Laboratory 9 Practice Report

Version control (CodeCommit) and continuous

deployment (CI/CD)

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Cloud Architecture *(Arquitectura en la Nube)*

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# Introduction

# This practice focuses on learning about version control and continuous deployment within a DevOps framework. DevOps combines development (Dev) and operations (Ops) to increase the efficiency, speed, and security of software development and delivery compared to traditional processes. A nimbler software development lifecycle results in a competitive advantage for businesses and their customers. Key activities include utilizing version control clients, starting with setting up local repositories and progressing to creating repositories on platforms like GitHub and Code Commit. Participants will also engage in configuring centralized version control services, managing document versions, and implementing continuous deployment environments. Through these activities, we expect to gain hands-on experience in efficient and streamlined software development practices, controlling document versions, and having the opportunity to implement continuous delivery pipelines, such as deploying from GitHub to services like Elastic Beanstalk.

# Theoretical Framework

In this section, is provided a concise literature review concerning the key concepts that form the basis of the practice.

**DevOps**

A

**Version control (CodeCommit)**

**Continuous Deployment (CI/CD)**

**Elasticbeanstalk**

# Architectural diagram

# Practice Development

The following section delineates the sequence of actions and procedures implemented.

* **Set up a local repository**

**Configure git with your iteso account**

Texto

Descripción generada automáticamente

**Set up the repository**

Texto

Descripción generada automáticamente

Texto

Descripción generada automáticamente

**Version control – version 1**



Texto

Descripción generada automáticamente

**Version control – version 2**

Texto

Descripción generada automáticamente

**Version control – version 3**

Texto

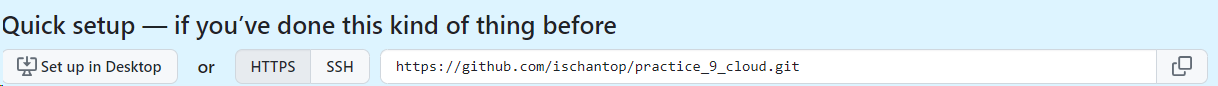
Descripción generada automáticamente

**Check version history**

Texto

Descripción generada automáticamente

**Create a repository on GitHub**



<https://github.com/ischantop/practice_9_cloud.git>

**Add the GitHub repository to the local repository**

Texto

Descripción generada automáticamente

**Refresh the GitHub repository screen. What change do you see?**

I can see the latest version of the file that was in my local repository.

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico

Descripción generada automáticamente

* **Create a repository in CodeCommit**

Interfaz de usuario gráfica, Texto, Aplicación, Correo electrónico

Descripción generada automáticamente

<https://git-codecommit.us-east-1.amazonaws.com/v1/repos/practice9>

**Add the CodeCommit repository to the local repository**

**In AWS CLI**



Interfaz de usuario gráfica, Texto, Aplicación, Chat o mensaje de texto

Descripción generada automáticamente

# Problems and Solutions

# Experiments and Results

All experiments were conducted successfully, showing effective implementation and operation within the cloud environment.

# Cost analysis

From AWS Pricing Calculator <https://calculator.aws/#/> :

# Conclusions

The practice of. Through the implementation of practical cases and experimentation with technologies like Elastic Load Balancing (ELB), we gain invaluable insights into the. Furthermore, the theoretical understanding of foundational concepts such as. Ultimately, this hands-on approach fosters a deeper understanding of cloud computing principles.

# Bibliography

[1] Amazon Web Services. " Introduction to Application Load Balancers". Amazon Web Services. Available: <https://docs.aws.amazon.com/elasticloadbalancing/latest/application/introduction.html>