

Big Data: Data Wrangling Boot Camp

Adding a PostGres User

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What are we going to cover?

- 1 How to add a PostGres user
- 2 How to check the PostGres operation



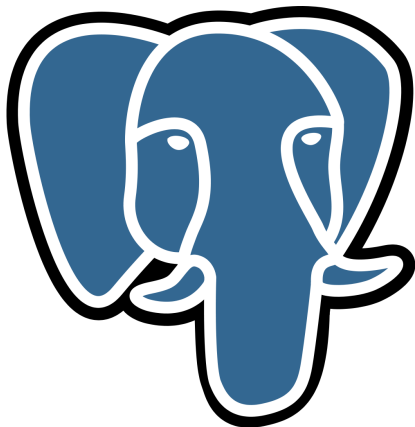


50,000 view

At a macro level:

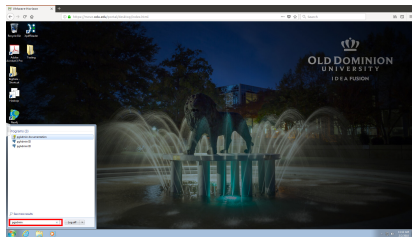
- 1 The PostGres database server can provide access to more than one database
- 2 Each database has a set of unique user and password combinations
- 3 The boot camp R scripts use specific data base, user, and passwords

PostGres has to have the correct user and password set up for the correct database.



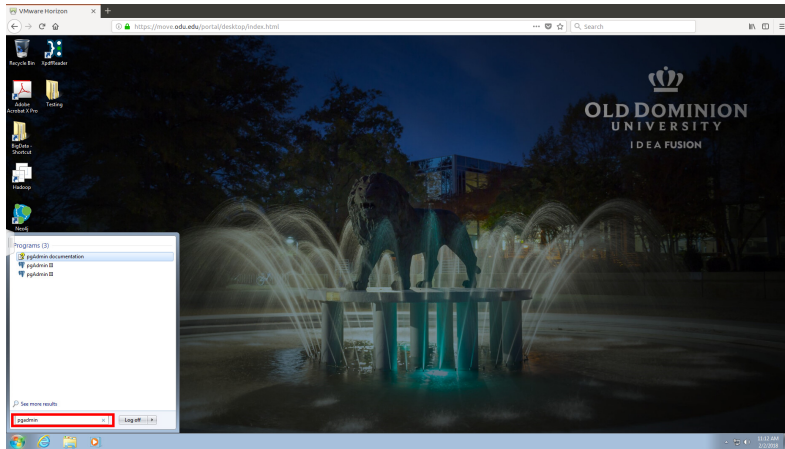
Locate the PgAdmin III program (1 of 2).

- 1 Press the start menu button.
- 2 Type pgadmin
- 3 Highlight and click pgAdmin III

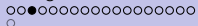


See the red outlined area.

Same image.

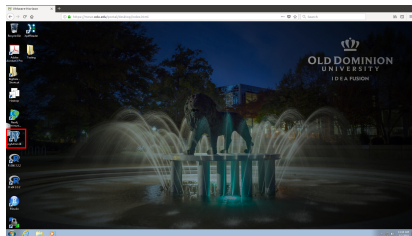


See the red outlined area.



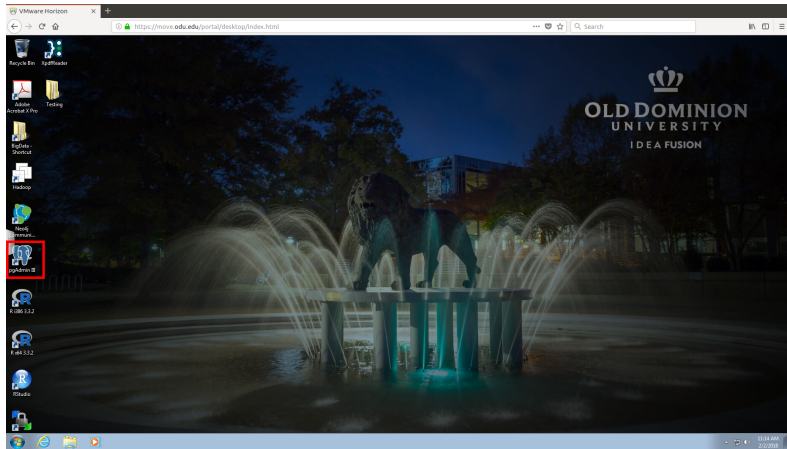
Locate the PgAdmin III program (2 of 2).

Alternatively, locate and double click the pgAdmin III icon



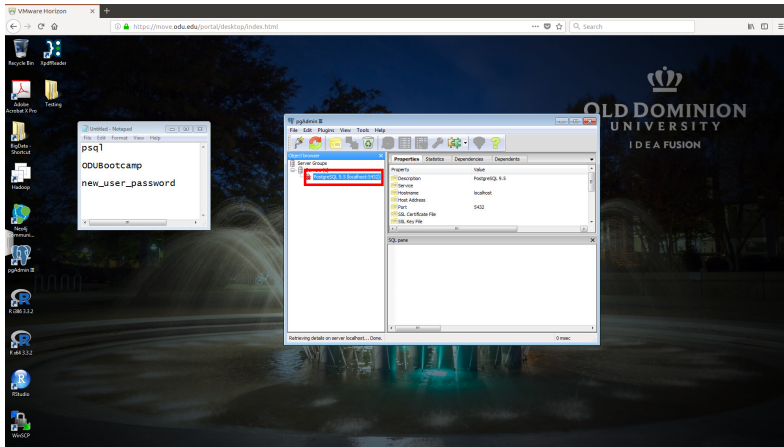
See the red outlined area.

Same image.



See the red outlined area.

Same image.



See the red outlined area.

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○

pgAdmin will ask for the administrator password.

Passwords are case sensitive.

Default password: psql

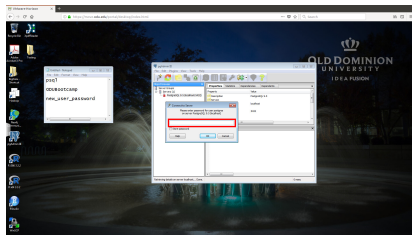
ODU VM default password:

ODUBootcamp

Sometimes password:

new_user_password

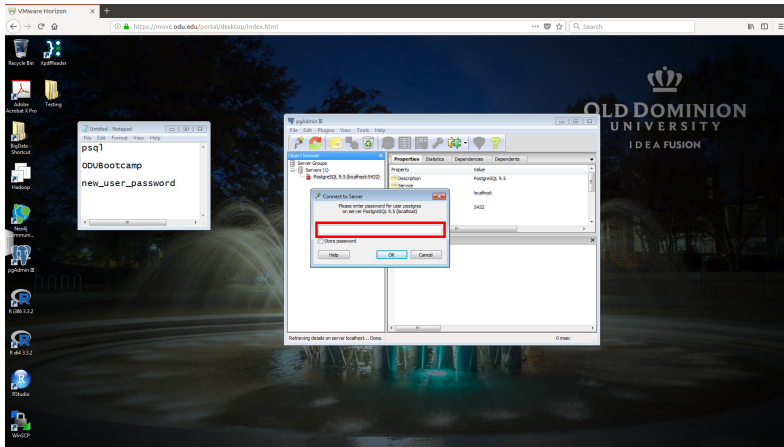
Enter a password that works.



See the red outlined area.

Windows

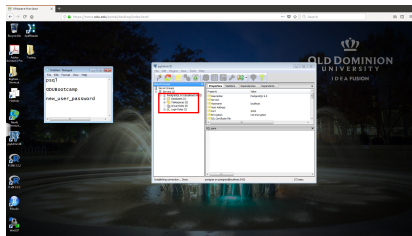
Same image.



See the red outlined area.

The correct password will allow access to the database.

You will now have total access to all aspects of the database.



See the red outlined area.

Windows

Same image.

The screenshot shows a Windows desktop environment. In the background, there is a browser window displaying the URL <https://move.odu.edu/portal/desktop/index.html>. The desktop wallpaper features the Old Dominion University logo and the text "IDEA FUSION".

Two windows are open in the foreground:

- Untitled - Notepad**: Contains the following text:

```
psql
ODUbootcamp
new_user_password
```
- pgAdmin III**: Shows the "Server Groups" tree view. The "PostgreSQL 9.5 Enclosed" folder is highlighted with a red rectangle. The "Properties" pane on the right shows details for the selected server group, including:

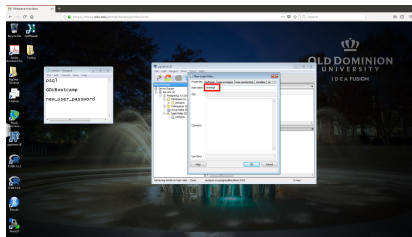
Property	Value
Description	PostgreSQL 9.5
Service	localhost
Hostname	localhost
Port	5432
Encryption	not encrypted
SSL Certificate File	

See the red outlined area.

Right click on “Login Roles” to add a new user. (1 of 3)

A new user requires three things:

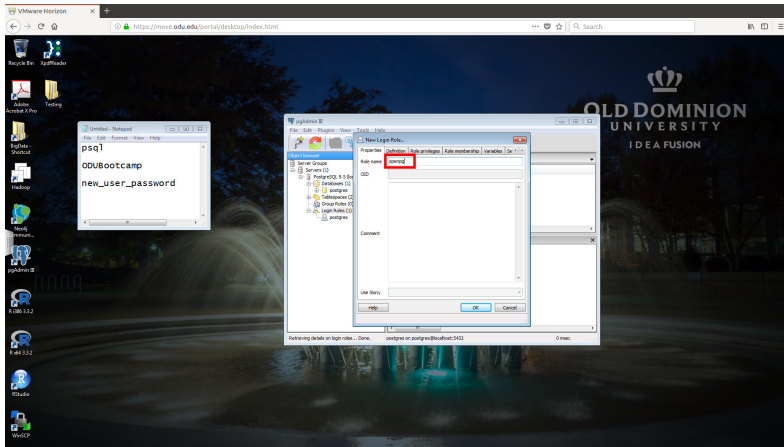
- 1 A role name: openpg (in this case)
- 2 A password: new_user_password (in this case)
- 3 Privileges: Superuser (in this case)



See the red outlined area.

Windows

Same image.

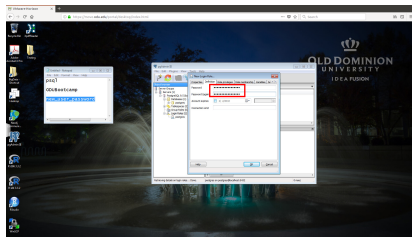


See the red outlined area.

Right click on “Login Roles” to add a new user. (2 of 3)

A new user requires three things:

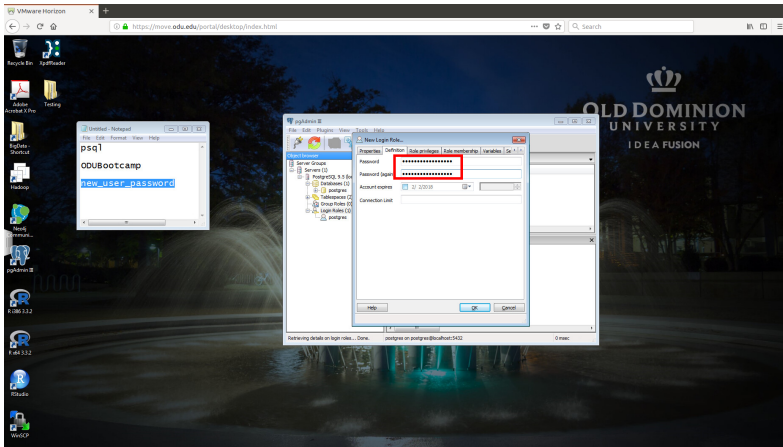
- 1 A role name: openpg (in this case)
- 2 A password: new_user_password (in this case)
- 3 Privileges: Superuser (in this case)



See the red outlined area.

Windows

Same image.



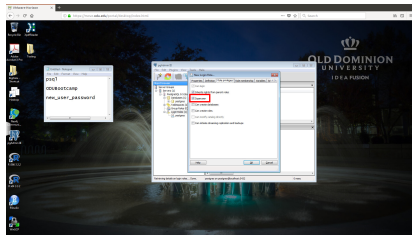
See the red outlined area.

Right click on “Login Roles” to add a new user. (3 of 3)

A new user requires three things:

- 1 A role name: openpg (in this case)
- 2 A password: new_user_password (in this case)
- 3 Privileges: Superuser (in this case)

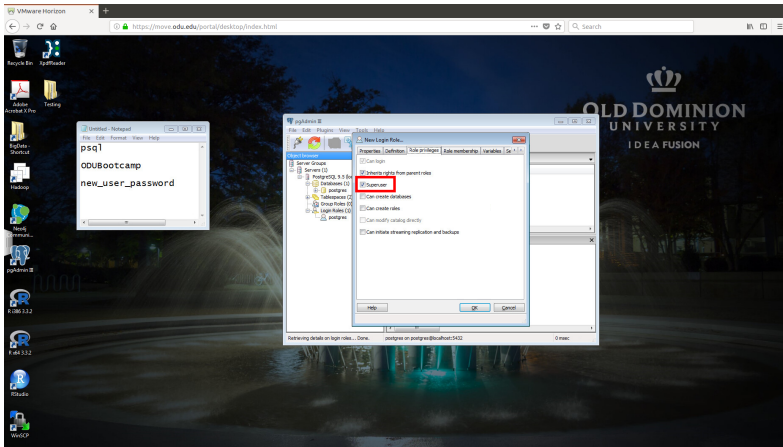
Press OK, to add the new PostGres user.



See the red outlined area.

Windows

Same image.

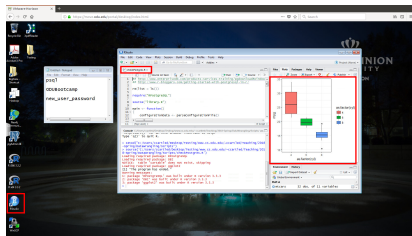


See the red outlined area.

Windows

Use the attached checkPostgres.R script to verify connectivity.

- ① Load RStudio
- ② Set the session directory to where checkPostgres.R is located
- ③ Source checkPostgres.R
- ④ Confirm the graphic is created



See the red outlined area.

Windows

Same image.

The screenshot displays a Windows desktop with several icons on the left side. A terminal window titled "Untitled - Notepad" shows the following text:

```
psql
ODUbootcamp
new_user_password
```

In the bottom-left corner of the desktop, the R logo icon is highlighted with a red square.

The central focus is an RStudio window titled "RStudio". The top-left pane shows the source editor with R code:

```
1 # checkPostgres.R
2 #
3 # http://www.postgresql.org/products/
4 # http://www.r-bloggers.com/getting-started-with-postgresql/
5
6 rm(list = ls())
7 require("RPostgreSQL")
8 source("library.R")
9
10 main <- function()
11 {
12   configurePostgres <- parseConfiguratorFile()
13 }
14
15 # Run Level 1
```

The top-right pane shows a boxplot titled "as.factor(cyl)" with "cyl" on the x-axis and "mpg" on the y-axis. The plot shows three boxplots for factor levels 4, 6, and 8. The box for factor 4 is red, factor 6 is green, and factor 8 is blue. A red rectangle is drawn around the entire boxplot area.

The bottom-right pane shows the Environment window with the following content:

```
Environment History
Import Dataset
Global Environment
DATA
mtcars 32 obs. of 11 variables
```

The console window at the bottom shows the following output:

```
Compile C:\Users\ccart1ed\Desktop\Testing\www.cs.odu.edu/~ccart1ed/teaching/2018/Spring/DataMining/scripts/as
Type "q()" to quit R.
> setwd("C:/Users/ccart1ed/Desktop/Testing/www.cs.odu.edu/~ccart1ed/teaching/2018
-Spring/DataMining/scripts")
> source("C:/Users/ccart1ed/Desktop/Testing/www.cs.odu.edu/~ccart1ed/teaching/2018
-Spring/DataMining/scripts/checkPostgres.R")
Loading required package: RPostgreSQL
Loading required package: DBI
NOTICE: table "cartab" does not exist, skipping
Loading required package: ggplot2
[1] "The program has ended."
1: package 'RPostgreSQL' was built under R version 3.3.3
2: package 'DBI' was built under R version 3.3.3
3: package 'ggplot2' was built under R version 3.3.3
```

See the red outlined area.

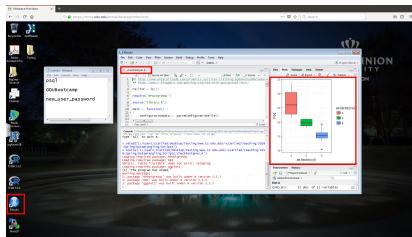
Its simple.

- 1 Locate the pgAdmin program.
- 2 Follow the steps in the Windows section.

Use the attached R script to verify everything is correct.

The attached R script:

- ① Logs into the PostGres database
- ② Creates a table
- ③ Inserts data into the table
- ④ Extracts data from the table
- ⑤ Creates an image.



If you see this image, then things are configured correctly.

Same image.

The screenshot shows a VMware Horizon desktop environment. In the foreground, there is a terminal window titled 'psql' with the following content:

```
psql
ODUbootcamp
new_user_password
```

Below the terminal is a window titled 'RStudio' showing an R script named 'checkPostgres.R'. The code in the script includes:

```
1 # Source on Save
2 # http://www.r-bloggers.com/products-services-training-oddu-bootcamp/index
3 # http://www.r-bloggers.com/getting-started-with-postgresql/
4 rm(list = ls())
5 require("RPostgreSQL")
6 source("library.R")
7 main <- function() {
8   configurePostgres <- parseConfiguratorFile()
9   ...
10 }
11 # Run Level 1
```

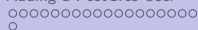
The RStudio console shows the following output:

```
Consume C:\Users\ccartled\Desktop\Testing\www.cs.odu.edu/~ccartled/teaching/2018/Spring/DataMining/scripts/as
Type 'q()' to quit R.
> setwd("C:/Users/ccartled/Desktop/Testing/www.cs.odu.edu/~ccartled/teaching/2018
> Spring/DataMining/scripts")
> source("C:/Users/ccartled/Desktop/Testing/www.cs.odu.edu/~ccartled/teaching/2018
> Spring/DataMining/scripts/checkPostgres.R")
Loading required package: RPostgreSQL
Loading required package: DBI
NOTICE: table "cartled" does not exist, skipping
Loading required package: ggplot2
[1] "the program has ended."
1: package 'RPostgreSQL' was built under R version 3.3.3
2: package 'DBI' was built under R version 3.3.3
3: package 'ggplot2' was built under R version 3.3.3
```

On the right side of the RStudio window, a box plot is displayed, titled 'as factor(cyl)'. The x-axis is labeled 'as factor(cyl)' with categories 4, 6, and 8. The y-axis is labeled 'mpg' with values from 10 to 35. The plot shows three box plots: a red one for category 4, a green one for category 6, and a blue one for category 8. The red box plot has the highest median mpg, followed by the green, and then the blue.

At the bottom left of the desktop, the RStudio icon is highlighted with a red square. The background of the desktop features a logo for 'UNION CITY'.

If you see this image, then things are configured correctly.



Q & A time.

“A human being should be able to change a diaper, plan an invasion, butcher a hog, conn a ship, design a building, write a sonnet, balance accounts, build a wall, set a bone, comfort the dying, take orders, give orders, cooperate, act alone, solve equations, analyze a new problem, pitch manure, program a computer, cook a tasty meal, fight efficiently, die gallantly. Specialization is for insects.”

Robert Heinlein, Time Enough for Love



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What have we covered?

- Talked about how to add a user to a PostGres installation
- Talked about how to check for correct user and connectivity



Files of interest

1 Checkout the PostGres R
connectivity 

2 R library script file 