

Project Echo Cloud Plan

Authors:

- Adam Edwards

Overview

This master document is an overview of the plan to get Databytes Project Echo running within the public cloud using Google Cloud Platform.

This plan has two primary focuses:

- Outline the foundation to start running the project long term in GCP.
- Provide the architectural design for the first components to be deployed onto GCP, ideally within T2 2024.

Considerations

The primary considerations are:

- This is a university project, so a balance needs to be struck between doing things properly as if this were a professional setting and keeping them simple.
- As the public cloud is being used rather than individual developers' laptops security is of great concern.
- Costs should be kept as low as possible, there is only a very small budget (\$500 GCP credit) for Trimester 2 2024.

Software Configuration Management (SCM)

- Environment Management
- Source Code Management
- Build management

SCM includes many items that largely relate to workload management "how we work" but Project Echo already has processes in place and for now my opinion is to keep things simple.

IE, something that is very important in a professional setting is Configuration Control/Change Management. As the documentation in its current state will show our immediate plan is to first get Project Echo functional within the development environment, as there's no deployments to higher environments Change Management planning isn't required yet.

Wikipedia's page on SCM is a good high-level overview

https://en.wikipedia.org/wiki/Software_configuration_management

Architecture

- High Level Architecture
- Reference Architecture
- Components
 - Echo Store
 - Echo API
 - IOT
 - Tooling

