Understanding CI-CD

Fundamentals – CI/CD

What is Continuous Integration?

The practice of merging all developers' working copies to a shared mainline several times a day.

What is Continuous Deployment ?

A software engineering approach in which the value is delivered frequently through automated deployments.

What is Continuous Delivery ?

An engineering practice in which teams produce and release value in short cycles.

In Summary :

Continuous Integration + Continuous Deployment = Continuous Delivery

Continuous Delivery Over Traditional Delivery

Continuous Delivery is not about what we deliver but it is all about how we deliver. It is a change in mindset so as to deliver continuously in the form of small functional features aligned with time to market to gain customer’s trust and confidence on quick and quality deliveries.

Whereas Traditional delivery is focused on delivering the final Product in one go which takes very long to get into Production , thus lags behind the market pace and thus loses the confidence of the customer.

Benefits - CI

- Continuous Integration –

  Multiple teams can work in parallel on the various features of the target Product without waiting for anyone to upload their latest code. This feature reduces the dependency .

  The issues in the code are resolved at an early state while integrating the code for the target model features.

  The time to resolve the issues are less due to small pieces of code wrt the features being worked on.

Benefits - CD

- Smaller code changes are simpler (more atomic) and have fewer unintended consequences.
- Fault isolation is simpler and quicker.
- Mean time to resolution (MTTR) is shorter because of the smaller code changes and quicker fault isolation.