What is DevOps/DevSecOps Pipeline?

DevOps is a set of practices that combines software development (Dev) and IT operations (Ops). It aims to shorten the systems development life cycle and provide continuous delivery with high software quality.

Why this topic?

DevOps has become the predominant approach in the software/product development area. It allows better visibility, coordination, and faster iterations in comparison to other relatively older processes like SDLC or Agile, making it popular. Hence, understanding of DevOps processes is a must for a Pentester or DevOps professional.

Pre-requisites?

- Knowledge of DevOps and DevSecOps process

What will you learn?

This section covers different components/tools used in various phases of the DevOps process. The objective is to teach the user how these components are used in isolation instead of providing the whole pipeline. The labs are focused on learning and not on CTF style evaluation. Each lab comes equipped with a PDF manual that covers the usage of the tools with different easy to follow examples.

Sub-sections/topics to be covered

We are going the following types of DevOps/DevSecOps pipelines:

1. Web Application
This phase deals with the writing and management of the source code. The developers write the source code in the selected programming language (using development frameworks) in their favorite IDE (Integrated Development Environment) or text editors. In the case of a small/independent project, the project is processed into a deployable/usable form in IDE itself. However, when multiple developers are working on a big project, the code from all contributors needs to be collected in one place (Code Repository) before the build phase.

2. Software

Building Project labs will cover building/packaging the software/webapp from source code, on a local machine. This section is to give the beginners visibility into what actually happens when the pipeline executes the build step.