Configure Replication and Enable Point-in-Time-Recovery for Cloud SQL for PostgreSQL

GSP922

- Point-in-time recovery (PITR) in Cloud SQL for PostgreSQL creates new instances from specific timestamps using write-ahead logs (WAL).
- Lab enables PITR, performs recovery to pre-error state, verifies data restoration on new instance.

- **PITR Requirements**
  - Enable automated backups (7-day retention minimum) and PITR on Cloud SQL instance creation/update.
  - Configure sufficient WAL storage; recovery creates new instance inheriting source settings.

- **Recovery Process**
  - Select source instance, target project/zone, recovery timestamp from Cloud Console or gcloud.
  - Verify restored data excludes post-recovery-time changes, confirming successful rollback.

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Open Google Cloud console

Username
student-00-d5fc8450a432(

Password
A2CeGGLjrEXM

Project ID
qwiklabs-gcp-03-6cc2ba0(

Task 1. Enable backups on the Cloud SQL for PostgreSQL instance

In this task you will enable scheduled backups on a Cloud SQL for PostgreSQL instance.

1. In Cloud Shell, display the instance details:

```
export CLOUD_SQL_INSTANCE=postgres-orders
gcloud sql instances describe $CLOUD_SQL_INSTANCE
```

Click the **Authorize** button if prompted.

2. In Cloud Shell, get the current UTC time in 24 hour format:

```
date +"%R"
```

3. In Cloud Shell, enter the following command to enable scheduled back-ups, replacing `HH:MM` with a time that is earlier than the time that was displayed in the previous step.

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Project ID
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2. In Cloud Shell, get the current UTC time in 24 hour format:

```
date +"%R"
```

3. In Cloud Shell, enter the following command to enable scheduled back-ups, replacing `HH:MM` with a time that is earlier than the time that was displayed in the previous step.

```
gcloud sql instances patch $CLOUD_SQL_INSTANCE \
    --backup-start-time=HH:MM
```

Note: For the purposes of this lab, it is imperative that you specify a backup start time earlier than the time displayed in the previous step. This is because you do not want a back-up to start while you are running the lab.
For example if the date command shows that the current time is `14:25` you could replace `HH:MM` with `13:25`, or even `12:00`. You must make sure it is a valid time in 24 hour format or you will receive an error saying the request was invalid.

4. Confirm your changes. Note the **format** parameter, which extracts only the

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Note: For the purposes of this lab, it is imperative that you specify a backup start time earlier than the time displayed in the previous step. This is because you do not want a back-up to start while you are running the lab.
For example if the date command shows that the current time is `14:25` you could replace `HH:MM` with `13:25`, or even `12:00`. You must make sure it is a valid time in 24 hour format or you will receive an error saying the request was invalid.

4. Confirm your changes. Note the **format** parameter, which extracts only the desired fields.

```
gcloud sql instances describe $CLOUD_SQL_INSTANCE --format
'value(settings.backupConfiguration)'
```

You will see a response similar to the following showing that backups are set for 7 days, and run at 14:00 daily in this example:

```
backupRetentionSettings={'retainedBackups': 7, 'retentionUnit':
'COUNT'}; enabled=True;kind=sql#backupConfiguration; startTime=14:00;
transactionLogRetentionDays=7
```

Dashboard – qwiklabs-gcp-03-6c

https://console.cloud.google.com/home/dashboard?project=qwiklabs-gcp-03-6cc2ba083945&pli=1&cloudshell=true

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Terminal (qwiklabs-gcp-03-6cc2ba083945) | Open Editor

```
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ export CLOUD_SQL_INSTANCE=postgres-orders
gcloud sql instances describe $CLOUD_SQL_INSTANCE
backendType: SECOND_GEN
connectionName: qwiklabs-gcp-03-6cc2ba083945:europe-west1:postgres-orders
createTime: '2026-01-15T13:41:40.605Z'
databaseInstalledVersion: POSTGRES_13_23
databaseVersion: POSTGRES_13
etag: dec1b6fb960a0bacf9b4fe585d9a5fe4dc4b1a499da82a5be09c80a14ad2b63e
gceZone: europe-west1-d
geminiConfig:
  activeQueryEnabled: false
  entitled: false
  googleVacuumMgmtEnabled: false
  indexAdvisorEnabled: false
  oomSessionCancelEnabled: true
includeReplicasForMajorVersionUpgrade: false
instanceType: CLOUD_SQL_INSTANCE
ipAddresses:
- ipAddress: 34.76.177.101
  type: PRIMARY
- ipAddress: 34.140.15.87
  type: OUTGOING
kind: sql#instance
maintenanceVersion: POSTGRES_13_23.R20251004.01_26
name: postgres-orders
project: qwiklabs-gcp-03-6cc2ba083945
region: europe-west1
satisfiesPzi: true
selfLink: https://sqladmin.googleapis.com/sql/v1beta4/projects/qwiklabs-gcp-03-6cc2ba083945/instances/postgres-orders
serverCaCert:
  cert: |-
```

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Dashboard – qwiklabs-gcp-03-6

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```
  cert: |-
    -----BEGIN CERTIFICATE-----
    MIIDfzCCAmegAwIBAgIBADANBgkqhkiG9w0BAQsFADB3MS0wKwYDVQQuEyRhZDU2
    ZWUxNi1mNGM5LTQyZjItYTBjOS04N2E0OTdkMWNiMjIxIzAhBgNVBAMTGkdvb2ds
    ZSBDbG91ZCBTUUwgU2VydmVyIENBMRQwEgYDVQQKEwtHb29nbGUsIEluYzELMAkG
    A1UEBhMCVVMwHhcNMjYwMTE1MTM0MjExWhcNMzYwMTEzMTM0MzExWjB3MS0wKwYD
    VQQuEyRhZDU2ZWUxNi1mNGM5LTQyZjItYTBjOS04N2E0OTdkMWNiMjIxIzAhBgNV
    BAMTGkdvb2dsZSBDbG91ZCBTUUwgU2VydmVyIENBMRQwEgYDVQQKEwtHb29nbGUs
    IEluYzELMAkGA1UEBhMCVVMwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIB
    AQCx7EoZQF0Co6U7Q1DiGFIrEvpTOyCABVn+m0d0KERtuykwyEUSJQFew5Ld+S2a
    bKZ2Uia2BBNZd/HzKZXRdVw6OQ5nXoJrJBS0rtkYz1WXGxzxAQhGXTs/TJ4eABjj
    2Sh9L78XxDfUw3z3ZuD0wNMh1AUUD1L30wYqnVgcTMNoKM756d7+/jL/cMVKEd31
    t5dcQ5VoR6BLtBk+RKA6emrI5VJHeg0e7iNVKvcjbVRm/JITjK7AMP4ddnXB5MnI
    DfXYdYA3mRfXSON6LDYj2DAdVtVbO1Ne72VOSfGe/EzA0Oxi51LsAuNnoSmHmFh3
    kbJsSLTWUiA2f7Cc59NhvNvVAgMBAAGjFjAUMBIGA1UdEwEB/wQIMAYBAf8CAQAw
    DQYJKoZIhvcNAQELBQADggEBAInwMUKGgHFp4QK09O974Sb1ZN1RgQ9cg6ZzIzEC
    DOTWBYgy0AiWO2DgXM8KvRh2S93EgaylYDwWACCPLVBSNtD37PUFDd3jHQxH0ymn
    Hih/pJ8LI1vS9qGMUWu0P7TmRNtxD76BjK6TuyPkOk4PkeUrAO3rofrFkPaKe4lT
    30DF+HhxlEdWLEr6r/AKV21hUaKAsgBZGYHJkTzKUMzNNuD0vA6lBdxfGSM2uFJt
    nJTc8jmwdTewvS0iFoupSL6BWchbvayFUShO9xdwIGQHaxeZZQTlewE2q6fquXSg
    Ulbq42E2XI8a4/FuAA9RQDzBmiR8CK8B0lCyfnE/3dPeA7U=
    -----END CERTIFICATE-----
  certSerialNumber: '0'
  commonName: C=US,O=Google\, Inc,CN=Google Cloud SQL Server CA,dnQualifier=ad56ee16-f4c9-42f2-a0c9-87a497d1cb22
  createTime: '2026-01-15T13:42:11.318Z'
  expirationTime: '2036-01-13T13:43:11.318Z'
  instance: postgres-orders
  kind: sql#sslCert
  sha1Fingerprint: 1a3fb2dc2c77689ea07582543893de9871a8cf93
serviceAccountEmailAddress: p117420804989-gkc52l@gcp-sa-cloud-sql.iam.gserviceaccount.com
settings:
```

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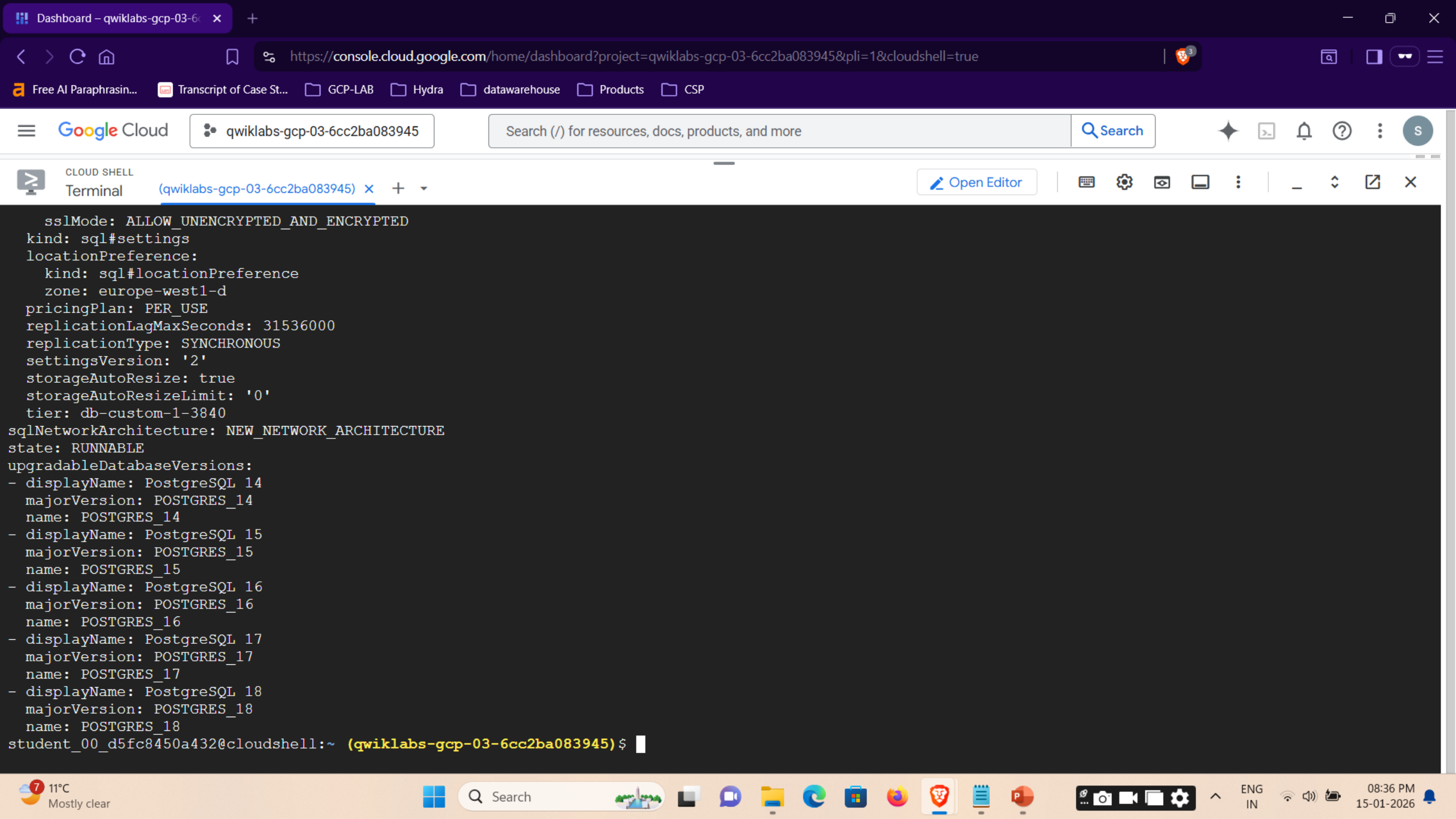
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Open Editor
sslMode: ALLOW_UNENCRYPTED_AND_ENCRYPTED
kind: sql#settings
locationPreference:
kind: sql#locationPreference
zone: europe-west1-d
pricingPlan: PER_USE
replicationLagMaxSeconds: 31536000
replicationType: SYNCHRONOUS
settingsVersion: '2'
storageAutoResize: true
storageAutoResizeLimit: '0'
tier: db-custom-1-3840
sqlNetworkArchitecture: NEW_NETWORK_ARCHITECTURE
state: RUNNABLE
upgradableDatabaseVersions:
- displayName: PostgreSQL 14
majorVersion: POSTGRES_14
name: POSTGRES_14
- displayName: PostgreSQL 15
majorVersion: POSTGRES_15
name: POSTGRES_15
- displayName: PostgreSQL 16
majorVersion: POSTGRES_16
name: POSTGRES_16
- displayName: PostgreSQL 17
majorVersion: POSTGRES_17
name: POSTGRES_17
- displayName: PostgreSQL 18
majorVersion: POSTGRES_18
name: POSTGRES_18
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$
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```
  storageAutoResizeLimit: '0'
  tier: db-custom-1-3840
sqlNetworkArchitecture: NEW_NETWORK_ARCHITECTURE
state: RUNNABLE
upgradableDatabaseVersions:
- displayName: PostgreSQL 14
  majorVersion: POSTGRES_14
  name: POSTGRES_14
- displayName: PostgreSQL 15
  majorVersion: POSTGRES_15
  name: POSTGRES_15
- displayName: PostgreSQL 16
  majorVersion: POSTGRES_16
  name: POSTGRES_16
- displayName: PostgreSQL 17
  majorVersion: POSTGRES_17
  name: POSTGRES_17
- displayName: PostgreSQL 18
  majorVersion: POSTGRES_18
  name: POSTGRES_18
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ date +"%R"
15:06
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ gcloud sql instances patch $CLOUD_SQL_INSTANCE \
    --backup-start-time=15:06
The following message will be used for the patch API method.
{"name": "postgres-orders", "project": "qwiklabs-gcp-03-6cc2ba083945", "settings": {"backupConfiguration": {"backupRetentionSettings": {"retainedBackups":
7, "retentionUnit": "COUNT"}, "backupTier": "STANDARD", "enabled": true, "startTime": "15:06", "transactionLogRetentionDays": 7, "transactionalLogStorageSt
ate": "TRANSACTIONAL_LOG_STORAGE_STATE_UNSPECIFIED"}}}
Patching Cloud SQL instance...done.
Updated [https://sqladmin.googleapis.com/sql/v1beta4/projects/qwiklabs-gcp-03-6cc2ba083945/instances/postgres-orders].
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$
```

Dashboard – qwiklabs-gcp-03-6c

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```
upgradableDatabaseVersions:
- displayName: PostgreSQL 14
  majorVersion: POSTGRES_14
  name: POSTGRES_14
- displayName: PostgreSQL 15
  majorVersion: POSTGRES_15
  name: POSTGRES_15
- displayName: PostgreSQL 16
  majorVersion: POSTGRES_16
  name: POSTGRES_16
- displayName: PostgreSQL 17
  majorVersion: POSTGRES_17
  name: POSTGRES_17
- displayName: PostgreSQL 18
  majorVersion: POSTGRES_18
  name: POSTGRES_18
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ date +"%R"
15:06
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ gcloud sql instances patch $CLOUD_SQL_INSTANCE \
    --backup-start-time=15:06
The following message will be used for the patch API method.
{"name": "postgres-orders", "project": "qwiklabs-gcp-03-6cc2ba083945", "settings": {"backupConfiguration": {"backupRetentionSettings": {"retainedBackups":
7, "retentionUnit": "COUNT"}, "backupTier": "STANDARD", "enabled": true, "startTime": "15:06", "transactionLogRetentionDays": 7, "transactionalLogStorageSt
ate": "TRANSACTIONAL_LOG_STORAGE_STATE_UNSPECIFIED"}}}
Patching Cloud SQL instance...done.
Updated [https://sqladmin.googleapis.com/sql/v1beta4/projects/qwiklabs-gcp-03-6cc2ba083945/instances/postgres-orders].
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ gcloud sql instances describe $CLOUD_SQL_INSTANCE --format 'value(settings.backupConfi
guration)'
backupRetentionSettings={'retainedBackups': 7, 'retentionUnit': 'COUNT'};backupTier=STANDARD;enabled=True;kind=sql#backupConfiguration;startTime=15:06;tran
sactionLogRetentionDays=7;transactionalLogStorageState=TRANSACTIONAL_LOG_STORAGE_STATE_UNSPECIFIED
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$
```

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Project ID
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Task 2. Enable and run point-in-time recovery

In this task you will enable and configure point-in-time recovery on a Cloud SQL for PostgreSQL instance. A point-in-time recovery always creates a new instance; you cannot perform a point-in-time recovery to an existing instance. The new instance inherits the settings of the source instance.

Enable point-in-time recovery

In this step you will enable point-in-time recovery.

- In Cloud Shell, enable point-in-time recovery:

```
gcloud sql instances patch $CLOUD_SQL_INSTANCE \
   --enable-point-in-time-recovery \
   --retained-transaction-log-days=1
```

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Project ID
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inherits the settings of the source instance.

Enable point-in-time recovery

In this step you will enable point-in-time recovery.

- In Cloud Shell, enable point-in-time recovery:

```
gcloud sql instances patch $CLOUD_SQL_INSTANCE \
   --enable-point-in-time-recovery \
   --retained-transaction-log-days=1
```

It will take a minute or two for this command to complete.

Make a change to the Cloud SQL for PostgreSQL database

In this step you will add a row to the `orders.distribution_centers` table in the database. After point-in-time recovery we will expect this row to be absent from the database.

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End Lab 00:26:16 Time limit

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Password
A2CeGGLjrEXM

Project ID
qwiklabs-gcp-03-6cc2ba0(

It will take a minute or two for this command to complete.

Make a change to the Cloud SQL for PostgreSQL database

In this step you will add a row to the `orders.distribution_centers` table in the database. After point-in-time recovery we will expect this row to be absent from the database.

1. In Cloud Console, on the **Navigation menu** (☰), click **View All Products** > **Databases** > **Cloud SQL** and click on the Cloud SQL instance named `postgres-orders`.
2. In Cloud Console, in the `Connect to this instance` section, click **Open Cloud Shell**. A command will be auto-populated to the Cloud Shell.
3. Run that command and enter the password `supersecret!` when prompted. A **psql** session will start in Cloud Shell.
4. In **psql**, change to the `orders` database:

```
\c orders
```

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End Lab 00:26:10 Time limit

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Open Google Cloud console

Username
student-00-d5fc8450a432(

Password
A2CeGGLjrEXM

Project ID
qwiklabs-gcp-03-6cc2ba0(

4. In **psql**, change to the `orders` database:

```
\c orders
```

5. When prompted, enter the password `supersecret!` again.

6. In **psql**, get the row count of the `distribution_centers` table:

```
SELECT COUNT(*) FROM distribution_centers;
```

Output:

```
orders=> SELECT COUNT(*) FROM distribution_centers;
 count
-------
    10
(1 row)
```

7. In Cloud Shell, open a new tab (+), get the current UTC time in RFC 3339 format. This is the timestamp you will use for the point-in-time replica that you will create in the next task.

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End Lab 00:26:05 Time limit

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student-00-d5fc8450a432(

Password
A2CeGGLjrEXM

Project ID
qwiklabs-gcp-03-6cc2ba0(

7. In Cloud Shell, open a new tab (+), get the current UTC time in RFC 3339 format. This is the timestamp you will use for the point-in-time replica that you will create in the next task.

```
date --rfc-3339=seconds
```

You should wait for a few moments at this point to make sure that the changes you make in the next step occur after this timestamp.

Note: For the purposes of this lab, it is imperative that you specify a timestamp after point-in-time recovery was enabled (if not a successful back-up will be required as a starting point), but before the source instance was modified. If not your changes at the source will be replicated to the clone and the roll back won't be evident.

8. In **psql**, to add a row to the `orders.distribution_centers` table and get the new COUNT, run:

```
INSERT INTO distribution_centers VALUES(-80.1918,25.7617,'Miami FL',11);
```

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Username
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Password
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Project ID
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starting point), but before the source instance was modified. If not your changes at the source will be replicated to the clone and the roll back won't be evident.

8. In **psql**, to add a row to the `orders.distribution_centers` table and get the new COUNT, run:

```
INSERT INTO distribution_centers VALUES(-80.1918,25.7617,'Miami FL',11);
SELECT COUNT(*) FROM distribution_centers;
```

Output:

```
orders=> SELECT COUNT(*) FROM distribution_centers;
 count
-------
    11
(1 row)
```

9. Exit **psql**:

```
\q
```

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End Lab 00:25:54 Time limit

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Cloud console

Username
student-00-d5fc8450a432(

Password
A2CeGGLjrEXM

Project ID
qwiklabs-gcp-03-6cc2ba0(

9. Exit **psql**:

```
\q
```

Perform a point-in-time recovery

In this step you will make a clone of the `postgres-orders` Cloud SQL instance at a specific point in time.

- In Cloud Shell, to create a point-in-time clone, run:

```
export NEW_INSTANCE_NAME=postgres-orders-pitr
gcloud sql instances clone $CLOUD_SQL_INSTANCE
$NEW_INSTANCE_NAME \
    --point-in-time 'TIMESTAMP'
```

You must replace the TIMESTAMP placeholder with the exact timestamp displayed by the `date` command you used earlier in the second Cloud Shell tab.

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End Lab 00:25:48 Time limit

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Cloud console

Username
student-00-d5fc8450a432(

Password
A2CeGGLjrEXM

Project ID
qwiklabs-gcp-03-6cc2ba0(

In this step you will make a clone of the `postgres-orders` Cloud SQL instance at a specific point in time.

- In Cloud Shell, to create a point-in-time clone, run:

```
export NEW_INSTANCE_NAME=postgres-orders-pitr
gcloud sql instances clone $CLOUD_SQL_INSTANCE
$NEW_INSTANCE_NAME \
    --point-in-time 'TIMESTAMP'
```

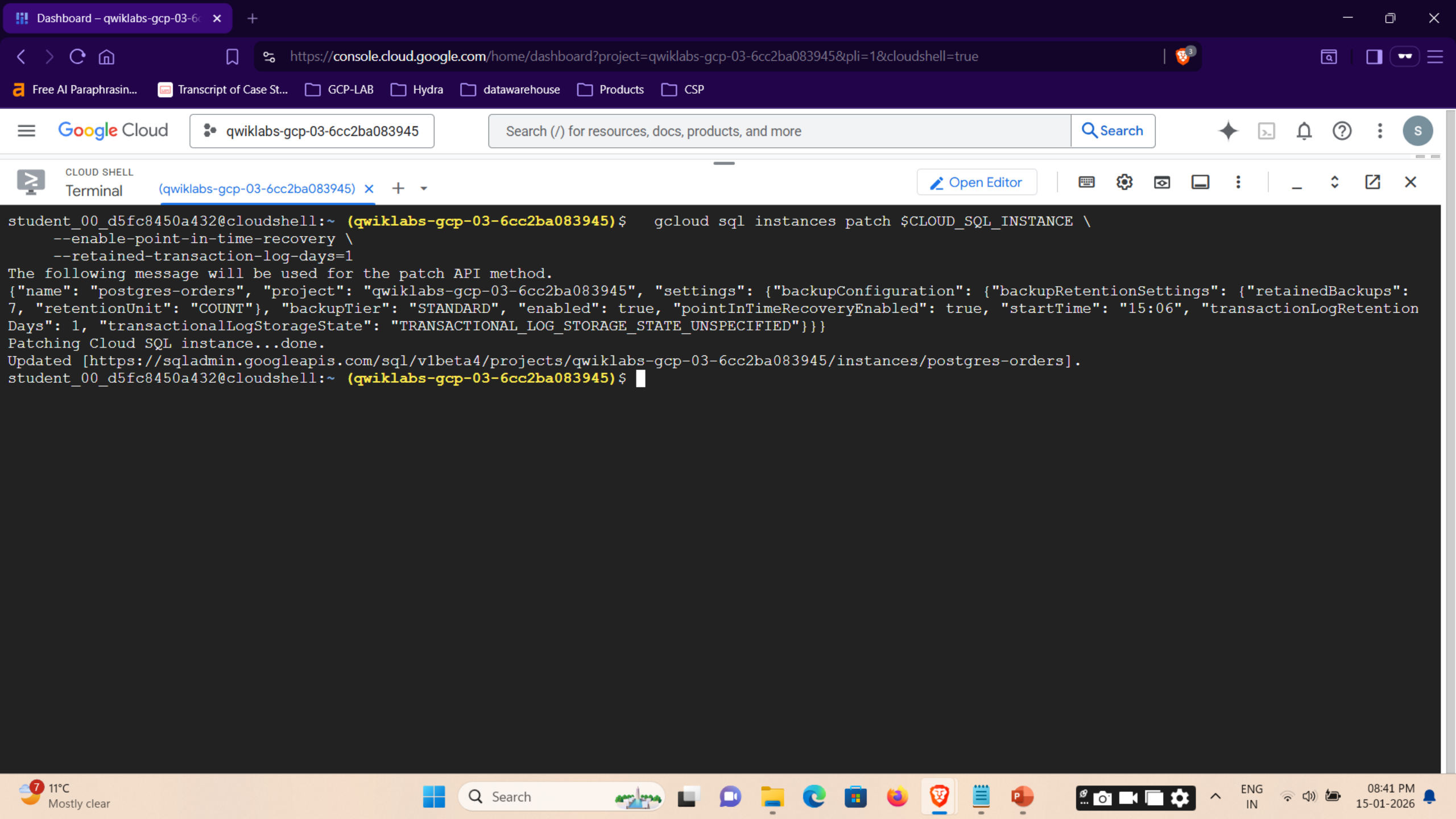
You must replace the TIMESTAMP placeholder with the exact timestamp displayed by the `date` command you used earlier in the second Cloud Shell tab.

This TIMESTAMP must be UTC timezone, RFC 3339 format, for example, '2021-11-01 15:00:00'. The TIMESTAMP indicates the time to which you want to recover the state of the database. It should be enclosed in single quotes. The alternate RFC3339 variant is also supported: '2021-11-01T15:00:00.000Z'.

It could take 10 minutes or more for the replica to be created and ready for use. In the mean time, continue with the next task.

Enable and run point-in-time recovery

100/100


Dashboard – qwiklabs-gcp-03-6
https://console.cloud.google.com/home/dashboard?project=qwiklabs-gcp-03-6cc2ba083945&pli=1&cloudshell=true
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Transcript of Case St...
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datawarehouse
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Search (/) for resources, docs, products, and more
Search
CLOUD SHELL
Terminal
(qwiklabs-gcp-03-6cc2ba083945)
Open Editor
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ gcloud sql instances patch $CLOUD_SQL_INSTANCE \
--enable-point-in-time-recovery \
--retained-transaction-log-days=1
The following message will be used for the patch API method.
{"name": "postgres-orders", "project": "qwiklabs-gcp-03-6cc2ba083945", "settings": {"backupConfiguration": {"backupRetentionSettings": {"retainedBackups": 7, "retentionUnit": "COUNT"}, "backupTier": "STANDARD", "enabled": true, "pointInTimeRecoveryEnabled": true, "startTime": "15:06", "transactionLogRetentionDays": 1, "transactionalLogStorageState": "TRANSACTIONAL_LOG_STORAGE_STATE_UNSPECIFIED"}}}
Patching Cloud SQL instance...done.
Updated [https://sqladmin.googleapis.com/sql/v1beta4/projects/qwiklabs-gcp-03-6cc2ba083945/instances/postgres-orders].
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$
11°C
Mostly clear
Search
ENG
IN
08:41 PM
15-01-2026

postgres-orders – Overview – Cl

https://console.cloud.google.com/sql/instances/postgres-orders/overview?project=qwiklabs-gcp-03-6cc2ba083945&cloudshell=true

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Google Cloud | qwiklabs-gcp-03-6cc2ba083945 | clod sql | Search

CLOUD SHELL
Terminal (qwiklabs-gcp-03-6cc2ba083945) (qwiklabs-gcp-03-6cc2ba083945) Open Editor

Gemini CLI is available in Cloud Shell terminal! Type `gemini` to try it. Learn more Don't show again Dismiss

```
Welcome to Cloud Shell! Type "help" to get started, or type "gemini" to try prompting with Gemini CLI.
Your Cloud Platform project in this session is set to qwiklabs-gcp-03-6cc2ba083945.
Use `gcloud config set project [PROJECT_ID]` to change to a different project.
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ gcloud sql connect postgres-orders --user=postgres --quiet
Allowlisting your IP for incoming connection for 5 minutes...done.
Connecting to database with SQL user [postgres].Password:
psql (16.11 (Ubuntu 16.11-1.pgdg24.04+1), server 13.23)
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, compression: off)
Type "help" for help.

postgres=> \c orders
Password:
psql (16.11 (Ubuntu 16.11-1.pgdg24.04+1), server 13.23)
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, compression: off)
You are now connected to database "orders" as user "postgres".
orders=> SELECT COUNT(*) FROM distribution_centers;
 count
-------
    10
(1 row)

orders=>
```

11°C Mostly clear | Search | ENG IN | 08:43 PM 15-01-2026

postgres-orders – Overview – Cl

https://console.cloud.google.com/sql/instances/postgres-orders/overview?project=qwiklabs-gcp-03-6cc2ba083945&cloudshell=true

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CLOUD SHELL
Terminal (qwiklabs-gcp-03-6cc2ba083945) (qwiklabs-gcp-03-6cc2ba083945) | Open Editor

Gemini CLI is available in Cloud Shell terminal! Type `gemini` to try it. Learn more | Don't show again | Dismiss

```
Welcome to Cloud Shell! Type "help" to get started, or type "gemini" to try prompting with Gemini CLI.
Your Cloud Platform project in this session is set to qwiklabs-gcp-03-6cc2ba083945.
Use `gcloud config set project [PROJECT_ID]` to change to a different project.
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ date --rfc-3339=seconds
2026-01-15 15:13:20+00:00
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$
```

11°C Mostly clear | Search | ENG IN | 08:43 PM 15-01-2026

postgres-orders – Overview – Cl

https://console.cloud.google.com/sql/instances/postgres-orders/overview?project=qwiklabs-gcp-03-6cc2ba083945&cloudshell=true

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CLOUD SHELL
Terminal (qwiklabs-gcp-03-6cc2ba083945) (qwiklabs-gcp-03-6cc2ba083945) Open Editor

Gemini CLI is available in Cloud Shell terminal! Type `gemini` to try it. Learn more Don't show again Dismiss

```
Your Cloud Platform project in this session is set to qwiklabs-gcp-03-6cc2ba083945.
Use `gcloud config set project [PROJECT_ID]` to change to a different project.
student_00_d5fc8450a432@cloudshell:~ (qwiklabs-gcp-03-6cc2ba083945)$ gcloud sql connect postgres-orders --user=postgres --quiet
Allowlisting your IP for incoming connection for 5 minutes...done.
Connecting to database with SQL user [postgres].Password:
psql (16.11 (Ubuntu 16.11-1.pgdg24.04+1), server 13.23)
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, compression: off)
Type "help" for help.

postgres=> \c orders
Password:
psql (16.11 (Ubuntu 16.11-1.pgdg24.04+1), server 13.23)
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, compression: off)
You are now connected to database "orders" as user "postgres".
orders=> SELECT COUNT(*) FROM distribution_centers;
 count
-------
    10
(1 row)

orders=> INSERT INTO distribution_centers VALUES(-80.1918,25.7617,'Miami FL',11);
SELECT COUNT(*) FROM distribution_centers;
INSERT 0 1
 count
-------
    11
(1 row)

orders=>
```

11°C Mostly clear | Search | ENG IN | 08:43 PM 15-01-2026

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End Lab 00:25:20 Time limit

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Cloud console

Username
student-00-d5fc8450a432(

Password
A2CeGGLjrEXM

Project ID
qwiklabs-gcp-03-6cc2ba0(

Task 3. Confirm database has been restored to the correct point-in-time

In this task you will confirm that a row of data that was added to the original database after the point-in-time recovery timestamp is not in the cloned database.

1. In Cloud Console, on the **Overview** page, click the **All Instances** breadcrumb and then click on the Cloud SQL instance named `postgres-orders-pitr`.

Now you will have to wait for the replica to come online.

2. In Cloud Console, in the `Connect to this instance` section, click **Open Cloud Shell**. A command will be auto-populated to the Cloud Shell.
3. Run that command and enter the password `supersecret!` when prompted. A **psql** session will start in Cloud Shell.
4. In **psql**, change to the `orders` database:

```
\c orders
```

100/100
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3. Run that command and enter the password `supersecret!` when prompted. A **psql** session will start in Cloud Shell.

4. In **psql**, change to the `orders` database:

```
\c orders
```

5. When prompted, enter the password `supersecret!` again.

6. In **psql**, get the row count of the `distribution_centers` table:

```
SELECT COUNT(*) FROM distribution_centers;
```

Output:

Dashboard
Catalog
Paths

Lab setup instructions and requirements

End Lab 00:25:01 Time limit

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. Learn more.

Open Google Cloud console

Username
student-00-d5fc8450a432(

Password
A2CeGGLjrEXM

Project ID
qwiklabs-gcp-03-6cc2ba0(

```
\c orders
```

5. When prompted, enter the password `supersecret!` again.

6. In **psql**, get the row count of the `distribution_centers` table:

```
SELECT COUNT(*) FROM distribution_centers;
```

Output:

```
orders=> SELECT COUNT(*) FROM distribution_centers;
 count
-------
    10
(1 row)
```

You will see that the `distribution_centers` table in the new Cloud SQL for PostgreSQL instance has the 10 rows that it had on the source instance at the point-in-time of cloning. If your query returns 11 rows check that you have connected to the replica instance and not the original.

100/100
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Instances – Cloud SQL – qwiklabs

https://console.cloud.google.com/sql/instances?project=qwiklabs-gcp-03-6cc2ba083945

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Cloud SQL

- Get Started
- Instances
- Backups
- Release Notes

Instances | Create Instance | Migrate Database | Show info panel | Learn

Starting Feb 1, 2025, all instances running community end-of-life versions of PostgreSQL and MySQL are under extended support. These instances will be charged for extended support from May 1, 2025. Upgrade your instances running end-of-life versions before May 1, 2025 to prevent additional charges. Learn more

View affected instances | Dismiss

Filter Enter property name or value

Status	Instance ID	Issues	Cloud SQL edition	Type	Public IP address	Private IP address	Instance connection na	Actions
✓	postgres-orders		Enterprise	PostgreSQL 13	34.76.177.101		qwiklabs-gcp-03-...	
✓	postgres-orders-pitr		Enterprise	PostgreSQL 13	34.38.149.253		qwiklabs-gcp-03-...	

https://console.cloud.google.com/sql/instances/postgres-orders-pitr/overview?project=qwikl...

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Cloud SQL

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Primary instance

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- Query insights
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- Users
- Databases
- Backups
- Replicas
- Operations

Release Notes

Review the documentation to learn about the many ways to connect to your instance. Learn more

To connect using gcloud,
Open Cloud Shell

Suggested actions

Enable high availability

Service account

p117420804989-ohsh3u@gcp-sa-cloud-sql.iam.gserviceaccount.com

Operations and logs

Creation Time	Completion Time	Type	Status
Jan 15, 2026, 9:18:18 PM	Jan 15, 2026, 9:18:40 PM	Update	Update finished
Jan 15, 2026,	Jan 15, 2026,	Update	Update

Database flags and parameters

Vertex AI Integration is disabled

No labels set

Edit configuration

Maintenance

Maintenance timing
Cloud SQL chooses the maintenance timing.

Maintenance window
Updates may occur any day of the week.

Notifications
Off

Upcoming
No maintenance scheduled right now.

Maintenance version
POSTGRES_13_23.R20251004.01_26
Instance has the latest supported maintenance version.

Edit maintenance preferences

Edit notification preferences

postgres-orders-pitr – Overview

https://console.cloud.google.com/sql/instances/postgres-orders-pitr/overview?project=qwiklabs-gcp-03-6cc2ba083945&cloudshell=true

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CLOUD SHELL
Terminal (qwiklabs-gcp-03-6cc2ba083945) | Open Editor

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```
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Connecting to database with SQL user [postgres].Password:
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SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, compression: off)
Type "help" for help.

postgres=> \c orders
Password:
psql (16.11 (Ubuntu 16.11-1.pgdg24.04+1), server 13.23)
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, compression: off)
You are now connected to database "orders" as user "postgres".
orders=>
orders=> SELECT COUNT(*) FROM distribution_centers;
 count
-------
    10
(1 row)

orders=>
```

11°C Clear | Search | ENG IN | 09:26 PM 15-01-2026