

Fundamentals and Benefits of CI/CD to Achieve, Build, and Deploy Automation

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What is CICD?

Stands for Continuous Integration (CI) and Continuous Deployment (CD)

CI is the practice of merging development code into a shared master/main branch several times a day – ideally very regularly – and running automated actions in a pipeline against the code to prove its quality and readiness for production. CI covers everything from compiling, testing, analysing and scanning code as well as potentially promoting code.

CD is all about the automated deployment of code. CD covers everything from provisioning and configuring infrastructure, deploying code and application components, smoke testing and rollback capabilities.

The key here is: **automation**

Benefits of CICD

- We spend less time fixing production issues that could have been caught by automated testing
- Prevents any security vulnerabilities making their way into production and ensures strict adherence to NatWest Group security standards
- Extremely quick deployments – minutes not days or weeks
- Less and more efficient infrastructure costs as old infrastructure can be removed automatically when it's no longer required
- Reduced downtime and smoke testing can ensure application is definitely up before making it production
- Built in, from the beginning rollback capability – this will please change management in terms of change backout positions

What does this mean for NatWest Group?

- Huge cost savings due to high degree of automation
- Very fast delivery of new features and products
- Significantly reduced exposure to risk due to thorough automated testing
- Increased regulatory compliance
- Less production impacting issues which lead to downtime
- Less money spent on projects as they will be able to deliver value much quicker