



# CI/CD

The developer's superhero



# What is CI/CD

- CI/CD stands for Continuous Integration/Continuous Deployment
- Continuous Integration means that developers can repeatedly contribute to projects without having to go through long process of getting code merged in
- Continuous Delivery means that developers have a means on deploying their code to multiple environments in a safe and controlled manner



# Why CI?

- Allowing developers to continually integrate code into projects creates ease in contributions and issue resolution
- Platforms like GitLab, RTC, and TeamFoundation provide source control for code repositories.
- The quicker developers can contribute to projects the quicker they can identify bugs together. This also leads into the quicker they can fix bugs in deployed environments
- A good CI opens the door to faster release times.



# Why CD?

- A Continuous Delivery system allows developers to not only deploy their applications, but test them too.
- GitLab CI pipelines and CircleCI allow for jobs to be ran on developer code to audit it, which can prevent non-compliant packages from reaching production
- CD also guarantees a stable and consistent process that will follow the set of rules laid out without missing steps.
- Allowing for CD usage can help prevent accidental deployment errors and expose problems via Smoke Tests.



# Considerations

- Consider where the pipelines need to be ran
  - Onprem vs Cloud: Sometimes pipelines have information in secrets that shouldn't be exposed outside of the company
- Consider the Costs
  - Onprem vs Cloud: Hardware costs of installing the Pipeline runners, the team cost to do so, etc
  - How much money is saved by converting (i.e. saved time on deployments, less production issues etc)
- Consider the learning curve:
  - It may not be possible to switch over everyone at once, but migrations are possible
  - Some code practices may not fit into the CICD paradigm
- Consider the outcome:
  - Less Production issues
  - Better development environment



# Conclusion

While introducing CI/CD to the company may be slow at first, the benefits and savings that come from the implementation will outweigh the detriments.

The stability and consistency of CI/CD will always beat manual action