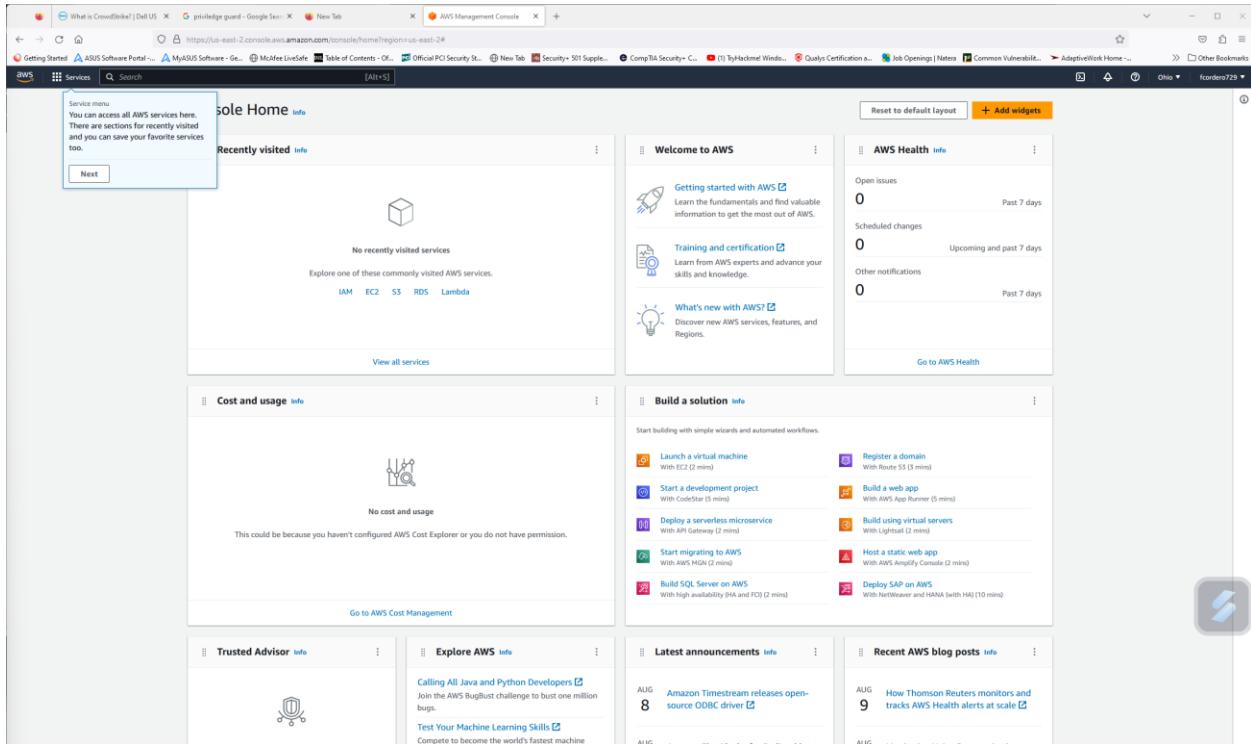


## Intensive Cloud Training

Authored by Francisco Cordero

MultiCloud application and database migration between Google Cloud Platform and Amazon Web Services.

Creation of Amazon AWS account and first time login.



## Creation of Google GCP account and first time login.

The screenshot shows the Google Cloud Platform (GCP) console. At the top, there are several tabs: 'What is CrowdStrike' (active), 'Dell US', 'privilege guard - Google Search', 'New Tab', 'Dashboard | IAM (Global)', and 'Welcome - My First Project'. The main header bar includes the 'Google Cloud' logo, a search bar with placeholder 'Search (/) for resources, docs, products, and more', and a 'Search' button. Below the header, there's a decorative graphic featuring a blue dot, a green circle, and a yellow triangle. The main content area starts with a 'Welcome, Frank Noneofya' message with a 'PREVIEW' badge. It displays a 'Free Trial' status: '0 out of \$300 credits used' (Expires November 8, 2023). It also shows the project ID 'carmel-anvil-395413' and a link to 'Explore curated resources to help you build and deploy your first project'. Below this, there's a section titled 'Recommended based on your interest in Data, AI/ML, SAP -' with three cards: 'Create a log analysis pipeline' (BigQuery), 'Create a data warehouse with BigQuery' (BigQuery), and 'Create an analytics lakehouse' (Data science, IoT, streaming analytics). There are buttons to 'View all Solutions' and 'Explore curated resources'. The next section is 'Products' with eight cards: 'Analyze and manage data' (BigQuery), 'Train and host ML models' (Vertex AI), 'Process batch data' (Cloud Dataflow), 'Organize business data' (Looker), 'Build conversational apps' (Dialogflow), 'Explore and manage data' (Data Catalog), 'Convert text to speech' (Text-to-Speech API), and 'Convert speech to text' (Speech-to-Text API). Buttons for 'View all products', 'View all APIs', and 'Compare with AWS and Azure' are available. Finally, there's a section for 'Interactive tutorials' with four cards: 'Get started with BigQuery - query, load...', 'Query a public dataset with the Google Cloud...', 'Train an AutoML tabular model', and 'Train an AutoML video classification model'. A small 'S' icon is visible on the right side of the page.

Go into AWS IAM service and create user account terraform-en-1 and provision account.

The screenshot shows the AWS IAM 'Create user' wizard. The title bar indicates the current step: 'Step 1 Specify user details'. The main form is titled 'Specify user details' and contains a 'User details' section. In this section, the 'User name' field is filled with 'terraform-en-1'. Below the field, a note states: 'The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and +, -, ., \_ (hyphen)'. There is also an optional checkbox: 'Provide user access to the AWS Management Console - optional' with the sub-instruction: 'If you're providing console access to a person, it's a best practice to manage their access in IAM Identity Center.' At the bottom of the form, a note says: 'If you're creating programmatic access through access keys or service-specific credentials for AWS CodeCommit or Amazon Keyspaces, you can generate them after you create this IAM user. Learn more.' On the right side of the form, there are 'Cancel' and 'Next Step' buttons. A small 'S' icon is visible on the right side of the page.

## Grant terraform-en-1 AmazonS3FullAccess permissions.

The screenshot shows the AWS IAM 'Create user' interface at step 3: Review and create. The 'Attach policies directly' tab is selected. A search bar at the top right is set to 'Filter by Type: All types' and has '52 matches'. The results list includes the 'AmazonS3FullAccess' policy, which is checked. Other policies listed include 'AmazonS3ObjectLambdaExecutionRolePolicy', 'AmazonS3OutpostsFullAccess', 'AmazonS3OutpostsReadOnlyAccess', 'AmazonS3ReadOnlyAccess', 'AmazonSageMakerAdmin-ServiceCatalogProductsServiceRolePolicy', 'AmazonSageMakerCanvasAccess', 'AmazonSageMakerCanvasForecastAccess', 'AmazonSageMakerCanvasFullAccess', 'AmazonSageMakerCoreServiceRolePolicy', 'AmazonSageMakerEdgeDeviorFleetPolicy', 'AmazonSageMakerFeatureStoreAccess', 'AmazonSageMakerFullAccess', 'AmazonSageMakerGeospatialExecutionRole', 'AmazonSageMakerGeospatialFullAccess', 'AmazonSageMakerGroundTruthFullAccess', 'AmazonSageMakerMechanicalTurkAccess', 'AmazonSageMakerModelGovernanceUseAccess', 'AmazonSageMakerModelRegistryFullAccess', and 'AmazonSageMakerNotebooksServiceRolePolicy'. At the bottom, there is a note about setting a permissions boundary.

AWS creation of access key.

Go to Security tab, Access Key and click on Create Access Key.

The screenshot shows the AWS IAM 'Security credentials' tab for the 'terraform-en-1' user. The 'Console access' section shows 'Disabled' for both 'Access key 1' and 'Access key 2'. The 'Console sign-in' section includes a 'Console sign-in link' (https://209552656993.signin.aws.amazon.com/console) and a 'Create access key' button. The 'Multi-factor authentication (MFA)' section indicates 'No MFA devices. Assign an MFA device to improve the security of your AWS environment'. The 'Access keys' section shows 'No active access keys'. The 'SSH public keys for AWS CodeCommit' section shows 'No SSH public keys' and a 'Upload SSH public key' button. The left sidebar shows the 'Identity and Access Management (IAM)' navigation path.

## Mission1

<https://thecloudbootcamp.notion.site/Steps-to-implement-Hands-on-Project-Mission-1-45f94747e1124751a9b063637bf52823>

# Amazon Web Services

- Access AWS console and go to IAM service
- Under Access management, Click in "Users", then "Add users". Insert the User name **terraform-en-1** and click in **Next** to create a programmatic user.

Download Access Key for terraform-en-1 user.

The screenshot shows the AWS IAM 'Create access key' interface. At the top, a green banner says 'Access key created'. Below it, the 'Retrieve access keys' section displays the generated access key 'AKIATBPTEBBQRQ2DQURQ' and its corresponding secret access key, which is partially obscured by dots. A 'Show' link is available to view the full secret key. To the left, there are two steps: 'Step 1: Access key best practices & alternatives' and 'Step 2: optional Set description tag'. At the bottom right, there are 'Download .csv file' and 'Done' buttons.

Activate Google GCP Cloud Shell.

You're in Free Trial  
0 out of \$300 credits used  
Expires November 6, 2023  
What happens when trial ends?  
ACTIVATE FULL ACCOUNT

You're working on project My First Project  
Number: 51058475588 ID: caramel-anvil-395413

Explore curated resources to help you build and deploy your first project

**Recommended based on your interest in Data, AI/ML, SAP •**

**Pre-built solution templates •**

- Create a log analysis pipeline
- Create a data warehouse with BigQuery
- Create an analytics lakehouse

**Products**

- Analyze and manage data (BigQuery)
- Train and host ML models (Vertex AI)
- Process batch data (Cloud Dataprep)
- Organize business data (Looker)
- Build conversational apps (Dialogflow)
- Explore and manage data (Data Catalog)
- Convert text to speech (Text-to-Speech API)
- Convert speech to text (Speech-to-Text API)

View all Solutions | View all Products | View all APIs | Compare with AWS and Azure

Terminal (caramel-anvil-395413) + +

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to caramel-anvil-395413.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
feedback@cloudshell:~ (caramel-anvil-395413) [ ]
```

Click here to see details about your Cloud Shell session and usage quota  
Got it!

## Upload of files AccessKeys.csv and Mission1.zip to GCP through Cloud Shell Editor.

mission1 - Cloud Storage - My First Project

CLOUD SHELL Editor

File Edit Selection View Go Run Terminal Help

EXPLORER OPEN EDITORS

FRANNECK1975 mission1\_en AccessKeys.csv mission1.zip README-cloudshell.txt

Click here to see details about your Cloud Shell session and usage quota  
Got it!

Uploading and My First Project operations

Uploading 2 files

- AccessKeys.csv
- mission1.zip

Complete Complete

Get started with Cloud Storage

- Getting bucket information
- Uploading objects
- Downloading objects
- Use cases for Cloud Storage
- Terraform samples
- Architecture guides for storage
- Making data public

All Cloud Storage documentation

Unzipped Terraform files and Copied AccessKeys.csv to Mission1/en directory.

Terminal (caravel-enr1l-395413) ~ +

```
frankies1978@cloudshell:~/mission_en (caravel-enr1l-395413)$ rm mission1_en
Archive: mission1_en
  creating: mission1_en/
  inflating: mission1_en/.03_Store
  inflating: mission1_en/.terraform
  inflating: mission1_en/.terraform/.tfignore
  inflating: mission1_en/.terraform/.tfvars
  inflating: mission1_en/.terraform/.variables.tf
  inflating: mission1_en/.terraform/main.tf
  inflating: mission1_en/.terraform/main.tfvars
  inflating: mission1_en/.terraform/providers/database.tf
  inflating: mission1_en/.aws_set_credentials.sh
  inflating: mission1_en/.aws_set_region.sh
  creating: mission1_en/.aws_set_region
  inflating: mission1_en/.aws_set_region.sh
  creating: mission1_en/.terraform/
  inflating: mission1_en/.terraform/.tfignore
  inflating: mission1_en/.terraform/.tfvars
  inflating: mission1_en/.terraform/.variables.tf
  inflating: mission1_en/.terraform/main.tf
  inflating: mission1_en/.terraform/providers/tcb_gcp_database.tf
  inflating: mission1_en/.terraform/providers/tcb_gcp_storage.tf
frankies1978@cloudshell:~/mission_en (caravel-enr1l-395413)$ ls -la
total 20
drwxr-x 3 frankies1978 frankies1978 4096 Aug 9 14:16 .
drwxr-x 2 frankies1978 frankies1978 4096 Feb 7 2022 ..
drwxr-x 4 frankies1978 frankies1978 4096 Feb 7 2022 mission1_en
drwxr-x 3 frankies1978 frankies1978 4096 Feb 7 2022 mission2_en
frankies1978@cloudshell:~/mission_en (caravel-enr1l-395413)$ cd mission1_en
frankies1978@cloudshell:~/mission1_en (caravel-enr1l-395413)$ ls -la
drwxrwxr-x 4 frankies1978 frankies1978 4096 Feb 7 2022 .
drwxrwxr-x 1 frankies1978 frankies1978 4096 Feb 7 2022 ..
drwxrwxr-x 1 frankies1978 frankies1978 4096 Feb 7 2022 .DB_Store
drwxrwxr-x 3 frankies1978 frankies1978 4096 Feb 7 2022 .terraform
drwxrwxr-x 2 frankies1978 frankies1978 4096 Feb 7 2022 .terraform.d
frankies1978@cloudshell:~/mission1_en (caravel-enr1l-395413)$ cd en
frankies1978@cloudshell:~/mission1_en/mission1_en (caravel-enr1l-395413)$ ls -la
total 32
drwxrwxr-x 4 frankies1978 frankies1978 4096 Feb 9 2022 .
drwxrwxr-x 2 frankies1978 frankies1978 4096 Feb 9 2022 ..
-rw-r--r-- 1 frankies1978 frankies1978 99 Aug 9 14:16 AccessKeys.csv
-rw-r--r-- 1 frankies1978 frankies1978 1000 Sep 5 2022 credentials.sh
-rw-r--r-- 1 frankies1978 frankies1978 1459 Feb 3 2022 .DB_Store
-rw-r--r-- 1 frankies1978 frankies1978 1459 Feb 3 2022 .terraform
-rw-r--r-- 1 frankies1978 frankies1978 1459 Feb 3 2022 .terraform.providers
-rw-r--r-- 1 frankies1978 frankies1978 1459 Feb 3 2022 .terraform.providers.tcb_gcp_database
frankies1978@cloudshell:~/mission1_en/mission1_en (caravel-enr1l-395413)$ chmod +x *.sh
```

Click here to see details about your Cloud Shell session and usage quota  
Get it!

Uploads and My First Project operations

Uploading 2 files

- AccessKeys.csv
- mission1.zip

Complete

All Cloud Storage documentation

Enabled the following services.

gcloud services enable containerregistry.googleapis.com

gcloud services enable container.googleapis.com

gcloud services enable sqladmin.googleapis.com

```
Welcome to Cloud Shell! Type "help" to get started.  
Your Cloud Platform project in this session is set to caramel-anvil-395413.  
Use "gcloud config set project [PROJECT_ID]" to change to a different project.  
frankiecl975@cloudshell:~ (caramel-anvil-395413)$ gcloud services enable containerregistry.googleapis.com  
Operation "operations/acf.p2-510583475558-c772dbf-37d3-45b9-a54f-b172dce4cd2e" finished successfully.  
frankiecl975@cloudshell:~ (caramel-anvil-395413)$ gcloud services enable container.googleapis.com  
Operation "operations/acf.p2-510583475558-cf3afe49-f756-4837-b79b-b9aebdf46391" finished successfully.  
frankiecl975@cloudshell:~ (caramel-anvil-395413)$ gcloud services enable sqladmin.googleapis.com  
Operation "operations/acf.p2-510583475558-cf3afe49-f756-4837-b79b-b9aebdf46391" finished successfully.  
frankiecl975@cloudshell:~ (caramel-anvil-395413)$ cd ~/mission1/en/mission1/en/terraform  
frankiecl975@cloudshell:~/mission1/en/mission1/en/terraform (caramel-anvil-395413)$ terraform init  
  
Initializing the backend...  
  
Initializing provider plugins...  
- Finding hashicorp/aws versions matching "> 3.0"...  
- Finding latest version of hashicorp/google...  
- Installing hashicorp/aws v3.76.1...  
- Installed hashicorp/aws v3.76.1 (signed by HashiCorp)  
- Installing hashicorp/google v4.77.0...  
- Installed hashicorp/google v4.77.0 (signed by HashiCorp)  
  
Terraform has created a lock file .terraform.lock.hcl to record the provider  
selections it made above. Include this file in your version control repository  
so that Terraform can guarantee to make the same selections by default when  
you run "terraform init" in the future.  
  
Terraform has been successfully initialized!  
  
You may now begin working with Terraform. Try running "terraform plan" to see  
any changes that are required for your infrastructure. All Terraform commands  
should now work.  
  
If you ever set or change modules or backend configuration for Terraform,  
run this command to reinitialize your working directory. If you forget, other  
commands will detect it and remind you to do so if necessary.  
frankiecl975@cloudshell:~/mission1/en/mission1/en/terraform (caramel-anvil-395413)$ terraform plan  
  
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:  
- create  
  
Terraform will perform the following actions:  
  
# aws_s3_bucket.b will be created  
+ resource "aws_s3_bucket" "b" {  
  - acceleration_status      = (known after apply)  
  - acl                      = "private"  
  - arn                      = (known after apply)  
  - bucket                   = "luxury-covid-testing-system-pdf-en-xxxx"  
  - bucket_domain_name       = (known after apply)  
  - bucket_region_name        = (known after apply)  
  - force_destroy            = false  
  - hosted_zone_id           = (known after apply)  
  - id                       = (known after apply)  
  - object_lock_enabled      = (known after apply)  
  - region                   = (known after apply)  
  - request_payer             = (known after apply)  
  - tags_all                 = (known after apply)  
  - website_domain            = (known after apply)  
  - website_endpoint          = (known after apply)  
}  
  
# google_container_cluster.primary will be created  
+ resource "google_container_cluster" "primary" {  
  - cluster_ipv4_cidr        = (known after apply)  
  - datapath_provider         = (known after apply)  
  - default_max_pods_per_node = true  
  - enable_autopilot          = false  
  - enable_binary_authorization = false  
}
```

Edited tcb\_aws\_storage.tf script to add fcorde72975

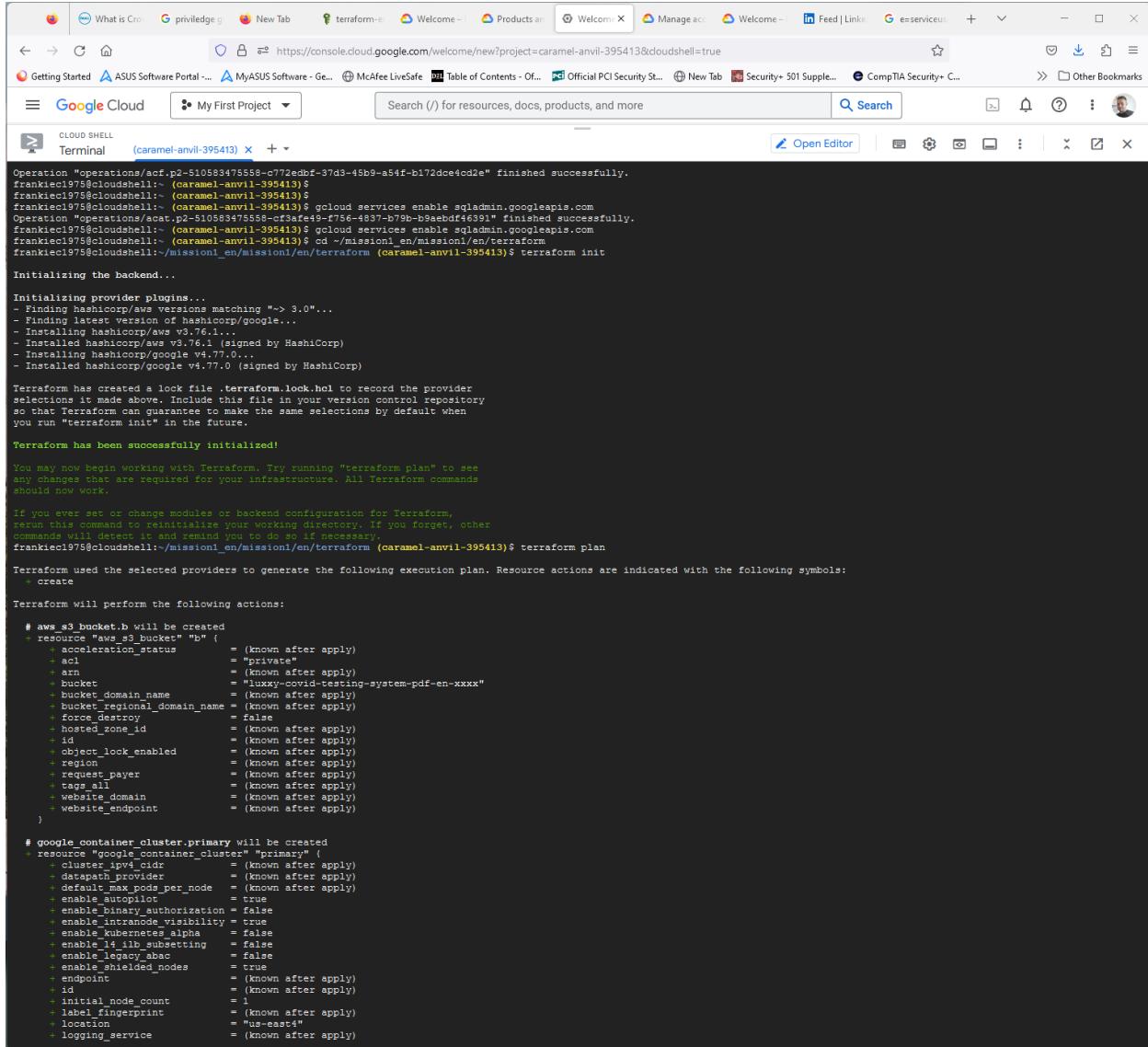
The screenshot shows the Google Cloud Shell Editor interface. The left sidebar displays a file tree under 'OPEN EDITORS' for a project named 'FRANKIEC1975'. The 'mission1\_en' folder contains several files: 'aws\_variables.tf', 'gcp\_variables.tf', 'main.tf', 'tcb\_aws\_storage.tf', 'tcb\_gcp\_database.tf', 'aws\_set\_credentials.sh', and 'gcp\_set\_project.sh'. The right pane shows the content of the 'tcb\_aws\_storage.tf' file:

```
tcb_aws_storage.tf
mission1_en > mission1 > pt > terraform > tcb_aws_storage.tf > ...
1 # Linhas para criar o bucket S3 na AWS
2
3 resource "aws_s3_bucket" "b" {
4   bucket = "luxxy-covid-testing-system-pdf-pt-fcorde72975"
5   acl = "private"
6 }
7
```

Ran following commands:

```
cd ~/mission1_en/mission1/en/terraform/ terraform init terraform plan terraform apply Type Yes and go ahead.
```

Ran terraform init script.



The screenshot shows a Google Chrome browser window with a terminal-like interface. The address bar shows the URL: https://console.cloud.google.com/welcome/new?project=caramel-anvil-395413&cloudshell=true. The title bar says "Google Cloud". The main content area is a terminal window titled "Terminal (caramel-anvil-395413)". The terminal output is as follows:

```
Operation "operations/acf/p2-510583475558-c772edbf-37d3-45b9-a54f-b172dce4cd2e" finished successfully.
frankieci1975@cloudshell:~ (caramel-anvil-395413)$ gcloud services enable sqldadmin.googleapis.com
Operation "operations/acat/p2-510583475558-cf3afe49-f756-4837-b79b-b9aebe1f6391" finished successfully.
frankieci1975@cloudshell:~ (caramel-anvil-395413)$ gcloud services enable sqldadmin.googleapis.com
frankieci1975@cloudshell:~ (caramel-anvil-395413)$ cd ~/mission1_en/mission1/en/terraform
frankieci1975@cloudshell:~/mission1_en/mission1/en/terraform (caramel-anvil-395413)$ terraform init

Initializing the backend...
Initializing provider plugins...
- Finding hashicorp/aws versions matching "> 3.0.0"...
- Finding latest version of hashicorp/google...
- Installing hashicorp/aws v3.76.1...
- Installed hashicorp/aws v3.76.1 (signed by HashiCorp)
- Installing hashicorp/google v4.77.0...
- Installed hashicorp/google v4.77.0 (signed by HashiCorp)

Terraform has created a lock file .terraform.lock.hcl to record the provider selections it made above. Include this file in your version control repository so that Terraform can guarantee to make the same selections by default when you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see any changes that are required for your infrastructure. All Terraform commands should now work.

If you ever set or change modules or backend configuration for Terraform, rerun this command to reinitialize your working directory. If you forget, other commands will detect it and remind you to do so if necessary.
frankieci1975@cloudshell:~/mission1_en/mission1/en/terraform (caramel-anvil-395413)$ terraform plan

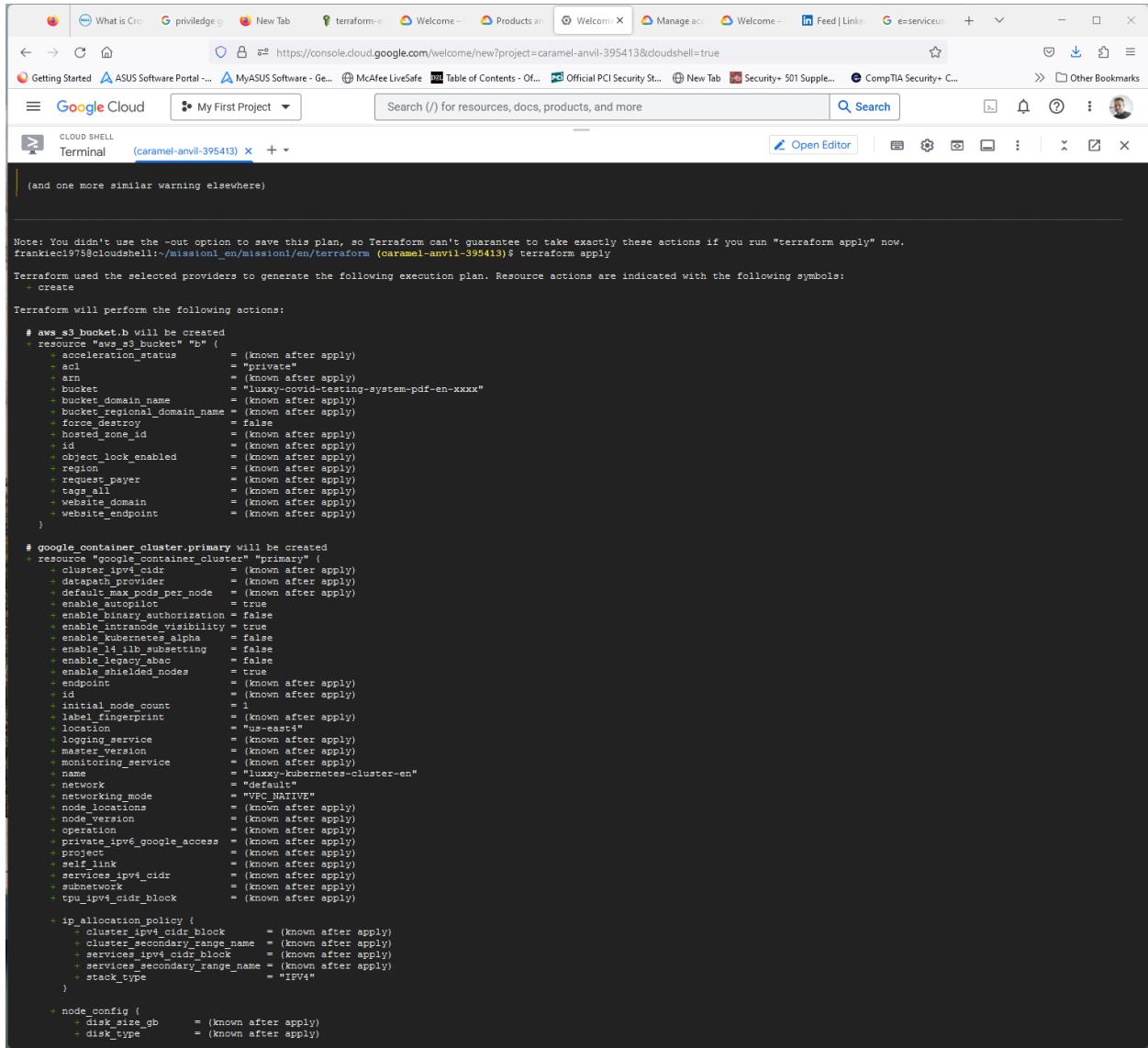
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
+ create

Terraform will perform the following actions:

# aws_s3_bucket.b will be created
+ resource "aws_s3_bucket" "b" {
    acceleration_status      = (known after apply)
    acl                      = "private"
    arn                      = (known after apply)
    bucket                   = "luxxy-covid-testing-system-pdf-en-xxxx"
    bucket_domain_name       = (known after apply)
    bucketRegionalDomainName = (known after apply)
    force_destroy            = (known after apply)
    hosted_zone_id           = (known after apply)
    id                       = (known after apply)
    object_lock_enabled      = (known after apply)
    region                   = (known after apply)
    request_payer            = (known after apply)
    tags_all                 = (known after apply)
    website_domain           = (known after apply)
    website_endpoint          = (known after apply)
}

# google_container_cluster.primary will be created
+ resource "google_container_cluster" "primary" {
    cluster_ipv4_cidr        = (known after apply)
    datapath_provider          = (known after apply)
    default_max_pods_per_node = (known after apply)
    enable_egress_logging     = true
    enable_hierarchical_logging = false
    enable_intranode_visibility = true
    enable_kubernetes_alpha   = false
    enable_l4_ilb_subsetting   = false
    enable_legacy_abac         = false
    enable_shielded_nodes      = true
    endpoint                  = (known after apply)
    id                        = (known after apply)
    initial_node_count        = (known after apply)
    label_fingerprint          = (known after apply)
    location                  = "us-east1"
    logging_service             = (known after apply)
```

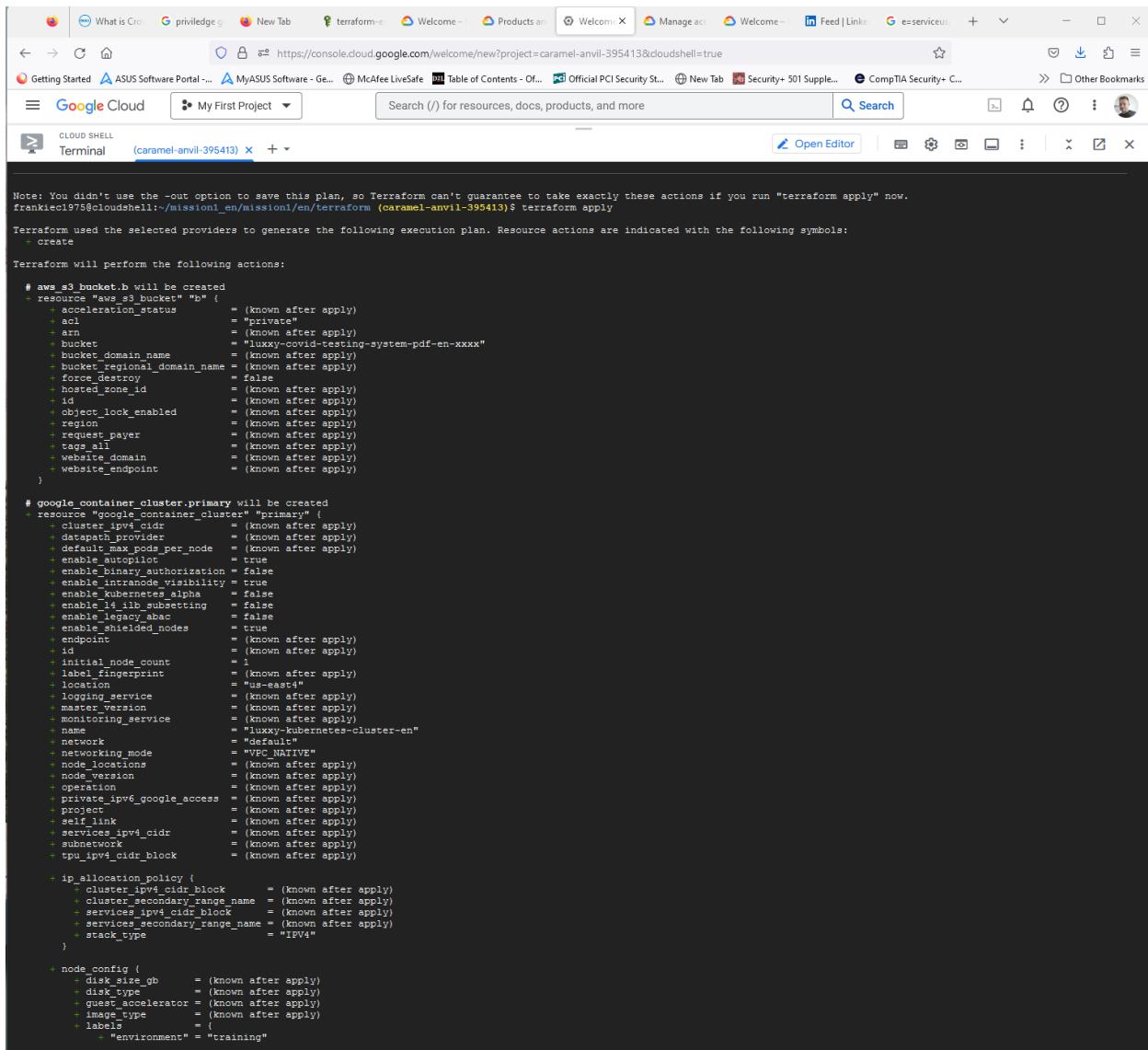
## Ran terraform plan script



The screenshot shows a Google Cloud browser interface with a terminal window open. The terminal window displays the output of a Terraform plan command. The output includes notes about the lack of -out option, provider usage, and a detailed list of resources and their planned actions.

```
Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.  
frankieci975@cloudshell:~/mission1/en$ terraform plan  
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:  
+ create  
  
Terraform will perform the following actions:  
  
# aws_s3_bucket.b will be created  
+ resource "aws_s3_bucket" "b" {  
    acceleration_status = (known after apply)  
    acl = "private"  
    arn = (known after apply)  
    bucket = "luxxy-covid-testing-system-pdf-en-xxxx"  
    bucket_domain_name = (known after apply)  
    bucketRegionalDomainName = (known after apply)  
    force_destroy = false  
    hostedZoneId = (known after apply)  
    id = (known after apply)  
    objectLockEnabled = (known after apply)  
    region = (known after apply)  
    requestPayer = (known after apply)  
    tags_all = (known after apply)  
    website_domain = (known after apply)  
    websiteEndpoint = (known after apply)  
}  
  
# google_container_cluster.primary will be created  
+ resource "google_container_cluster" "primary" {  
    clusterIpv4Cidr = (known after apply)  
    datapathProvider = (known after apply)  
    defaultMaxPodsPerNode = (known after apply)  
    enableAutopilot = true  
    enableBinaryAuthorization = false  
    enableCloudIdentity = true  
    enableKubernetesAlpha = false  
    enableI4IbSubsetting = false  
    enableLegacyAbac = false  
    enableShieldedNodes = true  
    endpoint = (known after apply)  
    id = (known after apply)  
    initialPodCount = (known after apply)  
    labelFingerprint = "us-east1"  
    location = (known after apply)  
    loggingService = (known after apply)  
    masterVersion = (known after apply)  
    monitoringService = (known after apply)  
    name = "luxxy-kubernetes-cluster-en"  
    network = "VPC_NAIVE"  
    networkingMode = (known after apply)  
    nodeLocations = (known after apply)  
    nodeVersion = (known after apply)  
    operation = (known after apply)  
    privateIpv6GoogleAccess = (known after apply)  
    project = (known after apply)  
    selfLink = (known after apply)  
    servicesIpv4Cidr = (known after apply)  
    subnetwork = (known after apply)  
    tpuIpv4CidrBlock = (known after apply)  
  
+ ipAllocationPolicy {  
    clusterIpv4CidrBlock = (known after apply)  
    clusterSecondaryRangeName = (known after apply)  
    servicesIpv4CidrBlock = (known after apply)  
    servicesSecondaryRangeName = (known after apply)  
    stackType = "IPV4"  
}  
  
+ nodeConfig {  
    diskSizeGb = (known after apply)  
    diskType = (known after apply)  
}
```

## Ran terraform apply script.



The screenshot shows a Google Cloud Cloud Shell terminal window. The URL in the address bar is <https://console.cloud.google.com/welcome/new?project=caramel-anvil-395413&cloudshell=true>. The terminal tab is titled '(caramel-anvil-395413)'. The terminal content displays the output of a 'terraform apply' command:

```
Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.  
frankie1975@cloudshell:~/mission1/en/mission1/en/terraform (caramel-anvil-395413)$ terraform apply  
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:  
+ create  
  
Terraform will perform the following actions:  
  
# aws_s3_bucket.b will be created  
+ resource "aws_s3_bucket" "b" {  
    + acceleration_status      = (known after apply)  
    + acl                      = (known after apply)  
    + arn                      = (known after apply)  
    + bucket                   = "luxxy-covid-testing-system-pdf-en-xxxx"  
    + bucket_domain_name       = (known after apply)  
    + bucketRegionalDomainName = (known after apply)  
    + force_destroy            = false  
    + hostedZoneId             = (known after apply)  
    + id                       = (known after apply)  
    + objectLockEnabled        = (known after apply)  
    + region                   = (known after apply)  
    + requestPayer             = (known after apply)  
    + tags_all                 = (known after apply)  
    + websiteDomain            = (known after apply)  
    + websiteEndpoint          = (known after apply)  
}  
  
# google_container_cluster.primary will be created  
+ resource "google_container_cluster" "primary" {  
    + clusterIpv4Cidr           = (known after apply)  
    + datapathProvider          = (known after apply)  
    + defaultMaxPodsPerNode     = (known after apply)  
    + enableAutopilot           = true  
    + enableBinaryAuthorization = false  
    + enableIntranodeVisibility = true  
    + enableKubernetesAlpha     = false  
    + enableKubernetesNetworking = false  
    + enableLegacyAbac          = false  
    + enableShieldedNodes       = true  
    + endpoint                  = (known after apply)  
    + id                        = (known after apply)  
    + initialNodeCount          = 1  
    + labelFingerprint          = (known after apply)  
    + location                  = "us-east1"  
    + loggingService            = (known after apply)  
    + masterVersion             = (known after apply)  
    + monitoringService         = (known after apply)  
    + name                      = "luxxy-kubernetes-cluster-en"  
    + network                   = "default"  
    + networkingMode            = "VPC NATIVE"  
    + nodeLocations             = (known after apply)  
    + nodeVersion               = (known after apply)  
    + openSsh                   = (known after apply)  
    + privateIpv6GoogleAccess  = (known after apply)  
    + project                  = (known after apply)  
    + selfLink                  = (known after apply)  
    + servicesIpv4Cidr          = (known after apply)  
    + subnetwork                = (known after apply)  
    + tpuIpv4CidrBlock          = (known after apply)  
}  
  
+ ipAllocationPolicy {  
    + clusterIpv4CidrBlock     = (known after apply)  
    + clusterSecondaryRangeName = (known after apply)  
    + servicesIpv4CidrBlock    = (known after apply)  
    + servicesSecondaryRangeName = (known after apply)  
    + stackType                = "IPV4"  
}  
  
+ nodeConfig {  
    + diskSizeGb               = (known after apply)  
    + diskType                  = (known after apply)  
    + guestAccelerator          = (known after apply)  
    + imageType                 = (known after apply)  
    + labels {  
        + "environment" = "training"  
    }  
}
```

SQL Database created.

The screenshot shows the Google Cloud SQL Instances page. The URL is https://console.cloud.google.com/sql/instances?referrer=search&project=caramel-anvil-395413. The search bar contains 'sql'. The page displays a table with one row:

| Instance ID                                     | Cloud SQL edition | Type      | Public IP address | Private IP address | Instance connection name | High availability | Location   | Actions        |
|---|-------------------|-----------|-------------------|--------------------|--------------------------|-------------------|------------|----------------|
| luxxy-covid-testing-system-database-instance-en | Enterprise        | MySQL 5.7 | 34.150.155.100    |                    | caramel-anvil-39541...   | ENABLE            | us-east4-a | <span>⋮</span> |

## Setting the SQL IP Instance to default private address and enabling API.

The screenshot shows the Google Cloud Platform interface for managing a SQL instance. The left sidebar shows 'Google Cloud' and 'My First Project'. Under 'SQL', the 'Connections' tab is selected. The main area displays the 'luxxy-covid-testing-system-database-instance-en' instance, which is a MySQL 5.7 instance. The 'NETWORKING' tab is active. A callout box highlights the 'Private services access connection required' section, which states: 'Your network "default" requires a private services access connection. This connection enables your services to communicate exclusively by using internal IP addresses.' It includes a 'SET UP CONNECTION' button. Below this, there's a 'SHOW ALLOCATED IP RANGE OPTION' section with a 'Public IP' checkbox selected. Other sections include 'Authorized networks' (disabled), 'Google Cloud services authorization' (with an 'Enable private path' checkbox), and 'App Engine authorization' (disabled). On the right side, there are sections for 'Private services access connections' (listing VPC peering, Google-managed services, and isolated projects), 'SHOW DIAGRAM' (with a checked 'Enable Service Networking API' checkbox), 'Allocate an IP range' (with a radio button for 'Select one or more existing IP ranges or create a new one'), and 'Create a connection' (with 'CREATE CONNECTION' and 'CANCEL' buttons).

Mission 1 Completed

## Mission 2

<https://thecloudbootcamp.notion.site/Steps-to-implement-Hands-on-Project-Mission-2-176de4ba31eb4c8b8604cf6bdf3ae5ec>

# Amazon Web Services

- Access AWS console and go to IAM service
- Under Access management, Click in "Users", then "Add users". Insert the User name **luxxy-covid-testing-system-en-app1** and click in **Next** to create a programmatic user.

Created AWS user.

The screenshot shows the AWS IAM service interface. On the left, there's a navigation sidebar with options like Dashboard, Access management (selected), Access reports, and Related consoles. The main content area is titled 'Users (2) Info' and shows a table of two IAM users:

| User name                         | Groups | Last activity | MFA  | Password age | Active key age |
|-----------------------------------|--------|---------------|------|--------------|----------------|
| luxy-covid-testing-system-en-app1 | None   | Never         | None | None         | 3 minutes ago  |
| terraform-en-1                    | None   | 13 hours ago  | None | None         | 23 hours ago   |

At the top right of the main area, there are 'Add users', 'Delete', and other buttons. The browser address bar shows the URL: https://us-east-1.console.aws.amazon.com/iamv2/home?region=us-east-2#/users.

## Created AWS Access Key and downloaded to import to GCP.

The screenshot shows the AWS Identity and Access Management (IAM) console interface. On the left, there's a sidebar with navigation links like Dashboard, Access management (Users, Roles, Policies, Identity providers, Account settings), Access reports (Access analyzer, Archive rules, Analyzers, Settings, Credential report, Organization activity, Service control policies (SCPs)), and Related consoles (IAM Identity Center, AWS Organizations). The main content area has several sections:

- Console sign-in**: Shows a "Console sign-in link" (https://209352656993.signin.aws.amazon.com/console) and a "Console password" field which is "Not enabled". There's a "Enable console access" button.
- Multi-factor authentication (MFA)**: A section with a note about using MFA for security. It includes a "Remove" button, a "Resync" button, and an "Assign MFA device" button. Below it is a message: "No MFA devices. Assign an MFA device to improve the security of your AWS environment" with an "Assign MFA device" button.
- Access keys (1)**: A section for managing access keys. It shows one key named "AKIATBPTEBQ4F7J5NMJ". The details are:

|   |                        |
|---|------------------------|
| Description: luxxy-covid-testing-system-en-app1 | Status: Active         |
| Last used: None                                 | Created: 4 minutes ago |
| Last used region: N/A                           | Last used service: N/A |

An "Actions" dropdown and a "Create access key" button are also present.
- SSH public keys for AWS CodeCommit (0)**: A section for managing SSH public keys. It includes an "Actions" dropdown and an "Upload SSH public key" button. Below is a table:

| SSH Key ID         | Uploaded | Status |
|--------------------|----------|--------|
| No SSH public keys |          |        |

An "Upload SSH public key" button is at the bottom.

At the bottom, there are links for CloudShell, Feedback, Language, and a footer with copyright information: © 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences.

Went to SQL instance and added user app.

The screenshot shows the Google Cloud Platform interface for managing SQL instances. The left sidebar is titled "SQL" and contains the following navigation items:

- PRIMARY INSTANCE
- Overview
- System insights
- Query insights
- Connections
- Users** (selected)
- Databases
- Backups
- Replicas
- Operations

The main content area is titled "Users" and shows the following details for the selected instance:

All instances > luxxy-covid-testing-system-database-instance-en

**luxxy-covid-testing-system-database-instance-en**

MySQL 5.7

User accounts enable users and applications to connect to your instance. [Learn more](#)

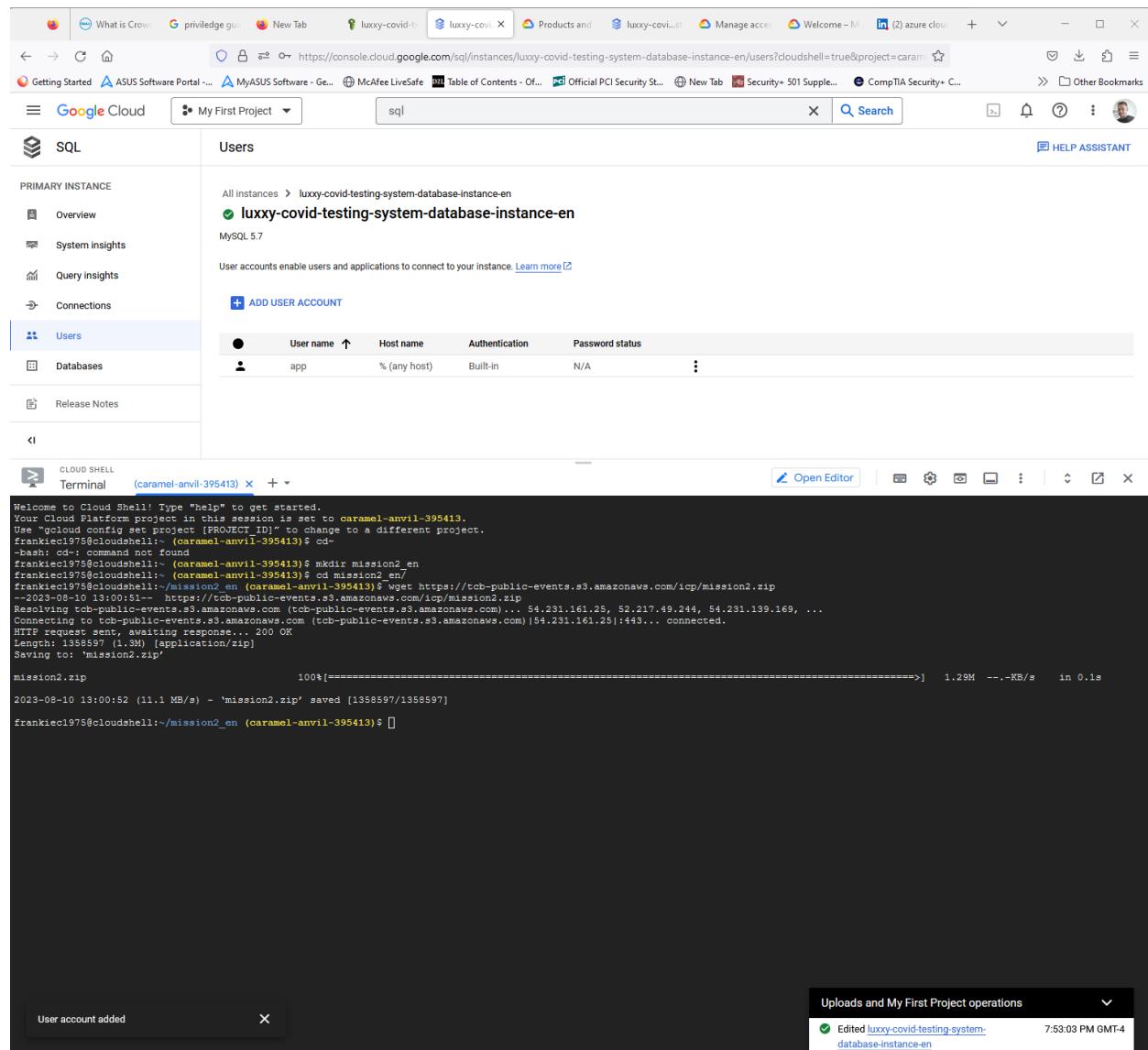
**+ ADD USER ACCOUNT**

|  | User name | Host name    | Authentication | Password status |
|--|-----------|--------------|----------------|-----------------|
|  | app       | % (any host) | Built-in       | N/A             |

A modal dialog at the bottom left says "User account added". A notification bar at the bottom right says "Edited luxxy-covid-testing-system-database-instance-en" at 7:53:03 PM GMT-4.

Created directory mission2\_en and changed directory into it.

Downloaded mission2.zip from internet directory.



The screenshot shows the Google Cloud SQL interface. On the left, there's a sidebar with options like Overview, System insights, Query insights, Connections, and Users (which is selected). The main area displays a table of users:

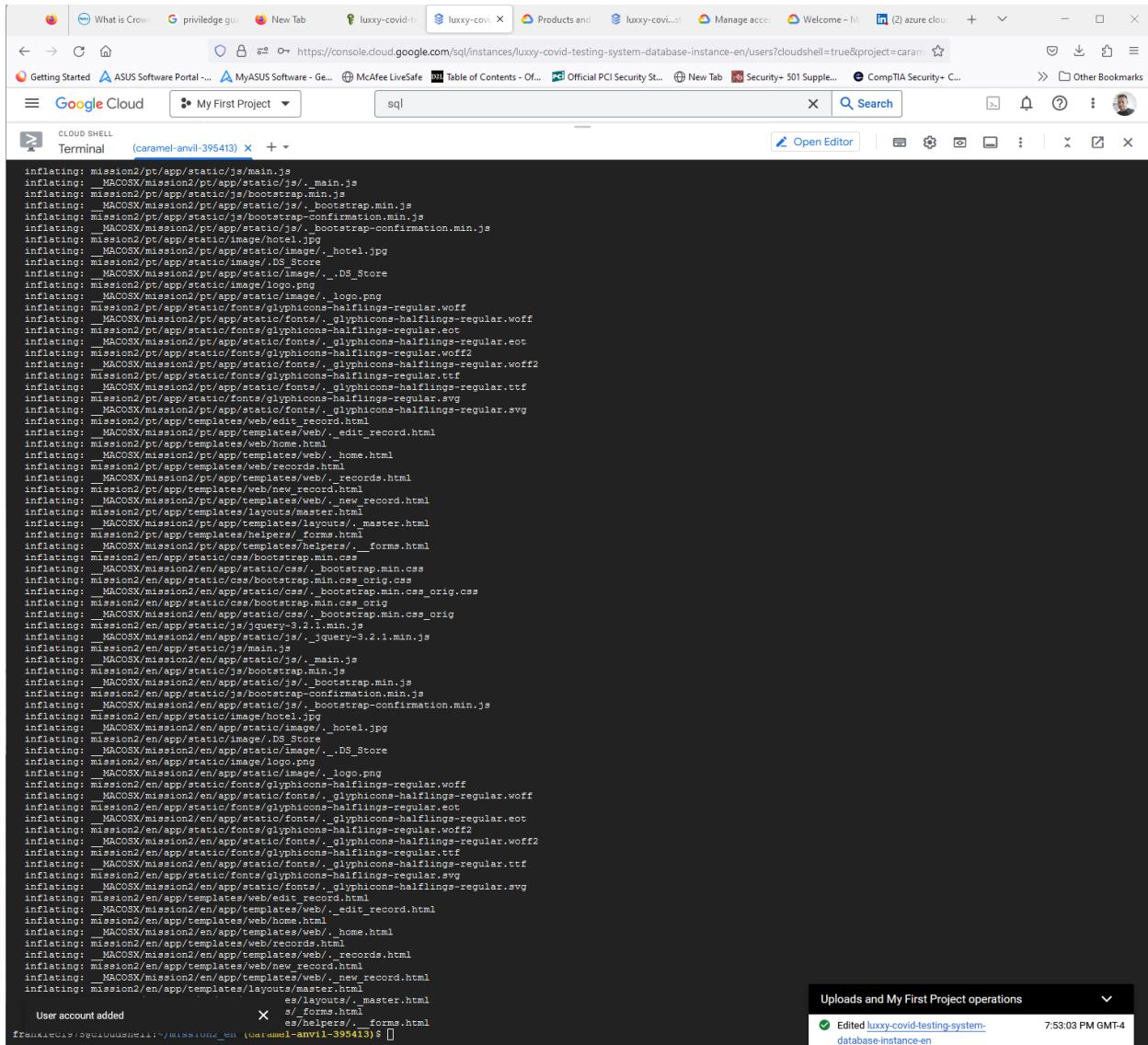
| User | Host name    | Authentication | Password status |
|------|--------------|----------------|-----------------|
| app  | % (any host) | Built-in       | N/A             |

At the bottom, a terminal window titled "Terminal (caramel-anvil-395413)" shows the following command-line session:

```
Welcome to Cloud Shell! Type "help" to get started.  
Your Cloud Platform project in this session is set to caramel-anvil-395413.  
Use "gcloud config set project [PROJECT_ID]" to change to a different project.  
frankieci1975@cloudshell:~ (caramel-anvil-395413)$ cd -  
-bash: cd: command not found  
frankieci1975@cloudshell:~ (caramel-anvil-395413)$ mkdir mission2_en  
frankieci1975@cloudshell:~ (caramel-anvil-395413)$ cd mission2_en/  
frankieci1975@cloudshell:~/mission2_en (caramel-anvil-395413)$ wget https://tcb-public-events.s3.amazonaws.com/icp/mission2.zip  
--2023-08-10 13:00:51-- https://tcb-public-events.s3.amazonaws.com/icp/mission2.zip  
Receiving tcb-public-events.s3.amazonaws.com (tcb-public-events.s3.amazonaws.com)... 54.231.161.25, 62.217.49.244, 54.231.139.169, ...  
Connecting to tcb-public-events.s3.amazonaws.com (tcb-public-events.s3.amazonaws.com)|54.231.161.25|:443... connected.  
HTTP request sent, awaiting response... 200 OK  
Length: 1358597 (1.3MiB) [application/zip]  
Saving to: 'mission2.zip'  
  
mission2.zip          100%[=====]  1.29M --.-KB/s   in 0.1s  
2023-08-10 13:00:52 (11.1 MB/s) - 'mission2.zip' saved [1358597/1358597]  
frankieci1975@cloudshell:~/mission2_en (caramel-anvil-395413)$
```

A modal dialog at the bottom left says "User account added". A notification bar at the bottom right says "Uploads and My First Project operations" with a message "Edited luxxy-covid-testing-system-database-instance-en" and the timestamp "7:53:03 PM GMT-4".

## Unzipped files from mission2.zip



The screenshot shows a Google Cloud Platform terminal window titled "Terminal (caramel-anvil-395413)". The terminal is displaying a list of files being inflated from a ZIP archive. The files listed include various static assets such as JavaScript files (main.js, bootstrap-confirmation.min.js), CSS files (bootstrap.min.css, bootstrap.min.css.orig.css), and font files (glyphicons-halflings-regular.woff). There are also HTML files like edit\_record.html, new\_record.html, master.html, and forms.html, along with image files (logo.png, hotel.jpg). The terminal output is as follows:

```
inflating: mission2/pt/app/static/js/main.js
inflating: mission2/pt/app/static/js/bootstrap-confirmation.min.js
inflating: _MACOSX/mission2/pt/app/static/js/_bootstrap.min.js
inflating: mission2/pt/app/static/js/bootstrap-confirmation.min.js
inflating: _MACOSX/mission2/pt/app/static/js/_bootstrap-confirmation.min.js
inflating: mission2/pt/app/static/image/hotel.jpg
inflating: _MACOSX/mission2/pt/app/static/image/_hotel.jpg
inflating: mission2/pt/app/static/image/_DS_Store
inflating: mission2/pt/app/static/image/logo.png
inflating: _MACOSX/mission2/pt/app/static/images/_logo.png
inflating: mission2/pt/app/static/fonts/glyphicons-halflings-regular.woff
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.woff
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.eot
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.eot
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.woff2
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.woff2
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.ttf
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.ttf
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.svg
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.svg
inflating: mission2/pt/app/templates/web/_edit_record.html
inflating: _MACOSX/mission2/pt/app/templates/web/_edit_record.html
inflating: mission2/pt/app/templates/web/home.html
inflating: _MACOSX/mission2/pt/app/templates/web/_home.html
inflating: mission2/pt/app/templates/_new_record.html
inflating: _MACOSX/mission2/pt/app/templates/_new_record.html
inflating: mission2/pt/app/templates/_master.html
inflating: _MACOSX/mission2/pt/app/templates/_master.html
inflating: mission2/pt/app/templates/_helpers/_forms.html
inflating: mission2/pt/app/templates/_helpers/_forms.html
inflating: mission2/pt/app/static/css/bootstrap-min.css
inflating: _MACOSX/mission2/pt/app/static/css/_bootstrap-min.css
inflating: mission2/pt/app/static/css/bootstrap-min.css.orig.css
inflating: _MACOSX/mission2/pt/app/static/css/_bootstrap_min.css_orig.css
inflating: mission2/pt/app/static/css/bootstrap_min.css_orig
inflating: _MACOSX/mission2/pt/app/static/css/_bootstrap_min.css_orig
inflating: mission2/pt/app/static/js/jquery-3.2.1.min.js
inflating: _MACOSX/mission2/pt/app/static/js/_jquery-3.2.1.min.js
inflating: mission2/pt/app/static/js/main.js
inflating: _MACOSX/mission2/pt/app/static/js/_main.js
inflating: mission2/pt/app/static/js/bootstrap-confirmation.min.js
inflating: _MACOSX/mission2/pt/app/static/js/_bootstrap-confirmation.min.js
inflating: mission2/pt/app/static/images/_DS_Store
inflating: _MACOSX/mission2/pt/app/static/images/_DS_Store
inflating: mission2/pt/app/static/images/_logo.png
inflating: _MACOSX/mission2/pt/app/static/images/_logo.png
inflating: mission2/pt/app/static/fonts/glyphicons-halflings-regular.woff
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.woff
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.eot
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.eot
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.woff2
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.woff2
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.ttf
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.ttf
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.svg
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.svg
inflating: mission2/pt/app/templates/web/_edit_record.html
inflating: _MACOSX/mission2/pt/app/templates/web/_edit_record.html
inflating: mission2/pt/app/templates/web/home.html
inflating: _MACOSX/mission2/pt/app/templates/web/_home.html
inflating: mission2/pt/app/templates/_new_record.html
inflating: _MACOSX/mission2/pt/app/templates/_new_record.html
inflating: mission2/pt/app/templates/_master.html
inflating: _MACOSX/mission2/pt/app/templates/_master.html
inflating: mission2/pt/app/templates/_helpers/_forms.html
inflating: mission2/pt/app/templates/_helpers/_forms.html
inflating: mission2/pt/app/static/css/bootstrap-min.css
inflating: _MACOSX/mission2/pt/app/static/css/_bootstrap-min.css
inflating: mission2/pt/app/static/css/bootstrap-min.css.orig.css
inflating: _MACOSX/mission2/pt/app/static/css/_bootstrap_min.css_orig.css
inflating: mission2/pt/app/static/css/bootstrap_min.css_orig
inflating: _MACOSX/mission2/pt/app/static/css/_bootstrap_min.css_orig
inflating: mission2/pt/app/static/js/jquery-3.2.1.min.js
inflating: _MACOSX/mission2/pt/app/static/js/_jquery-3.2.1.min.js
inflating: mission2/pt/app/static/js/main.js
inflating: _MACOSX/mission2/pt/app/static/js/_main.js
inflating: mission2/pt/app/static/js/bootstrap-confirmation.min.js
inflating: _MACOSX/mission2/pt/app/static/js/_bootstrap-confirmation.min.js
inflating: mission2/pt/app/static/images/_DS_Store
inflating: _MACOSX/mission2/pt/app/static/images/_DS_Store
inflating: mission2/pt/app/static/images/_logo.png
inflating: _MACOSX/mission2/pt/app/static/images/_logo.png
inflating: mission2/pt/app/static/fonts/glyphicons-halflings-regular.woff
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.woff
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.eot
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.eot
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.woff2
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.woff2
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.ttf
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.ttf
inflating: mission2/pt/app/static/fonts/_glyphicons-halflings-regular.svg
inflating: _MACOSX/mission2/pt/app/static/fonts/_glyphicons-halflings-regular.svg
inflating: mission2/pt/app/templates/web/_edit_record.html
inflating: _MACOSX/mission2/pt/app/templates/web/_edit_record.html
inflating: mission2/pt/app/templates/web/home.html
inflating: _MACOSX/mission2/pt/app/templates/web/_home.html
inflating: mission2/pt/app/templates/_new_record.html
inflating: _MACOSX/mission2/pt/app/templates/_new_record.html
inflating: mission2/pt/app/templates/_master.html
inflating: _MACOSX/mission2/pt/app/templates/_master.html
inflating: mission2/pt/app/templates/_helpers/_forms.html
inflating: mission2/pt/app/templates/_helpers/_forms.html
```

At the bottom of the terminal, it says "User account added". The status bar at the bottom right shows "Edited luxxy-covid-testing-system-database-instance-en 7:53:03 PM GMT-4".

Connected to SQL server using Public IP Address and using username app.

Used following commands to create table and verify creation of tables.

```
use dbcovidtesting;  
source ~/mission2_en/mission2/en/db/create_table.sql  
show tables;  
exit;
```

The screenshot shows a web browser window with multiple tabs open. The main content is the Google Cloud SQL Overview page for a primary instance named 'luxxy-covid-testing-system-database-instance-en'. The Overview tab is selected, showing basic instance details like Public IP address (34.150.155.100) and Private IP address (10.59.248.3). A timeline at the top shows UTC-4 from 12:00 PM to 8:00 AM on Aug 10. Below the timeline, there's a note to 'Go to Query insights for more in-depth info on queries and performance'.

**CLOUD SHELL** Terminal (caramel-anvil-395413) x +

```

frankiec1975@cloudshell:~/mission2_en (caramel-anvil-395413)$ mysql --host=34.150.155.100 --port=3306 -u app -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 10984
Server version: 5.7.42-google (Google)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use dbcovidtesting;
Database changed
mysql> source ~/mission2_en/mission2/en/db/create_table.sql
Query OK, 0 rows affected (0.08 sec)

mysql> show tables;
+----------------+
| Tables_in_dbcovidtesting |
+----------------+
| records |
+----------------+
1 row in set (0.01 sec)

mysql> exit;
Bye
frankiec1975@cloudshell:~/mission2_en (caramel-anvil-395413)$

```

User account added

Uploads and My First Project operations

- Edited luxxy-covid-testing-system-database-instance-en 7:53:03 PM GMT-4

# Command to enable Cloud Build API

gcloud services enable cloudbuild.googleapis.com

The screenshot shows a Google Cloud Platform interface with a MySQL database instance named 'luxxy-covid-testing-system-database-instance-en'. The instance has 1 vCPU, 614.4 MB memory, and 10 GB SSD storage. It was created at 12:00 PM UTC-4 on Aug 10, 2023. The terminal window shows the MySQL command-line interface being used to create a database and table, and then enabling Cloud Build services.

```

frankie1975@cloudshell:/mission2_en (caramel-anvil-395413)$ mysql --host=34.150.155.100 --port=3306 -u app -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 10984
Server version: 5.7.42-google (Google)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use dbcovidtesting;
Database changed
mysql> source ~/mission2_en/mission2/en/db/create_table.sql
Query OK, 0 rows affected (0.08 sec)

mysql> show tables;
+-----+
| Tables_in_dbcovidtesting |
+-----+
| records |
+-----+
1 row in set (0.01 sec)

mysql> exit;
Bye
frankie1975@cloudshell:/mission2_en (caramel-anvil-395413)$ gcloud services enable cloudbuild.googleapis.com
Operation "operations/acf:p2-51058347558-56c3b6ff-ceeb-4046-acbc-703f5feb5053" finished successfully.
frankie1975@cloudshell:/mission2_en (caramel-anvil-395413)$ []

```

**User account added**

**Uploads and My First Project operations**

- Edited luxxy-covid-testing-system-database-instance-en
- 7:53:03 PM GMT-4

## Creation of Docker image.

```
cd ~/mission2_en/mission2/en/app
```

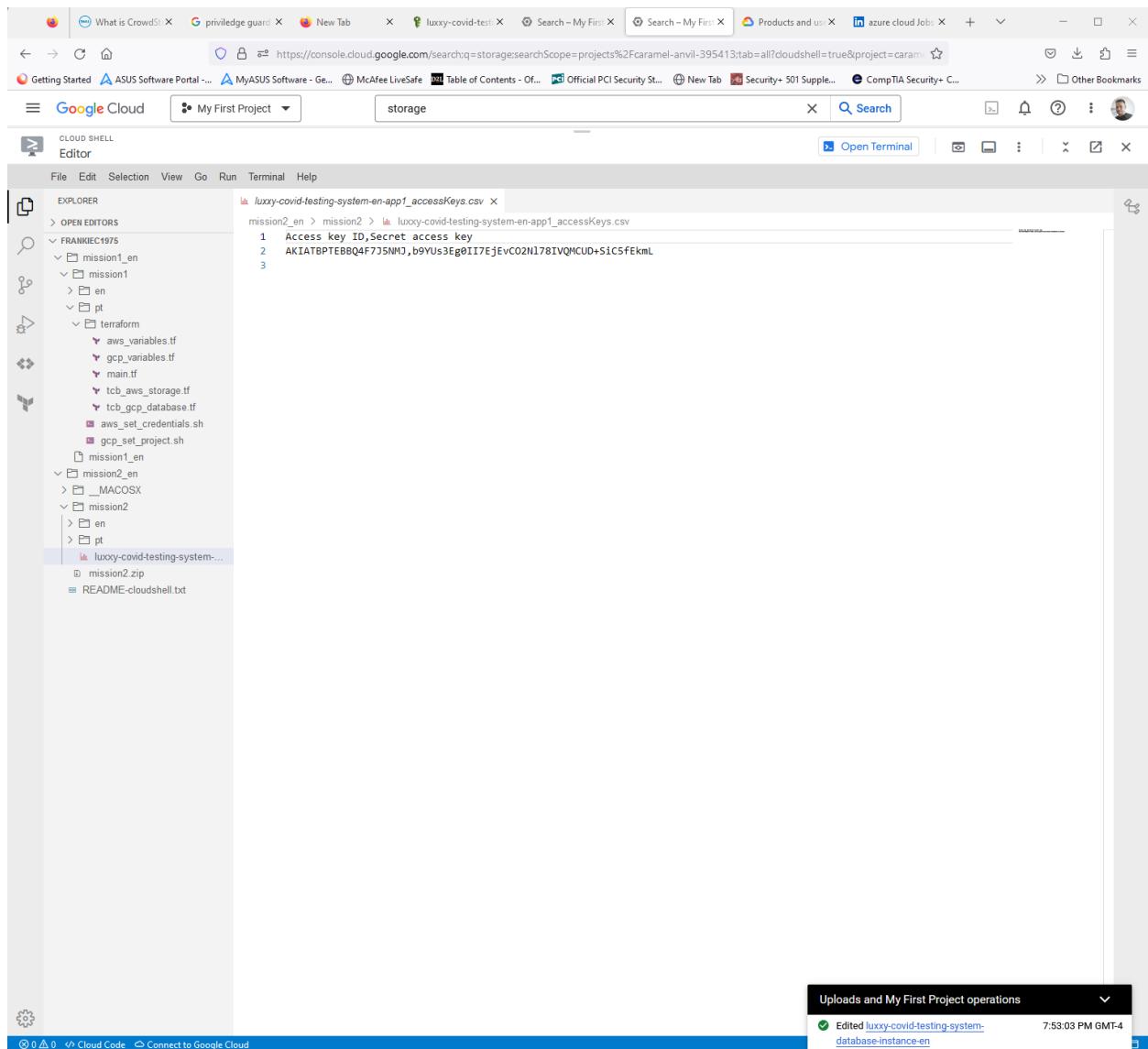
```
gcloud builds submit --tag gcr.io/caramel-anvil-395413/luxxy-covid-testing-system-app-en
```

The screenshot shows a Google Cloud Platform terminal window titled "Terminal (caramel-anvil-395413)". The terminal is displaying the output of a "gcloud builds submit" command. The log output is as follows:

```
4.3/4.3 MB 46.0 MB/s eta 0:00:00
Downloading boto3-1.28.23-py3-none-any.whl (195 kB) 135.8/135.8 kB 159.2 MB/s eta 0:00:00
Downloading botocore-1.31.23-py3-none-any.whl (11.1 kB) 11.1/11.1 kB 47.4 MB/s eta 0:00:00
Downloading importlib-metadata-3.7.0-py3-none-any.whl (39 kB) 39 kB
Downloading typing_extensions-4.7.1-py3-none-any.whl (39 kB)
Downloading urllib3-1.26.16-py2.py3-none-any.whl (143 kB) 143.1/143.1 kB 152.5 MB/s eta 0:00:00
Installing collected packages: text-unidecode, zipp, Werkzeug, urllib3, typing-extensions, six, pymysql, pycparser, MarkupSafe, jmespath, itsdangerous, idna, unicorn, greenlet, dnsryptthon, click, WTForms, python-dateutil, Jinja2, importlib-metadata, email-validator, cffi, SQLAlchemy, Flask, Faker, cryptography, botocore, s3transfer, Flask-WTF, Flask-SQLAlchemy, boto3 re-1.31.23 cffi-1.15.1 click-7.1.2 cryptography-41.0.3 dnspython-2.1.0 email-validator-1.1.2 greenlet-1.0.0 unicorn-20.1.0 idna-3.1 importlib-metadata-6.7.0 itsdangerous-1.1.0 jmespath -1.1.0 pygments-2.21 pymysql-1.0.0 python-dateutil-2.8.1 s3transfer-0.6.1 six-1.15.0 text-unidecode-1.3 typing-extensions-4.7.1 urllib3-1.26.16 zipp-3.18.0
WARNING: Running pip as root is deprecated. The package you are trying to install may be damaged or corrupted if you do this. It is recommended to use a virtual environment instead
  https://pip.pypa.io/warnings/venv
Removing intermediate container 7fe3559b6da3
Step 6/8 : COPY . .
 0ed2735d49c3
Step 7/8 : EXPOSE 8000
  RunCMD 5ddabc24c906
Removing intermediate container 5ddabc24c906
ce20e3bd17b8
Step 8/8 : CMD ["gunicorn","app:app","--config=config.py"]
  Running in 3eab43c2193
Removing intermediate container 3eab43c2193
93d699aa1528
Successfully built 93d699aa1528
Successfully tagged gcr.io/caramel-anvil-395413/luxxy-covid-testing-system-app-en:latest
Pushed
Pushing gcr.io/caramel-anvil-395413/luxxy-covid-testing-system-app-en
The push refers to repository [gcr.io/caramel-anvil-395413/luxxy-covid-testing-system-app-en]
21bb5be9917dd: Preparing
16580190c766: Preparing
56623e3c824d: Preparing
bbda58607313: Preparing
bf2fc4cbcd5f: Preparing
d5b66cc4065: Preparing
ee8947591c83: Preparing
cd19e2e32579: Preparing
c5f1d4dd95f0: Preparing
6a25221bd1f24: Preparing
b578f477cd5d: Preparing
b299f991a111: Preparing
c94ac8fa3d89: Preparing
d5b66cc4065: Waiting
ee8947591c83: Waiting
cd19e2e32579: Waiting
c5f1d4dd95f0: Waiting
6a25221bd1f24: Waiting
b578f477cd5d: Waiting
b299f991a111: Waiting
c94ac8fa3d89: Waiting
bf2fc4cbcd5f: Pushed
bbda58607313: Pushed
21bb5be9917dd: Pushed
d5b66cc4065: Layer already exists
ee8947591c83: Layer already exists
cd19e2e32579: Layer already exists
c5f1d4dd95f0: Layer already exists
6a25221bd1f24: Layer already exists
b578f477cd5d: Layer already exists
b299f991a111: Layer already exists
c94ac8fa3d89: Layer already exists
56623e3c824d: Pushed
16580190c766: Pushed
latest: digest: sha256:eccf1d1612486f86471f36891046d823c46435becb112306632f718f60f52bfb5 size: 3055
DONE
ID: da017ed3-fc08-48de-9bf7-420a4d4703b83
CREATE TIME: 2023-08-10T15:14:53+00:00
DURATION: 1M1S
SO: source/1691673291.346513-b9c16250b35e484297e7137a350de793.tgz
IM: User account added
ST: id-testing-system-app-en (+1 more)
frankiecu1@frankiecu1:~/mission2_en/mission2/en/app (caramel-anvil-395413)$
```

At the bottom right of the terminal window, there is a sidebar titled "Uploads and My First Project operations" which shows a single entry: "Edited luxxy-covid-testing-system- database-instance-en" at 7:53:03 PM GMT-4.

Uploaded AWS luxxy-covid-testing-system-en-app1\_accessKeys.csv file.



Ran into issue where it wouldn't connect.

The screenshot shows the Google Cloud Platform (GCP) Kubernetes Engine interface. The left sidebar contains navigation links for Clusters, Workloads, Services & Ingress, Applications, Secrets & ConfigMaps, Storage, Object Browser, Migrate to Containers, Backup for GKE, Security Posture (NEW), Config & Policy (Config and Policy), Marketplace, and Release Notes. The main content area displays a table for Kubernetes clusters, with one entry visible:

| Status          | Name  | Location | Mode      | Number of nodes | Total vCPUs | Total memory | Notifications | Labels |
|-----------------|---|----------|-----------|-----------------|-------------|--------------|---------------|--------|
| Green checkmark | <a href="#">luxxy-kubernetes-cluster-en</a> | us-east4 | Autopilot | 0               | 0 GB        | —            | —             | —      |

Below the cluster table is a Cloud Shell terminal window titled "Terminal (caramel-anvil-395413)". The terminal output shows a connection loss message and a history of commands run on the cluster, including "kubectl apply" commands for deploying a pod named "luxxy-covid-testing-system".

```
Welcome to Cloud Shell! Type "help" to get started.  
Your Cloud Platform project in this session is set to caramel-anvil-395413.  
Use "gcloud config set project [PROJECT ID]" to change to a different project.  
frankiec1975@cloudshell:~/.mission2_en/.mission2/en/kubernetes/ (caramel-anvil-395413)$ cd ~/.mission2_en/.mission2/en/kubernetes/  
frankiec1975@cloudshell:~/.mission2_en/.mission2/en/kubernetes (caramel-anvil-395413)$ kubectl apply -f luxxy-covid-testing-system.yaml  
The connection to the server localhost:8080 was refused - did you specify the right host or port?  
frankiec1975@cloudshell:~/.mission2_en/.mission2/en/kubernetes (caramel-anvil-395413)$ kubectl apply -f luxxy-covid-testing-system.yaml  
The connection to the server localhost:8080 was refused - did you specify the right host or port?  
frankiec1975@cloudshell:~/.mission2_en/.mission2/en/kubernetes (caramel-anvil-395413)$ [ ]
```

The screenshot shows the Google Cloud Platform interface for managing Kubernetes clusters. On the left, there's a sidebar with various navigation options like Clusters, Workloads, Services & Ingress, Applications, Secrets & ConfigMaps, Storage, Object Browser, Migrate to Containers, Backup for GKE, and Security Posture (marked as NEW). The main area is titled 'Kubernetes Engine' and shows 'Kubernetes clusters'. It has tabs for 'OVERVIEW', 'OBSERVABILITY', and 'COST OPTIMIZATION'. Under 'OVERVIEW', there's a table with one row for 'luxy-kubernetes-cluster-en'. The table columns include Status (green checkmark), Name (luxy-kubernetes-cluster-en), Location (us-east4), Mode (Autopilot), Number of nodes (0), Total vCPUs (0), Total memory (0 GB), Notifications (none), and Labels (empty). Below the table, a modal window titled 'Connect to the cluster' provides instructions for connecting via command-line or dashboard. It includes a 'Command-line access' section with a command to run 'kubectl' and a 'RUN IN CLOUD SHELL' button. Another section for the 'Cloud Console dashboard' with a 'OPEN WORKLOADS DASHBOARD' button. At the bottom, a terminal window shows a lost connection warning and some command-line logs related to Kubernetes deployment.

After running command to grant Command-line Access, was able to connect.

The terminal window shows a successful connection to the Google Cloud Shell. It displays a series of commands run by the user 'frankie1975@cloudshell:~/mission2\_en/mission2/en/kubernetes' to apply a deployment configuration and get cluster credentials. The logs indicate that the connection was initially refused due to host/port specification and then successfully established after the 'gcloud container clusters get-credentials' command.

```

Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to caramel-anvil-395413.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
frankie1975@cloudshell:~/mission2_en/mission2/en/kubernetes/ (caramel-anvil-395413)$ cd ~/mission2_en/mission2/en/kubernetes/
frankie1975@cloudshell:~/mission2_en/mission2/en/kubernetes (caramel-anvil-395413)$ kubectl apply -f luxxy-covid-testing-system.yaml
The connection to the server localhost:8080 was refused - did you specify the right host or port?
frankie1975@cloudshell:~/mission2_en/mission2/en/kubernetes (caramel-anvil-395413)$ kubectl apply -f luxxy-covid-testing-system.yaml
The connection to the server localhost:8080 was refused - did you specify the right host or port?
frankie1975@cloudshell:~/mission2_en/mission2/en/kubernetes (caramel-anvil-395413)$

frankie1975@cloudshell:~/mission2_en/mission2/en/kubernetes (caramel-anvil-395413)$ gcloud container clusters get-credentials luxy-kubernetes-cluster-en --region us-east4 --project caramel-anvil-395413
Fetching cluster endpoint and auth data.
kubeconfig entry generated for luxy-kubernetes-cluster-en.
frankie1975@cloudshell:~/mission2_en/mission2/en/kubernetes (caramel-anvil-395413)$ kubectl apply -f luxxy-covid-testing-system.yaml
service/luxxy-covid-testing-system created
Warning: autopilot-default-resources-mutator:Autopilot updated Deployment default/luxxy-covid-testing-system: defaulted unspecified resources for containers [luxxy-covid-testing-system]
  (see http://g.co/k8s/autopilot-defaults)
deployment.apps/luxxy-covid-testing-system created
service/luxxy-covid-testing-system configured
frankie1975@cloudshell:~/mission2_en/mission2/en/kubernetes (caramel-anvil-395413)$

```

## Kubernetes Engine running.

The screenshot shows the Google Cloud Platform interface for managing Kubernetes services. The left sidebar has a 'Kubernetes Engine' section with 'Clusters', 'Workloads', 'Services & Ingress' (which is selected), 'Applications', and 'Secrets & ConfigMaps'. The main area is titled 'Services & Ingress' with tabs for 'SERVICES' and 'INGRESS'. It shows a table with one row for 'luxxy-covid-testing-system'. The table columns are Name, Status, Type, Endpoints, Pods, Namespace, and Clusters. The endpoint listed is 35.188.255.125.80. The status is OK and the type is External load balancer. The namespace is default and the cluster is luxxy-kubernetes-cluster-en. There are buttons for 'CREATE INGRESS', 'DELETE', 'REFRESH', 'RESET', and 'SAVE'.

The screenshot shows a web browser window for the 'Luxxy - Luxury Hotels & Resorts' COVID-19 Testing Status System. The URL in the address bar is 35.188.255.125. The page title is 'COVID-19 Testing Status System'. There is a button labeled 'Add guest result >'. Below the button is a large image of a swimming pool with palm trees and umbrellas.

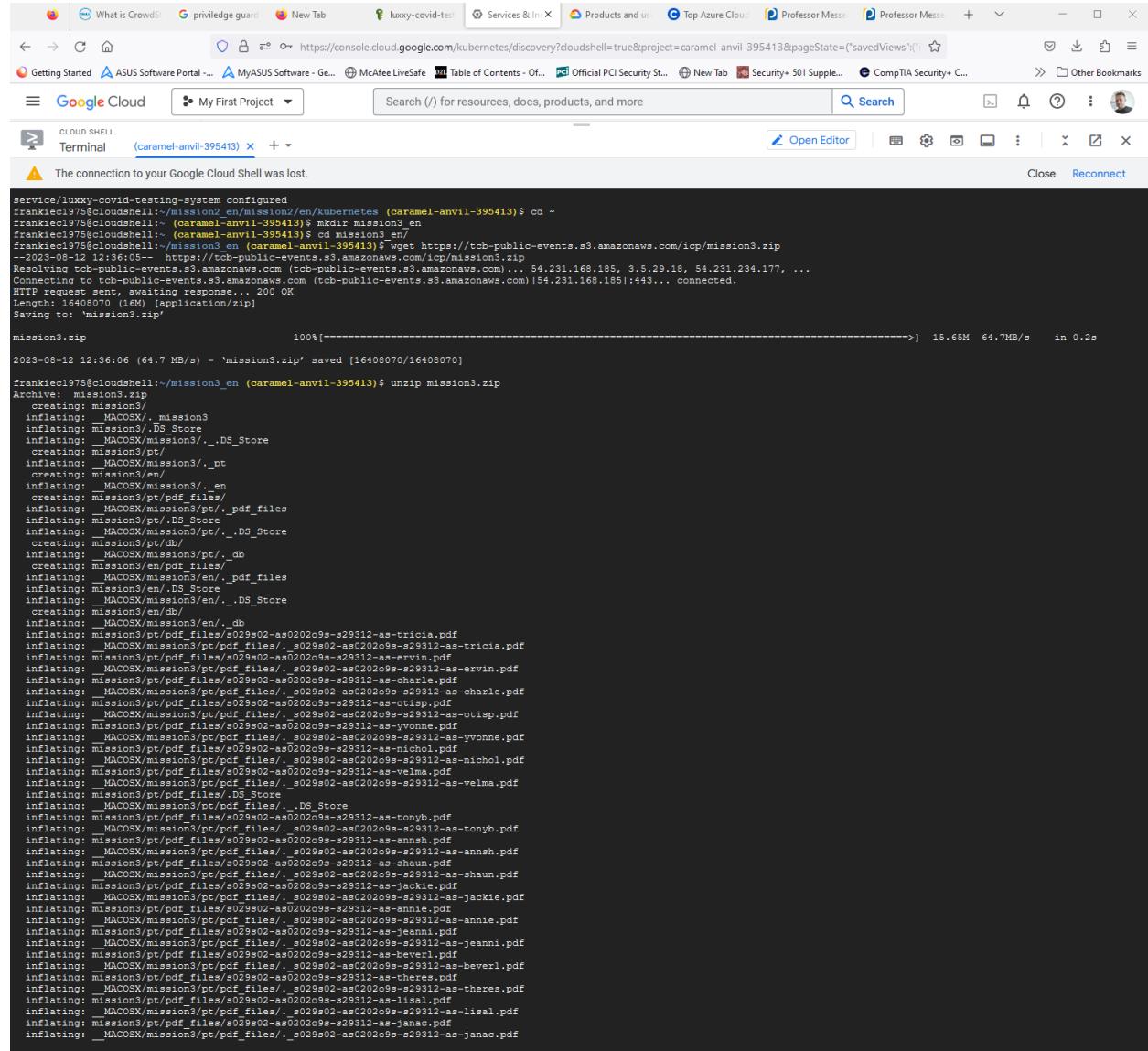


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## Mission3

<https://thecloudbootcamp.notion.site/Steps-to-implement-Hands-on-Project-Mission-3-593b00d893c7427aaffe372794b239df>

Created Mission3\_en directory, downloaded Mission3.zip file and unzipped file.



The screenshot shows a Google Cloud Shell terminal window. The terminal output is as follows:

```
service/luxxy-covid-testing-system configured
frankieci975@cloudshell:~/mission3_en/mission3_en/kubernetes (caramel-anvil-395413)$ cd ~
frankieci975@cloudshell:~ (caramel-anvil-395413)$ mkdir mission3_en
frankieci975@cloudshell:~ (caramel-anvil-395413)$ cd mission3_en
frankieci975@cloudshell:~/mission3_en (caramel-anvil-395413)$ curl -O https://tcb-public-events.s3.amazonaws.com/1cp/mission3.zip
--2023-08-12 12:36:05 -- https://tcb-public-events.s3.amazonaws.com/tcb-public-events.s3.amazonaws.com... 54.231.168.185, 54.231.234.177, ...
Resolving tcb-public-events.s3.amazonaws.com (tcb-public-events.s3.amazonaws.com)... 54.231.168.185...
Connecting to tcb-public-events.s3.amazonaws.com (tcb-public-events.s3.amazonaws.com)|54.231.168.185|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 16408070 (16M) [application/zip]
Saving to: 'mission3.zip'

mission3.zip          100%[=====] 15.65M 64.7MB/s   in 0.2s

2023-08-12 12:36:06 (64.7 MB/s) - `mission3.zip' saved [16408070/16408070]

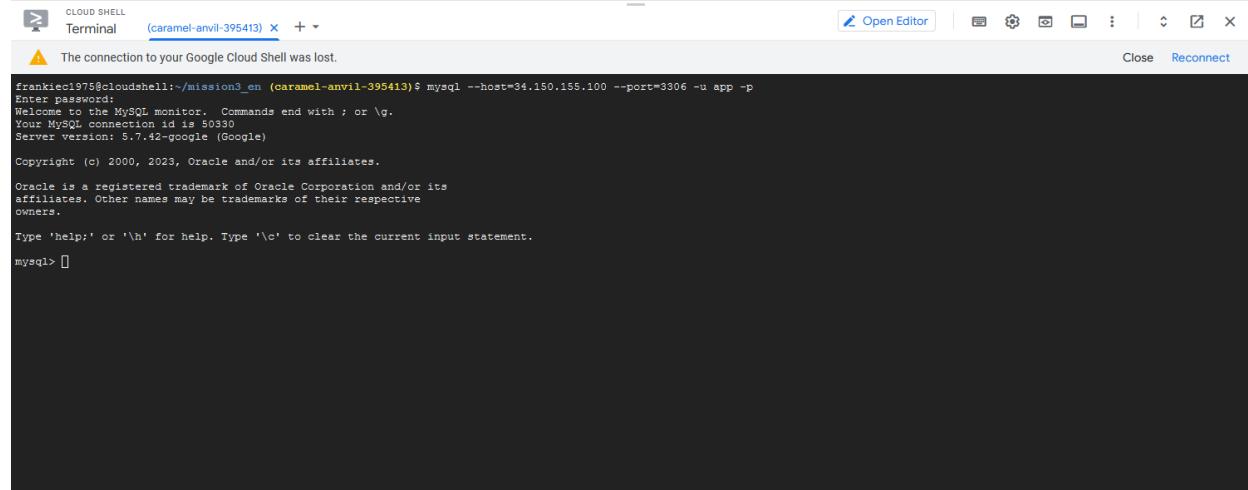
frankieci975@cloudshell:~/mission3_en (caramel-anvil-395413)$ unzip mission3.zip
Archive: mission3.zip
  creating: mission3/
  inflating: __MACOSX__/_mission3
  inflating: __MACOSX__/.DS_Store
  inflating: __MACOSX__/_mission3/_._DS_Store
  creating: __MACOSX__/_pt/
  inflating: __MACOSX__/_mission3/_._pt
  creating: mission3/en/
  inflating: __MACOSX__/mission3/_._en
  creating: mission3/pt/pdf_files/
  inflating: __MACOSX__/mission3/pt/_._pdf_files
  inflating: mission3/pt/.DS_Store
  inflating: __MACOSX__/mission3/pt/_._DS_Store
  creating: mission3/pt/db/
  inflating: __MACOSX__/mission3/pt/_._db
  creating: mission3/pt/pdf_files/
  inflating: __MACOSX__/mission3/pt/_._pdf_files
  inflating: mission3/pt/.DS_Store
  inflating: __MACOSX__/mission3/pt/_._DS_Store
  creating: mission3/en/db/
  inflating: __MACOSX__/missions/_en/_db
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-tricia.pdf
  inflating: __MACOSX__/missions/_en/_pdf_files/_/s029s02-as0202o9s-a29312-as-tricia.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-ervin.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-ervin.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-charlie.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-charlie.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-otisp.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-otisp.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-yvonne.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-yvonne.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-nichol.pdf
  inflating: __MACOSX__/missions/_pt/pdf_files/_/s029s02-as0202o9s-a29312-as-nichol.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-velma.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-velma.pdf
  inflating: mission3/pt/pdf_files/_/s029s02/_DS_Store
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02/_DS_Store
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-tonyb.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-tonyb.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-annsh.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-annsh.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-shaun.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-shaun.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-jacki.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-jacki.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-annie.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-annie.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-jeannie.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-jeannie.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-beveril.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-beveril.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-theres.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-theres.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-lisal.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-lisal.pdf
  inflating: mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-janac.pdf
  inflating: __MACOSX__/mission3/pt/pdf_files/_/s029s02-as0202o9s-a29312-as-janac.pdf
```

## Connected to SQL server.



The screenshot shows the Google Cloud Platform interface for managing Cloud SQL instances. A table lists a single instance:

| Instance ID                                    | Cloud SQL edition | Type      | Public IP address | Private IP address | Instance connection name | High availability | Location   | Actions |
|--|-------------------|-----------|-------------------|--------------------|--------------------------|-------------------|------------|---------|
| luxy-covid-testing-system-database-instance-en | Enterprise        | MySQL 5.7 | 34.150.155.100    | 10.59.240.3        | caramel-anvil-39541...   | ENABLE            | us-east1-a | ⋮       |

The terminal window shows a MySQL session connected to the 'luxy-covid-testing-system-database-instance-en' instance. The session starts with the MySQL prompt and includes standard copyright and usage information.

```
frankieci975@cloudshell:~/mission3_en (caramel-anvil-395413)$ mysql --host=34.150.155.100 --port=3306 -u app -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 50330
Server version: 5.7.42-google (Google)

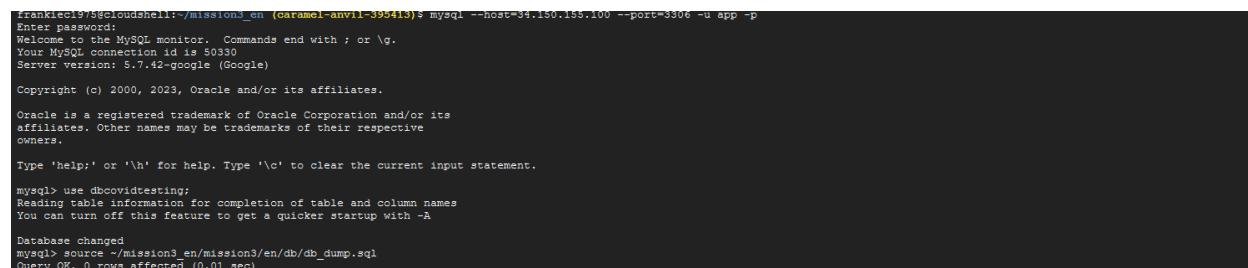
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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> 
```

## Importing Records to SQL Database.



The terminal window shows the process of importing data from a SQL dump file into a MySQL database. The user connects to the database, selects the target schema, and runs a command to import the data from the dump file.

```
frankieci975@cloudshell:~/mission3_en (caramel-anvil-395413)$ mysql --host=34.150.155.100 --port=3306 -u app -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 50330
Server version: 5.7.42-google (Google)

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

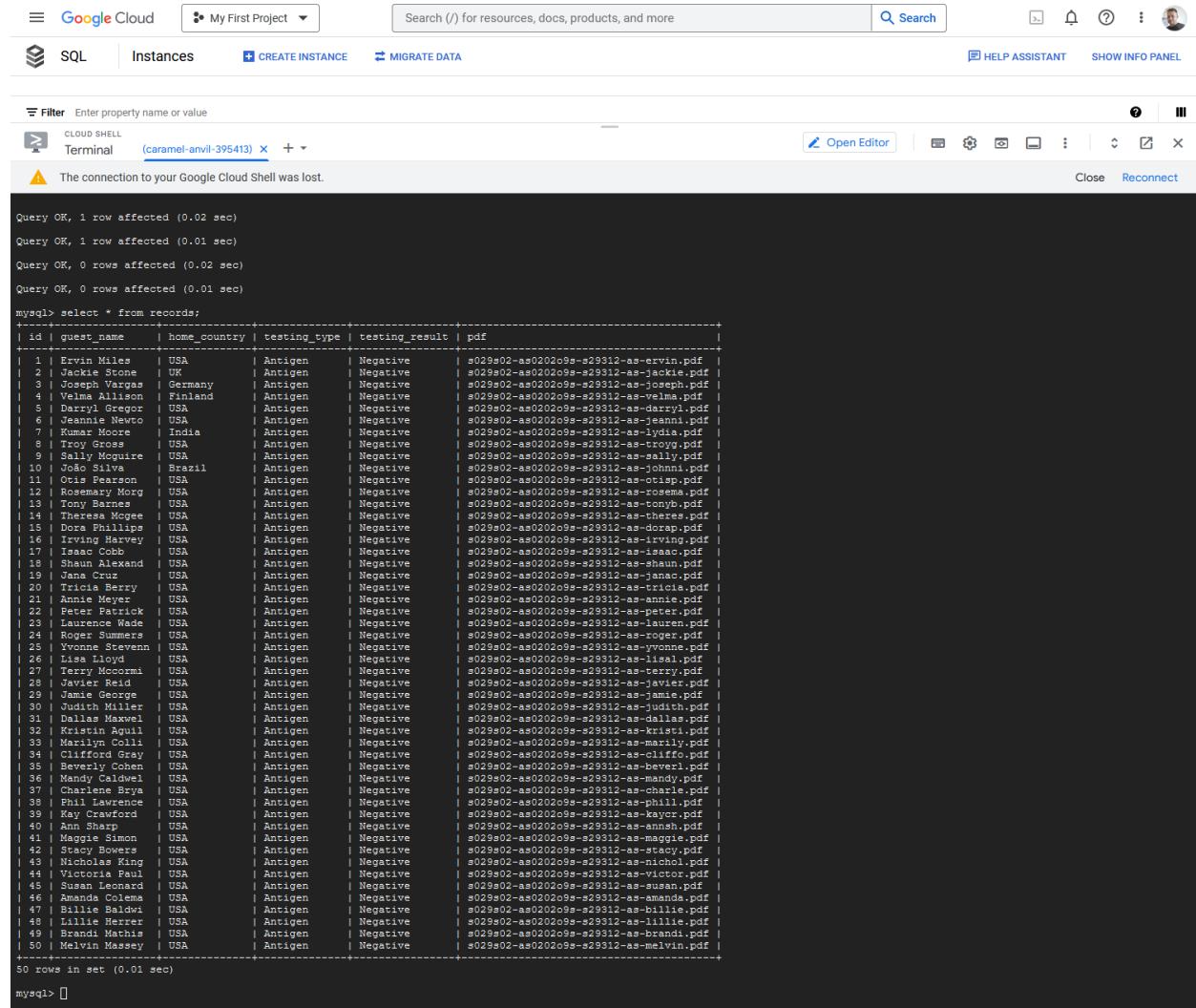
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use dbcovidtesting;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> source ~/mission3_en/missions3/en/db/db_dump.sql
Query OK, 0 rows affected (0.01 sec)
```

## Verifying import of records.



The screenshot shows the Google Cloud Platform SQL interface. At the top, there's a navigation bar with 'Google Cloud' and 'My First Project'. A search bar says 'Search (/) for resources, docs, products, and more' with a 'Search' button. On the right, there are icons for help, info panel, and user profile.

The main area is a terminal window titled '(caramel-anvil-395413)'. It displays a MySQL session:

```
Query OK, 1 row affected (0.02 sec)
Query OK, 1 row affected (0.01 sec)
Query OK, 0 rows affected (0.02 sec)
Query OK, 0 rows affected (0.01 sec)

mysql> select * from records;
+----+-----+-----+-----+-----+
| id | guest_name | home_country | testing_type | testing_result | pdf
+----+-----+-----+-----+-----+
| 1 | Ervin Miles | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-ervin.pdf
| 2 | Jackie Stone | UK | Antigen | Negative | s029s02-as0202o9s-s29312-as-jackie.pdf
| 3 | Ira Mcdowell | Germany | Antigen | Negative | s029s02-as0202o9s-s29312-as-ira.pdf
| 4 | Velma Allison | Ireland | Antigen | Negative | s029s02-as0202o9s-s29312-as-velma.pdf
| 5 | Darryl Gregor | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-darryl.pdf
| 6 | Jeannie Newto | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-jeannie.pdf
| 7 | Kumar Moore | India | Antigen | Negative | s029s02-as0202o9s-s29312-as-kumar.pdf
| 8 | Troy Gross | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-troyg.pdf
| 9 | Sally McGuire | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-sally.pdf
| 10 | João Silva | Brazil | Antigen | Negative | s029s02-as0202o9s-s29312-as-johnni.pdf
| 11 | Otis Pearson | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-otisp.pdf
| 12 | Rosemary Mog | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-rosem.pdf
| 13 | Linda Ewing | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-linda.pdf
| 14 | Theresa Moree | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-theresa.pdf
| 15 | Dora Phillips | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-dorap.pdf
| 16 | Irving Harvey | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-irving.pdf
| 17 | Isaac Cobb | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-isaac.pdf
| 18 | Shaw Alexana | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-shawn.pdf
| 19 | Jana Cruz | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-janac.pdf
| 20 | Tricia Berry | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-tricia.pdf
| 21 | Jameson Hart | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-jameson.pdf
| 22 | Peter Patlock | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-peter.pdf
| 23 | Laurence Wade | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-lauren.pdf
| 24 | Roger Summers | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-roger.pdf
| 25 | Yvonne Stevenn | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-yvonne.pdf
| 26 | Lisa Lloyd | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-lisal.pdf
| 27 | Terry McCorm | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-terry.pdf
| 28 | Javier Reid | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-javier.pdf
| 29 | Jamie George | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-jamie.pdf
| 30 | Phillip Miller | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-phillip.pdf
| 31 | Dallas Maxwell | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-dallas.pdf
| 32 | Kristin Aquil | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-krist1.pdf
| 33 | Marilyn Colli | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-marily.pdf
| 34 | Clifford Gray | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-cliff0.pdf
| 35 | Beverly Cohen | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-bever1.pdf
| 36 | Mandy Caldwell | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-mandy.pdf
| 37 | Charlene Brya | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-charlie.pdf
| 38 | Phil Lawrence | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-phil.pdf
| 39 | Debbie Crawford | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-debbie.pdf
| 40 | Ann Shaffer | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-annash.pdf
| 41 | Maggie Simon | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-maggie.pdf
| 42 | Stacy Bowers | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-stacy.pdf
| 43 | Nicholas King | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-nichol.pdf
| 44 | Victoria Paul | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-victor.pdf
| 45 | Susan Leonard | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-susan.pdf
| 46 | Amanda Colemi | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-amanda.pdf
| 47 | Billie Baldwin | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-billie.pdf
| 48 | Alissa Hansen | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-alissa.pdf
| 49 | Brandi Mathis | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-brandi.pdf
| 50 | Melvin Massey | USA | Antigen | Negative | s029s02-as0202o9s-s29312-as-melvin.pdf
+----+-----+-----+-----+-----+
50 rows in set (0.01 sec)
```

mysql> []

Within AWS created mission3\_en directory, downloaded zip file and unzipped file.

```
mkdir mission3_en
```

```
cd mission3_en
```

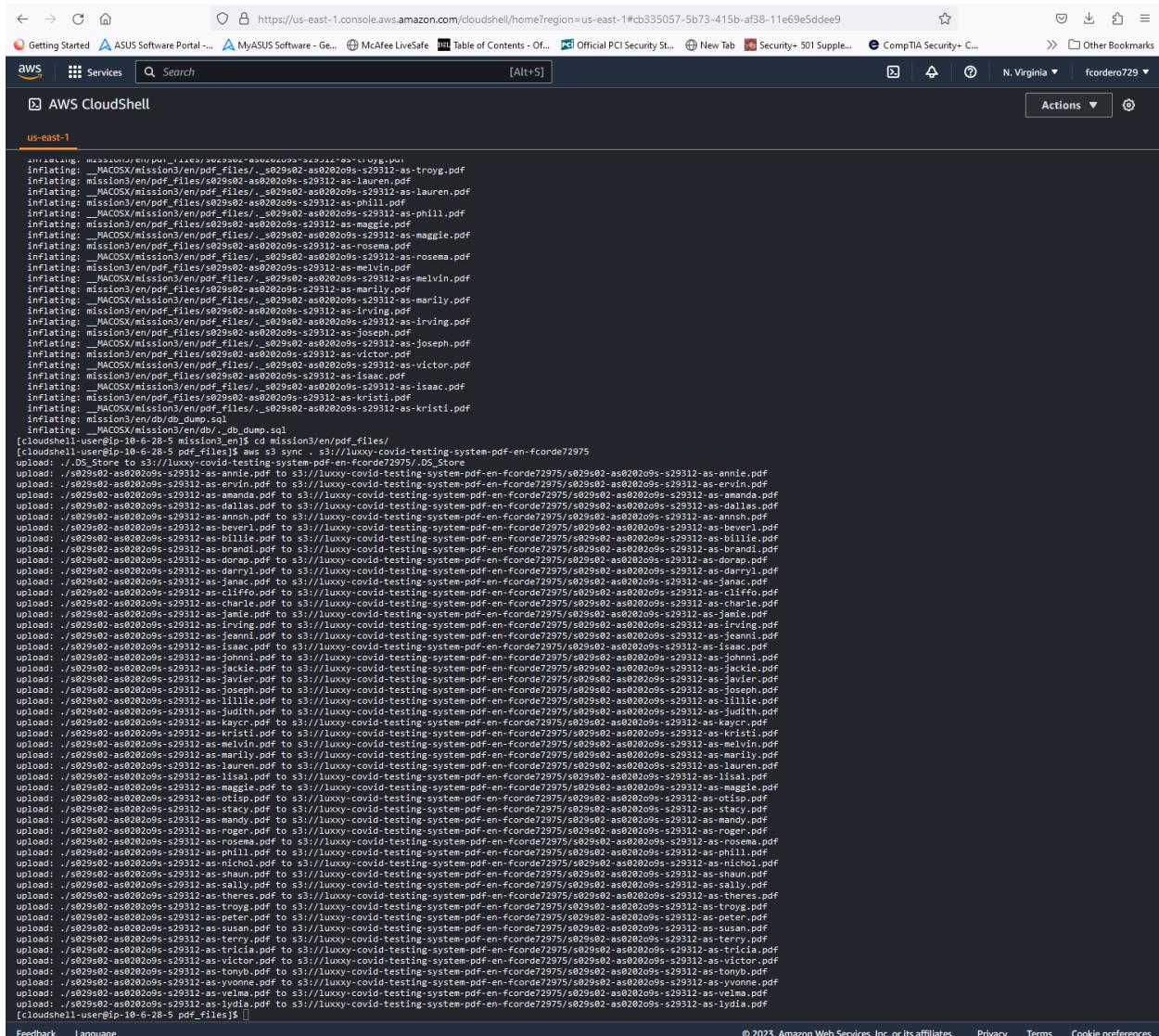
```
wget https://tcb-public-events.s3.amazonaws.com/icp/mission3.zip
```

```
unzip mission3.zip
```

The screenshot shows a terminal window titled "AWS CloudShell" on the "us-east-1" region. The terminal is displaying the output of the "unzip" command on a ZIP file named "mission3.zip". The output lists numerous PDF files being extracted, each with a name like "\_MACOSX/mission3/en/pdf\_file/\_s029x02-as29312-as-jaanni.pdf" and a timestamp such as "2023-02-08T10:20:29Z". The terminal also shows the user navigating through the extracted files and executing commands like "dump.sql" and "db\_dump.sql". The AWS CloudShell interface includes a top navigation bar with tabs for "Getting Started", "ASUS Software Portal", "McAfee LiveSafe", "Table of Contents - Of...", "Official PCI Security St...", "New Tab", "Security+ 501 Suppl...", "CompTIA Security+ C...", and "Other Bookmarks". The bottom of the screen displays standard browser footer links for "Feedback", "Language", "Privacy", "Terms", and "Cookie preferences".

```
infating: mission3/en/pdf_files/_s029x02-as29312-as-jaanni.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-jaanni.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-beverl.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-beverl.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-theres.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-theres.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-theres.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-theres.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-lisal.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-lisal.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-janac.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-janac.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-billie.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-billie.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-sally.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-sally.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-kaycr.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-kaycr.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-susan.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-susan.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-peter.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-peter.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-darryl.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-darryl.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-amanda.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-amanda.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-terry.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-terry.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-roger.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-roger.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-cliffro.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-cliffro.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-mandy.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-mandy.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-johnni.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-johnni.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-judith.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-judith.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-lidia.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-lidia.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-jamie.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-jamie.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-lillie.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-lillie.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-dallas.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-dallas.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-javier.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-javier.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-stacy.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-stacy.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-brandi.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-brandi.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-dorap.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-dorap.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-melvin.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-melvin.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-marilly.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-marilly.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-irving.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-irving.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-joseph.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-joseph.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-victor.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-victor.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-isaac.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-isaac.pdf
infating: mission3/en/pdf_files/_s029x02-as29312-as-kristi.pdf
infating: _MACOSX/mission3/en/pdf_file/_s029x02-as29312-as-kristi.pdf
infating: mission3/en/db_dump.sql
infating: _MACOSX/mission3/en/db_dump.sql
infating: mission3/en/db_db_dump.sql
[cloudshell-user@ip-10-6-28-5 missions3_en]$
```

## AWS Sync pdf files.



The screenshot shows a terminal window in AWS CloudShell with the following log output:

```
infating: _MACOSX/mission3/en/pdf_files/_s029s02-as020209s-s29312-as-troyg.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-lauren.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-phill.pdf
infating: _MACOSX/mission3/en/pdf_files/_s029s02-as020209s-s29312-as-maggie.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-rosema.pdf
infating: _MACOSX/mission3/en/pdf_files/_s029s02-as020209s-s29312-as-rosena.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-melvin.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-marly.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-irving.pdf
infating: _MACOSX/mission3/en/pdf_files/_s029s02-as020209s-s29312-as-irving.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-joseph.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-victor.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-isaac.pdf
infating: mission3/en/pdf_files/_s029s02-as020209s-s29312-as-kristi.pdf
infating: _MACOSX/mission3/en/pdf_files/_s029s02-as020209s-s29312-as-kristi.pdf
infating: mission3/en/db/_dump.sql
infating: _MACOSX/mission3/en/db/_dump.sql
[cloudshell-user@ip-10-6-28-5 mission3]$ cd mission3/en/pdf_files/
[cloudshell-user@ip-10-6-28-5 mission3]$ ls
luxxy-covid-testing-system-pdf-en-fcorde2975
Upload: ./DS_Store to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/.DS_Store
upload: ./s029s02-as020209s-s29312-as-annie.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-ervin.pdf
upload: ./s029s02-as020209s-s29312-as-ervin.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-ervin.pdf
upload: ./s029s02-as020209s-s29312-as-amanda.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-amanda.pdf
upload: ./s029s02-as020209s-s29312-as-dallas.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-dallas.pdf
upload: ./s029s02-as020209s-s29312-as-darren.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-darren.pdf
upload: ./s029s02-as020209s-s29312-as-beverl.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-beverl.pdf
upload: ./s029s02-as020209s-s29312-as-billie.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-billie.pdf
upload: ./s029s02-as020209s-s29312-as-brandi.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-brandi.pdf
upload: ./s029s02-as020209s-s29312-as-dorap.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-dorap.pdf
upload: ./s029s02-as020209s-s29312-as-darren.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-darren.pdf
upload: ./s029s02-as020209s-s29312-as-darryl.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-darryl.pdf
upload: ./s029s02-as020209s-s29312-as-dawn.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-dawn.pdf
upload: ./s029s02-as020209s-s29312-as-cliffo.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-cliffo.pdf
upload: ./s029s02-as020209s-s29312-as-charle.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-charle.pdf
upload: ./s029s02-as020209s-s29312-as-jamie.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-jamie.pdf
upload: ./s029s02-as020209s-s29312-as-irving.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-irving.pdf
upload: ./s029s02-as020209s-s29312-as-jeanne.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-jeanne.pdf
upload: ./s029s02-as020209s-s29312-as-johnni.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-johnni.pdf
upload: ./s029s02-as020209s-s29312-as-johnni.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-johnni.pdf
upload: ./s029s02-as020209s-s29312-as-jackie.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-jackie.pdf
upload: ./s029s02-as020209s-s29312-as-javier.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-javier.pdf
upload: ./s029s02-as020209s-s29312-as-joseph.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-joseph.pdf
upload: ./s029s02-as020209s-s29312-as-lillie.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-lillie.pdf
upload: ./s029s02-as020209s-s29312-as-kayce.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-kayce.pdf
upload: ./s029s02-as020209s-s29312-as-kristi.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-kristi.pdf
upload: ./s029s02-as020209s-s29312-as-melvin.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-melvin.pdf
upload: ./s029s02-as020209s-s29312-as-marly.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-marly.pdf
upload: ./s029s02-as020209s-s29312-as-margie.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-margie.pdf
upload: ./s029s02-as020209s-s29312-as-otisp.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-otisp.pdf
upload: ./s029s02-as020209s-s29312-as-stacy.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-stacy.pdf
upload: ./s029s02-as020209s-s29312-as-mandy.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-mandy.pdf
upload: ./s029s02-as020209s-s29312-as-roger.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-roger.pdf
upload: ./s029s02-as020209s-s29312-as-saman.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-saman.pdf
upload: ./s029s02-as020209s-s29312-as-phill.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-phill.pdf
upload: ./s029s02-as020209s-s29312-as-shau.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-shau.pdf
upload: ./s029s02-as020209s-s29312-as-nichol.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-nichol.pdf
upload: ./s029s02-as020209s-s29312-as-sally.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-sally.pdf
upload: ./s029s02-as020209s-s29312-as-troy.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-troy.pdf
upload: ./s029s02-as020209s-s29312-as-peter.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-peter.pdf
upload: ./s029s02-as020209s-s29312-as-susan.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-susan.pdf
upload: ./s029s02-as020209s-s29312-as-terry.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-terry.pdf
upload: ./s029s02-as020209s-s29312-as-trina.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-trina.pdf
upload: ./s029s02-as020209s-s29312-as-yvonne.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-yvonne.pdf
upload: ./s029s02-as020209s-s29312-as-lydia.pdf to s3://luxxy-covid-testing-system-pdf-en-fcorde2975/s029s02-as020209s-s29312-as-lydia.pdf
```

Checked results of sync on site address.

| Guest Name    | Home Country | Testing Type | Testing Result | Scanned Result (PDF) |                      |                        |
|---------------|--------------|--------------|----------------|----------------------|----------------------|------------------------|
| Amanda Colema | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Ann Sharp     | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Annie Meyer   | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Beverly Cohen | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Billie Baldwi | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Brandi Mathis | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Charlene Brya | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Clifford Gray | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Dallas Maxwel | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Darryl Gregor | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Dora Phillips | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Ervin Miles   | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Irving Harvey | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Isaac Cobb    | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Jackie Stone  | UK           | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Jamie George  | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Jana Cruz     | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Javier Reid   | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| Jeannie Newto | USA          | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |
| João Silva    | Brazil       | Antigen      | Negative       | <a href="#">Link</a> | <a href="#">Edit</a> | <a href="#">Delete</a> |

Successfully Migrated application and database to a Multicloud Architecture between Google Cloud Platform and Amazon Web Services.