0) Setup
1) brew install --cask google-cloud-sdk
2) brew install jq

Project

gcloud config set project retail-modernization-exam

Service URLs

export EW3="https://retail-api-ew3-p5gsyjunqa-ey.a.run.app"

export EW10="https://retail-api-ew10-p5gsyjunqa-oe.a.run.app"

---

1) Health checks (both regions)

curl -s "$EW3/health" | jq

curl -s "$EW10/health" | jq

---

2) Prove region + revision (whoami)

curl -s "$EW3/whoami" | jq

curl -s "$EW10/whoami" | jq

---

3) Create order (EW3 path)

curl -s -X POST "$EW3/orders" \
 -H "Content-Type: application/json" \
 -H "Idempotency-Key: demo-call-10" \
 -d '{"user_id":"demo-user","amount":10.50,"currency":"EUR"}' | jq

---

4) Idempotency test (run twice)

curl -s -X POST "$EW3/orders" \
 -H "Content-Type: application/json" \
 -H "Idempotency-Key: demo-call-1" \
 -d '{"user_id":"idem-user","amount":1.11,"currency":"EUR"}' | jq

---

5) List orders (use this instead of GET-by-id)

```
curl -s "$EW3/orders?limit=20" | jq
```

---

6) Primary shows replica

```
gcloud sql instances describe retail-pg --format="value(replicaNames)"
```

7) Replica identity + status

```
gcloud sql instances describe retail-pg-ew10-replica \
  --format="value(state,instanceType,masterInstanceName,region)"
```

Replication proof (write → verify on replica)

8A) Write (EW3)

```
curl -s -X POST "$EW3/orders" \
  -H "Content-Type: application/json" \
  -H "Idempotency-Key: replica-proof-21" \
  -d '{"user_id":"replica-proof","amount":2.22,"currency":"EUR"}' | jq
```

------+++++------

8B) Verify in Cloud SQL Studio (on ew10 replica)

Cloud SQL → retail-pg-ew10-replica → Cloud SQL Studio:

```
SELECT order_id, user_id, amount, currency, created_at
FROM orders
WHERE user_id like 'replica%'
ORDER BY created_at DESC
LIMIT 5;
OR
SELECT * FROM orders;
```

Show Cloud Run URLs from CLI

**gcloud run services describe retail-api-ew3 **

 **--region=europe-west3 **

 --format="value(status.url)"

**gcloud run services describe retail-api-ew10 **

 **--region=europe-west10 **

 --format="value(status.url)"

Appendix / Disaster Recovery Commands

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10) Failover

Only for DR explanation slide:

gcloud sql instances promote-replica retail-pg-ew10-replica

Then update Cloud Run:

gcloud run services update retail-api-ew3 \

  --region=europe-west3 \

  --set-env-vars INSTANCE_CONNECTION_NAME=retail-modernization-exam:europe-west10:retail-pg-ew10-replica