CI/CD tool

Continuous Integration (CI) is a practice used by development teams to merge the code to the central repository regularly. It allows many developers to contribute quickly and work on a single code base.

Continuous Delivery (CD) is an approach used by teams to release features in short cycles. It aims to accelerate the phase at which the software is built, released, and tested. Continuous delivery tools or continuous deployment tools are related concepts that are sometimes used interchangeably.

What are CI CD tools?

- CI and CD are both concerned with automating subsequent stage of the pipeline, but they are used separately to demonstrate how much automation is taking place.

Benefits of using CI CD tools

Without CI CD tools, organizing code updates is a time-consuming manual procedure. Software projects can automate code updates with the use of CI CD tools.

- Some benefits of CI CD tools are:
- Smaller Code Modifications
- Isolation of Faults
- A shorter time to resolution
- Increased Test Reliability
- Increased Release Rate
- Reduced Backlog
- Customer Contentment

1. Buddy

Buddy is a creative CI/CD solution for web developers that helps in transitioning to DevOps easier. It develops, tests, and deploys software using delivery pipelines. It supports all widely used languages, frameworks, and task management tools.

- The benefits of Buddy are:
- 15-minute configuration with simple and informative UI/UX
- Deployments that are made in a flash depending on changesets
- Builds operate in isolated containers with cached dependencies
- All widely used languages, frameworks, and task management are supported

2. Jenkins

Jenkins is a cross-platform, continuous integration tool used to continually build and test software applications. Java programming languages are used to develop Jenkins. They offer real-time testing and reporting. It can be used to perform continuous builds, run tests or perform repetitive tasks.

- The benefits of Jenkins are:
- It is an open-source tool with a strong sense of community.
- It's easy to set up.
- It is completely free.
- As it is created using Java, it can run on all the major platforms.

3. Buildbot

One of the top CI CD tools – Buildbot, was created in Python and worked with the Twisted framework. Buildbot is an open-source platform that automates complex testing and application deployment processes. This tool's popularity is because it facilitates the parallel and distributed execution of strategies across several platforms.

- The benefits of Buildbot are:
- Execute builds on several slave platforms
- Unrestricted build process: supports projects written in C, Python, etc
- Quickly finds the build issue and tests every time something has changed

4. IBM UrbanCode

IBM produces a multi-tier application paradigm or solution called UrbanCode. It offers continuous delivery, self-service, quick feedback, incremental updates, and consistently automates application deployments. The applications can also be rolled back, and modifications can be distributed throughout servers, tiers, and components. It also offers versioning, audit trails, and other features.

- Benefits of using UrbanCode:
- Ensures continual delivery
- Can deploy multichannel applications easily
- Can manage thousands of endpoints to clouds, data centers, or mainframes

5. Perforce Helix

All documented APIs are supported by the consistent, open, and adaptable CI platform Perforce Helix. The tool includes many features such as application management, agile planning and management, dev collaboration, and open source management. This robust versioning engine manages and secures any kind and size of file. It also provides replication for high-performance developments and builds.

- Benefits of Perforce Helix are:
- Massive codebase
- Supports Graphical or binary materials that do not code
- Allows dependencies within and between components of code

Thank you