5 Steps to adopting Agile IT
Infrastructure Monitoring Necessary for a Customer-Driven World
Fueling the Application Experience

If you’ve seen recent car ads, you know they’re as likely to promote applications and connections as they are styling and horsepower. But manufacturers aren’t the only ones pushing apps these days. Banks, airlines, restaurants—you name it—all are using them to attract and engage customers. This is the application economy; where every company is in the software business, and user experience is the new survival of the fittest.

Take too long to bring an app to market, or cause even the slightest lag in load time, and you lose your customers to competitors. In fact, 25 percent of users will abandon apps after just a three-second response delay\(^1\). But, give customers what they want when they want it, and the market is yours.

What fuels the app experience is an optimally performing IT infrastructure. One weak link in the network or server not only disrupts usability, but causes exponential, far-reaching damage to a brand once that issue goes viral. And as the traditional infrastructure evolves to support cloud storage, big data initiatives, mobility, distributed environments and other emerging technologies, the links multiply as do the potential points of failure.

In order to avoid such catastrophes and exceed the expectations of the demanding modern customer, you must overcome a variety of challenges, such as:

- **IDENTIFYING PROBLEMS** within a complex, hybrid IT infrastructure
- **CAPITALIZING ON THE DEMAND** for more dynamic infrastructures
- **MANAGING MULTIPLE TOOLS** that are siloed, complicated and reactive
- **SHIFTING IT TEAM’S FOCUS** from individual “IT” silos to customer experience

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What if You Could…

**Proactively resolve issues**
before the customer experience suffers?

**Reduce complexity**
and increase IT’s operational efficiency?

**Support DevOps methodologies**
and cutting-edge technologies that enable faster deployment?

To power the kind of high-level application performance that today’s customer-driven world demands, you need to adopt an agile infrastructure monitoring approach. Here's how…
As enterprises have grown over the years, their IT environments have become populated by a mix of legacy and modern components. Physical infrastructures and mainframes coexist with evolving dynamic infrastructures, such as virtualization and cloud. And in many cases, each of these components came with, or required, its own tool for monitoring performance.

When issues arise in such environments, there are as many “sources of truth” as there are monitoring tools, which can lead to finger pointing and delays—all taking place while the customer experience suffers.
IT needs to unify monitoring tools across various infrastructure elements in and out of the data center. They need to gain a holistic picture through a unified view and back-end architecture, and leverage standard templates to monitor key performance indicators.

Doing so will enable:

- **Increased visibility**
- **Faster mean-time-to-repair**
- **Reduced cost and complexity** of managing multiple, disparate tools
- **Improved staff productivity** as they spend more time on important business initiatives

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80% of respondents to the "Infrastructure & Operation Trends Survey" agree that disjointed, cross-platform management leads to lost opportunity.²

But, agile monitoring is not just about bringing data together in a unified view; it’s also about bringing data together in a tool that can quickly identify an element failure and intuitively understand the impact of that failure on a business service and end-user experience.

For example, in eCommerce, the online ordering is the main activity unit. But an issue at any point in the chain, from product selection through to the delivery of the goods to their recipients, can affect different stages of order processing as they are intricately intertwined to guarantee customer satisfaction. This value chain at the backend is typically supported by a mix of IT infrastructure elements, which help ensure that customer gets a good experience.
Regardless of processing stage, the objective remains the same; to ensure service reliability. The focus, however, shifts from the individual element of failure to the comprehensive service, end-user or customer. Agile monitoring supports this shift by building customer- and business-centric views (process and IT infrastructure) from top to bottom that:

- Identify critical business services
- Split each service into sub processes
- Map infrastructure elements to each sub process
- Create service-centric views, dashboards and alerts

When it comes to this new approach, think of it as data served your way, designed based on specific roles and dispersed to the appropriate staff accordingly—all in an effort to enable business service visibility, provide more reliable services and establish customer- and business-focused teams.
While mere seconds of downtime could cost you big before, now, **slowness is the new downtime.** And there is virtually no room for error. Even if your availability is up to par at 99.4 percent, sluggish performance will damage the customer experience. Take, for example, a retail franchise with 600 stores, 30 lanes, and 50 credit card transactions per lane. If you reduced the time to process those transactions from 10 seconds to 1 second, you’d decrease time expended from 2,500 hours to 250 hours.

An Example
Difference in performance can have a massive impact on business

<table>
<thead>
<tr>
<th>600 Stores</th>
<th>30 Lanes</th>
<th>50 Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,500 Hours</td>
<td>250 Hours</td>
<td>2,500 Hours</td>
</tr>
</tbody>
</table>

What if time goes down from 10 secs to 1 sec?
Switch from Availability to Proactive Experience Reporting

The right monitoring approach goes beyond availability reporting to measuring performance, and end-to-end-user experience.

Proactively tracking end-user experience along with infrastructure key performance metrics enables:

- **Superior customer experience** as you focus on improved experience versus availability
- **Proactive issue resolution** as you resolve bottlenecks before they happen
- **Fewer service desk tickets** as you streamline support operations
Delivering on evolving customer expectations isn’t just a matter of extrapolating IT data. Business data can, in fact, provide significant insights into infrastructure design and performance optimization.

Take, for example, Black Friday—the biggest shopping day of the year. Last year, the online shopping cart of a major home goods retailer crashed, prohibiting countless customers from completing their transactions and costing the company a lot of money on what otherwise was projected to be a very profitable day. If the company was able to evaluate business data, such as click-throughs, number of visitors, etc. with IT data like capacity and bandwidth, they could possibly help prevent this disaster from occurring again.

Business data can, in fact, provide significant insights into **infrastructure design** and **performance optimization**.
Integrate Non-IT Data and Correlate

By adopting a similar agile monitoring approach, you can:

- Identify relevant customer or business data sources
- Build unified business and IT reports/views
- Correlate IT and non-IT data to find meaningful patterns
- Use information to proactively pinpoint bottlenecks

Doing so allows you to improve the infrastructure, application design and business performance. And by demonstrating these unified views to key stakeholders, you can showcase IT’s success and impact on the business.
An application’s performance is heavily reliant on its supporting IT infrastructure. In fact, the two are so tightly integrated that the underlying infrastructure might be the last mile required to boost an app’s performance or improve user experience. Memory, CPU, network bandwidth, code—all of these components need to be optimized. And your IT operations team needs to provide infrastructure utilization data to application teams so that both groups can make any necessary adjustments for future releases or designs.
As you adopt an agile monitoring approach, it’s important to bring together people—application developers, network and systems administrators, and support personnel—with a diversified skill set who have a singular focus on reliability. Working as a team, they can:

- **Assess infrastructure components utilization** of applications in test and go live environments
- **Perform analysis** on historical IT and non-IT data
- **Conduct regular meetings** to share insights and devise new plans

This cross-functional reliability team can help improve infrastructure utilization and performance, as well as remove problems before an application goes into production, saving a lot of headache down the road. And together, this team can help you provide a superior customer experience second to none.
The Agile Infrastructure Monitoring Approach You Need

The new application economy is rife with opportunities for organization that can rise to the challenge. But to innovate and meet new customer demands, you’ve got to operate with agility—so you can provide a quick response at every turn.

**CA Unified Infrastructure Management (CA UIM)** enables you to proactively manage the performance of physical and virtual servers, applications, networks, storage devices, databases, end-user services, cloud and big data environments—all through a single, unified view and architecture. Consequently with a unified view and architecture, your organization can streamline administration and more quickly and effectively support the delivery of new services, applications and technologies.

Ultimately, you’ll be better equipped to focus on what really counts—providing a superior customer experience, promoting innovation and growing your business.
CA Technologies (NASDAQ: CA) creates software that fuels transformation for companies and enables them to seize the opportunities of the application economy. Software is at the heart of every business, in every industry. From planning to development to management and security, CA is working with companies worldwide to change the way we live, transact and communicate – across mobile, private and public cloud, distributed and mainframe environments. Learn more at ca.com.