Module 2

Automation and Cost Management Proje
Based on TAGs in AWS

Institution: Instituto de Tecnologia e Liderança – INTELI
Business Partner: Thomson Reuters

Authors:

Gustavo Monteiro

Advisor: Rodolfo Riyoei Goya

Agenda

- **Quick Project Recap (Module 1 Review)**

- **Tagging Strategy: Development, Validation, and Refinement**
  - Foundational Research and Principles
  - Practical Validation and Partner Feedback
  - Formalization of the Tagging Standard

- **The Tagging Quick Start Guide**

- **Current Challenges**

- **Conclusion and Next Steps**

Quick Project Recap (Module 1 Review)

- **Main Objective:** To develop a methodology for implementing a cost tagging system in AWS, aiming to optimize cost control and enhance operational efficiency.

- **Core Problem:** The need for a comprehensive tagging system applicable to all billable services in AWS.

- **Key Highlights from Module 1:**

  - Initial problem definition, personas, and lean inception.

  - Overview of AWS technologies and initial solution architecture.

  - Early challenges with environment setup.

Tagging Strategy – Foundational Research and Principles

- **Importance of a Tagging Strategy:** Enabling cost visibility, accurate tracking, and resource categorization.

- **Research into Common Tagging Patterns:**

  - Leveraging AWS Well-Architected Framework and AWS documentation.

  - Identifying key tag keys (e.g., CostCenter, Environment, ApplicationID, Owner).

  - Understanding grouping strategies and naming conventions.

- **Defining the Tagging Strategy and Core Practices:**

  - **Objectives**: Cost visibility, operational management, optimization

  - **Practices**: Standardization, mandatory tags, governance, use of Cost Allocation Tags

Tagging Strategy – Practical Validation

- **Test Implementation Plan:**

  - Service selection (EC2) and scenario simulation (hypothetical product components).

  - Methodology: Manual instance creation (Console) and tag management via AWS CLI.

- **Execution: Manual Instantiation and CLI Tagging:**

  - Creation of EC2 instances.

  - Demonstrating AWS CLI commands.

  - Practical examples of applying the defined tags to test instances.

Tagging Strategy – Partner Feedback

- **Partner Feedback and Initial Observations**:

  - Overall positive reception.

  - Discussion point: Clarity on cost-center mapping (requires further internal partner discussion).

  - Suggestion: Granularity for environment categorization (non-production vs. production).

  - Suggestion: service-type tag (valuable but deferred to focus on foundational tags).

Tagging Strategy – Formalization of the Standard

Tag Key	project-id	application-id	cost-center	environment	environment-type	owner-email
Purpose	Uniquely identifies the project to which the resource contributes	Identifies the specific application, service, or workload	Specifies the financial business unit responsible for the costs incurred	Defines the specific stage in the deployment lifecycle	Provides a higher-level classification of the resource's environment	Identifies the primary individual responsible for the resource
Format	Alphanumeric string	Alphanumeric string	Alphanumeric string	Lowercase string	Lowercase string, selected from a strictly limited predefined list	A valid email address.
Example	• PRJ78910 • PRJ77622	• DOG55 • WEX01 • TOSINTER	• alfa124 • beta232	• development • qa • production	• production • non-production	• username1@ domain.com

The Tagging Quick Start Guide

- **Importance and Objectives of the Guide:**
  - Facilitate rapid onboarding and user adoption.
  - Promote consistent application and reduce errors.
  - Improve user experience and compliance.
  - Serve as an accessible "cheat sheet."

- **Target Audience:**
  - Reference for the internal DevOps team, including new members, to facilitate the correct and consistent application of tags to AWS resources.

- AWS Academy Lab limitations for advanced automation (e.g., Lambda for lifecycle management, AWS Config for tag governance)

- Finalizing cost-center value definitions with the partner.

- Ensuring effective dissemination and adoption of the tagging standard.

Current Challenges

Conclusion and Next Steps

Achievements:

- Developed, validated, and formalized a robust tagging strategy.

- Outlined the structure for the Quick Start Guide.

Next Steps:

- Develop the API for management data collection .

- Create dashboards/reports for data visualization.

Thank you