

Fundamentals and Benefits of CI/CD

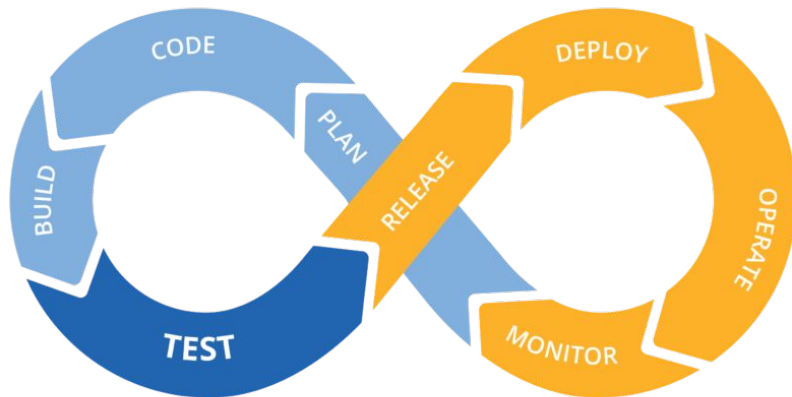
And why we at **UdaPeople** should do DevOps

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What is CI/CD?

- **Continuous Integration:**
 - Practice of automating the integration of code changes from multiple contributors into a single software project (definition from *Atlassian*).
 - **Continuous Delivery / Deployment:**
 - Practice of regularly deploying artefacts that successfully passes the CI phase to ensure confidence around the deployment (definition from *RedHat*).
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- **Every** step of the **product development lifecycle** is automated
 - **Continuously** innovate, test, and deliver products
 - Customer **regularly** gets new version → short feedback cycles



Benefits of Continuous Integration

- **Reduces** costs! How?
 - **Less** developer time on issues from new developer code (by **frequently merging** code)
 - **Less** infrastructure costs from unused resources (by **automating** the creation process)
- **Avoid** costs! How?
 - **Less** bugs in production and less time in testing (by catching failing tests **fastly**)
 - **Prevent** embarrassing or costly security holes (by **detecting** security vulnerabilities)
 - **Less** human error, Faster deployments (by **automating** the cleanup process)
- **Benefits** for developer, manager and customer!
 - **Developer:** Smaller code changes, find bugs faster, reduce deployment errors, fast testing
 - **Product Manager:** Smaller backlog, increase accountability, more transparency
 - **Customer:** Faster release rate, customer satisfaction, faster error resolution time



Benefits of Continuous Deployment / Delivery

- **Increase** revenue! How?
 - New **value-generating features** released more quickly (by **faster** and more **frequent** production deployments)
 - Less **time to market** (by deploying to production **without manual** checks)
- **Protect** revenue! How?
 - **Reduced downtime** from a deploy-related crash or major bug (by **automated** smoke tests)
 - **Quick undo** to return production to working state (by **automated** rollback triggered by job failure)
- **Benefits** for developer, manager and customer!
 - **Developer:** no manual deployment → fast testing → fast development
 - **Product Manager:** Fast review, faster feature release, better planning
 - **Customer:** Fast feedback for new features, no service outages, feels valued



Why we at UdaPeople need it?

- We get too less feedback (deployment takes multiple hours)
- Customers and stakeholders request task forces (they don't see new features)
- New joiners are struggling (onboarding takes too much time)
- People don't know what others are working on (no collaborative development)
- Angry customers (some bugs stay in production for 10 hours or more due to missing smoke testing)

With **CI/CD** we can reduce and avoid costs, protect our current revenue and even increase it. This will satisfy developers, business owners and our customers!

