THE WONDERS OF CI/CD

A framework for driving value.

Continuous Integration/ Continuous Delivery

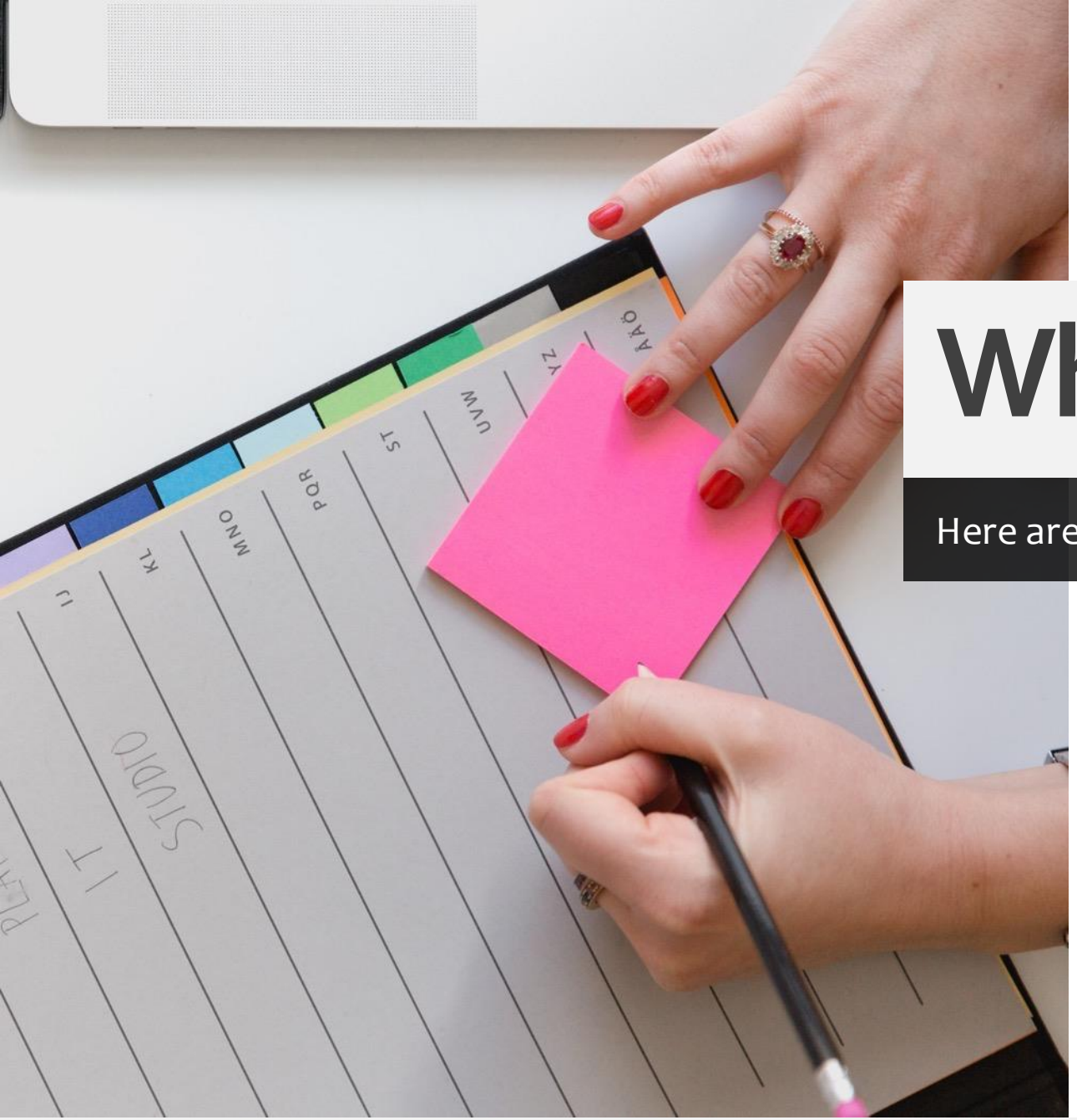
- Software development approach – for automating, streamlining the process of building, testing and deploying software.

Continuous Integration

- Code is committed to a shared repository by multiple workstreams, daily. Allowing us to identify conflicts early.
- Reduce the introduction of bugs with automated code compiling, testing and validation checks.
- CI/CD creates a culture of continuous improvement

Continuous Deployment

- Continuous deployment (CD) focuses on setting up a bundled artifact into a production environment in the fastest way possible. It automates the whole distribution process, including deployment.
- Frequent deployment drives value to a business. Allowing new features to be deployed more rapidly.



What is the up-side?

Here are some benefits of CI/CD

- Faster Product Delivery
- Easier Rollback of code changes
- Improved Efficiency
- Better planning
- Improved Troubleshooting
- Cost Effective
- Streamlined Testing and Monitoring

Benefits

Faster Product Delivery

- Multiple daily releases are realized.
- Automatically build, test and promote features to customers in a shot time.
- Improved delivery means quicker to market. Maintain a competitive advantage.
- If a new security feature is required, your team can use CI/CD and automated testing to introduce the fix to production systems faster and with higher assurance.
- Use tools like CircleCI, Docker, Kubernetes for CI/CD.

Easier Rollback of code changes

- Limit the time an issue stays in production. Rolling back to the latest "green-deployment" translates to improved customer experience.
- deploy the most recent successful build instantly to avoid production interruptions.
- Rollback enables effective version control. Tools like GIT, mean that developers can efficiently maintain multiple versions of the application

Benefits

Improved Efficiency

- CI/CD enables developers to do more in less time.
- Automate your process that includes deploying code to development, testing, and production environments and entering multiple commands across several domains.
- Reduce the time for Quality Assurance. Testing can be automated, freeing up resources.

Better planning

- Organizational designs must be adaptable to change. It's difficult for development and testing teams to ada pt to rapid change.
  Pipeline enables organizations to accomplish this by e nsuring that they have a well–organized surplus of items and a continuous line of communication with clients.
- CICD means that Release Managers can focus less on when to release features, and pivot to managing product quality and customer expectations.

Benefits

Improved Troubleshooting

- Observability is pivotal for DevOps.
- With the holp of CI/CD track the system's performance over time to determine essential performance indicators. Generate real-time reports, log – to minimize the guess work.
- Setup Alerts with push notification to email, slack and Prometheus to be notified of fatal errors or potential infrastructure risks.
- Rollback features based on log outputs. Reduce the time a defect resides in Production.

Cost Effective

- In any business situation, time and assets are essentials.
- Use CI/CD to rapidly spin-up/spin-down infrastructure. Reducing the operational cost associated with hosting data.
- Developers are empowered to share repositories, and are able work on the same code simultaneously.
- Improved ROI.

ThankYou

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