

# Comparison of build and deploy services : Travis CI, Circle CI, Jenkins

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# Price

- Travis CI – free for open source, \$69/month for bootstrap version and \$489/month for premium version
- Jenkins – free
- Circle CI – first container free for Linux users, each additional container costs \$50/month, OSX costs \$39/month for 1-5 builds/day and private data centers for cloud cost \$35/month per user on an annual contract

# Main features

- Circle CI is cloud based, no dedicated server or administration required so it is easy and quick to start with
- Travis CI is also cloud based but with additional options to run tests on Linux and MacOS at the same time and to create a build matrix to run build tests on different versions of a language
- Jenkins is a self-contained Java based program that can run on multiple operating systems with plugin support

# Additional features

- Circle CI has a REST API that gives you access to builds, projects and artifacts, checks for 3<sup>rd</sup> party dependencies and caches requirements installation
- Travis CI supports more languages out of the box compared to Circle CI and in case you prefer other CI platforms, you can configure it using TOX, a generic virtual environment tool
- Jenkins has a pipeline feature allowing to model simple to complex delivery pipelines as code

# Problems

- Circle CI supports only 2 versions of Ubuntu for free and MacOS is paid, since it is a cloud based system it can stop support for a language or a software at any time
- Travis CI is expensive compared to Circle CI and is difficult to customize
- Jenkins needs a dedicated server which results in additional expenses and requires time for configuration and customization

# Conclusion

- Circle CI is easy to get started with, hence recommended for small projects
- Travis CI has support for a wide range of environments, hence can be used for open source projects
- Jenkins should be used for large projects where a lot of customisation is required and it can be done by using various plugins in the Jenkins pipeline