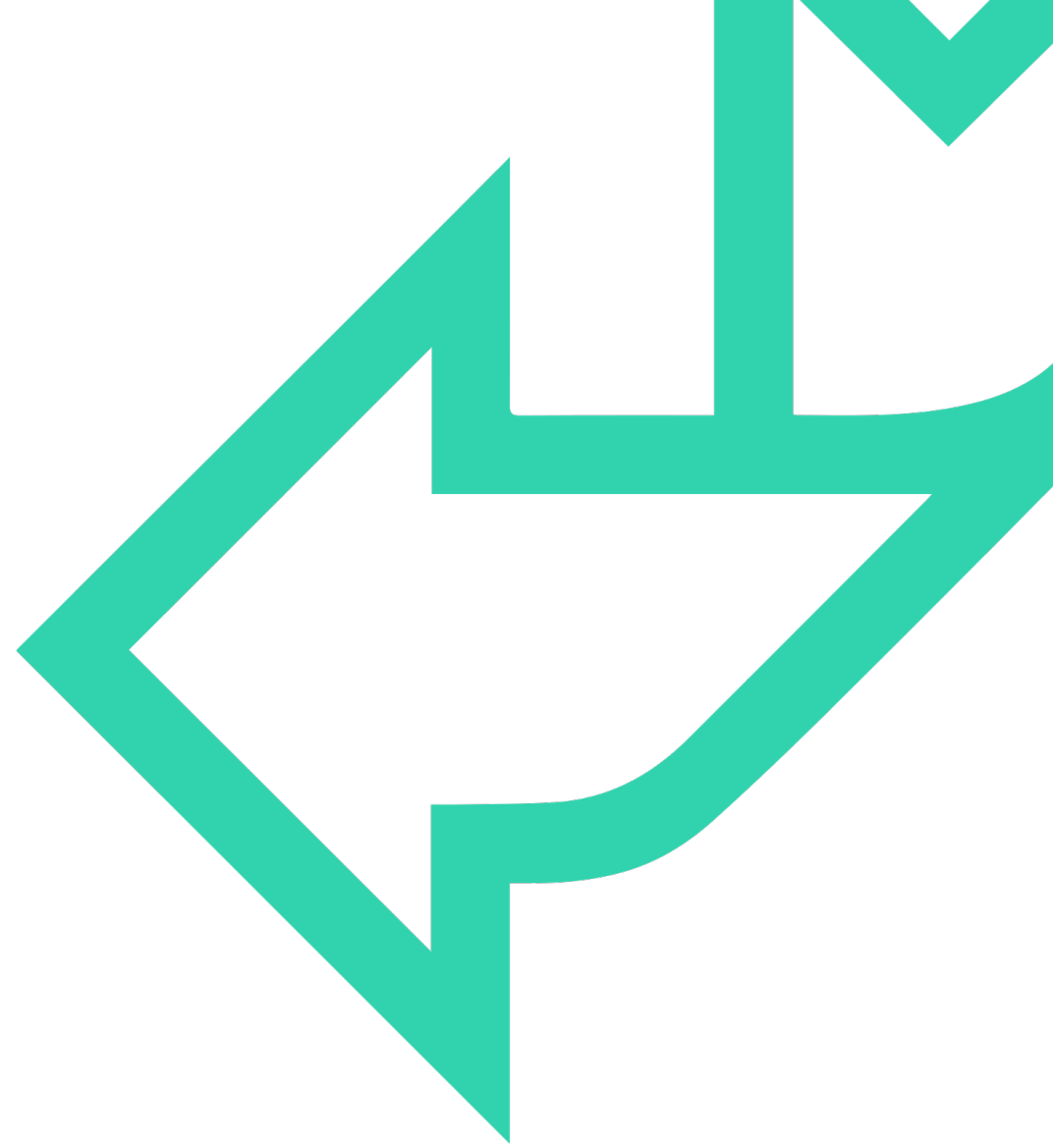




# CI Pipelines

Module 5 – Continuous Integration





# WHAT IS A CI PIPELINE?



We want to focus on automation, so the process between development and delivery needs to be automated as much as possible

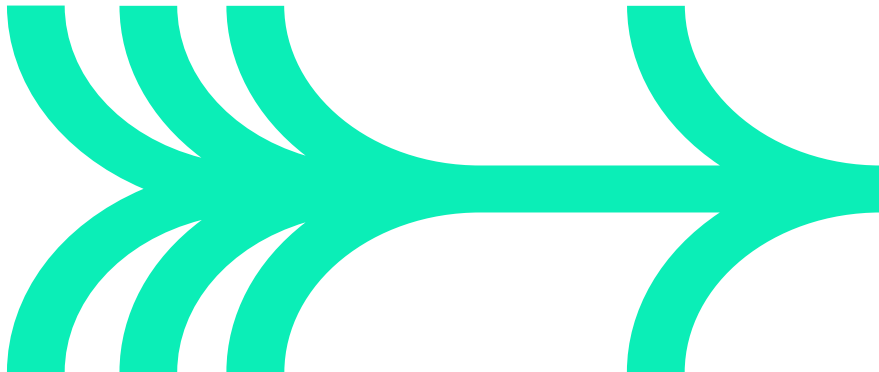
- To do this, we use a Continuous Integration (CI) pipeline

A CI pipeline is a set of tools connected to automate steps within the software delivery process. This can include:

- Triggering code builds
- Automating software testing
- Deployment of software



# Pipeline Example - Amazon



Prior to creating and utilising AWS, Amazon ran a lot of their infrastructure in-house

- This did not allow for flexibility around seasonal demand, which resulted in capacity waste

Eventually, they moved their retail site to AWS, which allowed for easy scaling

- This in turn allowed for a much faster continuous deployment process

Amazon are now deploying code on average every 11.7 seconds

- This could only be done with a sophisticated and well-designed CI pipeline!

# Pipeline Example - Netflix



- As one of the biggest streaming services in the world, Netflix need a solid cloud infrastructure
- Specifically, being able to deal with spikes of requests to ensure the app ran smoothly
- They created the Simian Army – a set of cloud testing tools
- Allows engineers to test the stability of the AWS tools that Netflix uses to run its site
- When frailties are spotted, they are investigated, fixed and deployed – again, with the use of CI!

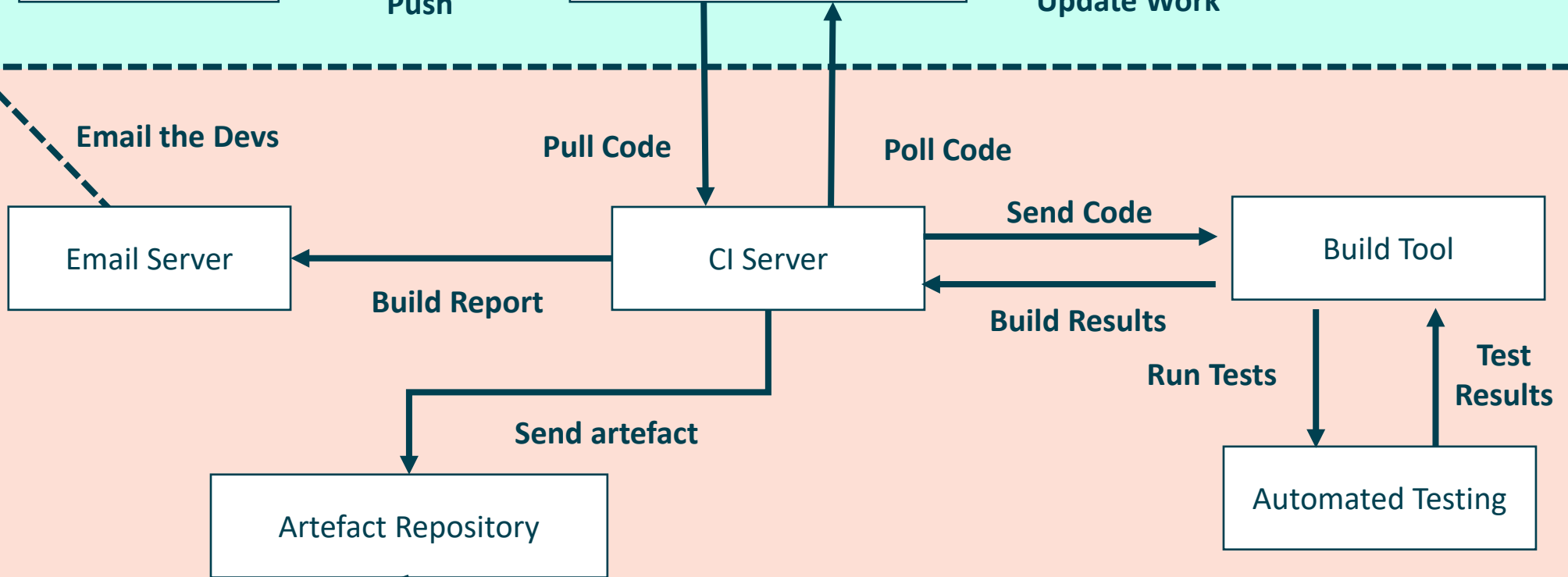


# THE CI PIPELINE

Developers



DevOps



Testers





## **EXERCISE 2 – DESIGNING A PIPELINE (45 MINS)**



In groups, try to design a sample CI pipeline based on the diagram shown in the slide deck.

Whilst choosing these tools, ensure you note down answers to the below questions:

- Why have you chosen the product?
- Does using this product cost anything?
- What are the alternatives to using this product?



**END OF SECTION**

