



ESPE
UNIVERSIDAD DE LAS FUERZAS ARMADAS
INNOVACIÓN PARA LA EXCELENCIA

UNIVERSIDAD DE LAS FUERZAS ARMADAS ESPE

**DEPARTAMENTO DE CIENCIAS DE LA
COMPUTACIÓN**

**INGENIERÍA EN TECNOLOGÍAS
DE LA INFORMACIÓN**

ARQUITECTURA DE SOFTWARE

Examen Segundo Parcial

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Link de GitHub: https://github.com/roberto1831/examen_parcial_2.git

RabbitMQ Management interface showing the 'Queues' tab. The table lists the following queues:

Virtual host	Name	Type	Features	State	Ready	Unacked	Total	Incoming	deliver / get	ack
/	cola_facturacion	classic	D	running	0	0	0	0.00/s	0.00/s	0.00/s
/	cola_inventario	classic	D	running	0	0	0	0.00/s	0.00/s	0.00/s
/	debug_ok	classic	D	running	4	0	4	0.00/s	0.00/s	0.00/s

Below the table, there is a section 'Add a new queue' with fields for Name, Durability, and Arguments.

```
PS C:\examen_arquitectura_software\agroflow\docker> docker compose up --tail=120 facturacion-svc
=> CACHED [facturacion-svc 2/5] WORKDIR /app 0.0s
=> CACHED [facturacion-svc 3/5] COPY requirements.txt . 0.0s
=> CACHED [facturacion-svc 4/5] RUN pip install --no-cache-dir -r requirements.txt 0.0s
=> [facturacion-svc 5/5] COPY . . 0.1s
=> [facturacion-svc] exporting to image 0.3s
=> exporting layers 0.1s
=> exporting manifest sha256:1ee9f8803543c43d28462a7dc057b4e6e2c23f4be87a43bc695be6586311031d 0.0s
=> exporting config sha256:6527d2273bc7504738171e0b93b6fd3555ae9fac2173ef76d7d735bb8076037e 0.0s
=> exporting attestation manifest sha256:0ef4d1a5335e2acbb8258c2d50aef6fbaae69fa9b093d159cdefce584066e31 0.0s
=> exporting manifest list sha256:ff6939a01975c28bc3e8619f2e8b2d49f66c819e6981bd68248b97041d198c7c 0.0s
=> naming to docker.io/library/docker-facturacion-svc:latest 0.0s
=> unpacking to docker.io/library/docker-facturacion-svc:latest 0.0s
=> [facturacion-svc] resolving provenance for metadata file 0.0s
[*] Running 7/7
✓ Container docker-postgres-1 Running 0.0s
✓ Container rabbitmq Running 0.0s
✓ Container docker-mysql-1 Running 0.0s
✓ Container docker-mariadb-1 Running 0.0s
✓ Container docker-facturacion-svc-1 Started 13.1s
✓ Container docker-inventario-svc-1 Started 12.7s
✓ Container docker-central-svc-1 Started 1.7s
PS C:\examen_arquitectura_software\agroflow\docker>
```

```
PS C:\examen_arquitectura_software\agroflow\docker> docker compose logs --tail=120 facturacion-svc
[app.get("/health")]
def health():
    return {"status": "ok"}

if __name__ == "__main__":
    init_db()
    start_consumer_thread()
    app.run(host="0.0.0.0", port=PORT)

PS C:\examen_arquitectura_software\agroflow\docker> # Inventario (MySQL)
PS C:\examen_arquitectura_software\agroflow\docker> docker compose exec mysql mysql -uinventario -pinventariopass inventariodb
>> -e "SELECT nombre,insuno,stock FROM insunos;"
time="2025-08-08T21:21:44-05:00" level=warning msg="C:\\examen_arquitectura_software\\agroflow\\docker\\docker-compose.yml: the attribute 'version' is obso
ete, it will be ignored, please remove it to avoid potential confusion"
mysql: [Warning] Using a password on the command line interface can be insecure.
+-----+-----+
| nombre | insuno | stock |
+-----+-----+
| Semilla | 23     | 876   |
| Fertilizante | PK    | 975   |
+-----+-----+

PS C:\examen_arquitectura_software\agroflow\docker> # Facturas (MariaDB) - deberia aparecer una con monto 1500.00
PS C:\examen_arquitectura_software\agroflow\docker> docker compose exec mariadb mariadb -ufactura -pfacturapass -D facturadb
>> -e "SELECT factura_id, cosecha_id, monto_total, pagado, fecha_emision FROM facturas ORDER BY fecha_emision DESC LIMIT 5;"
time="2025-08-08T21:21:44-05:00" level=warning msg="C:\\examen_arquitectura_software\\agroflow\\docker\\docker-compose.yml: the attribute 'version' is obso
ete, it will be ignored, please remove it to avoid potential confusion"
+-----+-----+-----+-----+-----+
| factura_id | cosecha_id | monto_total | pagado | fecha_emision |
+-----+-----+-----+-----+-----+
| f-1754785352619 | db403e10-d794-4b65-b57a-d0dbf6257817 | 1500.00 | 0 | 2025-08-09 02:09:12 |
| f-1754785352673 | db403e10-d794-4b65-b57a-d0dbf6257817 | 0.00 | 0 | 2025-08-09 02:09:12 |
+-----+-----+-----+-----+-----+

PS C:\examen_arquitectura_software\agroflow\docker> # Estado en Central
PS C:\examen_arquitectura_software\agroflow\docker> Invoke-RestMethod "http://localhost:8080/cosechas"

cosechaId : db403e10-d794-4b65-b57a-d0dbf6257817
agricultorId : 07d6fe62-faef-4572-93e4-0bcc4732de0a
```

```
PS C:\examen_architectura_software\agroflow\docker> # Ver factura insertada (12.5 * 120 = 1500.00)
PS C:\examen_architectura_software\agroflow\docker> docker compose exec mariadb mariadb -ufactura -pfacturapass -D facturadb '
>> -e "SELECT factura_id, cosecha_id, monto_total, pagado, fecha_emision FROM facturas ORDER BY fecha_emision DESC LIMIT 5;"
time="2025-08-08T21:25:59-05:00" level=warning msg="C:\\examen_architectura_software\\agroflow\\docker\\docker-compose.yml: the attribute 'version' is obso
ete, it will be ignored, please remove it to avoid potential confusion"

+-----+-----+-----+-----+-----+
| factura_id | cosecha_id | monto_total | pagado | fecha_emision |
+-----+-----+-----+-----+-----+
| f-175d706348262 | db403e10-d794-4b65-b57a-d0dbf6257817 | 1500.00 | 0 | 2025-08-09 02:25:48 |
| f-175d7063532619 | db403e10-d794-4b65-b57a-d0dbf6257817 | 1500.00 | 0 | 2025-08-09 02:09:12 |
| f-175d7063532673 | db403e10-d794-4b65-b57a-d0dbf6257817 | 0.00 | 0 | 2025-08-09 02:09:12 |
+-----+-----+-----+-----+-----+

PS C:\examen_architectura_software\agroflow\docker>
PS C:\examen_architectura_software\agroflow\docker> # Estado actualizado en Central (FACTURADA + facturaId)
PS C:\examen_architectura_software\agroflow\docker> Invoke-RestMethod "http://localhost:8080/cosechas/$cid"

cosechaId : db403e10-d794-4b65-b57a-d0dbf6257817
agricultorId : 07d6fe62-faef-4572-93e4-0bcc4732de0a
producto : Arroz Oro
toneladas : 12.5
estado : FACTURADA
creadoEn : 2025-08-09T02:09:12.124154Z
facturaId :

PS C:\examen_architectura_software\agroflow\docker> # reconstruir solo facturación
PS C:\examen_architectura_software\agroflow\docker> docker compose up -d --build facturacion-svc
time="2025-08-08T21:33:52-05:00" level=warning msg="C:\\examen_architectura_software\\agroflow\\docker\\docker-compose.yml: the attribute 'version' is obso
ete, it will be ignored, please remove it to avoid potential confusion"
[+] Building 3.1s (27/27) FINISHED docker:desktop-linux
```