It's time to trust AI

Real-time application observability
will accelerate mission innovation

Introduction

If your teams could significantly reduce time spent configuring systems, searching for root causes, and sitting in war rooms, they could rededicate this time to innovating the digital services citizens depend on. Artificial Intelligence (AI) allows agencies to free up resources, drive innovation, and scale by enabling more secure, successful mission operations without increasing manual effort.

Imagine moving a mission-critical workload from on-premises to the cloud — a day your agency has been preparing and waiting for — you're using the cloud environment's monitoring tool, and everything looks good. Then you have an outage, and the team spends the next eight hours figuring out what happened while mission-important activities are interrupted.

At the same time, you happen to be piloting an AI monitoring tool in your development environment, which mirrors the production environment. You look to see if the AI would have found the cause of the outage faster. And it did — in less than 15 minutes.

If that was your agency, would you adopt that AI tool immediately?

It could happen. This scenario is a real-world example from a Dynatrace client.

One of the biggest modernization challenges program managers and mission owners face is time spent chasing and solving problems rather than moving the mission forward. To overcome these challenges, a software intelligence platform, with AI at the core, is needed to help teams spend less time troubleshooting and more time innovating.

Despite the clear benefits of these tools, civilian agencies are not embracing AI solutions that can automate manually intensive troubleshooting and get missions back on point quickly. Why not?

Dynatrace partnered with market research firm Market Connections to find out. We asked civilian IT mission owners about the extent to which federal technologists and managers are aware of and have the need for application monitoring services, current efforts to incorporate new tools and techniques into their agencies, and general attitudes toward using AI.

Current trends in application monitoring

Respondents saw making use of advanced technologies and delivering services while reducing costs as the most important priorities in helping achieve IT modernization plans and efforts. Yet only a quarter use application monitoring tools, and 45% are not sure whether they use any tools or not. Additionally, nearly 40% rate their adoption of AI and machine learning as non-existent or low.

Respondents see cloud computing and APM as the most important areas for investing resources in the next year, with 40% stating cloud computing as essential. By way of comparison, only 15% see AI as essential.

While nearly 65% of respondents see AI as valuable to modernization efforts, 32% do not trust AI systems — which is likely why, overall, respondents do not see the investment in AI as essential. Bridging the trust gap will be critical to ensuring civilian agencies have the ability to focus on their missions and having observability into the full environment ensures time isn't wasted on manually carrying out tasks like finding root causes of outages. AI is a necessary component to achieving full observability. This also highlights a need for what's known as explainable AI, the "how" and "why" of what AI systems actually do.

On average, respondents indicate they only have two-thirds visibility into their entire IT environment. What's more surprising is only 9% rate the ability to track, monitor, and report on assets as critical, and while 60% say it's very important, it would be expected to see that number much closer to 100% considering the potential impact on missions by not having full visibility into the IT environment.

Furthermore, 79% of IT managers say their biggest challenges are using resources to detect and correct root causes and being reactive to problems instead of proactively identifying issues. This makes sense — every minute spent on these issues is time diverted from mission innovation.

Bridging the AI trust gap will be critical

65%
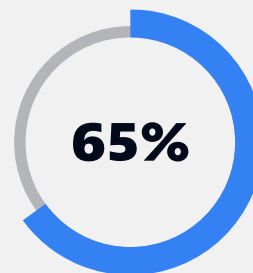
of respondents
see AI as valuable
to modernization efforts.

But...

32%
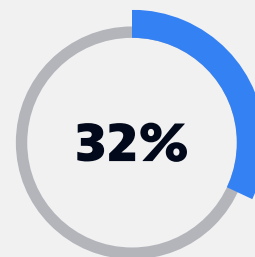
of respondents
do not trust AI systems.

What this data means to IT modernization

To keep up with mission demands, outpace bad actors, and maintain productivity, agency IT teams are transforming how they work. That transformation is happening in dynamic, complex multicloud environments that bring an exponentially greater scale and frequency of change than traditional data-center environments. This produces millions or even billions of connections, along with an immense volume, velocity, and variety of data.

To solve this problem, agency IT teams need an observability platform that enables automated end-to-end application and network visibility, and ties that to continuous automation and AI-driven analysis that quickly identifies and resolves issues — keeping the mission moving forward.
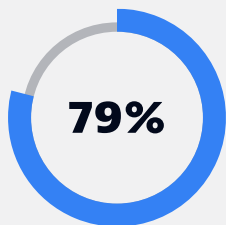
The respondents' biggest challenges are using valuable resources for detecting and correcting the root cause of problems (79%), being reactive to problems rather than proactively identifying issues (79%), only hearing of a problem once an end-user notifies the IT team (75%), and manual problem detection (73%).

Yet with only a quarter feeling AI is critical or very valuable to modernization efforts, there is seemingly a big disconnect because monitoring and observability that AI facilitates will solve those challenges, without a heavy lift to deploy.
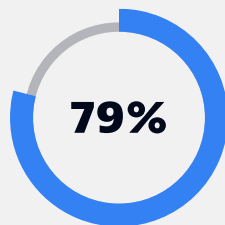
AI is critical to modernization efforts — and ultimately an agency's mission — because the combination of automatic and intelligent observability plus continuous runtime application security help agencies innovate faster, collaborate more effectively, and focus more time on direct mission support. AI-based application monitoring
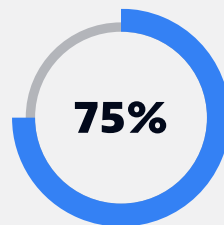
IT managers face ongoing challenges

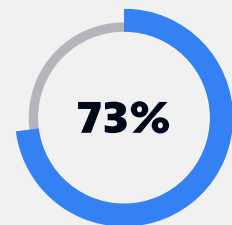The following were cited as the biggest day-in-the-life challenges for IT teams:

79%
using valuable resources for detecting and correcting the root cause of problems

79%
being reactive to problems rather than proactively identifying issues

75%
only hearing of a problem once an end-user notifies the IT team

73%
manual problem detection

removes silos of data, blind spots, "do it yourself" stitching together of tools, wasted time, and wasted resources. Even with those benefits, our data shows that IT professionals don't understand or feel comfortable with how and why AI systems can help them. As a result, there is an unfortunate trust gap that is keeping agencies from reaping these much-needed capabilities.

Moving workloads to the cloud is a step toward modernization. However, modern cloud environments are dynamic and complex. With millions or potentially even billions of dependencies, they bring a scale and frequency of change that is exponentially greater than on-premises data centers. They produce a volume, velocity, and variety of data beyond human ability to manage. To tame this complexity, teams often adhere to do it yourself approaches when attempting to collect and analyze data. This process of manually collecting data without real-time visibility into it requires your best talent — including development, DevOps, and SRE teams — which steals time from innovation, lacks scalability, and ultimately can expose the agency to security vulnerabilities.

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Trusting AI

While AI helps teams dramatically reduce manual work, nearly one-third (32%) of respondents cite lack of trust in the systems as a barrier to implementation, and almost two-thirds (60%) say staff knowledge of AI systems is a barrier. Teams can learn to trust their AI is making the right decisions and implementing the right solutions by implementing a system that is:

- **Explainable**
  Teams can see a complete set of circumstances leading up to any decision the AI engine makes, enabling them to trust that subsequent actions would be the same if an identical set of circumstances arose in the future. This reduces wasted motions such as troubleshooting and chasing false-positive alerts. It also accelerates results, whether that's speed and quality of innovation for development, automation and operational efficacy, or optimization and consistency of user experiences and mission outcomes.

- **Transparent**
  Humans can easily understand and explain the logic behind the AI's decisions because it follows a deterministic approach that discovers and updates in real time.

- **Unbiased**
  Supplying a precise known state of how everything across the stack operates means the AI is working with good data, removing the risk of biased decision-making. When the AI suppresses noise and provides precise answers with root-cause analysis and problem playback, resolution can happen in minutes, often before the mission is impacted.

Conclusion

To keep up with citizen needs and achieve mission goals, civilian agencies' IT teams must also transform how they work. They must innovate faster, collaborate more efficiently, and deliver more predictable results.

Reaching those objectives requires automatic and intelligent observability that spans applications, infrastructure, user experience, and the latest open-source standards. It also requires a solution that continuously maps, analyzes, and optimizes applications, microservices, infrastructure, and interdependencies across hybrid and multicloud environments.

AI provides teams with precise answers — not statistical guesses — in real-time, and the ultimate outcome is agency innovation that better serves constituents.

Your path forward

Automated deployment, configuration, and management in a single platform provides the situational awareness needed to maximize the performance of complex IT systems and ensures successful execution of missions.

Automation through the Dynatrace Software Intelligence Platform allows you to:

- **Auto-deploy through OneAgent:** Discover all processes running on the host and activate the appropriate instrumentation for your stack.

- **Continuously auto-discover and map your environment:** Smartscape creates a real-time dependency map showing relationships for all entities through the stack.

- **Proactively identify problems and their impact:** Eliminating the noise and providing meaningful alerts so you can focus on what matters.

- **Perform precise root-cause and auto-remediations:** Davis automates root cause analysis, enabling automation of remediation as well.

See full survey results here.

To take advantage of the Dynatrace Software Intelligence Platform, powered by AI:

📱 Call us at +1 888 833-3652

✉️ Email us at USFederal@dynatrace.com

💬 Chat with us

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