Continuous integration vs. continuous delivery vs. continuous deployment

Continuous integration

- **Compile/Lint**
- **Merge/Integrate**
- **Unit Tests**
- **Integration Tests**
- **Verify Dependency Security**

What you gain

- Less bugs get shipped to production as regressions are captured early by the automated tests.
- Building the release is easy as all integration issues have been solved early.
- Less context switching as developers are alerted as soon as they break the build and can work on fixing it before they move to another task.
- Testing costs are reduced drastically – your CI server can run hundreds of tests in the matter of seconds.
- Your QA team spend less time testing and can focus on significant improvements to the quality culture.

Continuous delivery

- Deploy to Test Env
- Team Test
- Deploy to Client Test Env
- Create Infrastructure
- Deploy to Production
- Rollbacks
- Promoting Production

What you gain

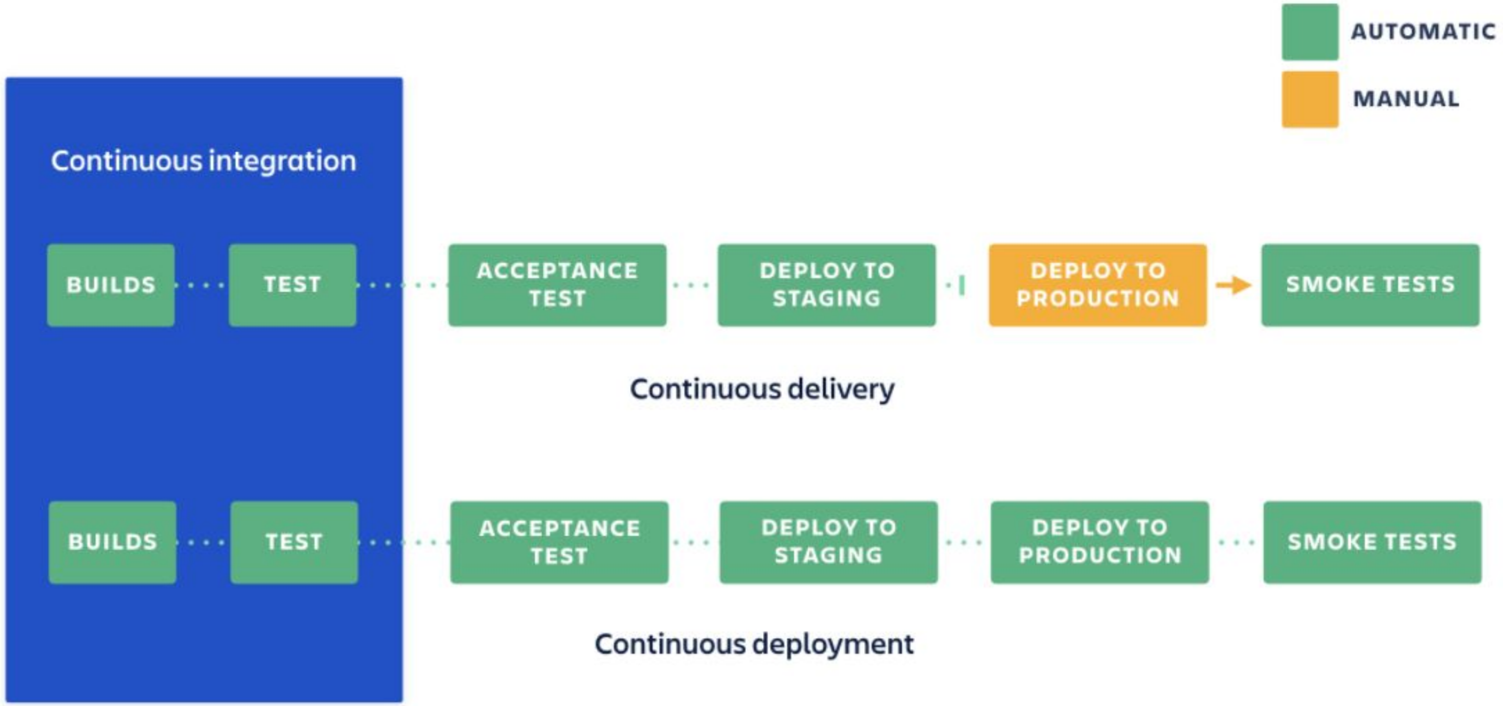
- The complexity of deploying software has been taken away. Your team doesn't have to spend days preparing for a release anymore.
- You can release more often, thus accelerating the feedback loop with your customers.
- There is much less pressure on decisions for small changes, hence encouraging iterating faster.

Continuous deployment

- One step further than continuous delivery.
- Every change that passes all stages of your production pipeline is released to your customers.
- No human intervention, and only a failed test will prevent a new change to be deployed to production.

What you gain

- You can develop faster as there's no need to pause development for releases. Deployments pipelines are triggered automatically for every change.
- Releases are less risky and easier to fix in case of problem as you deploy small batches of changes.
- Customers see a continuous stream of improvements, and quality increases every day, instead of every month, quarter or year.


AUTOMATIC
MANUAL
Continuous integration
BUILDS
TEST
ACCEPTANCE TEST
DEPLOY TO STAGING
DEPLOY TO PRODUCTION
SMOKE TESTS
Continuous delivery
BUILDS
TEST
ACCEPTANCE TEST
DEPLOY TO STAGING
DEPLOY TO PRODUCTION
SMOKE TESTS
Continuous deployment