This is the step by step **for PowerShell**, keeping everything inside the
`efiche_assessment_eric_maniraguha` project - docker configuration

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1. Create a **dedicated network**

This isolates the project containers:

```
docker network create efiche_network
```

All the containers will join this network, so you don't need `--link` (links are legacy).

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2. PostgreSQL container

```
docker run -d `
  --name airflow_postgres_new `
  --network efiche_network `
  -e POSTGRES_USER=postgres `
  -e POSTGRES_PASSWORD=admin `
  -e POSTGRES_DB=efiche_clinic_db_data_pipeline `
  -p 5434:5432 `
  -v airflow_pgdata_new:/var/lib/postgresql/data `
  postgres:15-alpine
```

Notes:

- Database is accessible at `localhost:5434`.
- Volume `airflow_pgdata_new` stores data persistently.

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3. Redis container

```
docker run -d `
  --name efiche_redis `
  --network efiche_network `
  -p 6379:6379 `
  redis:7-alpine
```

Notes:

- Redis is on default port 6379.

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4. PgAdmin container

```
docker run -d `
  --name efiche_pgadmin `
  --network efiche_network `
  -e PGADMIN_DEFAULT_EMAIL=admin@efiche.com `
  -e PGADMIN_DEFAULT_PASSWORD=admin `
  -p 5051:80 `
  dpage/pgadmin4:latest
```

Notes:

- PgAdmin available at http://localhost:5051.

- Inside PgAdmin, connect to airflow_postgres_new (network name) using:

    - Host: airflow_postgres_new
    - Port: 5432
    - User: postgres
    - Password: admin

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5. Airflow webserver

```
docker run -d `
  --name airflow_webserver `
  --network efiche_network `
  -p 8083:8080 `
  -e
AIRFLOW__CORE__SQL_ALCHEMY_CONN=postgresql+psycopg2://postgres:admin@airflow_postg
res_new:5432/efiche_clinic_db_data_pipeline `
  -e AIRFLOW__CORE__EXECUTOR=SequentialExecutor `
  apache/airflow:2.10.2-python3.11 webserver
```

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6. Airflow scheduler

```
docker run -d `
  --name airflow_scheduler `
  --network efiche_network `
  -e
AIRFLOW__CORE__SQL_ALCHEMY_CONN=postgresql+psycopg2://postgres:admin@airflow_postg
res_new:5432/efiche_clinic_db_data_pipeline `
  -e AIRFLOW__CORE__EXECUTOR=SequentialExecutor `
  apache/airflow:2.10.2-python3.11 scheduler
```

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7. Initialize Airflow DB

```
docker exec -it airflow_webserver airflow db init
```

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8. Create Airflow admin user

```
docker exec -it airflow_webserver airflow users create `
  --username airflow `
  --firstname Admin `
  --lastname User `
  --role Admin `
  --email admin@efiche.com `
  --password admin
```

Login Airflow at http://localhost:8083 using airflow / admin.

Info

1. All containers now live in **efiche_network**, so they can communicate via container names (no --link needed).

2. All persistent data is stored in Docker volumes (airflow_pgdata_new for Postgres).

3. Ports:

   - PostgreSQL: 5434
   - PgAdmin: 5051
   - Airflow: 8083
   - Redis: 6379