



Welcome!
GitLab



PLURALSIGHT

Hello

HELLO
my name is

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Senior Technology Instructor
Pluralsight ILT

About me...



- 30 years in the industry
- 25 years in teaching
- Certified Cloud architect
- Passionate about learning
- Also, passionate about Reese's Cups!



Agenda

- Learning objectives
- What is GitLab?
- Building your application in GitLab
- Securing your application in GitLab



How We're Going to Work Together

- Slides and words to highlight key concepts
- Demos to bring those concepts “to life”
- Discussion groups and lab work (which will take place in sandboxes provided via AWS WorkSpaces) for hands-on reinforcement
- NOTE: I welcome being interrupted – if you need more info, or clarification, or anything else, just break in and ask. I am here to help you.



Learning Objectives



Learning Objectives

- Understand key concepts and considerations when leveraging DevSecOps in an Agile environment to help “shift security left” during software development
- Construct and prioritize a threat model for an application being developed and use that threat model as a planning tool to guide each phase of the SDLC in a security-minded manner
- Speak to the value of DevSecOps and its consistent application as a set of standards and best practices



Learning Objectives

- Monitor, patch and scan for vulnerabilities in the Operating System (Windows and Linux) and underlying Infrastructure configuration
- Effectively utilize GitLab for Source Code Management and CI/CD, including:
 - Understanding and navigating practical activities related to source code repositories in GitLab
 - Effectively use Software Composition Analysis (SCA), Static Application Security Testing (SAST), and Dynamic Application Security Testing (DAST)



What is GitLab?

GitLab Features

Complete SDLC

Full Support for CI/CD

Robust Version
Control (Git)

Full Support for
DevSecOps

Plan & Track Work

Infrastructure Support

Full Support for
Package & Release

Terms



- Project – Where work is organized, managed, tracked, and delivered as part of software creation (like a repository)
- Group – Collection of projects or other groups (like a project)
- Issue – Unit of work in GitLab project (akin to a User Story)
- Epic – Collection of related issues
- Merge Request – Request for merge of one developer's changes with the rest of the team (like a Pull Request)
- Milestone – Deliverable(s) out of a GitLab project for completion (like a release)

GitLab Flow



<https://about.gitlab.com/topics/version-control/what-is-gitlab-flow/>



Building Your Application in GitLab

LAB:

Intro to GitLab CI/CD

https://docs.gitlab.com/ee/ci/quick_start/index.html

LAB:

Complex Pipeline

https://docs.gitlab.com/ee/ci/quick_start/tutorial.html

LAB:

Publish Packages with CI/CD

https://docs.gitlab.com/ee/user/packages/pypi_repository/auto_publish_tutorial.html

LAB:

Setup CI/CD Steps

https://docs.gitlab.com/ee/tutorials/setup_steps/index.html

LAB:

Project Runners

https://docs.gitlab.com/ee/tutorials/create_register_first_runner/index.html



Securing Your Application in GitLab

LAB:

Dependency Scanning

https://docs.gitlab.com/ee/tutorials/dependency_scanning.html

LAB:

Merge Request Approval Policy

https://docs.gitlab.com/ee/tutorials/scan_result_policy/index.html

LAB:

Docker Container Scanning

https://docs.gitlab.com/ee/tutorials/container_scanning/index.html

LAB:

Security End-to-End

<https://university.gitlab.com/learn/course/hands-on-labs-gitlab-with-git-essentials/main/hands-on-challenge-gitlab-with-git-essentials>



Thank you!

If you have additional questions,
please reach out to me at:
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