APACHE AIRFLOW

Step 1: Set Up a New Project Folder

mkdir airflow-demo

cd airflow-demo

python3 -m venv .venv

source .venv/bin/activate

Step 2: Install Apache Airflow (with constraints)

export AIRFLOW\_VERSION=2.9.1

export PYTHON\_VERSION="$(python --version | cut -d " " -f 2 | cut -d "." -f 1,2)"

export

CONSTRAINT\_URL="https://raw.githubusercontent.com/apache/airflow/constraints-${AIRFLOW\_V

pip install "apache-airflow==${AIRFLOW\_VERSION}" --constraint "${CONSTRAINT\_URL}"

Step 3: Initialize Airflow

export AIRFLOW\_HOME=$(pwd)/airflow\_home

airflow db init

Create the required folders:

mkdir -p $AIRFLOW\_HOME/dags

Step 4: Create an Admin User

airflow users create \

--username admin \

--firstname Admin \

--lastname User \

--role Admin \

--email admin \

--password admin

Step 5: Create a Simple DAG

Create file:

nano $AIRFLOW\_HOME/dags/hello\_dag.py

Paste this content:

from airflow import DAG

from airflow.operators.python import PythonOperator

export AIRFLOW\_VERSION=2.9.1

export PYTHON\_VERSION="$(python --version | cut -d " " -f 2 | cut -d "." -f 1,2)"

export

CONSTRAINT\_URL="https://raw.githubusercontent.com/apache/airflow/constraints-${AIRFLOW\_V

pip install "apache-airflow==${AIRFLOW\_VERSION}" --constraint "${CONSTRAINT\_URL}"

from datetime import datetime

def greet():

print("

Hello, Airflow is running!")

with DAG(

dag\_id="hello\_dag",

start\_date=datetime(2023, 1, 1),

schedule\_interval="@daily",

catchup=False

) as dag:

hello = PythonOperator(

task\_id="greet\_task",

python\_callable=greet

)

Step 6: Start the Webserver and Scheduler

In two different terminals:

Terminal 1:

source .venv/bin/activate

export AIRFLOW\_HOME=$(pwd)/airflow\_home

airflow webserver --port 8080

Terminal 2:

source .venv/bin/activate

export AIRFLOW\_HOME=$(pwd)/airflow\_home

airflow scheduler

Step 7: Access the UI

Go to: http://localhost:8080 Login with:

Username: admin

Password: admin

You should now see the hello\_dag in the list. Enable it and run manually.