

# Assignment 2

# Cloud Technologies

Group L

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# About

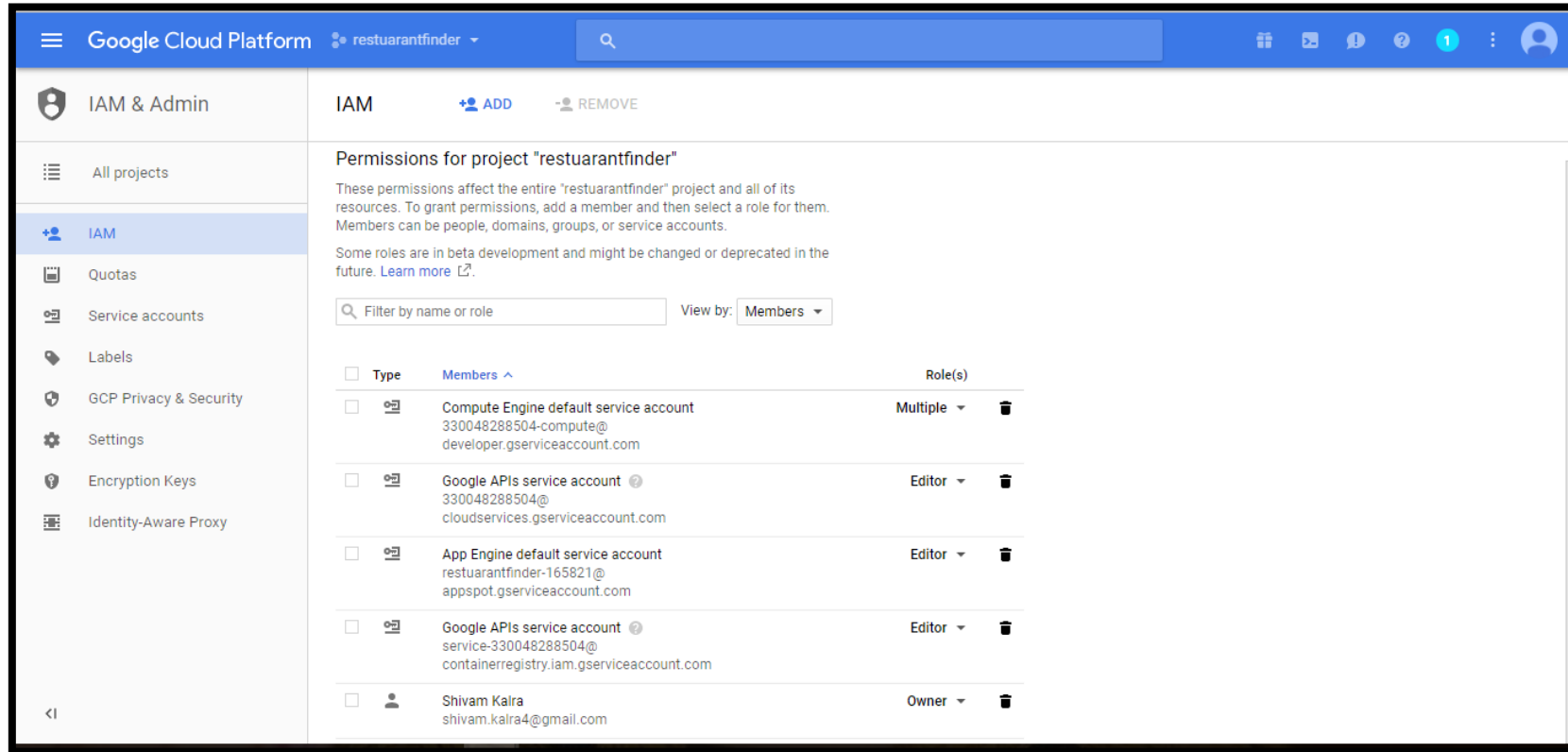
- Our assignment is based upon the Restaurants in USA.
  - We have taken the data from Kaggle.
  - Tools which we used are:
    - Ms Excel
    - My SQL
    - HTML, CSS
    - Java, JavaScript
    - Hadoop Virtual Machine
    - Google Cloud Platform
      - Google SQL
      - Google DataProc – Hive
      - Google Storage

# Assigned Task

- Use Cloud Services
  - Google Cloud Platform
    - Compute Engine
    - Storage
    - SQL
    - DataProc
- Help Kevin and Nitin in making UI

# My Work in Detail

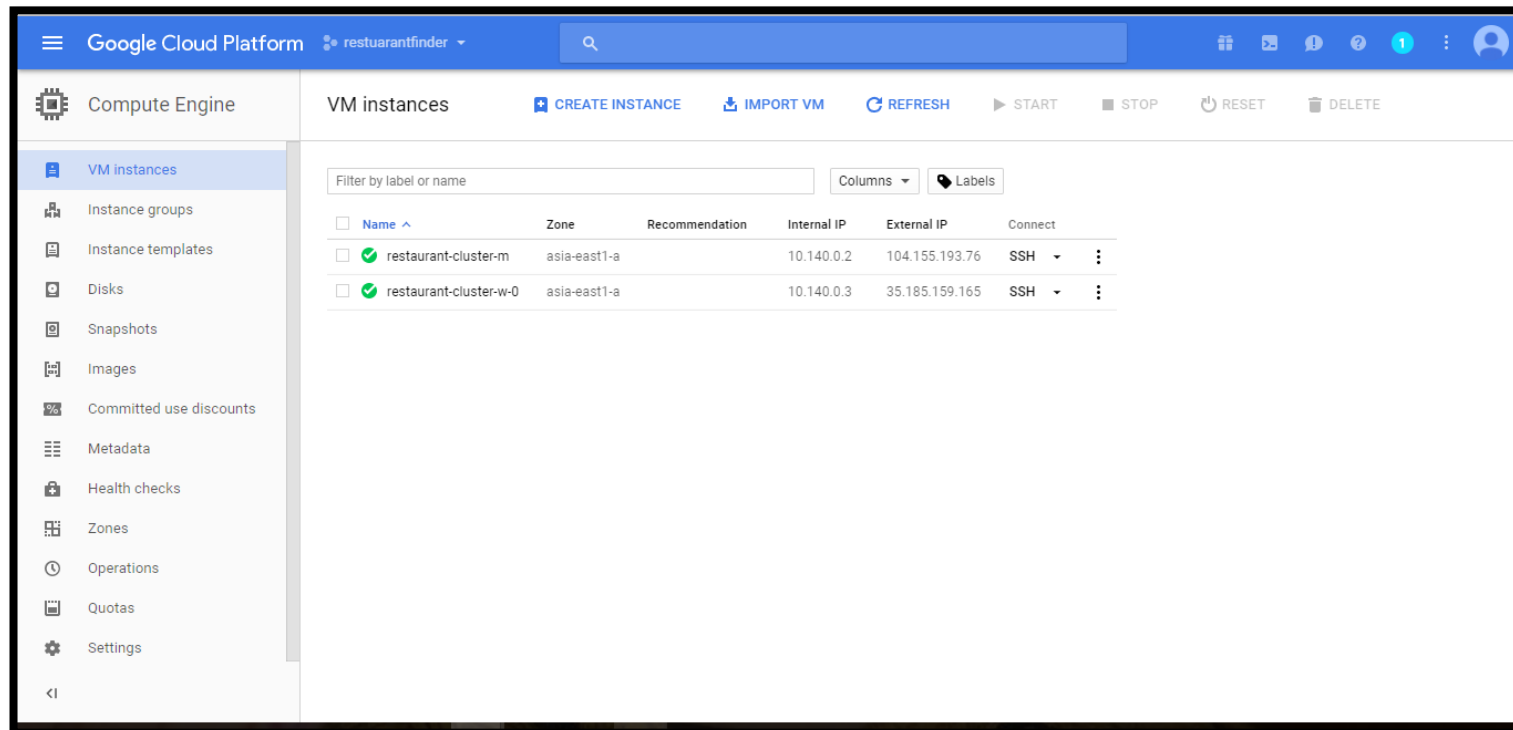
- Used Google Cloud Platform as Cloud service for the Assignment.



# Cont..

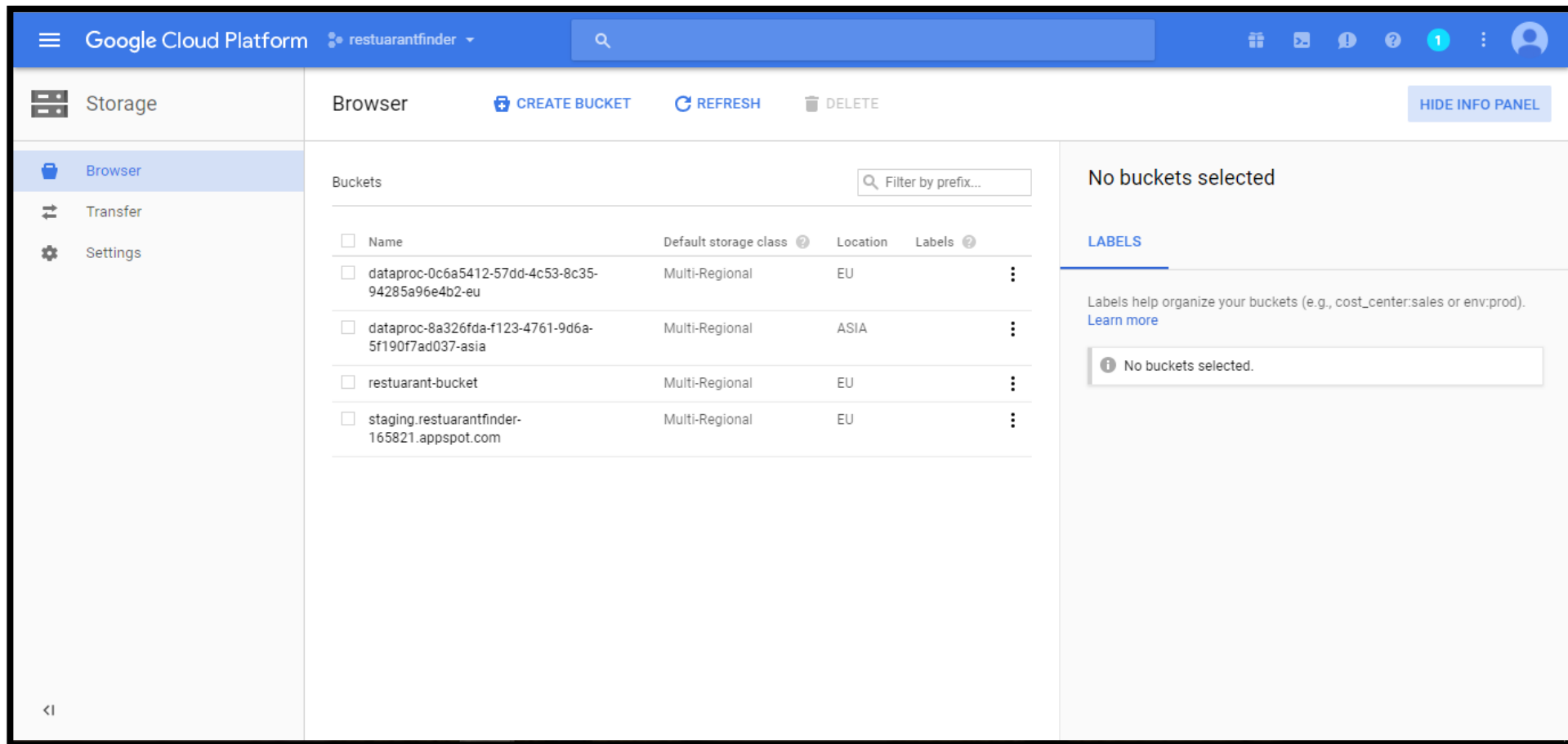
- Services I used in Google Cloud

Compute Engine – Make master node and worker node, to help in processing the tasks given to another cloud services.



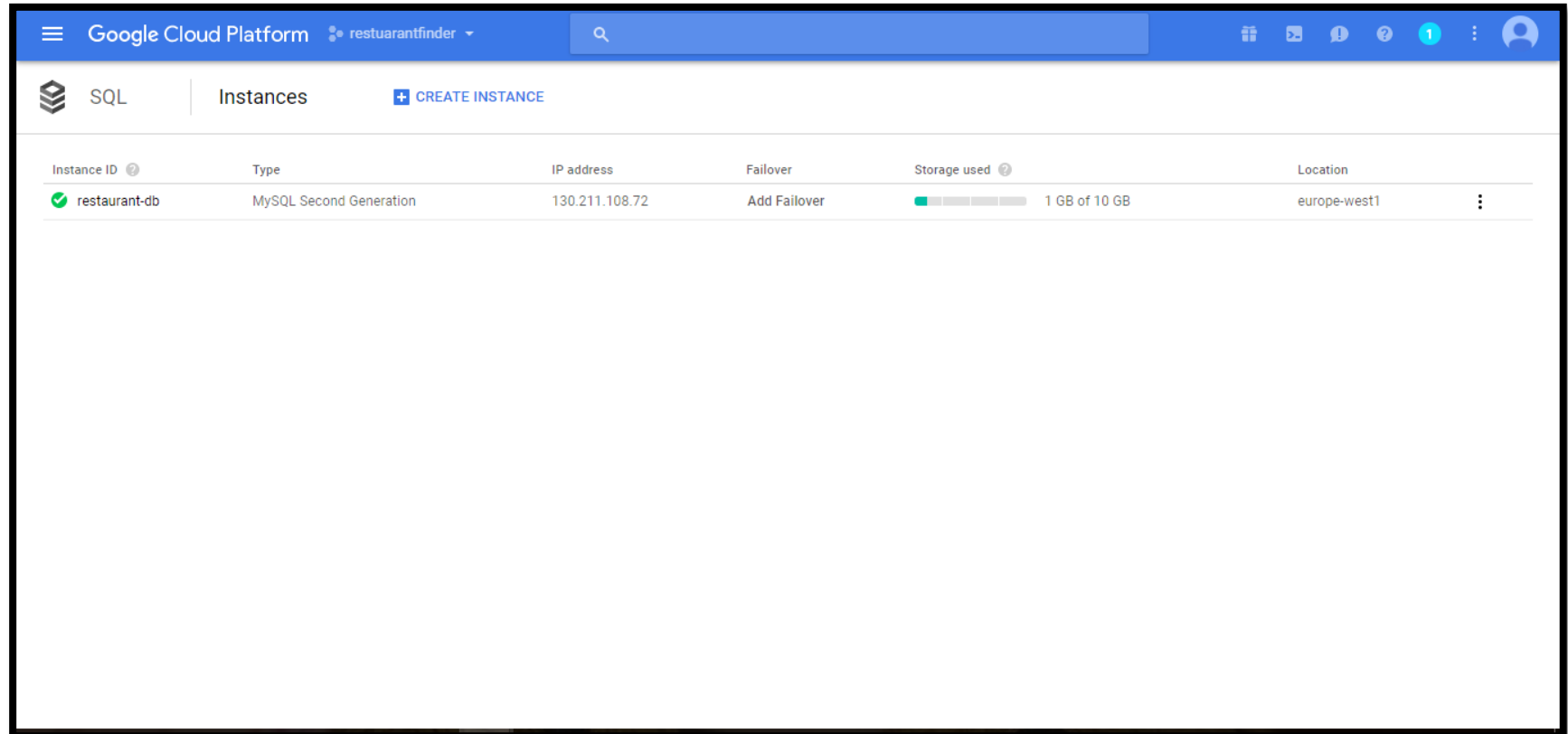
# Cont..

- Use Cloud Storage to save the data and make the other cloud services easier to share the data and save the logs and output.



# Cont..

- Use Cloud SQL , trying to connect the application with this for the output(Failed to do so).

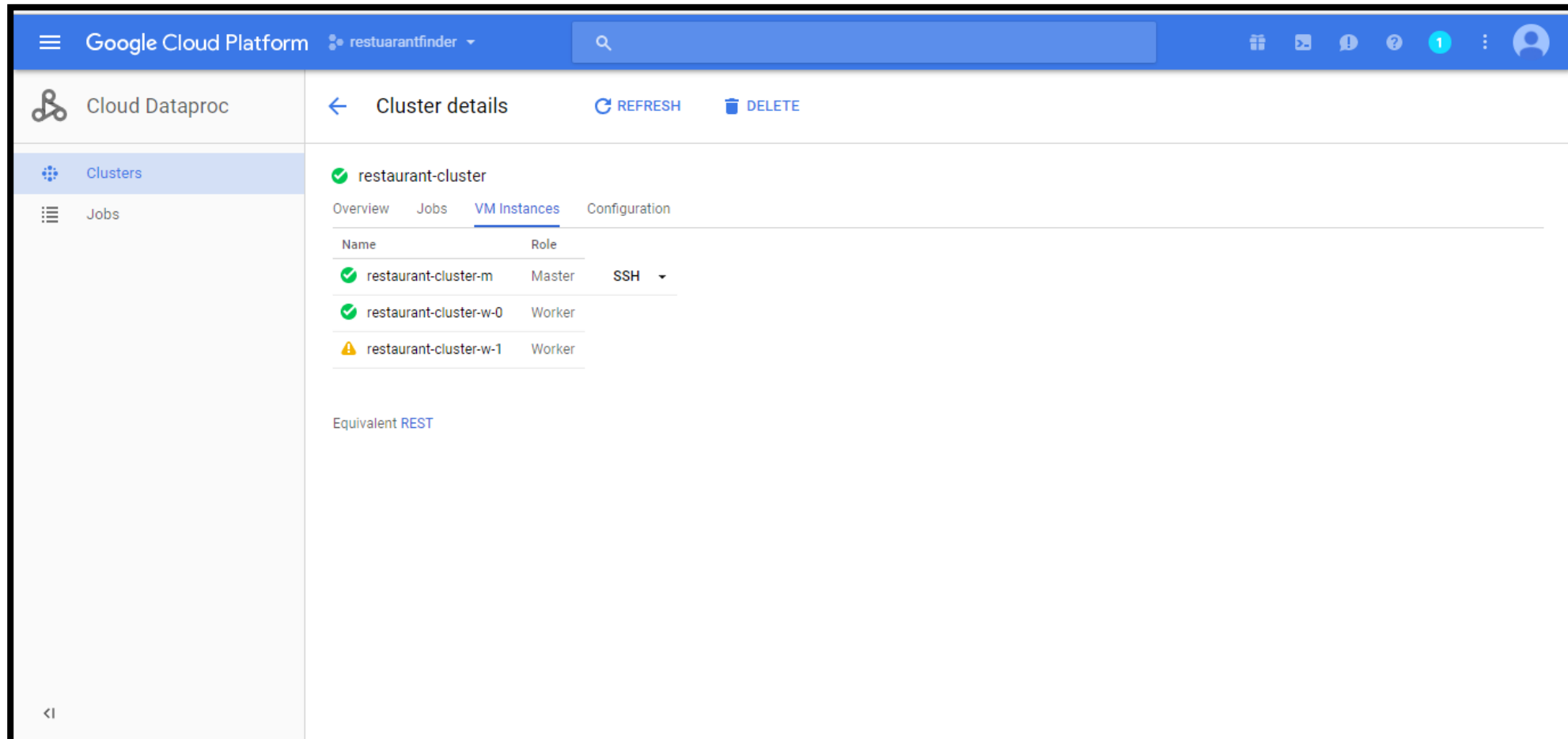


The screenshot shows the Google Cloud Platform console interface. At the top, there's a blue header with the Google Cloud Platform logo, a search bar, and a user profile icon. Below the header, the 'SQL' section is active, showing a list of instances under the 'Instances' tab. A '+ CREATE INSTANCE' button is visible. The table below lists one instance: 'restaurant-db', which is a 'MySQL Second Generation' instance with an IP address of '130.211.108.72'. It shows 'Add Failover' as an option and indicates that 1 GB of 10 GB storage is used. The location is 'europe-west1'.

Instance ID	Type	IP address	Failover	Storage used	Location
✓ restaurant-db	MySQL Second Generation	130.211.108.72	Add Failover	1 GB of 10 GB	europe-west1

# Cont...

- Use Google DataProc to implement Hive(Hive/Beeline) on the data stored in the Cloud Storage.



The screenshot displays the Google Cloud Platform console interface. The top navigation bar includes the 'Google Cloud Platform' logo, a project selector set to 'restaurantfinder', a search bar, and various utility icons. The left sidebar shows the 'Cloud Dataproc' menu with 'Clusters' and 'Jobs' options. The main content area is titled 'Cluster details' and features a 'restaurant-cluster' with a green status icon. Below this, there are tabs for 'Overview', 'Jobs', 'VM Instances' (which is selected), and 'Configuration'. A table lists the VM instances:

Name	Role	SSH
restaurant-cluster-m	Master	SSH
restaurant-cluster-w-0	Worker	
restaurant-cluster-w-1	Worker	

At the bottom of the console, there is a link for 'Equivalent REST'.



# Cont...

## Use hive

```
Secure | https://ssh.cloud.google.com/projects/restuarantfinder-165821/zones/asia-east1-a/instances/restaurant-cluster-m?authuser=0&hl=en_US&projectNumber=330048288504
shivam_kalra4@restaurant-cluster-m:~$ hive
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/usr/lib/hive/lib/log4j-slf4j-impl-2.4.1.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/usr/lib/hadoop/lib/slf4j-log4j12-1.7.10.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]

Logging initialized using configuration in jar:file:/usr/lib/hive/lib/hive-common-2.1.1.jar!/hive-log4j2.properties Async: true
Hive-on-MR is deprecated in Hive 2 and may not be available in the future versions. Consider using a different execution engine (i.e. spark, tez) or using Hive 1.X releases.
hive> select * from restaurant where id < 10;
FAILED: SemanticException [Error 10001]: Line 1:14 Table not found 'restaurant'
hive> select * from restaurant where id < 10;
OK
1      75      pizza      666 Monroe St N E Washington Dc DC US
2      33      Wine House      836 1/2 Main St Louisville CO US
3      63      the Square - Middletown 1045 Central Ave Middletown OH US
4      75      Famous Dave's      3803 9th St S W Puyallup WA US
5      68      Famous Dave's - Lombard 206 Yorktown Shopping Ctr Lombard IL US
6      17      Famous Dave's - Plymouth      11308 Mn Highway 55 Plymouth MN US
7      59      Famous Dave's - Upton Avenue      4264 S Upton Ave Minneapolis MN US
8      30      Famous Dave's Bar-b-que 1443 Us 22 Mountainside NJ US
9      19      Famous Dave's Forest Lake Mn - Hours Reviews & More      43 19th St S W Forest Lake MN US
Time taken: 1.559 seconds, Fetched: 9 row(s)
hive>
```

# Cont...

- Use Beeline

```
time taken: 1.559 seconds, fetched: 9 row(s)
hive>
[6]+ Stopped          hive
shivam_kalra4@restaurant-cluster-m:~$ beeline -u jdbc:hive2://localhost:10000/default -n shivam_kalra4@restaurant-cluster-m -d org.apache.hive.jdbc.HiveDriver
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/usr/lib/hive/lib/log4j-slf4j-impl-2.4.1.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/usr/lib/hadoop/lib/slf4j-log4j12-1.7.10.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Connecting to jdbc:hive2://localhost:10000/default
Connected to: Apache Hive (version 2.1.1)
Driver: Hive JDBC (version 2.1.1)
17/04/28 22:16:07 [main]: WARN jdbc.HiveConnection: Request to set autoCommit to false; Hive does not support autoCommit=false.
Transaction isolation: TRANSACTION_REPEATABLE_READ
Beeline version 2.1.1 by Apache Hive
0: jdbc:hive2://localhost:10000/default> select * from restaurant where id< 10;
+-----+-----+-----+-----+
| restaurant.id | restaurant.score | restaurant.name | restaurant.address |
+-----+-----+-----+-----+
| 1 | 75 | pizza | 666 Monroe St N E Washington Dc DC US |
| 2 | 33 | Wine House | 836 1/2 Main St Louisville CO US |
| 3 | 63 | the Square - Middletown | 1045 Central Ave Middletown OH US |
| 4 | 75 | Famous Dave's | 3803 9th St S W Puyallup WA US |
| 5 | 68 | Famous Dave's - Lombard | 206 Yorktown Shopping Ctr Lombard IL US |
| 6 | 17 | Famous Dave's - Plymouth | 11308 Mn Highway 55 Plymouth MN US |
| 7 | 59 | Famous Dave's - Upton Avenue | 4264 S Upton Ave Minneapolis MN US |
| 8 | 30 | Famous Dave's Bar-b-que | 1443 Us 22 Mountainside NJ US |
| 9 | 19 | Famous Dave's Forest Lake Mn - Hours Reviews & More | 43 19th St S W Forest Lake MN US |
+-----+-----+-----+-----+
9 rows selected (0.26 seconds)
0: jdbc:hive2://localhost:10000/default>
```

Thank You