

RevAntarctica

In this document, all requirements and required technologies pertaining to the first cloud administration project are defined.

In RevAntarctica, you will be deploying a website for Revature Antarctica. It will need to be deployed in a **resilient**, **cost-effective** and **efficient** architecture. The application should be deployed into Compute Engine instances, however, content should reside in a Cloud Storage bucket and somehow it needs to be **synchronized** into the server’s hard drive periodically. The functionality that needs to execute will be **serverless**. If you want to do your own custom theme for the website that is fine, please see the professional guidelines below about it.

**Requirements**

**Architecture**

· The website must be deployed in an HTTP server configured in a VM

· The VM must be deployed in an autoscaling instance group behind an HTTP load balancer.

· Access to the VM must be forbidden, and it should only be accessible through a Bastion.

· Instances must be deployed in custom VPCs and different subnets.

· Private instances must have access to the internet.

**Content**

· The website itself must be stored in a Cloud Storage bucket.

· This Storage bucket must be synchronized with the VM(s) filesystem(s) periodically.

· Website must be available globally using cdn.

**Functionality (Based on Theme)**

**As a User, I can:**

· Calculate something through an input and see the result.

· Store an object with at least 3 fields into Datastore and be notified of success.

· See all data stored in the Datastore table.

· See an image that is stored in a Cloud Storage bucket, querying it by its name.

· Do something of your choice.

**Mandatory Technologies**

· Compute VM

· HTTP Load Balancer

· Autoscaling

· Instance Groups

· Functions

· VPC

· Cloud Storage

· Datastore

**Guidelines and Deadlines**

· All requirements must be completed.

o It’s important to add your own flavor into your work, but don’t go outside of the box if mandatory requirements are not completed yet.

o When adding additional requirements, always document yourself into its pricing and don’t go overboard.

o This project is designed in a way that should need almost no cost to run.

· Project must be presented on Friday of Week 5 with no delays.

o An architecture diagram should be presented with some slides to back it up if needed.

o A document explaining the architecture must be sent to the trainer upon completion.

· Have fun, but always remember, keep it professional.