

Alternative Tools Research

1. New Tools

- a. Continuous Integration: **Jenkins**
- b. Real Time Error Monitoring: **Raygun**

2. Notable Features

a. Jenkins

- i. Free!
- ii. Customizable Workflow
- iii. Easy to install
- iv. Established product
- v. Good Reputation
- vi. Built by developers
- vii. Lots of available features, plugins
- viii. Server Based
- ix. Integrates with many other softwares, Ex: GitHub, aws, RedHat, etc)

b. Raygun

- i. Customizable dashboard layout
- ii. Add as many dashboards as desired
- iii. Advanced filtering options (browser, geography, device, application version, etc.)
- iv. No custom code or query language required
- v. Integrates with many other softwares, Ex: Github, Jira, and Slack
- vi. Inexpensive option starting at \$4 per month
- vii. Easily Scalable
- viii. Used by several “big name” companies

- c. Pitch: Based on my research, these look like they could be great options for our company based on performance, ease of use, affordability, and reputation. They would also be able to smoothly integrate natively with our current software choices.

3. Getting Started

a. Jenkins

- i. Getting Started with Jenkins seems pretty simple and straightforward. After reviewing the startup instructions for mac, they are as follows:
 - 1. Download Jenkins at Jenkins.io
 - 2. The Post-installation Setup Wizard walks you through the initial steps.
 - 3. When first accessing a new Jenkins instance, browse to localhost: with whatever port you configured for Jenkins during the setup wizard.
 - 4. Wait for the “Unlock Jenkins” page to appear
 - 5. Look in the console log output and locate the automatically generated alphanumeric password located between the two sets of asterisks. If it doesn't appear there is a command that will generate it: `sudo cat / var/lib/jenkins/secrets/initialAdminPassword`
 - 6. On the “Unlock Jenkins” page, insert the password into the Administrator password field and click continue.
 - 7. You're all done!

b. Raygun

- i. Getting Started with Raygun seemed to need a little more finagling, but once all of the scripting has been entered it seems straightforward.
 1. For getting started instructions for React.js (or any other language) navigate to:
<https://raygun.com/documentation/language-guides/javascript/react/>
 2. Include the provided script in the head of your document above all other script files.
 3. Add the lines that enable crash reporting and real user monitoring underneath the first snippet.
 4. For single page applications you can use the trackEvent option to track route changes. Make sure to pass the updated path as you want it to appear in Raygun.
 5. Add user tracking(optional) by adding the setUser method after the authentication step succeeds.
 6. Add custom timings(optional) by using the performance.now() API
 7. View your data in Raygun! You're all done!

4. Product History & Accomplishments

a. Jenkins

- i. Currently an open source tool
- ii. Started in 2004, and has been award winning since 2008, originally called Hudson.
- iii. Won the DevOps Dozen in 2016 and 2017 for Best DevOps Open Source Project
- iv. In 2019 Jenkins surpassed 200,000 installations, making it the most widely deployed automation server.

b. Raygun

- i. Raygun was founded in 2007 and is headquartered in Wellington, NZ.
- ii. Serves clients like Coca-cola, Microsoft, and Samsung
- iii. Has received several awards, including the Wellington Gold awards in 2016, and 2019
- iv. Generates 90% of its revenue from exports, and in 2014 successfully raised capital to grow its global customer base.