AWS Summary - Quaefacta

EC2 instance

Summary

EC2 instances are virtual computing environments in the AWS cloud. They can be used as a server to host web applications. This allows users to connect to the web application through the internet.

Pricing

AWS has a free tier for EC2 instances, this allows you to use t2.micro instances for 750 hours per month for a year at no charge. This is enough hours to run a single t2.micro instance for a year for free.

Usage:

We plan to use one t2.micro EC2 instance to host the Quaefacta web application.

Amazon RDS

Summary

Amazon RDS is a service for operating databases in the AWS cloud.

Pricing

AWS has a free tier for Amazon RDS which can run db.t2.micro instances of databases for 750 hours each month for a year at no charge. This includes 20 GB of storage as part of the free tier. This is enough hours per month to run the database for a year at no cost assuming the data stored is under 20 GB.

Usage

We plan to use one dbt2.micro instance to host the database for the Quaefacta web application. This database will contain all of the date required for the application except for user document uploads (such as medical certificates, photos of skin lesions, etc) which we plan to store using Amazon S3.

Amazon S3

Summary

Amazon S3 is a storage service which can be used to flexibly and securely store data.

Pricing

AWS free tier applies for the Amazon S3 service. It includes 5 GB of standard storage for a year. Whilst this isn't a very large amount of storage, it should be plenty for developing and testing the document upload functionality of the Quaefacta web application.

Usage

We plan to use the Amazon S3 service to store user uploaded documents.

Other details:

Amazon VPC:

Amazon Virtual Private Cloud is a virtual network, it can be thought of similar to a traditional network except in the AWS Cloud space.

Subnet:

A subnet is a grouping of IP addresses inside of the VPC. Subnets can be private or public. Instances in the private and public subnets can communicate with other instances in the same VPC, but only instances in a public subnet can communicate with the internet through the internet gateway.

Availability Zone:

Availability zones are distinct locations within a region that are isolated from each other. This means if there is a failure in one availability zone causing AWS server outages, AWS services will still be available for use in another availability zone. Availability zones almost never have outages so we can keep all our AWS infrastructure in one availability zone for the purpose of the Quaefacta web application development.

Internet Gateway:

An internet gateway is used to connect the VPC to the internet, allowing internet traffic to access the Quaefacta web application