

Week 1: DevOps Fundamental Skills

Things To Keep In Mind

- Don't panic
- #cloudnative-bootcamp
- Intro

Course Outline

- **Lecture:** Overview of predictions and core DevOps skills
- **Projects:**
 - Getting started with GitHub
 - Setting up your first Azure environment
 - Setting up your first AWS environment
 - Setting up projects in GitHub
 - Setting up your first GitHub Action

DevOps Predictions for 2021

- Culture and Leadership
- Hybrid teams
- Application security
- Cloud adoption
- DevOps is for the business
- Developers will have more say
- DevOps is still one of the most increasingly needed roles

Cloud Computing



- Using Microsoft or Amazons resources
- Renting
- Scalability at ease
- Quick deployments

Collaboration

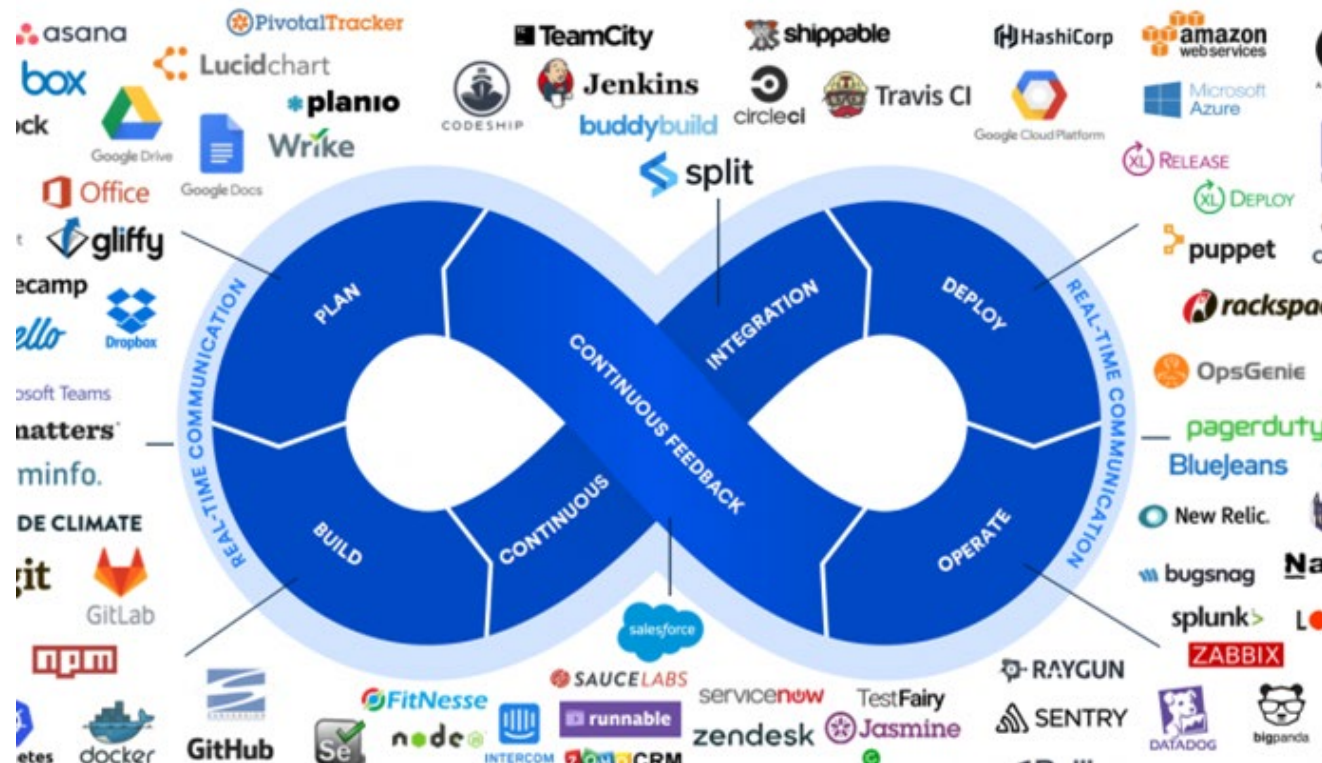


- Communication
- Working together
- Working with management
- Working with other teams

Working With The Business

- Management and engineers on the same page
- Goals for engineers and management
- Goals for the business

Major DevOps Tooling



- Coding and development practices
- Orchestration (Kubernetes)
- Containerization (Docker, containerd, CRI-O)
- Monitoring
- Cloud
- CI/CD
- Infrastructure-as-code

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.osolabs.com%2Fblog%2Fdevops-tools-of-the-trade%2F&psig=AOvVaw1kzbBRJzPG1z09ymmYs9VS&ust=1612273539091000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCIC1yI7pyO4CFQAAAAAAdAAAAABAD>

Security Skills

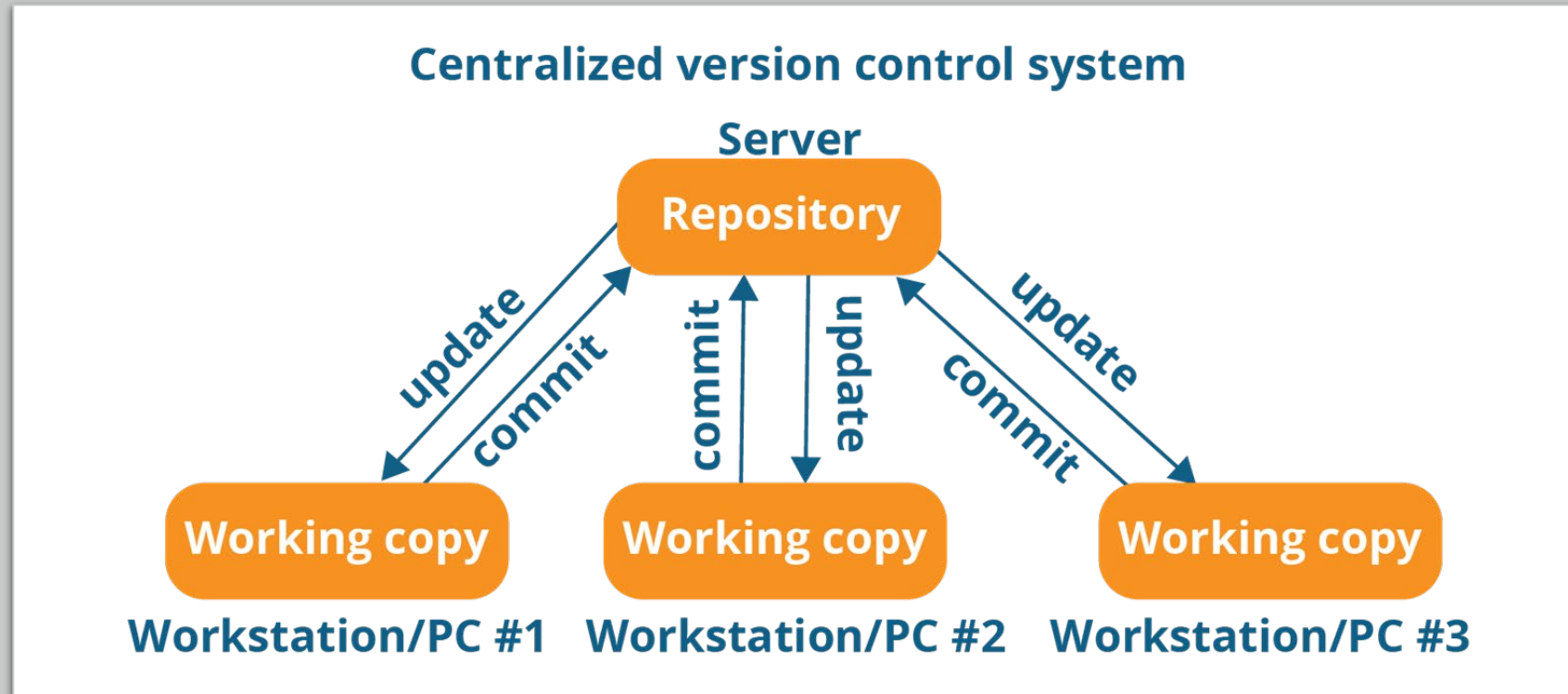
- No, you don't have to be a “hacker”
- Faster deployments == easier vulnerability
- Core software security competencies

Command-Line (CLI)

- Command-line wizardry
- Azure CLI
- AWS CLI
- A CLI tool is just a middle-man to an API
- Using the CLI

Version/Source Control

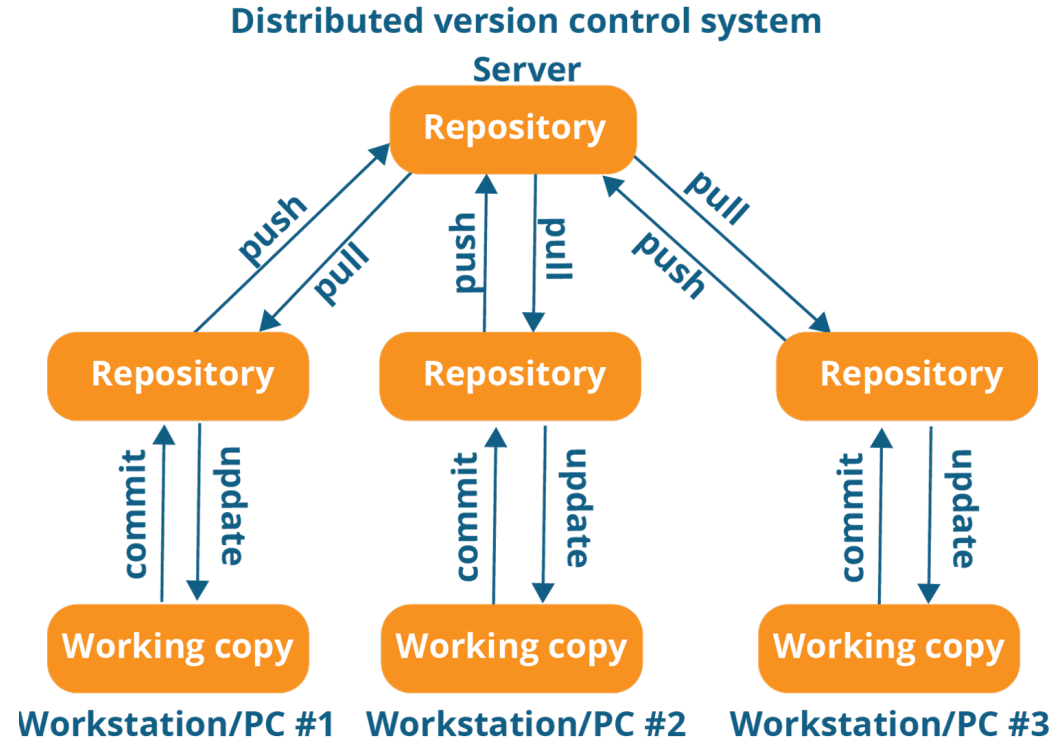
- A place to store code
- Version control == manage versions
- Collaboration
- Less bugs
- Everyone is aware



Centralized Version Control

- One server
- Everyone uses the code from the one server
- Very hard to collaborate

Distributed Version Control



- The most popular today
- Create multiple branches, pull requests, and collaborate

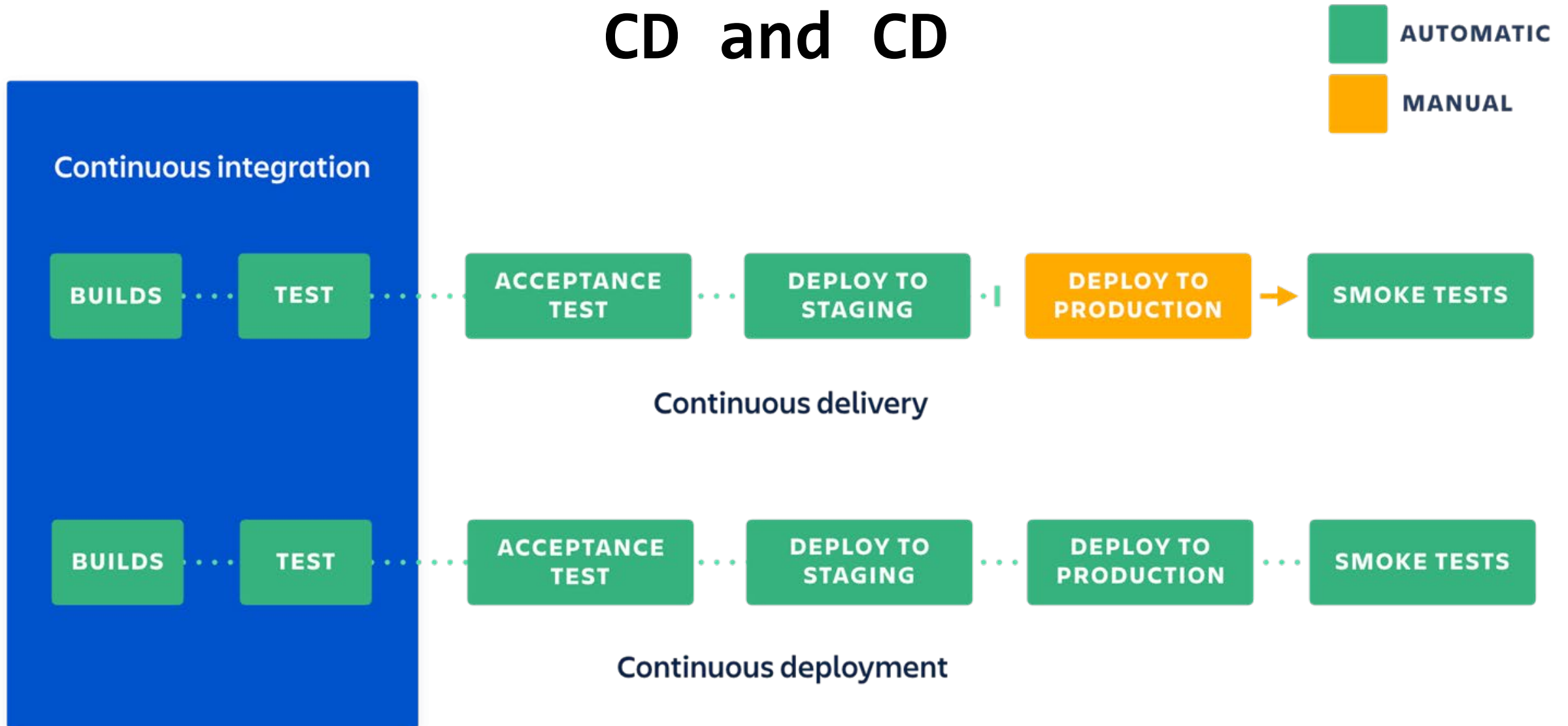
CI/CD

- Build, test, and create an artifact out of the code to be used in a deployment
- Deploy the code simply with a button click or as the code is committed to a repo

CD and CD is not the same

- Continuous Delivery: Allows you to automatically deploy code daily, weekly, hourly etc.
- Continuous Deployment: Auto-Deploy

CD and CD



Bonus : Books

- The Phoenix Project
- The DevOps Handbook
- Accelerate