Automation and Cost Management Project Based on TAGs in AWS

Public Report – Módulo 1

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1. **Introduction**

The project, carried out in partnership with Thomson Reuters, aims to develop a methodology for implementing a cost tagging system on AWS. The objective is to optimize cost control and increase operational efficiency by using tagging practices for all cloud-billed services.

2 . Initial Planning and Project Structure

From the beginning, the project was divided into four main modules, as discussed in the first guidance session. This was planned in the project plan, and its feasibility was discussed.

The final document for this module 1 reflects this structure by presenting the environment implementation plan, detailing development environment tests and the restrictions of this lab.

Subsequently, the need to develop user understanding tools through personas was also felt, a topic that had not been raised during the initial planning, highlighting a need to reassess the following modules.

3. **Solution Architecture and AWS Services**

In the guidance session, the solution architecture was a central point, focusing on how AWS services would be integrated into the project. The document details the research of AWS technologies and services, such as EC2, EBS, S3, and others, which were selected based on integration criteria and relevance to the project.

The use of AWS CloudFormation to automate the creation and configuration of resources is a key component discussed in both the guidance sessions and the document..

4. **Automation and Tagging Policies**

The importance of automation and tagging policies was emphasized especially in the third guidance session. In the documentation, these issues are addressed by describing the use of AWS CloudFormation templates and the implementation of tagging strategies to ensure consistency.

It was also highlighted as an MVP that the automated logic can be implemented in other types of services, so it should be a practice from the beginning of this project.

5. Challenges and Restrictions

Security issues and restrictions of the AWS Academy Learning Lab environment were discussed in the guidance sessions and are reflected in the document. Despite the limitations, such as the impossibility of creating security groups and the limited budget of 50 dollars per account, the project focuses on monitoring and managing costs through tags, which is considered sufficient for the current objectives.

The document also mentions these challenges faced during the initial implementation, such as attempting to implement services that the environment does not have permissions for, but that it is not an essential issue for this project, just desirable.

6. Conclusion and Next Steps

The document concludes with the initial implementation of the simulation environment, files used for CloudFormation templates and highlights the importance of understanding the use of the AWS laboratory for the next stage of the project. The integration of tagging practices and continuous automation are seen as very important for the success of the project, aligning with the logic discussed in the guidance sessions.

7. Feedback with the Business Partner:

The partner has shown great interest in the project. Both the manager and other FinOps professionals have been closely following the project, contributing suggestions on possible future directions.

Automation has been a central theme in the discussions, as well as the importance of ensuring data security. The team has also made themselves available to present the progress of the project, using the presentation developed in this last sprint.

8. Professional Development and Practical Application of Knowledge

This project provided the opportunity to consolidate my understanding of the relevance of process automation for the company, taking this as a good practice, not just as an option. The ability to experiment with AWS services in a lab environment, without the risk of incurring costs for the company, was particularly useful.

In addition, the creation and use of a custom CloudFormation template allowed me to experience in practice a tool that I observe being used in the corporate environment, but which, for security and governance reasons, I do not have the freedom to implement directly.

The interaction with these services made me deepen my studies, resulting in a greater knowledge about the architecture and the classification of the instances that I use in my daily work.