# How to connect to postgres using a postgres connection id inside a python callable

Asked 2 years, 10 months ago     Modified 3 months ago     Viewed 6k times

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I am using Airflow's python operator to call a python function. The **ERROR** occurs in the try/except block.

```python
def python_callable_new():
    print("Inside python callable ...")

    import psycopg2

    try:
        print("attempting database connection from python method.. ")
        conn = psycopg2.connect('postgres_defined_connection')
        print("success. ")
    except Exception as error:
        print("failed: ")
        print (error)
    return 'End of callable. '


with dag:
    start_task   = DummyOperator(   task_id= "start" )
    stop_task    = DummyOperator(   task_id= "stop"  )

    do_python_task = PythonOperator(
        task_id = 'do-py-operation',
        python_callable= python_callable_new,
    )

    extract_source_data = PostgresOperator(
        task_id='extract-cb-source-data',
        postgres_conn_id='postgres_defined_connection',
        sql='./sql_scripts/extract_csv_data.sql'
    )

    # csv_to_postgres

start_task >> do_python_task >> extract_source_data >> stop_task
```

Basically, my question is

- how can I use my **'postgres_defined_connection'** to connect to postgres inside of my python function?
- It connects just fine when I use the PostgresOperator, as can be seen in the extract_source_data task, but I need to use it in the callable function.

- The error that comes is **invalid dsn: missing "=" after "postgres_defined_connection" in connection info string**

(FYI - I store the postgres_defined_connection in a separate connections.py that uses sqlalchemy engine and PostgresHook)

python    postgresql    airflow

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                                                                        enzo                           cluis92
                                                                        **11.2k**  3   16   43          **752**  14   40

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**6**       `psycopg2.connect` expects connection parameters. You can pass them a single string if you format your connection parameters as key/value pairs separated by space. That is why it is giving you the error message missing "=".

▼        Please refer to the psycopg documentation for more information.

🔖

✔️        To connect to a Postgres database in Airflow, you can leverage the PostgresHook provided you have a connection created.

🕑
```python
from airflow.hooks.postgres_hook import PostgresHook

def execute_query_with_conn_obj(query):
    hook = PostgresHook(postgres_conn_id='my_connection')
    conn = hook.get_conn()
    cur = conn.cursor()
    cur.execute(query)

def execute_query_with_hook(query):
    hook = PostgresHook(postgres_conn_id='my_connection')
    hook.run(sql=query)
```

You can also do it with pure Python code.

```python
def execute_query_with_psycopg(query):
    conn_args = dict(
        host='myhost',
        user='admin',
        password='password',
        dbname='my_schema',
```

```python
        port=5432)
    conn = psycopg2.connect(**conn_args)
    cur = conn.cursor()
    cur.execute(query)

def execute_query_with_psycopg_string(query):
    conn = psycopg2.connect("dbname=test user=postgres password=secret")
    cur = conn.cursor()
    cur.execute(query)
```

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edited Nov 13, 2023 at 12:45

fujy
**5,188**   5   31   50

answered Apr 24, 2021 at 22:14

Alan Ma
**541**   2   7