



Revacloud

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

In Revacloud, you have to choose a **theme** for a website that will be deployed in a **resilient, cost-effective** and **efficient** architecture. The application should be deployed into EC2 instances, however, content should reside in an S3 bucket and somehow it needs to be **synchronized** into the server's hard drive periodically. The functionality that needs to execute will be **serverless**.

Requirements

Architecture

- The website must be deployed in an HTTP server configured in an EC2.
- The EC2 must be deployed in an autoscaling group behind an ELB.
- Access to the EC2 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 an S3 bucket.
- This S3 bucket must be synchronized with the EC2(s) filesystem(s) periodically.
- Cross-region replication and versioning is a nice to have.
- Website must be available in all Edge Locations with CloudFront.

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 DynamoDB and be notified of success.
- See all data stored in the DynamoDB table.
- See an image that is stored in an S3 bucket, querying it by its name.
- Do something of your choice.

Mandatory Technologies

- EC2
- ELB
- Autoscaling

- Lambda
- VPC
- CloudFront
- API Gateway
- S3
- DynamoDB

Guidelines and Deadlines

- All requirements must be completed.
 - 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.
 - When adding additional requirements, always document yourself into its pricing and don't go overboard.
 - 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.
 - An architecture diagram should be presented with some slides to back it up if needed.
 - A document explaining the architecture must be sent to the trainer upon completion.
- Have fun, but always remember, keep it professional.