WEB APPLICATION MONITORING TOOLS

AGENDA

INTRODUCTION

MOST RELEVANT TOOLS

WHAT TO MONITOR

SHOWCASE OF GOOGLE LIGHTHOUSE

INTRODUCTION

WHAT ARE WEB APPLICATION MONITORING TOOLS?

- routinely tests the functions of a website

- verifies the results of user input
  (e.g. during registration, purchase,...)

- Reports the result

- Goal: Continuously ensure user experience and
  performance of web applications

FUNCTION

1. The Software loads the Web-Application into the web browser

2. Automated script simulate or check user interactions (Happy Paths)

3. Comparison of expected results (defined in the script) with the actual results (of simualted interaction) merged into a performance report

4. In case of unexpected behavior (missing content, malfunction, slow responses,…) the monitoring service sends an alert to the support team

What to mind?

- Testing the script

- Irregular tests can cause to have bugs for over a couple of hours

- Tests behind firewalls could lead to local problems to users in another area – e.g. slow response, CDN (Content Delivery Network) doesn't work

EXAMPLE: LOGIN PROCESS

1. Navigate to the login page
2. Enter user ID
3. Enter password
4. Click "Submit"
5. Wait for response
6. Report results

MOST RELEVANT TOOLS

MOST RELEVANT TOOLS

- **1. Google Analytics**

- **Usage: Analysis of web traffic and user behavior.**

- **Main Features:**

  - **Real-time reporting.**

  - **Demographic data and interest reports.**

  - **User flow analysis to track paths through the website.**

  - **Conversion rates and goals to assess performance.**

MOST RELEVANT TOOLS

2. New Relic

Usage: Application performance monitoring.

Main Features:

    - Real-time application performance monitoring.

     - Error analysis and diagnosis.

    - APM (Application Performance Management) for various programming languages and environments.

MOST RELEVANT TOOLS

3. Pingdom

Usage: Uptime and performance monitoring of websites.

Main Features:

      - Uptime monitoring.

      - Response time tracking.

      - Notifications and reports.

MOST RELEVANT TOOLS

4. Datadog

Usage: Monitoring and security for cloud applications.

Main Features:

   - Monitoring of servers, databases, and tools.

   - Data visualization through dashboards.

   - Alerting and automation.

MOST RELEVANT TOOLS

5. Dynatrace

Usage: APM and AI-powered IT operations.

Main Features:

      - Fully automated, AI-powered monitoring solution.

      - In-depth transaction tracking and diagnostics.

WHAT TO MONITOR

WHAT TO MONITOR

- Web application monitoring means using software tools to check how your web application is performing. The goal is to ensure your app is error-free and works optimally to deliver a great user experience.

- While it's possible to check web applications manually, monitoring tools automate the process and notify you instantly when there's an issue. The upshot is that you get alerted to issues sooner and can rectify them before customers notice anything happened.
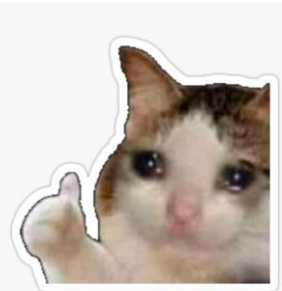
WHAT TO MONITOR

Application monitoring ultimately helps you:

- Reduce downtime
- Protect the user experience
- Improve search engine rankings
- Prevent security vulnerabilities from developing

They monitor various indicators of your app's performance, including:

- Network analytics
- Application uptime
- Hardware utilization
- Software performance
- Errors and crashes
- Internal links

SHOWCASE OF GOOGLE LIGHTHOUSE

THANK YOU

Your Apple Team