



Continuous integration is the practice of merging all developer's working copies to a shared mainline several times a day and continuous delivery is an engineering practice in which teams produce and release value in short cycles. While continuous deployment is a software engineering approach in which the value is delivered frequently through automated deployments.

### **BENEFITS OF CI/CD TO ACHIEVE, BUILD, AND DEPLOY AUTOMATION FOR CLOUD-BASED SOFTWARE PRODUCTS.**

Continuous integration, delivery and deployment (CI/CD) have enabled many organizations to release on a more frequent basis without compromising on quality.

**FASTER TIME TO MARKET:** The primary goal of a CI/CD pipeline is to deliver working software to users quickly and frequently which in turn helps in generating revenue for the company as there is continuous delivery of software to the market.

**REDUCED RISK:** Reduced risk in CI/CD helps in reducing cost for the business and save money for more options in software

development cycle. Because a company loses a lot of money when if a risk occurs which in turn affects cost.

**AUTOMATED SMOKE TEST:** The process of automated smoke test in CI/CD protects revenue in the company which reduce downtime from a deployed related crash or major bug.

**SMOOTHER PATH TO PRODUCTION:** Smoother path to production increases revenue as software is being staged for production quicker and ready for delivery to consumers to generate revenue.

**EFFICIENT INFRASTRUCTURE:** Creation of infrastructure using automation in CI/CD helps in avoiding cost which means less error, faster deployment for continuous delivery.

**TIGHTER FEEDBACK LOOP:** The CI/CD loop amplifies feedback and communication with no manual authentications, more iteration, and protects the cost in response to a requested change before delivery.

**DETECT SECURITY VULNERABILITIES:** Every company is conscious of security in every aspect of business. This helps in avoiding cost in CI/CD which prevents embarrassing or costly security holes.

In conclusion, the benefits of an automated CI/CD pipeline range from practical considerations like code quality and rapid bug fixes, to ensuring you're building the right thing for your users and improving your entire software development process which in turn generates revenue and avoid cost in ways most minimal.