Continuous Integration:

Jenkins

- Very popular
- Comes with hundreds of plugins
- Additional plugins can be added
- Built-in help
- Highly configurable

Jenkins is a highly supported and widespread continuous integration program that is very flexible due to its ability to easily integrate with plugins. This means that we can mold Jenkins to do whatever it needs to do by finding the right plugin, paired with its ease of use and its ability to work across multiple machines, Jenkins is a powerful tool!

Jenkins has very thorough and readable documentation which also include several tutorials to help get started, learn the Jenkins pipeline, or build your own tools.

Jenkins started in 2011 and is marketed as "the leading open-source automation server" according to their GitHub page. They are very active in updating Jenkins on their GitHub and have over 575 million docker pulls.

Real Time Error Tracking:

Raygun

- Complete visibility for errors across the entire stack
- Code-level diagnostics that allow for quick identification and more detailed information on the error than log files or support tickets
- Allows for organization and prioritization of errors and the ability to attach contextual information to an error
- Allows you to search for individual users to resolve errors on any level

Raygun allows for very detailed error diagnostics that will let us quickly and correctly identify the cause of the error due to how we can see errors at code-level and at each part of the stack. With Raygun we can search errors for specific users which allows us to fix errors for priority clients as well. Also, it has a very cool name.

Raygun has very well organized docs for EACH language it is compatible with. These docs include example code lines to help get started.

Raygun launched in 2004 amd is used by huge corporations like CocaCola, Target, Microsoft, Avis, Peloton, and Domino's.

Part 2:

Results	Insert	Append
tinyArray	33.7 μs	82.7 μs
smallArray	14.5 μs	14.2 μs
mediumArray	140.6 μs	44 μs
largeArray	8.2009 ms	414.3 μs
extraLargeArray	980.0084 ms	3.5388 ms

The append function scales much better than the insert function which is shown in the table above. It looks like the insert function scallions exponentially while the append function scales in a linear fashion.