Achieve Peak Web Performance

Synthetic Monitoring

January 2017

BEST PRACTICES

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Introduction

Website and application monitoring provide immensely helpful information for improving your online platform's performance-based customer experience. However, that information is only as useful as what your team does with it. According to a survey by Big Panda, IT professionals claimed "improving their organization's overall monitoring strategy" is the biggest monitoring challenge in 2017.

This Monitoring Best Practices Guide will help you understand why you need a monitoring strategy and how and when you can implement one. We will also offer you a first-hand example of a company who implemented a monitoring strategy and the success they saw from doing so.

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Which part of the development lifecycle should you implement synthetic monitoring?

Implement monitoring in the design phase

Often times companies start monitoring their website or application right before a deadline. Sometimes this is due to lack of resources or finances, but what companies don't realize is how much more efficient they are once monitoring is utilized from the get-go. Monitoring should be an industry standard and carried out through design, planning and analyzing.

Monitoring Recommendation

Take the most relevant scenarios and user journeys. At first it's hypothesis and as you collect more and more data you make it more of a concrete decision on what to monitor and adjust in the user journeys based on that monitoring.

Example

Your hypothesis as a whole user journey could look like the following:

User goes to a website, a homepage
User logs in.
User searches for something
User adds it to the cart.
User checks out and sees payment gateway
User makes payment/transaction

![Apica - Achieve Peak Web Performance]
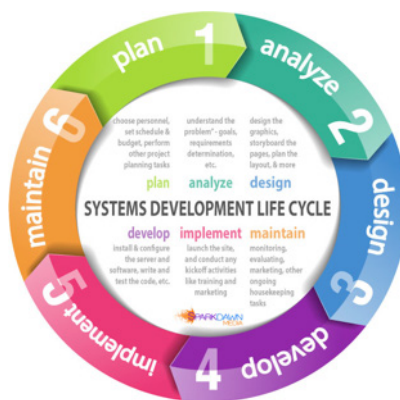
The 3 Second Sweet Spot

An average a user experience on amazon.com takes eight seconds. That's your response time. Out of that just the homepage only takes about two to three seconds. That's what every company should be thriving towards. People have the attention span of three seconds, so companies need to adhere to faster response times. Keep that in mind when developing an application.

"Monitor however many environments you have in your company policy."

How do you monitor your current applications?

Every application will have a chance for a systematic approach to upgrading that application or releasing patches or bug fixes.

Example

ALPHA
Monitor in the staging environment
Monitor in the UAT
BETA
Production

Top-Down Approach to Monitoring

Top-Down Approach: Your user-journey
It's not just your infrastructure monitoring or your web server doing what it's supposed to be doing. Is your database making all those queries and all those calls and what the rendition time for those calls are. That's the bottom-up approach.

Recommendation
Combine that bottom-up approach with the top-down approach. Make sure you have your user journey in place - you can see what your users are experiencing. Make sure you're able to catch those third-party URLs at that break.

Find an application you can use that'll integrate with APM tools and vendors to ensure you get the user experience as well as your infrastructure monitoring in the back-end as well, all your application performance monitoring in the back-end.

Who Benefits?
QA Team
Development & DevOps
Marketing
Operational Teams

A Monitoring Success Story

A recent customer released an application to the iOS and Android markets. It was a subscription based application, but there was a problem. When a user logged into their account (previously paid), they were redirected to repurchase a subscription again.

That caused a lot of bad reviews in both market places and brought business down significantly, so they abandoned the whole project and built a new application.

They realized they needed to understand what their whole infrastructure looked like and how the application stack functioned. Everything needed to be analyzed.

Short-term fix: Implement URL V2 checks just to make sure that all their links were up and all their sites were up.

Long-term fix: Started building up scenarios to make sure that every component of that application was being monitored. They had to do this for the mobile application, as well as their web application - the traditional user laptop and desktop. They made sure that every signup, all the utilities, and the services that were behind the signup page were being monitored, such as Mule Services, load balancers, etc.

They determined if there were any firewalls and monitored them, making sure to get the response time

Remedy: Understanding the stack, spoke to the developers to understand the main components of the application stack. We did an assessment, implemented uptime checks on the servers, built specific user journeys.

Result: 4.5 star-rating and immense increase in sales. Now that's a comeback.

Conclusion

Your organization's monitoring strategy is a long-term plan for addressing platform performance over time, and it's essential for getting the most benefit out of your monitoring data. Businesses that implement strong monitoring practices find it easier to resolve service disruptions.

Businesses looking to develop a monitoring strategy should consider the following:

- Identify and include all major stakeholders in the monitoring strategy development process. This includes developers, quality assurance, IT, management, owners, and marketing.
- Establish everything that needs to be monitored within the website and mobile application, which includes things like viewing content, making a transaction, and performing a search. Determine what the most common tasks are and monitor those.
- Discuss upcoming changes with the platforms across different teams, and devise a plan to monitor how those changes impact performance.
- Set performance benchmark goals. These are also helpful in determining alert criteria.
- Develop a location-based monitoring strategy to keep an eye on performance for your audiences in all important regions.
- Establish whose job it is to handle each part of the monitoring and evaluation process.
- Set the evaluation frequency and adjust that frequency as needed.
- Continue to meet with stakeholders to review the strategy every month or two.

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