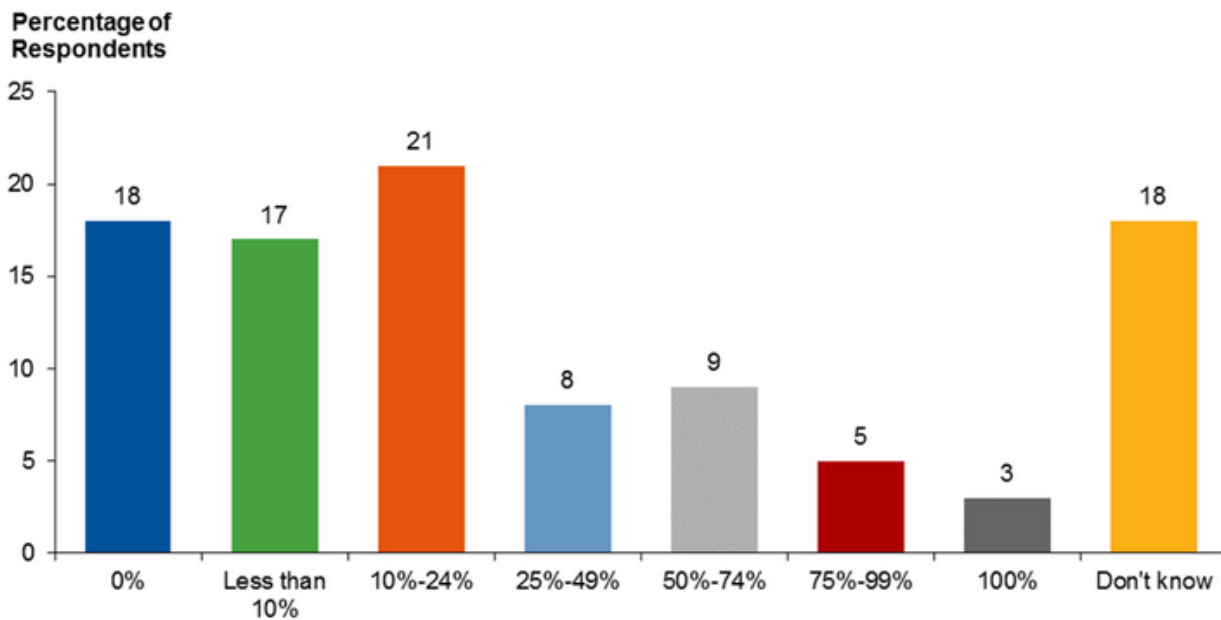


Source: Gartner (June 2015)

Overall, 61% of respondents viewed APM as either important (45%) or critical (16%). Sixty-three percent of that 61% have enterprise applications being monitored by an APM solution, with the largest cohort being 21% of the respondents having somewhere between 10% and 24% of their applications being monitored, and another 17% having less than 10% (but more than 0) usage (see Figure 2).

These two questions (how important are APM tools, and what percent of applications are monitored) were used as filters for further survey answering since we did not want to skew the survey with input from

**Figure 2. Percentage of Enterprise Applications Currently Monitored by an APM Solution**



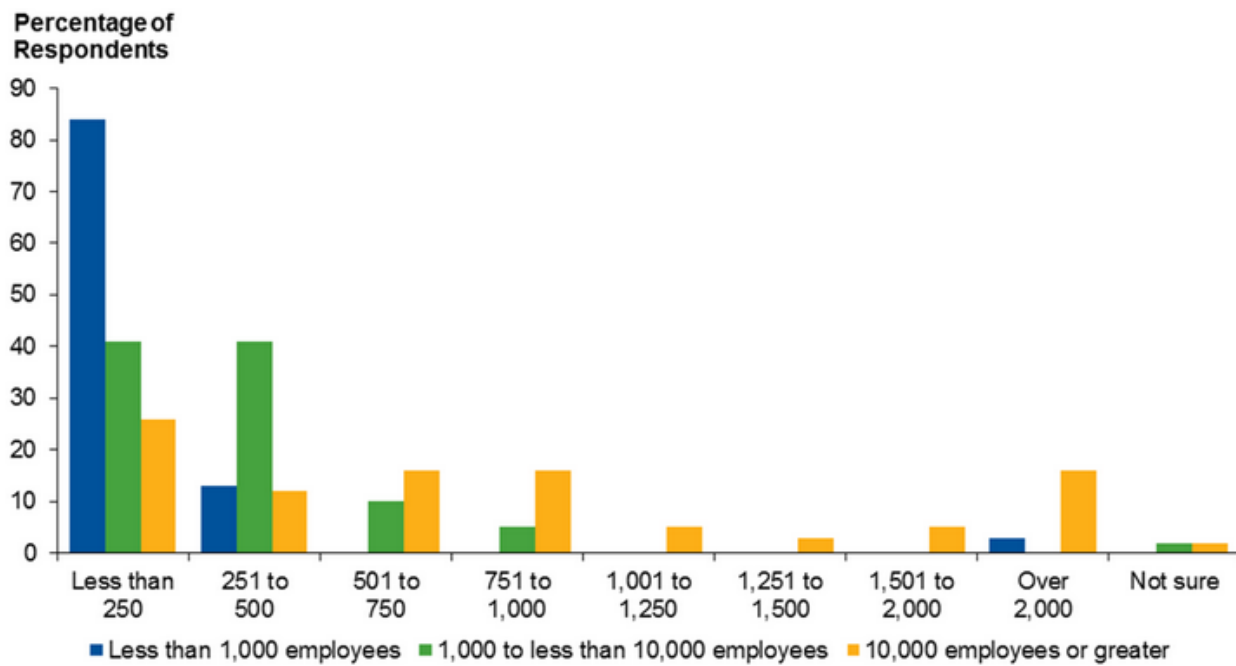
Source: Gartner (June 2015)

individuals that didn't at least see some degree of importance in, or were not currently using, APM tools. (Note: Postfiltering based upon these questions, the survey results show that APM tools were important to 58% of the respondents, critical to 25% and of minor importance to 17%.)

We also looked at installed base of applications sorted by size of company using the number of employees as the metric (see Figure 3). Gartner did not delineate between on-premises or cloud-based applications. The goal here was to establish the ceiling of applications that might possibly be monitored by an APM solution. While the range varies considerably in Figure 3, Table 1 below shows the average number of applications by company size.

Gartner also looked at the application installed base by company revenue, even though, in most of these samples the respondent sizes were small. Historically, there has been a rule of thumb within Gartner that a Global 2000 organization would typically have 2,000 or more applications (note: in calculating the annual Global 2000 listing, Forbes uses a model leveraging four metrics, of which one is revenue; the minimum revenue required in 2015 was \$4.16 billion). From the data, only 13% of companies with between \$3 billion and \$10 billion in revenue had over 2,000 unique server applications, while 24% of companies with revenue exceeding \$10 billion had over 2,000 applications. Thus, while some of these Global 2000-class companies met the rule of thumb, most did not.

**Figure 3. Number of Unique Server-Based Applications by Category**



Source: Gartner (June 2015)

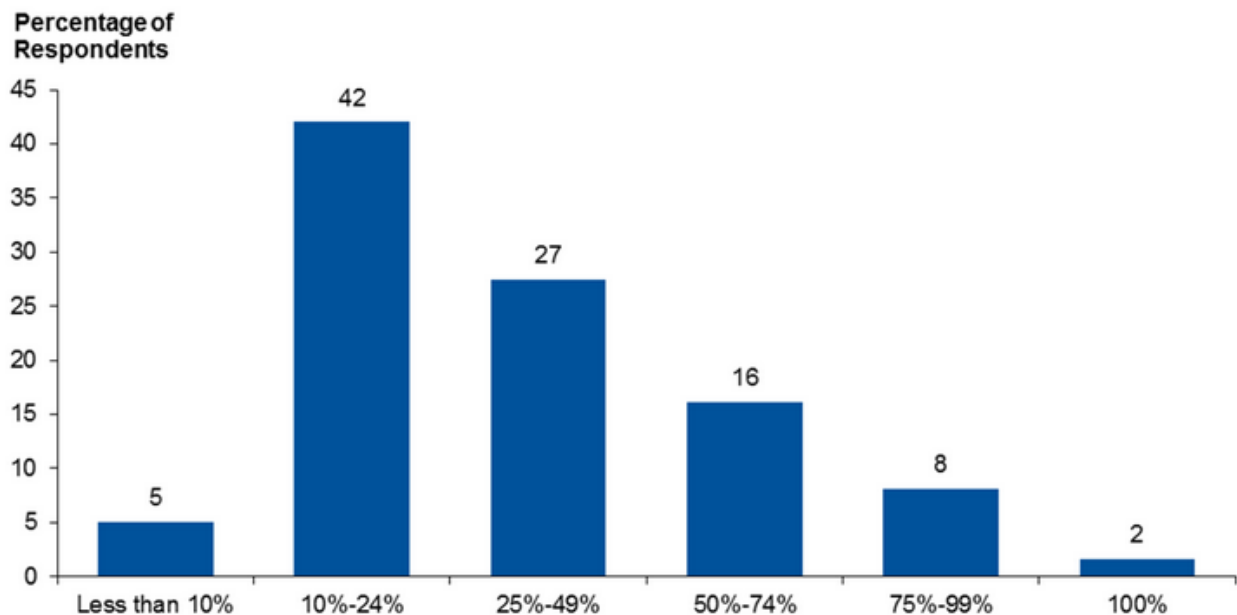
**Table 1. Average Number of Applications Based on Company Size**

	Companies < 1,000 employees	Companies with between 1,000 and 9,999 employees	Companies > 10,000 employees
No. of Applications	223	319	871
Source: Gartner (June 2015)			

We next asked questions regarding the number of server-based applications considered mission-critical, as well as the percentage of enterprise applications monitored by an APM solution today. As guidance for the respondents, Gartner defined mission-critical as “typically external, customer-revenue-generating applications with very short recovery time objectives and high-availability requirements.” Figure 4 shows that data.

Fifty-three percent of the respondents indicated that over a quarter of their application installed base was deemed mission-critical, and 26% said that over half of their applications fit a similar status. We then filtered the results from the question represented in Figure 2 to remove those that were not monitoring any applications with an APM solution or didn’t otherwise know. The results are in Figure 5.

**Figure 4. Percentage of Unique Server-Based Enterprise Applications Considered Mission-Critical**

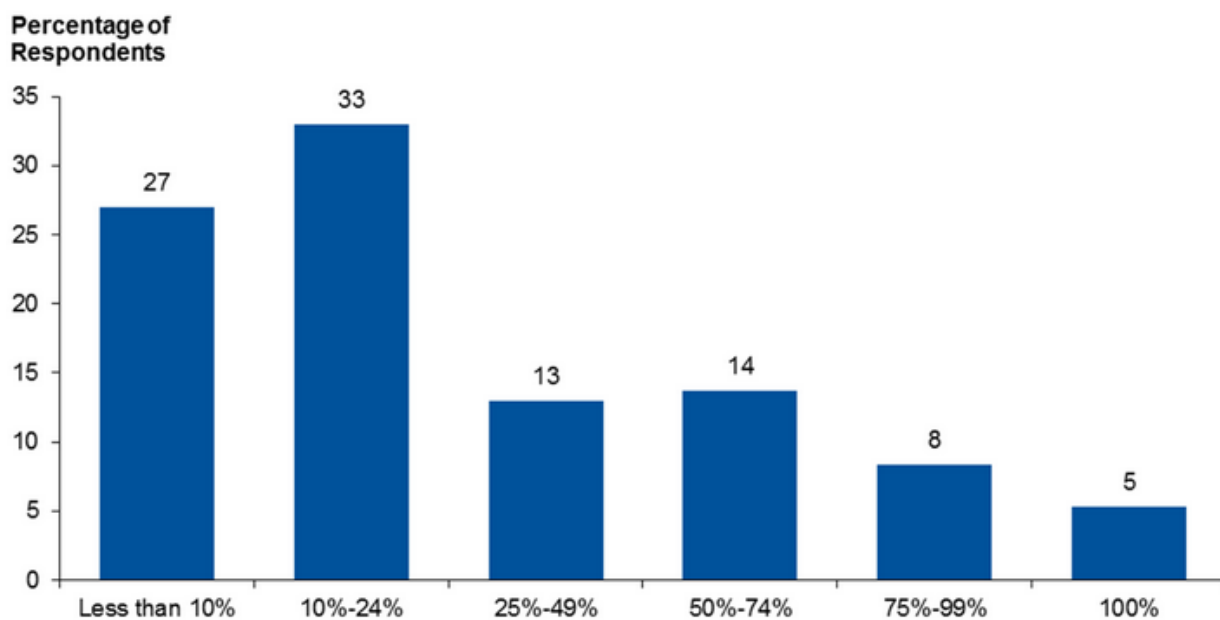


DK: don't know

Source: Gartner (June 2015)



**Figure 5. Percentage of Enterprise Applications Currently Monitored by an APM Solution (Filtered)**



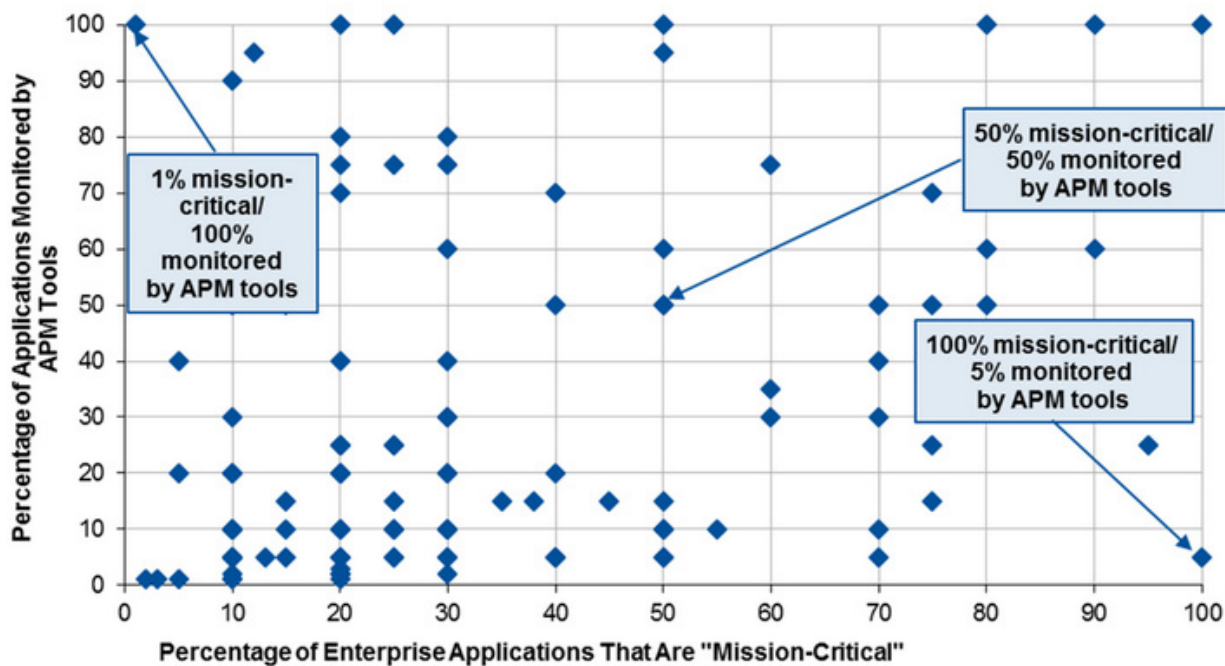
*n=131*  
 Source: Gartner (June 2015)

Visually comparing Figures 4 and 5, there seems to be some correlation between mission-criticality of an application and applications being monitored (the means were 32% and 30% respectively); but an analysis of all of the responses shows that, in fact, surprisingly, there is very little correlation between these two dimensions (see Figure 6). The definition of mission-critical may have influenced this result. Subsequent conversations with clients suggest that often times non-APM tools (such as Web analytics products and/or services from companies like Adobe,

Google and others) are used in place of at least some of the functionality that increasingly sophisticated APM products now also offer for external, or customer-facing or revenue-generating applications.

Overall, while the data shows that APM is viewed as an important enterprise requirement with a significant rate of usage, the conditions in which it is deployed remain surprisingly inconsistent.

**Figure 6. Comparison of Mission-Critical Versus Monitored Applications**



Source: Gartner (June 2015)

**Recommendation:**

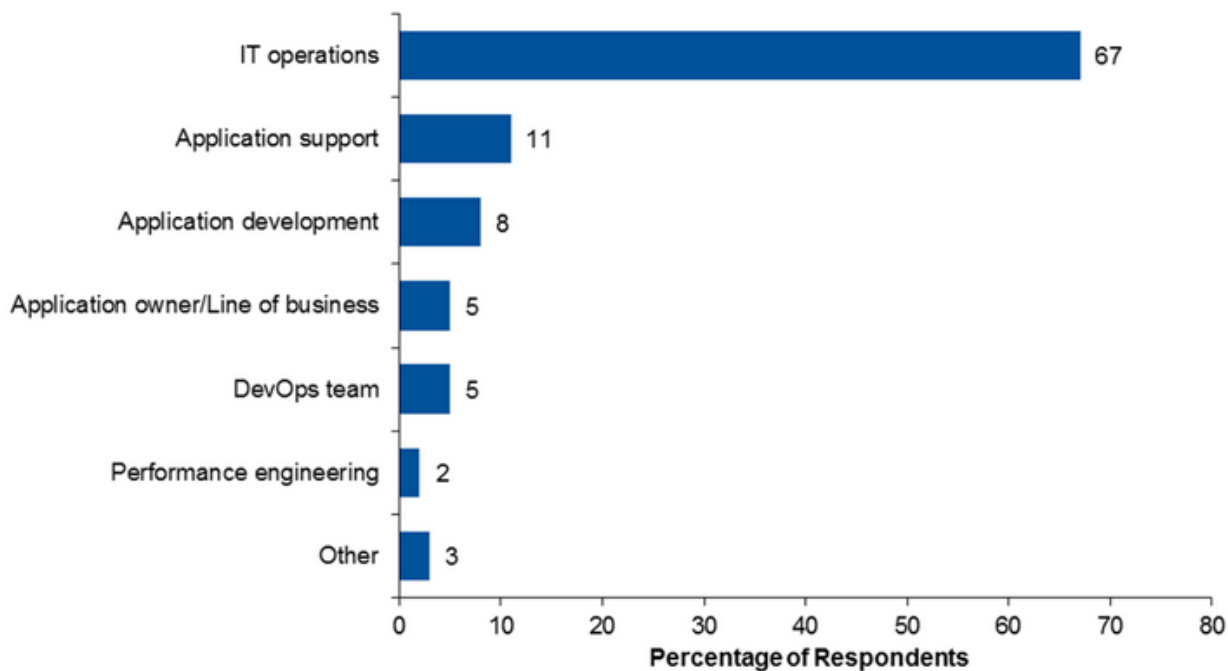
- Enterprise APM consumers should use this information as a reference point (in addition to guidance Gartner has previously published) to establish application performance monitoring coverage ratios, while ensuring that other considerations (such as application criticality and the monitoring cost) are taken into account.

**APM Buying Patterns Remain Consistent and Conservative**

IT operations remains the primary buyer of APM tools (see Figure 7).

Some of this may be explained by the fact that IT infrastructure and operations personnel were well-represented in the survey; however, the results were the same regardless of the industry, company size (people and revenue) and company technology

**Figure 7. The Primary Buyer of APM Tools**



Source: Gartner (June 2015)

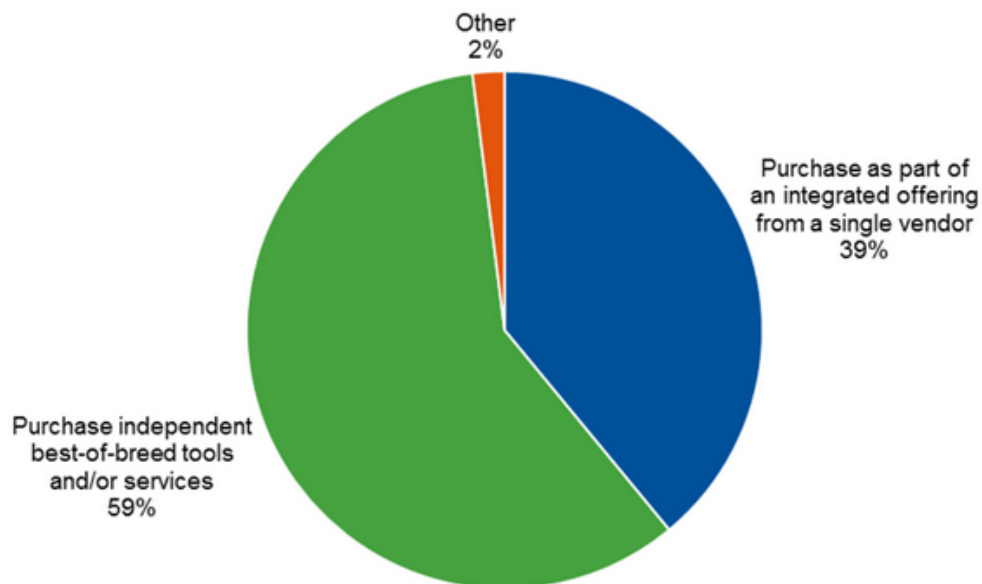
adoption (conservative, mainstream or aggressive). Keep in mind, however, that there is a growing trend influenced by the emergence of DevOps, where IT operations may still remain the buyer, but the consumer of the APM (and for that matter, network performance monitoring and diagnostics [NPMD]) data may well be someone other than in IT operations.

In terms of APM product buying preferences, as shown in Figure 8, purchasing best-of-breed tools was the desired option for almost 60% of the respondents. This is a buying pattern that we observe is often related to current economic conditions. When

economic times are poor, many enterprises decide to consolidate their purchases with the hope of saving money through better pricing through greater discounts. Likewise, so-called “flush” economic times, or at least nonrecessionary periods, often see a desire to focus on functionality, with cost not necessarily the primary purchasing criteria.

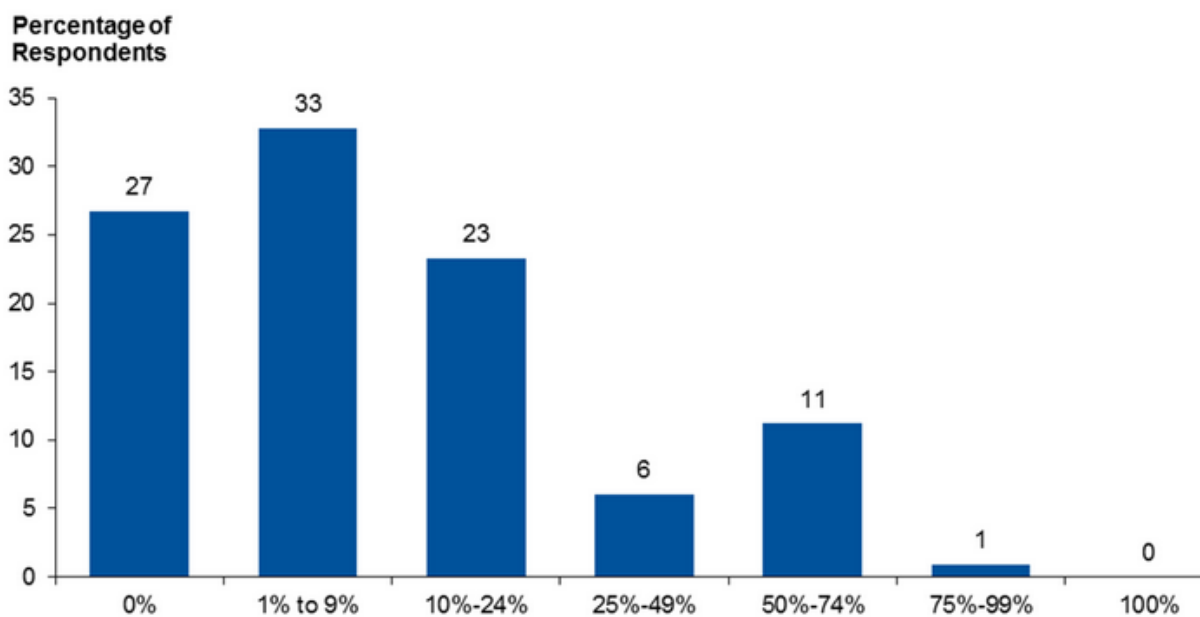
Finally, we wanted to assess the demand for SaaS-based APM offerings. The results (see Figure 9) clearly show that SaaS usage is still limited, with only 18% of the surveyed population indicating having 25% or more of their applications monitored using this method.

**Figure 8. APM Product Buying Preferences**



*n=131*  
Source: Gartner (June 2015)

**Figure 9. Percentage of Applications Managed Using a SaaS-Based Approach**



Source: Gartner (June 2015)



The overall data — whether by geography, industry or company size — did not deviate from this. Security/data privacy issues were the primary reason cited (almost across the board) for the lack of SaaS enthusiasm, with lack of integration with other management tools being the second most frequently selected reason for not deploying a SaaS-based APM service.

#### *Recommendations:*

- Enterprise APM consumers should deploy best-of-breed approaches as skills and finances dictate, but make sure to account for the potentially higher costs of integration.
- SaaS-based approaches are not currently in high demand for many enterprise APM consumers; however, enterprise customers of on-premises APM tools should continue to monitor for improvements in areas such as security and data privacy as well as integration, and consider APM as a service where conditions and policies warrant.

### **APM Justification Maps to the Most Important Product Features**

APM technology has been used over the years for a variety of tasks, for example, helping with problems, monitoring websites or profiling transactions. In the survey, we wanted to see if the reasons for purchase have changed in any significant manner. Figure 10 provides us with a glimpse into the current rationale for APM purchases.

In summing up all of the first, second and third-ranked choices, improving troubleshooting edged out enhancing the customer experience quality (83%

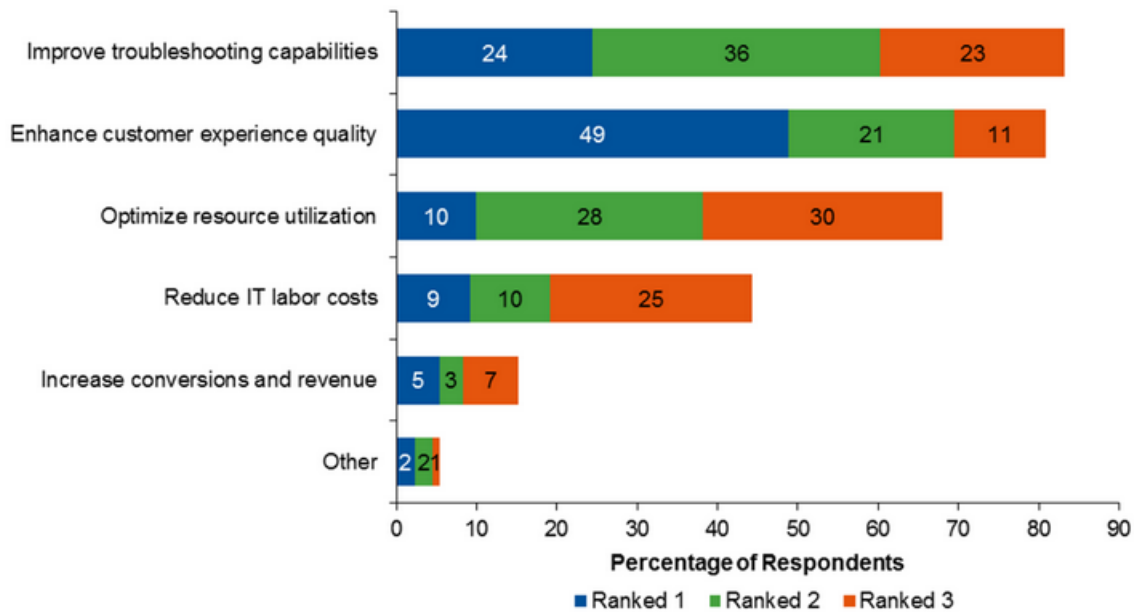
versus 81%); however, most of the respondents ranked the latter as their first priority or top ranking (49% to 24%). The detailed data showed that in only a few industries (utilities and nonprofit/government) was improving troubleshooting ranked first (again, same caveats on some of the industry statistics due to small sample sizes).

We then sought to understand which APM features or dimensions were in highest demand, to see if there was any correlation with the primary purchase criteria above. Figure 11 provides this information.

The preference for end-user experience monitoring aligns well with the desire to improve the customer experience quality as a purchase criteria. The interest in analytics at first does not seem to correlate with improving troubleshooting, but because of the increasing complexity of the application and infrastructure environment, we have observed rising client interest in analytics to improve root cause analysis and other capabilities. A subsequent question sought to understand the minimal set of capabilities required for a full-featured APM solution — the responses mirror the results in Figure 11, with end-user experience monitoring and IT operations analytics as the clear preferences and the other features lagging significantly behind.

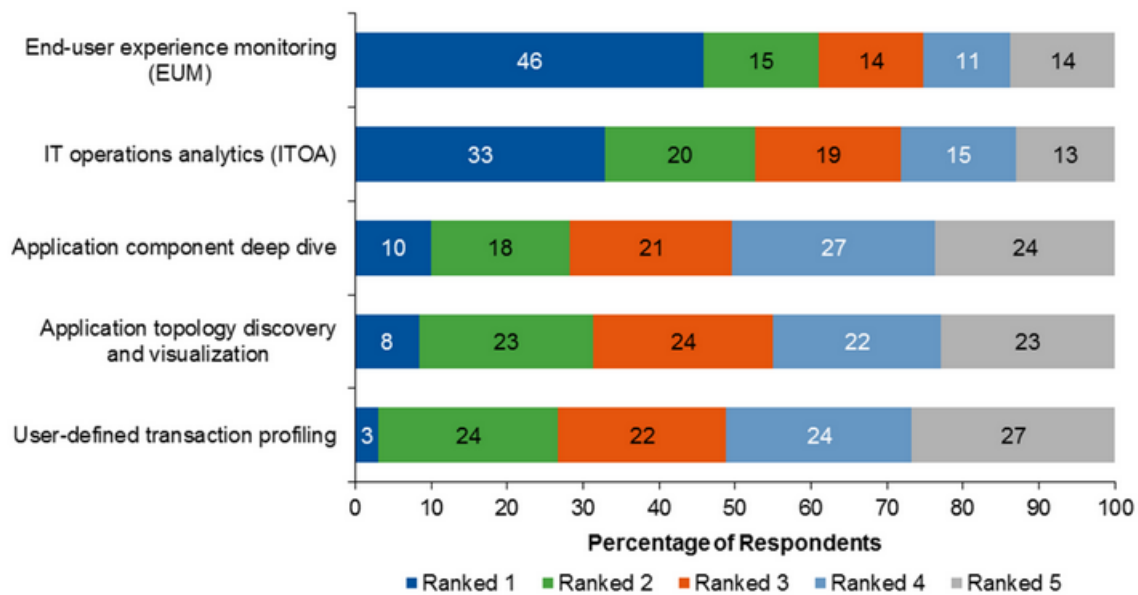
While the survey results show an inconsistency with respect to the use of APM solutions (as shown earlier), the responses for how the tools are justified, as well as the features that are most highly prized, are very consistent with historical Gartner observations.

**Figure 10. The Most Important Reason(s) for APM Investments**



Source: Gartner (June 2015)

**Figure 11. Most Critical Dimensions of APM**



Source: Gartner (June 2015)

### Recommendations:

- Enterprise APM consumers should look for products that enable not only the understanding of the end-user experience, but also the context of the business impact of poor performance.
- Enterprise APM consumers should look to leverage APM-based analytics capabilities to improve root cause analysis and problem remediation activities in order to address growing application complexity.

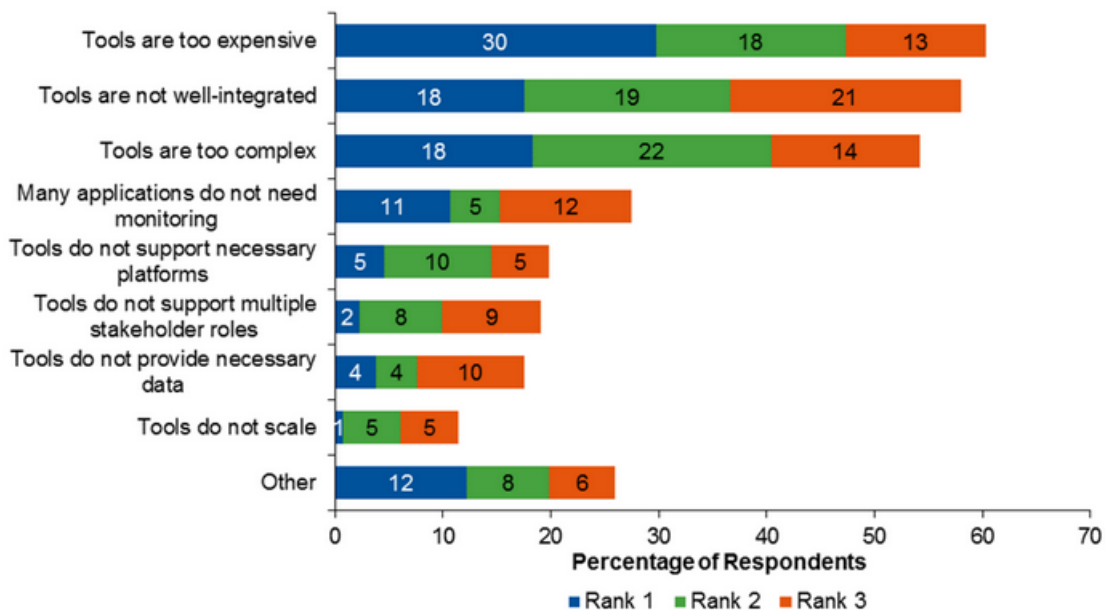
## Challenges Remain for Both Current and Future APM Adoption

The final areas of interest that our survey touched upon looked at the challenges for broader adoption of

APM today — plus potential concerns about the future. Figure 12 provides insight into the current issues below.

As with some previous questions, we allowed clients to have up to three selections and rank them in order. As with many other IT operations management (ITOM)-related products, cost ranked No. 1 — a common refrain in many of our inquiries, and this may in fact be one of the significant contributors to the on average 30% APM coverage surveyed in an earlier questions. Integration (or the lack thereof) came in second overall. This has two aspects to it — the first is the (sometimes) difficulty in integrating various APM components (the five dimensions), and the other being integrating APM within an overall combined monitoring framework. Both still remain challenges

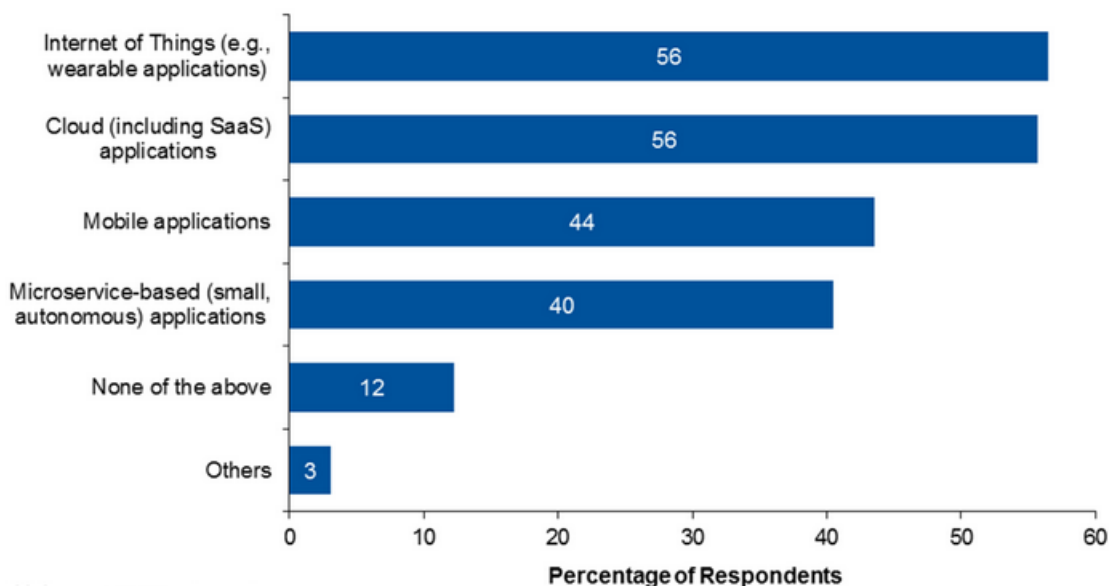
**Figure 12. Reasons Why APM Tools Are Not More Widely Used**



based on our discussions with clients, which are of course confirmed here. While strides have been made in making APM products easier to use, it's obvious that substantial complexity still remains both with respect to the usage, as well as maintenance of these applications. Surprisingly, the fact that some (or many) applications don't need support came in fourth; although, looking again back to the question that identifies the number of enterprise server-based applications being monitored, this then becomes a more obvious response. As can be seen, the lack of platform coverage and issues with stakeholder roles did not seem to bubble up as major concerns, nor did the necessary data being collected (or not). Scaling also was not identified as a current issue; however, that might not be true in the future (see Figure 13).

This question was designed to assess the “future proofing” of current APM investments with respect to the ability to concurrently monitor and support large numbers of increasingly dynamic applications — more so than found in most typical enterprise environments today. The results indicate that there are some concerns that supporting a potentially exponentially larger application installed base exhibiting increasingly temporal attributes will likely become an issue in the future — at least for on-premises-based APM implementations that have not been rearchitected to support increasingly demanding environments.

**Figure 13. Applications That May Challenge Current APM Tools in Terms of Future Support**



### Recommendations:

- Consumers of enterprise APM products and services should work to minimize costs by negotiating with multiple vendors for their APM needs and by continuing to assess alternative licensing approaches that might better align with their budgets.
- Enterprise APM product users should assess the ability of their current APM solutions to support an increasingly large and dynamic application environment.

## Methodology

This research was conducted via an online survey from 11 March to 25 March 2015 among Gartner Research Circle Members — a Gartner-managed panel composed of IT and business leaders. In total, 256 members participated, though only 131 across North America (38%), EMEA (35%), APAC (21%) and Latin America (5%) qualified for the bulk of the questionnaire. This sample size is adequate to draw conclusions because the sample is representative of the target audience (IT leaders). The mean annual revenue represented by each of the 131 respondents was slightly over \$4 billion, while the mean number of employees was approximately 9,200. All industries were included, with the highest representation being from insurance (12%), manufacturing and natural resources (also 12%), services (11%) and banking (10%).

The technology adoption profile of the respondents was a combination of mainstream (62%), conservative (21%) and aggressive (18%). Both IT (58%) and combined business-IT-oriented (42%) roles were part of the survey with enterprise architecture (39%), IT leadership — manager/director (37%) and IT strategy (35%) being the most common within the primarily IT-focused job functions; while strategy and planning (42%), business strategy (36%) and business analytics (31%) represented the top three business-related roles.

The distribution of responses is expected to be repeatable if we surveyed a larger number of respondents in this same segment. Respondents were required to view APM tools as “important” to their organization and to be using APM tools for at least 1% of enterprise applications. The survey was developed collaboratively by a team of Gartner analysts covering IT operations, and was reviewed, tested and administered by Gartner’s Research Data Analytics team.

## Evidence

This research was conducted via an online survey from 11 March to 25 March 2015 among Gartner Research Circle Members — a Gartner-managed panel composed of IT and business leaders.

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*Source: Gartner RAS Core Research Note G00276472, Cameron Haight, 25 June 2015*





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