


Time to get set-up for the section!

We will install:

- PostgreSQL –SQL engine that stores data and read queries and return information
- PostgreSQL is a top open-source database management system (DBMS) choice for business today
- PgAdmin- Graphical User Interface

Step 1: Download and Install PostgreSQL

Download the PostgreSQL




Ad · azure.microsoft.com/services/postgresql ▾

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Azure **PostgreSQL** - A Managed **PostgreSQL** Database Service for App Developers. Try Popular Products Free. Learn by Doing. 25+ Products Always Free. \$200 Free Credit. Build Your Next Idea. Services: Cloud Services, App Service, Container Service, SQL Database. [SQL Database](#) · [Azure Cosmos DB](#) · [SQL Database Pricing](#) · [Azure MySQL Database](#) [Azure Free Account](#) - \$0.00 - Receive a \$200 Credit · [More ▾](#)

www.postgresql.org ⋮



[PostgreSQL: The world's most advanced open source database](#)

PostgreSQL is a powerful, open source object-relational database system with over 30 years of active development that has earned it a strong reputation for ...

Results from postgresql.org 🔍

[Downloads](#)

Windows installers - Ubuntu - macOS - Linux downloads - ...

[Documentation](#)

Manuals. You can view the manual for an older version or ...

[Windows installers](#)

This installer includes the PostgreSQL server, pgAdmin; a ...

[License](#)

PostgreSQL is released under the PostgreSQL License, a liberal ...



11th February 2021: [PostgreSQL 13.2](#), [12.6](#), [11.11](#), [10.16](#), [9.6.21](#), & [9.5.25](#) Released!

PostgreSQL: The World's Most Advanced Open Source Relational Database

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New to PostgreSQL?



New to PostgreSQL?



Latest Releases



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Quick Links

- Downloads
 - Packages
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- Software Catalogue
- File Browser

Windows installers

Interactive installer by EDB

Download the installer certified by EDB for all supported PostgreSQL versions.

This installer includes the PostgreSQL server, pgAdmin; a graphical tool for managing and developing your databases, and StackBuilder; a package manager that can be used to download and install additional PostgreSQL tools and drivers. Stackbuilder includes management, integration, migration, replication, geospatial, connectors and other tools.

This installer can run in graphical or silent install modes.

The installer is designed to be a straightforward, fast way to get up and running with PostgreSQL on Windows.

Advanced users can also download a **zip archive** of the binaries, without the installer. This download is intended for users who wish to include PostgreSQL as part of another application installer.

Platform support

The installers are tested by EDB on the following platforms. They can generally be expected to run on other comparable versions:

PostgreSQL Version	64 Bit Windows Platforms	32 Bit Windows Platforms



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Downloads

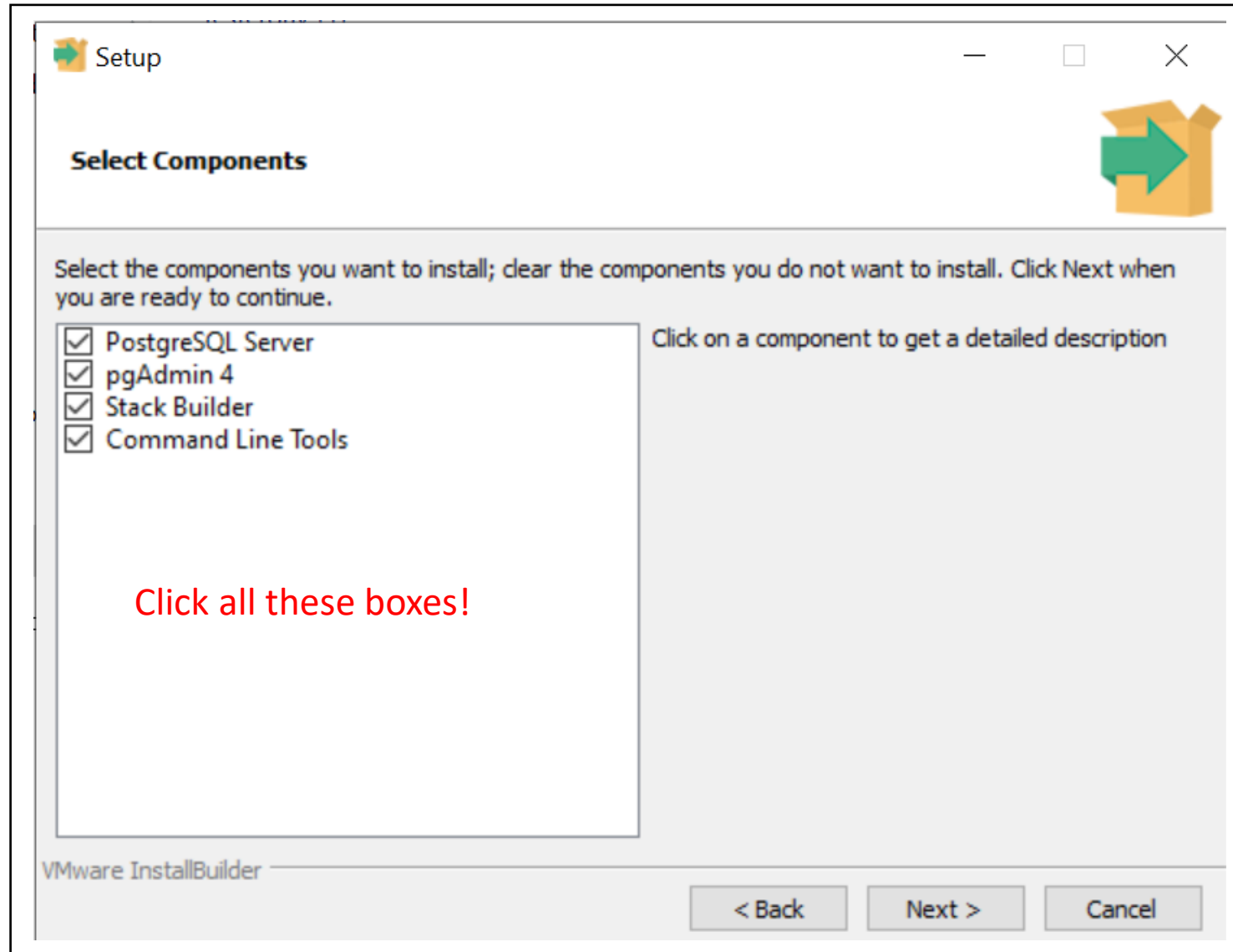
PostgreSQL Database Download

Version	Linux x86-64	Linux x86-32	Mac OS X	Windows x86-64	Windows x86-32
13.2	N/A	N/A	Download	Download	N/A
12.6	N/A	N/A	Download	Download	N/A
11.11	N/A	N/A	Download	Download	N/A
10.16	Download	Download	Download	Download	Download
9.6.24	Download	Download	Download	Download	Download

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Okay, got it!

Launch the Executable





Setup



Password



Please provide a password for the database superuser (postgres).

Password

••••••••

Retype password

••••••••

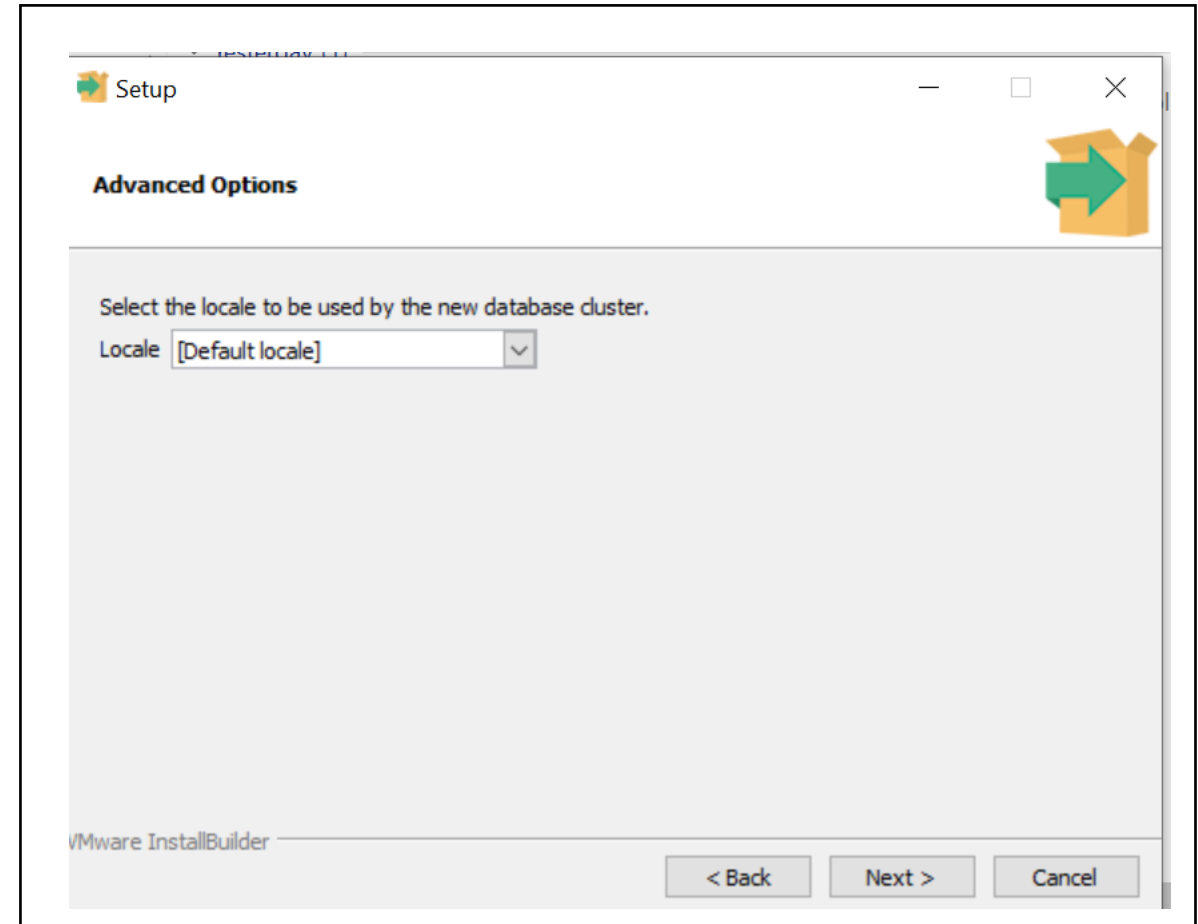
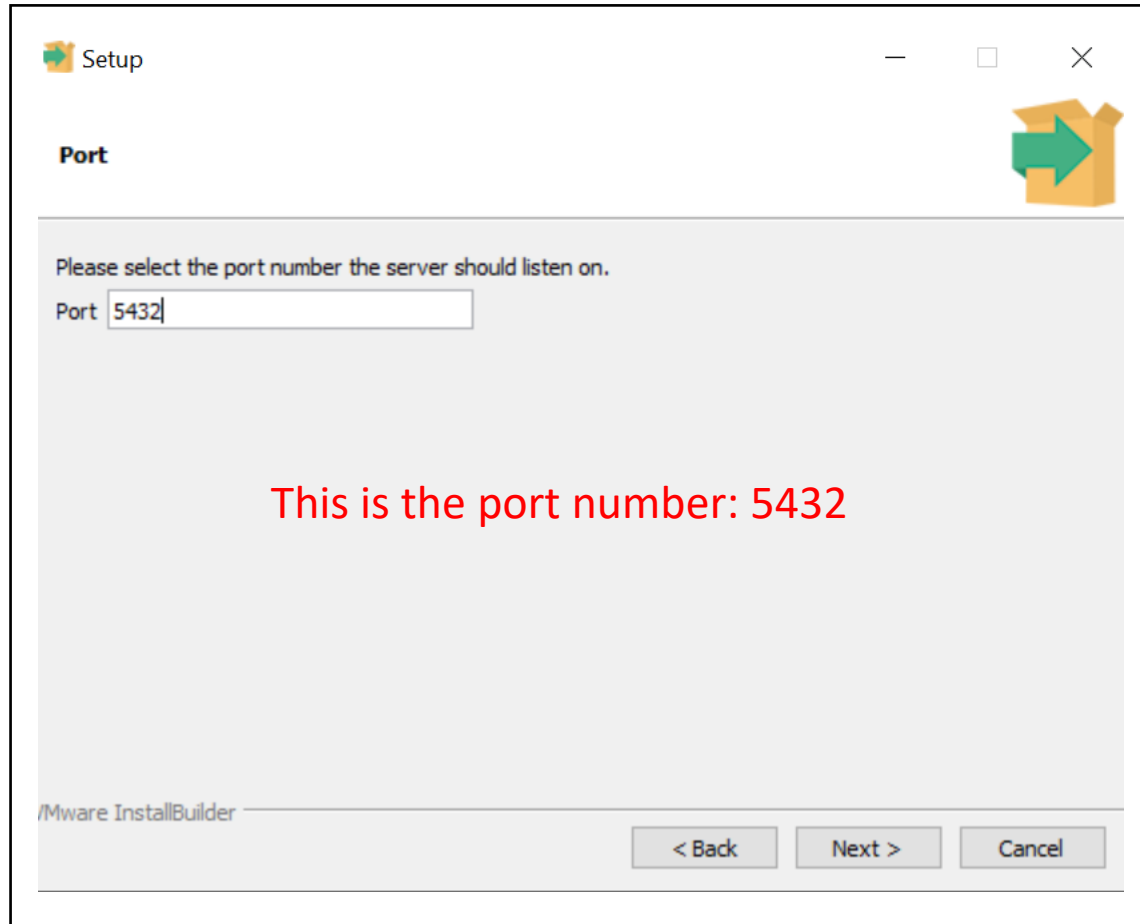
Do not forget your password!

VMware InstallBuilder

< Back

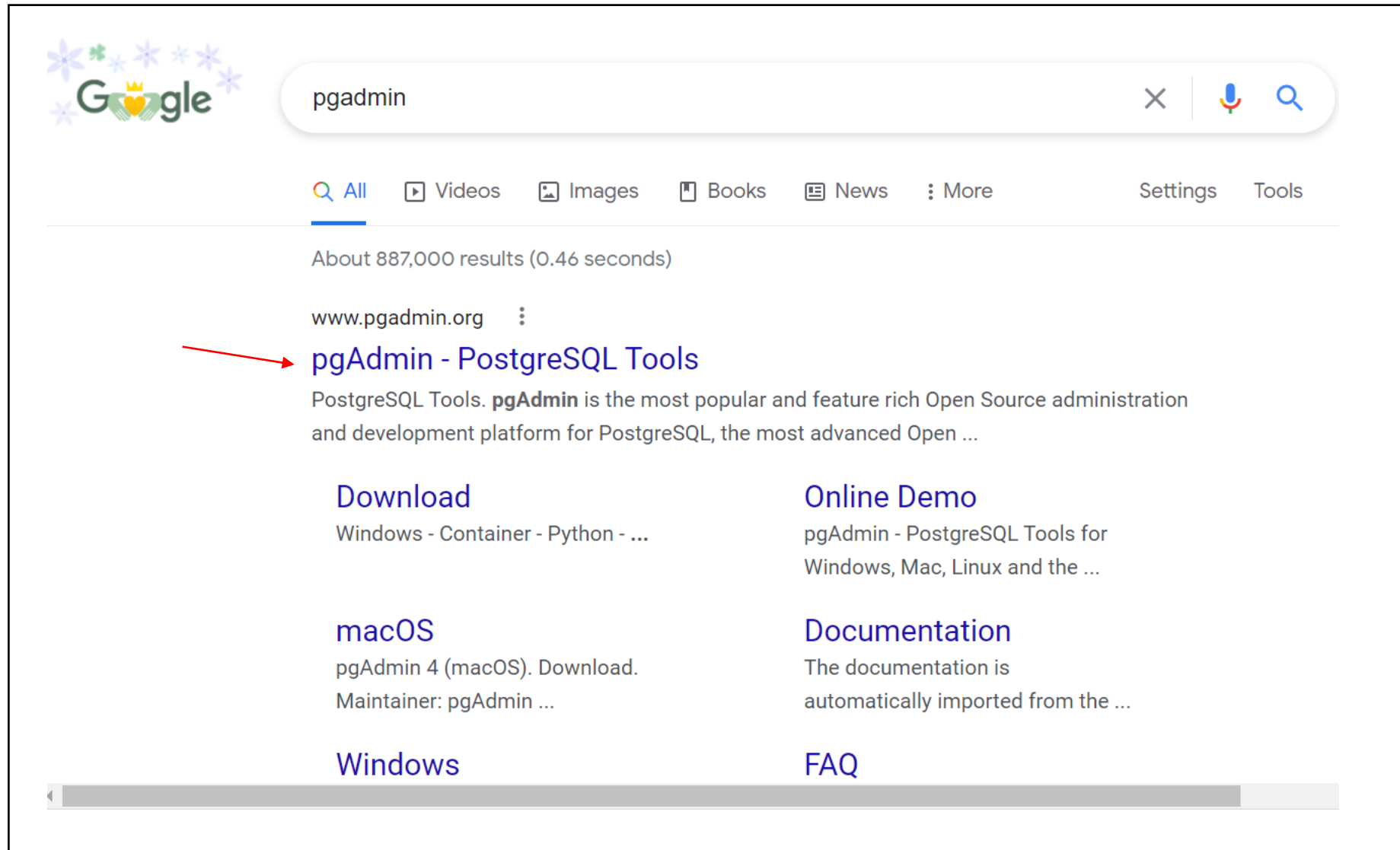
Next >

Cancel

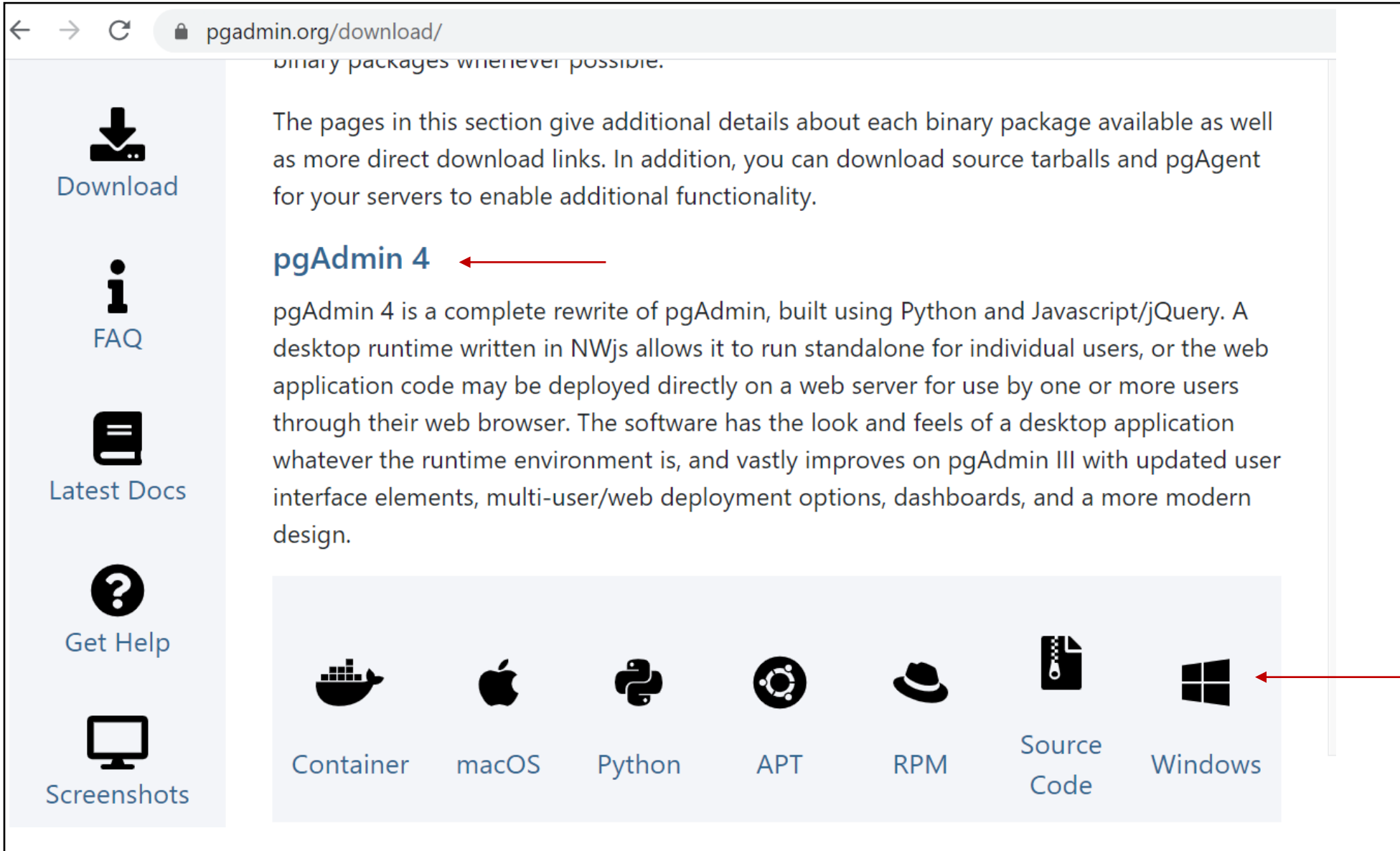


Step 2: Download and Install pgAdmin

pgAdmin download



If you have older version of Windows, please select older version of pgAdmin



The screenshot shows the pgAdmin.org/download/ page. On the left is a sidebar with navigation links: Download, FAQ, Latest Docs, Get Help, and Screenshots. The main content area has a heading "pgAdmin 4" with a red arrow pointing to it. Below the heading is a paragraph describing pgAdmin 4. At the bottom, there is a row of icons for different operating systems and deployment methods: Container, macOS, Python, APT, RPM, Source Code, and Windows. A red arrow points to the Windows icon.

pgadmin.org/download/

binary packages whenever possible.

The pages in this section give additional details about each binary package available as well as more direct download links. In addition, you can download source tarballs and pgAgent for your servers to enable additional functionality.

pgAdmin 4

pgAdmin 4 is a complete rewrite of pgAdmin, built using Python and Javascript/jQuery. A desktop runtime written in NWjs allows it to run standalone for individual users, or the web application code may be deployed directly on a web server for use by one or more users through their web browser. The software has the look and feels of a desktop application whatever the runtime environment is, and vastly improves on pgAdmin III with updated user interface elements, multi-user/web deployment options, dashboards, and a more modern design.

Container macOS Python APT RPM Source Code Windows



[Online Demo](#)



[Download](#)



[FAQ](#)



[Latest Docs](#)



[Get Help](#)

Download




Maintainer: pgAdmin Development Team

pgAdmin is available for 64 bit Windows™ 7 SP1 (desktop) or 2008R2 (server) and above, up to v4.30.

v5.0 and later are supported on Windows 8 (desktop) or 2012 (server) and above.

32 bit Windows support is available for versions up to v4.29.

The packages below include both the Desktop Runtime and Web Application:

-  [pgAdmin 4 v5.0](#) (released Feb. 25, 2021) ← **Last version**
-  [pgAdmin 4 v4.30](#) (released Jan. 28, 2021)
-  [pgAdmin 4 v4.29](#) (released Dec. 10, 2020)
-  [pgAdmin 4 v4.28](#) (released Nov. 12, 2020)
-  [pgAdmin 4 v4.27](#) (released Oct. 15, 2020)



11th February 2021: [PostgreSQL 13.2](#), [12.6](#), [11.11](#), [10.16](#), [9.6.21](#), & [9.5.25](#) Released!

Quick Links

- Downloads
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- Software Catalogue
- File Browser



File Browser

[Top](#) → [pgadmin](#) → [pgadmin4](#) → [v5.0](#) → [windows](#)

Directories

 [\[Parent Directory\]](#)

Files

 CURRENT_MAINTAINER	2021-02-25 11:47:34	138 bytes
 pgadmin4-5.0-x64.exe	2021-02-25 11:48:00	134.2 MB

Current Maintainer

Is all we care at this point.

Step 3: Download (but do not
directly open) dvdrental.tar file

Step 4: Restart your computer

Step 5: Restore the Database
(Ignore failed exit code if it
appears)

Browser

Servers (1)

PostgreSQL 13

Databases (1)

postgres

Create



Database...

Refresh...

Cast

Catalog

Event Triggers

Extensions

Foreign Data Wrappers

Languages

Publications

Schemas

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Login/Group Roles

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Create - Database



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dvdrental

postgres

Browser



Dashboard

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Dependents

Servers (1)

PostgreSQL 13

Databases (2)

dvdrental

Create

Create



Refresh...

Refresh...

Delete/Drop

Delete/Drop

CREATE Script

CREATE Script

Disconnect Database...

Disconnect Database...

Generate ERD (Beta)

Generate ERD (Beta)

Maintenance...

Maintenance...

Backup...

Backup...

Restore...

Restore...

Grant Wizard...

Grant Wizard...

Search Objects...

Search Objects...

Query Tool

Query Tool

Properties...

Properties...

Publications

Schemas

Subscriptions

Database sessions

Total Active Idle

1

Transactions per second

Transactions Commits Rollba

3

2

1

0

Operations in

Inserts Updates Delete

Tuples out

Fetched Returned

1400

1200

1000

800

600

400

200

0

Block I/O

Reads I

90

80

70

60

50

40

30

20

10

0

Server activity

Sessions

Locks

Prepared Transactions



Search

PID

User

Application

Client

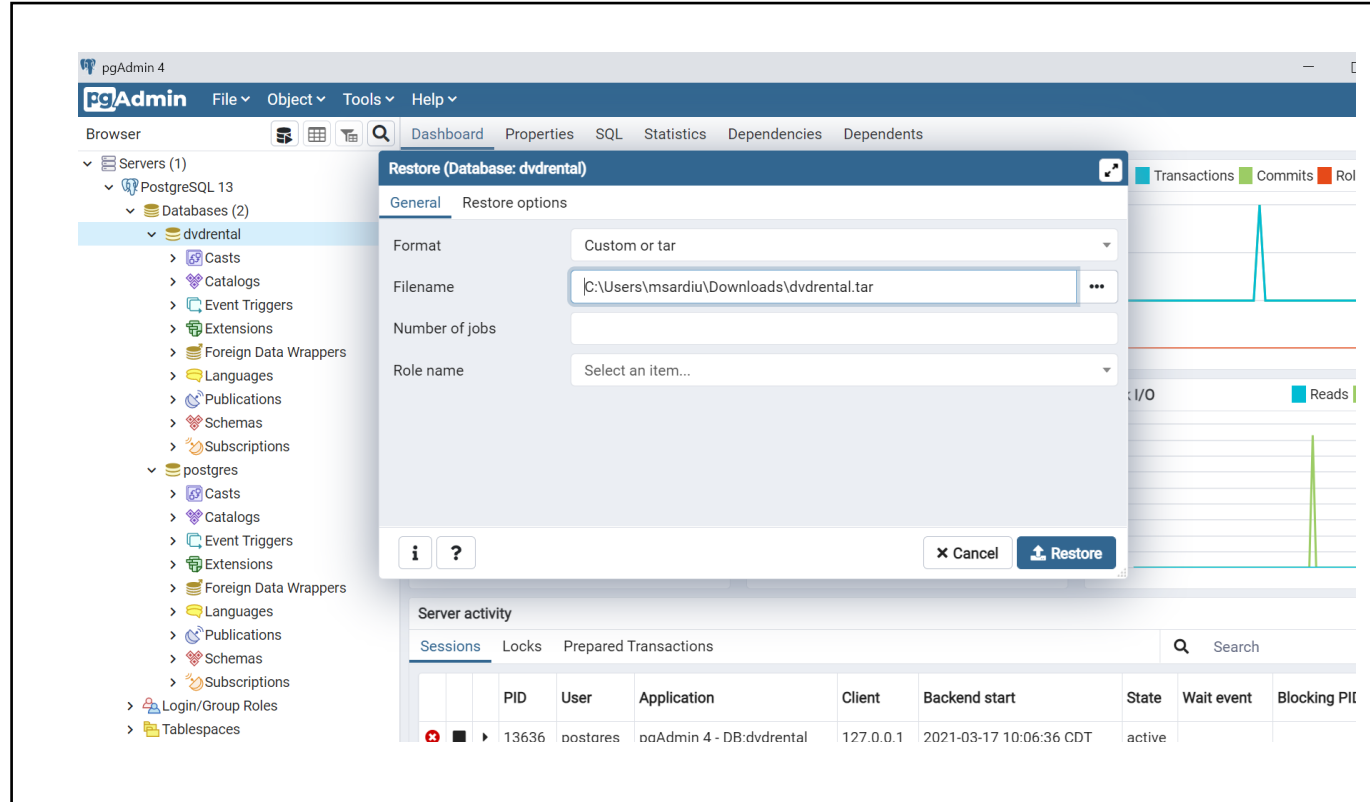
Backend start

State

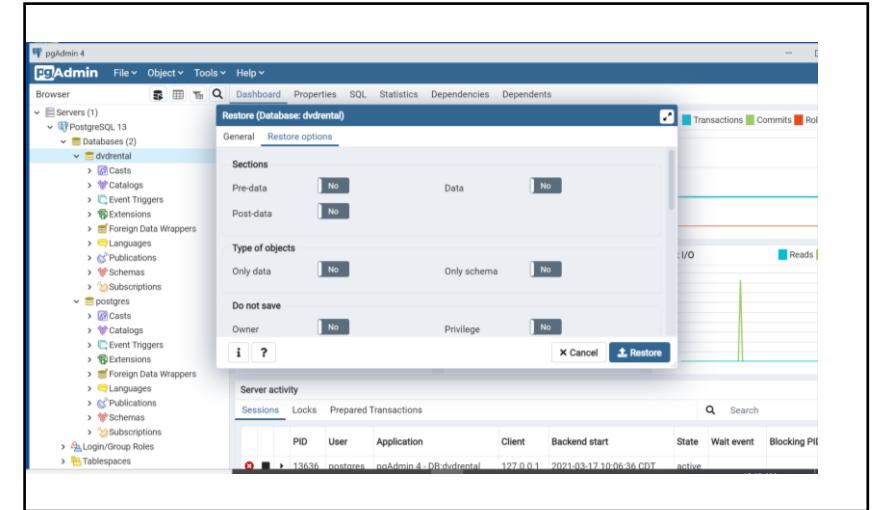
Wait event

Blocking PIDs

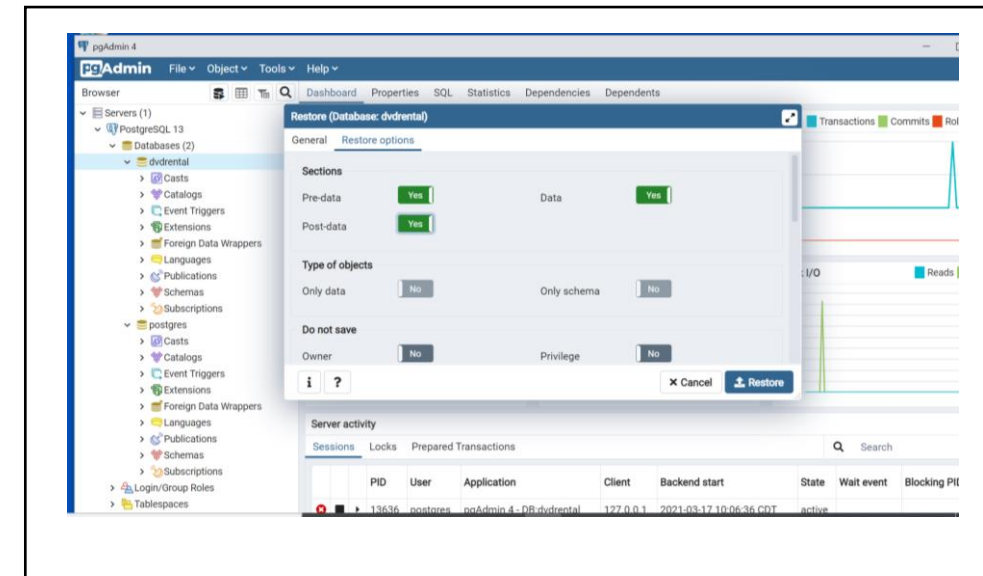
(1)



(2)



(3)



/user



Dashboard

Properties

SQL

Statistics

Dependencies

Dependents



Servers (1)

PostgreSQL 13

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dvdrental

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postgres

Casts

Catalogs

Event Triggers

Extensions

Foreign Data Wrappers

Languages

Publications

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Login/Group Roles

Tablespaces

Database sessions

Total Active Idle



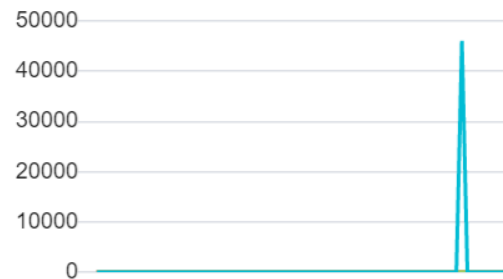
Transactions per second

Transactions Commits Rollbacks



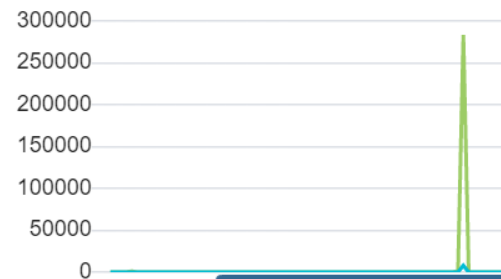
Tuples in

Inserts Updates Delete



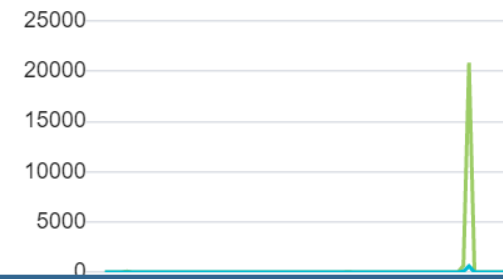
Tuples out

Fetched Returned



Block I/O

Reads Hits



Server activity

Sessions

Locks

Prepared Transactions

			PID	User	Application	Client
✖	■	▶	13636	postgres	pgAdmin 4 - DB:dvdrental	127.0.

Restoring backup on the server



Restoring backup on the server 'PostgreSQL 13 (localhost:5432)'

Wed Mar 17 2021 10:14:47 GMT-0500 (Central Daylight Time)

⌚ 22.93 seconds

ℹ More details...

✖ Stop Process



Successfully completed.

Refresh the database so all the changes can take place.

Admin 4

Admin

File

Object

Tools

Help

user

Servers (1)
PostgreSQL 13
Databases (2)
dvdrental
p
Create
Refresh...
Delete/Drop
CREATE Script
Disconnect Database...
Generate ERD (Beta)
Maintenance...
Backup...
Restore...
Grant Wizard...
Search Objects...
Query Tool
Properties...

Dashboard

Properties

SQL

Statistics

Dependencies

Dependents

Database sessions

Total

Active

Idle

1

0

Transactions per second

Transactions

Commits

Rollbacks

3

2

1

0

Tuples in

Inserts

Updates

Delete

1

0

Tuples out

Fetches

Returned

1600

1400

1200

1000

800

600

400

200

0

Block I/O

Reads

Hits

90

80

70

60

50

40

30

20

10

0

Server activity

Sessions

Locks

Prepared Transactions

		PID	User	Application	Client	
✖	■	▶	13636	postgres	pgAdmin 4 - DB:dvdrental	127.0.

Restoring backup on the server

Restoring backup on the server 'PostgreSQL 13 (localhost:5432)'

Wed Mar 17 2021 10:14:47 GMT-0500 (Central Daylight Time)

🕒 22.93 seconds

📄 More details...

⛔ Stop Process

✔ Successfully completed.

FIRST QUERY !!!!!!!!!!!!!!!!

The screenshot displays the pgAdmin 4 web interface. On the left, the 'Servers' tree shows 'PostgreSQL 13' with a sub-entry 'dvdrental'. A context menu is open for 'dvdrental', listing various actions such as 'Create', 'Refresh...', 'Delete/Drop', 'CREATE Script', 'Disconnect Database...', 'Generate ERD (Beta)', 'Maintenance...', 'Backup...', 'Restore...', 'Grant Wizard...', 'Search Objects...', 'Query Tool' (highlighted), and 'Properties...'. The main panel shows the 'Dashboard' tab with several performance metrics:

- Database sessions:** A line chart showing 'Total' sessions (blue line) at 1, 'Active' sessions (green line) at 0, and 'Idle' sessions (red line) at 0.
- Transactions per second:** A line chart showing 'Transactions' (blue line) with a sharp spike to 3, 'Commits' (green line) at 0, and 'Rollbacks' (red line) at 0.
- Tuples in:** A line chart showing 'Inserts' (blue line) at 0, 'Updates' (green line) at 0, and 'Delete' (red line) at 0.
- Tuples out:** A line chart showing 'Fetched' (blue line) at 0 and 'Returned' (green line) with a sharp spike to 1400.
- Block I/O:** A line chart showing 'Reads' (blue line) at 0 and 'Hits' (green line) with a sharp spike to 80.

At the bottom, the 'Server activity' section shows a table of sessions:

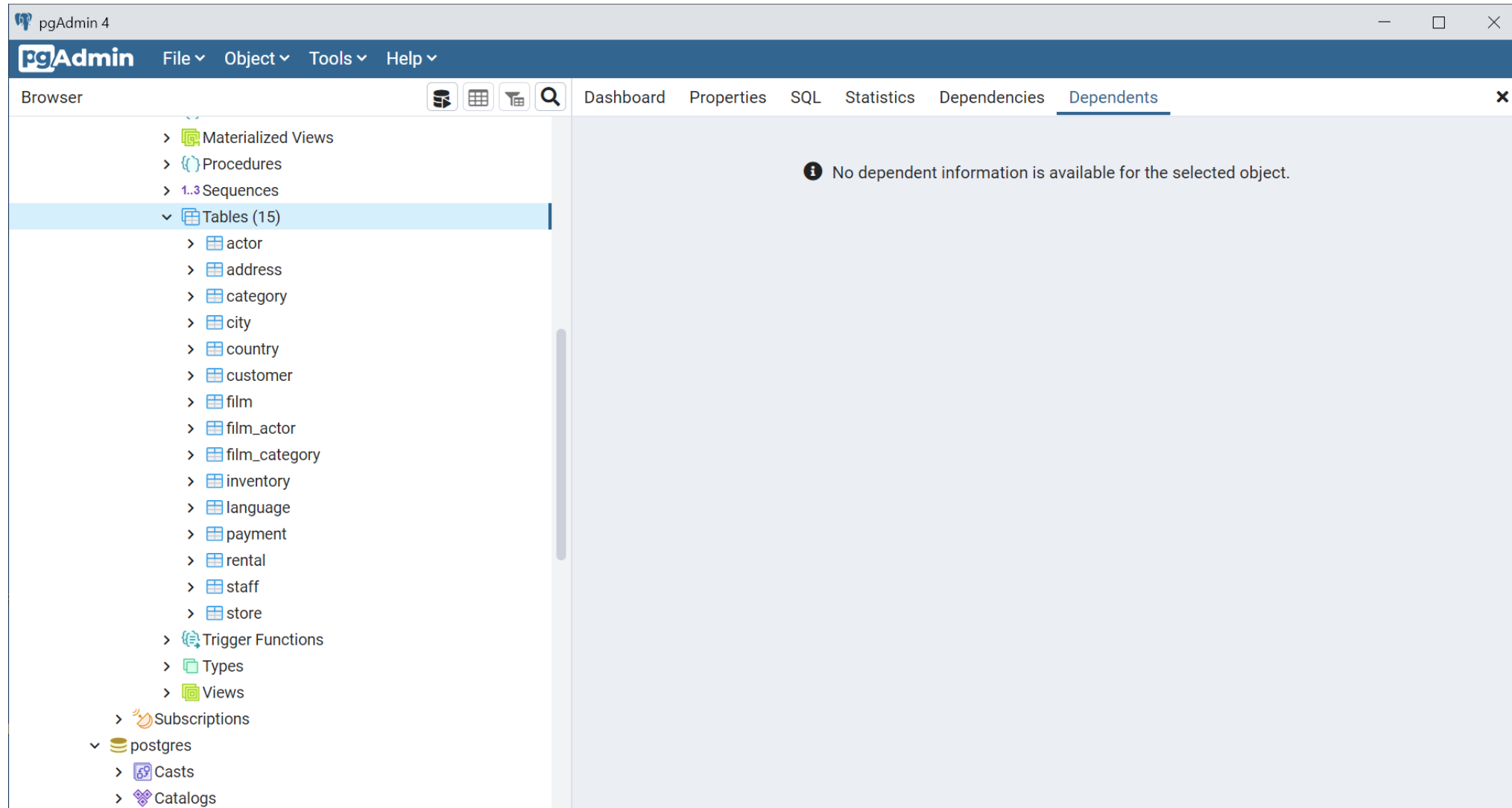
		PID	User	Application	Client	
✖	■	▶	13636	postgres	pgAdmin 4 - DB:dvdrental	127.0.

A notification banner at the bottom right states: 'Restoring backup on the server'. Below this, it says: 'Restoring backup on the server 'PostgreSQL 13 (localhost:5432)'' and 'Wed Mar 17 2021 10:14:47 GMT-0500 (Central Daylight Time)'. It also shows a duration of '22.93 seconds' and a status of 'Successfully completed.' with a green checkmark. Buttons for 'More details...' and 'Stop Process' are visible.

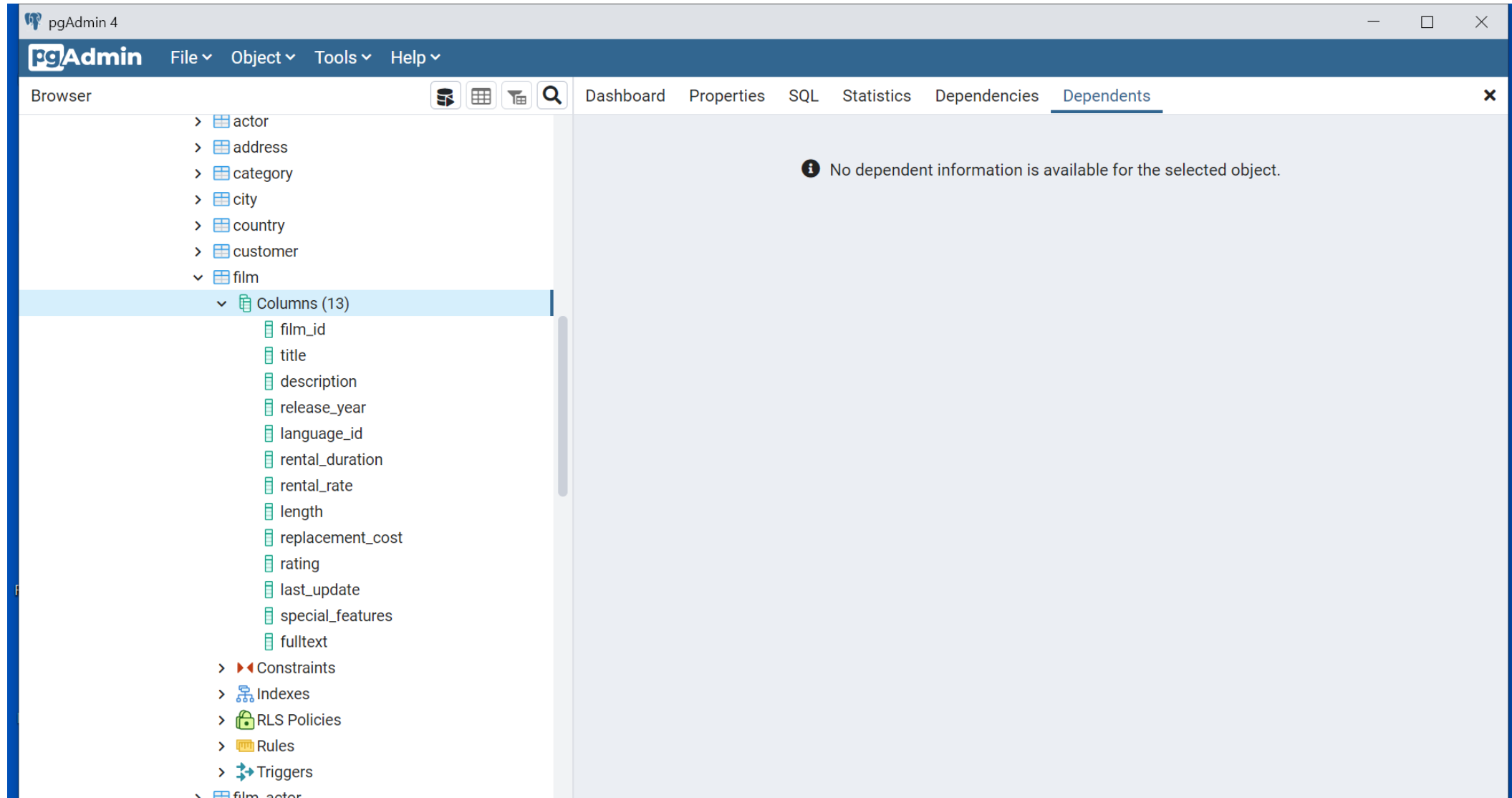
FIRST QUERY !!!!!!!!!!!!!!!!

The screenshot displays the pgAdmin 4 web interface. The top navigation bar includes 'Admin', 'File', 'Object', 'Tools', and 'Help'. Below this, a breadcrumb trail shows the current path: 'Dashboard' > 'Properties' > 'SQL' > 'Statistics' > 'Dependencies' > 'Dependents' > 'dvdrental/postgres@PostgreSQL 13'. The left sidebar contains a tree view of the database structure, with 'dvdrental' selected under 'PostgreSQL 13'. The main workspace is divided into three panes: 'Query Editor', 'Query History', and 'Scratch Pad'. The 'Query Editor' pane is active and shows a single line of text '1'. Below the editor, there are four tabs: 'Data Output', 'Explain', 'Messages', and 'Notifications'. The 'Data Output' tab is active, displaying a message: 'No data output. Execute a query to get output.'

Tables in the dvdrental database



Columns in the table Film



Ready to go

The screenshot shows the Admin 4 application window. The left sidebar displays a tree view of the database structure, with 'Schemas (1)' selected. The main area is divided into a 'Query Editor' and a 'Data Output' section. The query editor contains the SQL statement: `SELECT * FROM film;`. A red arrow points to the 'Run' button (a play icon) in the toolbar above the query editor. Below the query editor, the 'Data Output' section shows the results of the query in a table format. The table has columns: film_id, title, description, release_year, language_id, rental_duration, rental_rate, and length. The results show 6 rows of data.

Admin 4

File Object Tools Help

Dashboard Properties SQL Statistics Dependencies Dependents dvdrental/postgres@PostgreSQL 13 *

Query Editor Query History Scratch Pad

1 `SELECT * FROM film;`

Run button

Result of our query

	film_id [PK] integer	title character varying (255)	description text	release_year integer	language_id smallint	rental_duration smallint	rental_rate numeric (4,2)	length smallint
1	133	Chamber Italian	A Fateful Reflec...	2006	1	7	4.99	
2	384	Grosse Wonderful	A Epic Drama of...	2006	1	5	4.99	
3	8	Airport Pollock	A Epic Tale of a ...	2006	1	6	4.99	
4	98	Bright Encounters	A Fateful Yarn o...	2006	1	4	4.99	
5	1	Academy Dinosaur	A Epic Drama of...	2006	1	6	0.99	
6	2	Ace Goldfinger	A Astounding E...	2006	1	3	4.99	