The Top 3 Monitoring Challenges IT Faces

The challenges that IT teams face today are so complex and dynamic that they'd be largely unrecognizable to the IT team of ten or 15 years ago.

IT is doing so much, often with so little, and they're constantly researching, testing and installing new software or building new cloud instances. The distributed nature of the modern technology world is exciting, promising—and really, really hard to keep track of. Instead of monolithic hardware and software stacks in a data center, technology resources exist—ideally—wherever and however they're most effective.

That means that cloud applications can be delivered from many different locations to many different users, and that various pieces of the infrastructure could be hosted or delivered by as many outside providers. And the applications multiply quickly, as do the servers and memory storing this constantly created new information.

Businesses and IT teams are choosing and adopting next-generation infrastructure technology at a fast pace. In a recent EMA study, they found that 54% of enterprise network management professionals surveyed expect bandwidth to grow by half in 2016, and 48% expect them to double by the end of 2017. That reflects today's breakneck pace of using new technologies, in-house and through some kind of cloud service or provider.

EMA also found that almost all those networking professionals share the same challenges around monitoring apps in the cloud: reduced visibility and control, tracking end-user experience and enforcing service-level agreements (SLAs). The top application monitoring challenge, named by 60% of respondents, was keeping track of bugs and patches for applications.

At the same time, IT teams are trying to get a look at how networks are performing. Close to half of enterprises surveyed by EMA are applying advanced analytics to network data. The need to know what's going on from user, to application, to network hasn't gone away as modern technology has quickly advanced. Seeing into applications in-house and in the cloud is more important than ever, and exponentially more difficult than it used to be. IT teams are facing a few key challenges when they're exploring how to monitor app performance.

1. There's too much to monitor.

The sheer volume of things to monitor in a distributed environment gets overwhelming pretty quickly. Keeping track of what apps are part of the IT environment is a challenge already, not to mention monitoring the performance of each one and the integrations and interactions between applications.

This complicated scene means it can be really easy to ignore or overlook the need for true performance monitoring. Maybe that means you're still relying on old APM tools that only do some of the job, like monitoring only legacy applications or applications running on a certain network. Or you might be seeing the same reporting problems every week or month, but not actually exploring the underlying causes.

Performance monitoring also gets tricky in a distributed world when members of the IT team have to track problems through separate interfaces or portals. It's not uncommon to have to rely on application logs to find problems, or that many tools aren't integrated into the larger IT ecosystem. It can also be difficult to recreate problems that happened in production, or to find the time to solve an underlying problem, rather than treat the symptoms or settle for underperforming apps that simply limp along. Plus, IT teams have to address code, server and service issues all at the same time, from many distributed sources.

2. Monitoring tools aren't pulling their weight.

A monitoring tool that isn't doing the whole job of monitoring applications isn't a good use of data center space or IT's time. If a monitoring tool exists as a sort of panacea, it's likely not much more useful than not having a tool at all. Monitoring tools that aren't bringing ROI to the business are just wasting precious resources. Many legacy monitoring tools don't have the right features to monitor web applications and provide IT Ops with actionable data like total, available and used bandwidth, latency, round-trip time (RTT), packet loss and jitter. That reduces their effectiveness in a distributed environment.

Any kind of monitoring tool, even if an older legacy one, probably provides some data through alerts and reporting, along with regular log data. Maybe it's comforting to see those reports coming through or know that there's a pile of numbers and figures accumulating throughout the day. But an application performance monitoring tool should be able to do continuous monitoring reporting so that IT can actually improve application performance. Digging through application logs is time-consuming and doesn't give the IT team actionable insights that they can use to discover the underlying cause of a slowdown or recurring performance problem. Maintaining a baseline of poor performance or accepting chronic issues is all too easy with an APM tool designed for a legacy infrastructure.

Homegrown applications serve lots of very important purposes, but for application performance monitoring, it's better to look to the experts. Application monitoring changes quickly, so tools should be updated frequently. APM is one area of software where every possibility should be taken into account, and every endpoint, network and provider should be counted.

Relying on instinct to solve performance problems, or building your own monitoring tool that seems like it'll be good enough, will both likely backfire. An application monitoring tool today is a sophisticated product that can examine and analyze every issue that occurs across the infrastructure. You only need one, if it's a good one. A well-performing app monitoring tool can find unauthorized apps, trends and can right-size your bandwidth. And you may reconsider building it yourself in light of all the many glitches and failures that can cause performance slowdowns. App problems can be in connectivity to the databases, or with connectivity to the APIs, or with the pages themselves loading. IT teams might want to be able to tie performance to user experience, or compare cloud and in-house performance, but it's practically impossible without the right tool.

Keeping Track of your Apps

There are solutions to the challenges around application performance monitoring. Finding modern monitoring may seem daunting, if your distributed environment seems daunting. But once application monitoring is up and running, it becomes much less daunting to find problems within all those apps. An APM tool can help normalize metrics, so that there's a baseline or standard across all apps, whether they're served up through the cloud or built in-house.

Modern APM tools can pinpoint the exact app problem amidst the noise and confusion of so many components. It allows users to look at slow requests directly, and examine the entire app delivery chain for an understanding of what went wrong, when and where.

These key features should be part of an app performance monitoring tool that can truly find and address modern problems:

- Key performance metrics such as QoS, RTT, and total, available and utilized capacity

- Bi-directional monitoring across the WAN, both user to server and server to user

- Active route performance monitoring

- Diagnostic information on the root causes of app and network performance issues

Choose wisely for application performance monitoring that cuts through the complexity, provides real business value and stays up-to-date on whatever comes next.