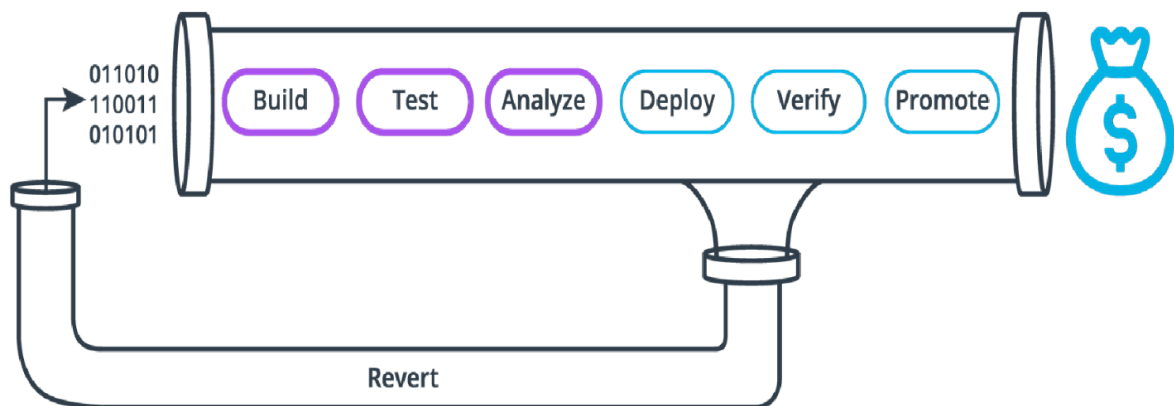# Fundamentals and Benefits of CI/CD to Achieve, Build, and Deploy Automation for Cloud-Based Software Products

Effective use of the CI/CD process ensures high quality, reliability, and security of the software products. Any customer centric software companies strive to provide services that are useful, highly valued, easily accessible, and ensure reduced costs.

Under Agile and DevOps frameworks, today's product development life cycles are innovative and result oriented without any extra overhead. Practices such as continuous integration and continuous delivery has set new industry paradigm for fast software product delivery with even lesser costs.

CONTINUOUS DELIVERY PIPELINE

With continuous delivery framework, one can easily automates the entire software release process where the involved teams produce software in short cycles, ensuring that the software can be reliably released at any time and, when releasing the software, without doing so manually. It aims at building, testing, and releasing software with greater speed and frequency.

CI/CD require limited resources for deploying and provisioning of infrastructure. Once these IaC scripts are written, can be reused again for other provisioning. Also, Infrastructure can be deployed in short-time as there is no requirement of multiple approvals. Short time results, significant cost reduction can be achieved by automating creating/disposing the infrastructure resources. Testing and validations are also part of the automation so as soon as the code is written and submitted by a developer to the central repository, it is ready to go through the other build/test/deploy phases to finally deliver the required output to the customers and end users.