

Steps to implement Hands-on Project - Mission 2

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.



Specify user details

User details

User name

The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and + = , . @ _ - (hyphen)

☐ **Enable console access - *optional***
Enables a password that allows users to sign in to the AWS Management Console.

 For programmatic access, you can generate access keys after you create the user. [Learn more](#) 

Cancel

Next

- On Set permissions, Permissions options, click in "Attach policies directly" button.

Set permissions

Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. [Learn more](#)

Permissions options

☐ **Add user to group**
Add user to an existing group, or create a new group. We recommend using groups to manage user permissions by job function.

☐ **Copy permissions**
Copy all group memberships, attached managed policies, and inline policies from an existing user.

☒ **Attach policies directly**
Attach a managed policy directly to a user. As a best practice, we recommend attaching policies to a group instead. Then, add the user to the appropriate group.

Permissions policies (1037) Refresh Create policy

Choose one or more policies to attach to your new user.

< 1 2 3 4 5 6 7 ... 52 > ⚙

<input type="checkbox"/>	Policy name	Type	Attached entities
<input type="checkbox"/>	AccessAnalyzerServiceRolePolicy	AWS managed	0
<input type="checkbox"/>	AdministratorAccess	AWS managed - job function	1
<input type="checkbox"/>	AdministratorAccess-Amplify	AWS managed	0
<input type="checkbox"/>	AdministratorAccess-AWSElasticBeanstalk	AWS managed	0
<input type="checkbox"/>	AlexaForBusinessDeviceSetup	AWS managed	0
<input type="checkbox"/>	AlexaForBusinessFullAccess	AWS managed	0

- Type AmazonS3FullAccess in Search.
- Select AmazonS3FullAccess

Permissions policies (1/1037) Refresh Create policy

Choose one or more policies to attach to your new user.

1 match

< 1 > ⚙

AmazonS3FullAccess ×

Clear filters

<input checked="" type="checkbox"/>	Policy name	Type	Attached entities
<input checked="" type="checkbox"/>	AmazonS3FullAccess	AWS managed	2

- Click in Next
- Review all details and click in Create user

Review and create

Review your choices. After you create the user, you can view and download the autogenerated password, if enabled.

User details

User name

terraform-en-1

Console password type

None

Require password reset

No

Permissions summary

< 1 >

Name	Type	Used as
AmazonS3FullAccess	AWS managed	Permissions policy

Tags - optional

Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.

No tags associated with the resource.

Add new tag

You can add up to 50 more tags.

Cancel

Previous

Create user

Steps to create access key:

- Click on the user you have created.
- Go to Security credentials tab.
- Scroll down and go to Access keys section.
- Click on Create access key

Access keys (0)

Use access keys to send programmatic calls to AWS from the AWS CLI, AWS Tools for PowerShell, AWS SDKs, or direct AWS API calls. You can have a maximum of two access keys (active or inactive) at a time. [Learn more](#)

Create access key

No access keys

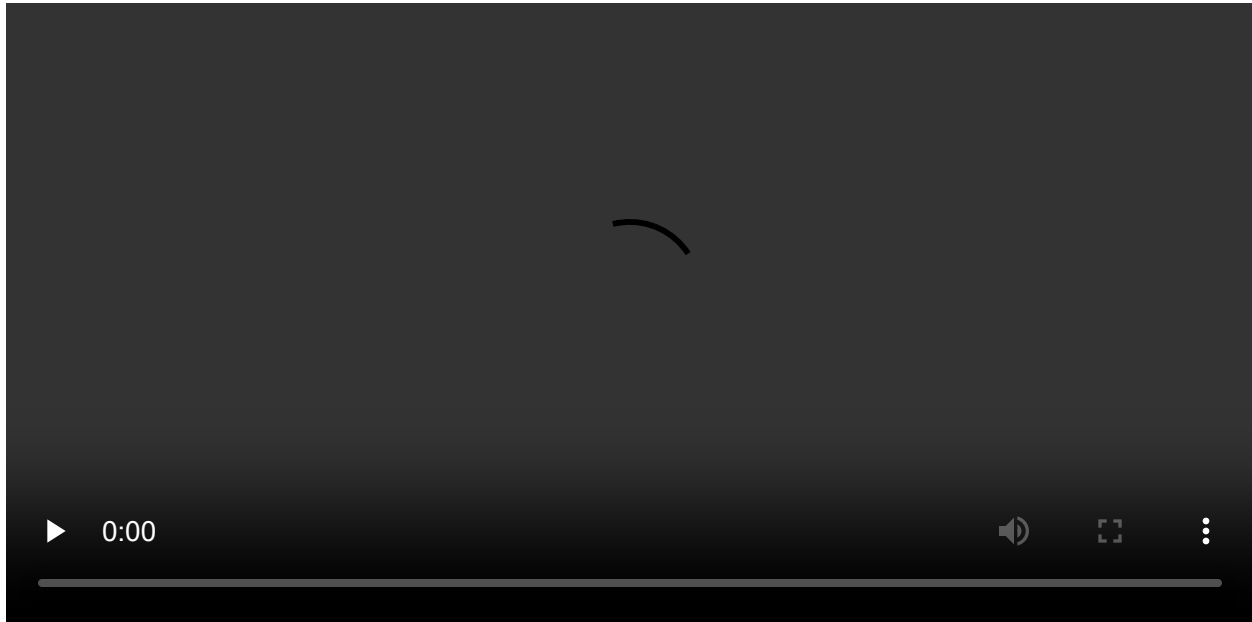
As a best practice, avoid using long-term credentials like access keys. Instead, use tools which provide short term credentials. [Learn more](#)

Create access key

- Select **Command Line Interface (CLI)** and **I understand the above recommendation and want to proceed to create an access key** checkbox.
- Click Next
- Click on Create access key
- Click on Download .csv file
- After download, click Done.
- Now, rename .csv file downloaded to luxxy-covid-testing-system-en-app1.csv

Google Cloud Platform (GCP)

- Navigate to Cloud SQL instance and create a new user **app** with password **welcome123456** on Cloud SQL MySQL database



- Connect to Google Cloud Shell
- **Download** the mission2 files to Google Cloud Shell **using the wget command as shown below**

```
cd ~ mkdir mission2_en cd mission2_en wget https://tcb-public-events.s3.amazonaws.com/icp/mission2.zip unzip mission2.zip
```

- Connect to MySQL DB running on Cloud SQL (once it prompts for the password, provide **welcome123456**)

```
mysql --host=<public_ip_cloudsql> --port=3306 -u app -p
```

- Once you're connected to the database instance, create the products table for testing purposes

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

- Enable Cloud Build API via Cloud Shell.

```
# Command to enable Cloud Build API gcloud services enable  
cloudbuild.googleapis.com
```

Known issue during this step

If you see the error below, please follow the steps to fix it:

```
ERROR: (gcloud.builds.submit) INVALID_ARGUMENT: could not resolve source: goo  
gleapi: Error 403: 989404026119@cloudbuild.gserviceaccount.com does not have  
storage.objects.get access to the Google Cloud Storage object., forbidden To  
solve it: 1. Access IAM & Admin; 2. Click on check-box Include Google-provide  
d role grants; 3. Click and select your Cloud Build Service Account Example:  
989404026119@cloudbuild.gserviceaccount.com Cloud Build Service Account 4. On  
your Cloud Build Service Account, right side, click on Edit principal 5. Clic  
k on Add another role 6. Click on Select Role, and filter by Storage Admin or  
gcs. Select Storage Admin (Full control of GCS resources). 7. Click on Save a  
nd go to Cloud Shell.
```

- Build the Docker image and push it to Google Container Registry. Please replace the <PROJECT_ID> with your My First Project ID.

```
cd ~/mission2_en/mission2/en/app gcloud builds submit --tag  
gcr.io/<PROJECT_ID>/luxxy-covid-testing-system-app-en
```

- Open the Cloud Editor and edit the Kubernetes deployment file (**luxxy-covid-testing-system.yaml**) and update the variables below on **line 33** in **red** with your <PROJECT_ID> on the Google Container Registry path, on **line 42** AWS Bucket name, AWS Keys (open file **luxxy-covid-testing-system-en-app1.csv** and use **Access key ID** on **line 44** and **Secret access key** on **line 46**) and Cloud SQL Database Private IP on **line 48**.

```
cd ~/mission2/en/kubernetes luxxy-covid-testing-system.yaml image:  
gcr.io/<PROJECT_ID>/luxxy-covid-testing-system-app-en:latest ... - name:  
AWS_BUCKET value: "luxxy-covid-testing-system-pdf-en-xxxx" - name:  
S3_ACCESS_KEY value: "xxxxxxxxxxxxxxxxxxxxxx" - name: S3_SECRET_ACCESS_KEY  
value: "xxxxxxxxxxxxxxxxxxxxxx" - name: DB_HOST_NAME value: "172.21.0.3"
```

- Connect to the GKE (Google Kubernetes Engine) cluster via Console (follow the video)
- Deploy the application Luxxy in the Cluster

```
cd ~/mission2_en/mission2/en/kubernetes kubectl apply -f luxxy-covid-testing-  
system.yaml
```

- Get the Public IP and test the application ([CLICK HERE to download COVID-19 Testing result sample](#)). Search for **GKE**, click on **Services & Ingress**, and then on **Endpoints** address:port
- You should see the app up & running! Congrats! 🎉