CI CD

Before starting with anything around and about CI CD, it's important to understand problems with traditional software development life cycle approach.

Traditional SDLC is prone to human errors/chaos given all the tasks throughout entire software development and delivery life cycle are manual, sometimes bugs are overlooked during testing leaving system to fail while delivery, coding issues sliding through the gaps and many more such scenarios occur making the entire delivery process prone to failure.

CI/CD answers back to error-prone traditional SDLC methodologies with its automated approach. The goal of CI/CD is to enable software development teams to constantly implement software upgrades into production to accelerate release rates, mitigate costs and nullify risks all across the development phase.

With the help of Continuous Integration and Deployment Solution developers can frequently, preferably several times per day, integrate code into a shared repository. An automated build and automated tests can then be used to validate each integration which can then further the life cycle to deployment and delivery.

Business can greatly benefit from adoption of CI CD as new ways of working. Transforming everything from ways of working to technology, continuous integration and continuous delivery has become essential in software deliver life cycle offering many a great benefits.

1. Developers can integrate their code into a common repository in tiny batches using a CI/CD pipeline. The whole team now collaboratively looks out for severe bugs and bug clusters and works on fixing them.
2. Detecting faults quickly and fixing them with a snap of a finger makes the release rate happen at an exponential speed. Frequent releases, on the other hand, are only conceivable if the code is produced in a constantly changing system.
3. One of the most compelling reasons to use a CI/CD pipeline is that it simplifies and accelerates fault isolation before it has a system-wide impact.
4. CI/CD reduces the MTTR because the code changes are smaller and fault isolations are easier to detect. One of the most important business risk assurances is to keep failures to a minimum and quickly recover from any failures that do happen. Application monitoring tools are a great way to find and fix failures while also logging the problems to notice trends faster.

5. Focus can be on major issues rather then wasting time on small issues.
6. An experienced company focuses on testing parts simultaneously so that with frequent delivery of versions, the product comes out bug-free.
7. It also aids in fast recovering from any setbacks, as the CI/CD pipeline makes sure that the fix is swiftly tested in conjunction with the rest of the code before being deployed to production.
8. The adoption of such CI CD pipeline improves code quality, enhancing the organization’s total ROI.

There are many tools that can help enable a smoother transition to a CI/CD process. Testing is a large part of that process because even if you are able to make your integrations and delivery faster, it would mean nothing if was done so without quality in mind. Also, the more steps of the CI/CD pipeline that can be automated, the faster quality releases can be accomplished.