

Steps to replicate

Start with Ubuntu 16.04 or 18.04 LTS Server ISO <https://ubuntu.com/download/server>

In Oracle Virtualbox this server only needs minimal resources 2cpu 2GB memory. Use a bridged network, this will present the VM NIC to the same network your host machine is on making it easy to connect to in the future.

Install Ubuntu and install SSH. Do NOT install PostgreSQL from the Ubuntu installer as it will grab the latest version 12, we need to manually select version 10.

Once Ubuntu is installed ensure all updates are applied; `sudo apt-get update && sudo apt-get upgrade`

If using 16.04 you need to add the postgresql repository using this guide, if 18.04 this can be skipped.
<https://www.postgresql.org/download/linux/ubuntu/>

Install postgresql 10; `sudo apt-get install postgresql-10`

Switch over to the postgres account on your server by typing: `sudo -i -u postgres`

From here easily change password; `psql -c "alter user postgres with password 'passW0rdhere'"`

Logout of the postgres account and get back to your login.

Edit these two files to allow PostgreSQL to listen to your local LAN subnet:

```
sudo nano /etc/postgresql/10/main/pg_hba.conf
```

```
add in your local subnet and CIDR header: host all all 192.168.105.0/24 md5
```

and:

```
sudo nano /etc/postgresql/10/main/postgresql.conf
```

```
Change listen to all interfaces; listen_addresses = '*'
```

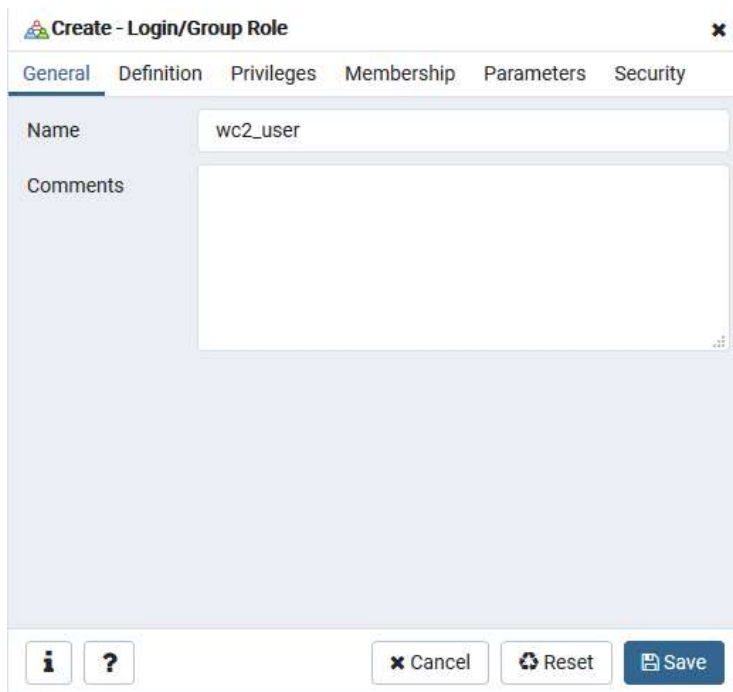
(Must remove leading # to mark line in use!!)

Restart the service or simply the whole computer to make changes active; `sudo shutdown -r now`

If you used DHCP in networking find the IP with; `ifconfig`

Now you have PostgreSQL 10 listening on your local LAN with user account postgres and a password you know. Suggest using pgAdmin4 on Windows from here.

Connect pgAdmin4 and create a new login role name. The password is on the definition tab.



The image shows the 'Create - Login/Group Role' dialog box in pgAdmin4, with the 'General' tab selected. The 'Name' field contains 'wc2_user'. The 'Comments' field is empty. At the bottom, there are buttons for 'Cancel', 'Reset', and 'Save', along with information and help icons.

| Tab | Name | Comments |
|---------|----------|----------|
| General | wc2_user | |

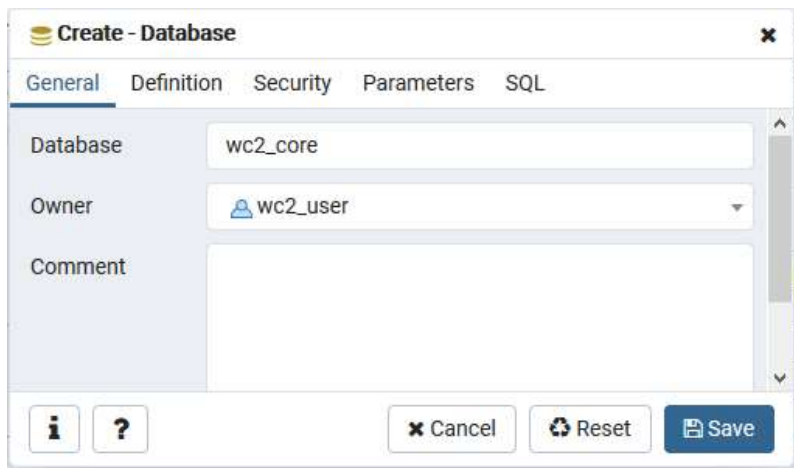
Enable privileges; login, create role, create db.



The image shows the 'Create - Login/Group Role' dialog box in pgAdmin4, with the 'Privileges' tab selected. The following privileges are configured:

| Privilege | Value |
|---|-------|
| Can login? | Yes |
| Superuser? | No |
| Create roles? | Yes |
| Create databases? | Yes |
| Update catalog? | No |
| Inherit rights from the parent roles? | Yes |
| Can initiate streaming replication and backups? | No |

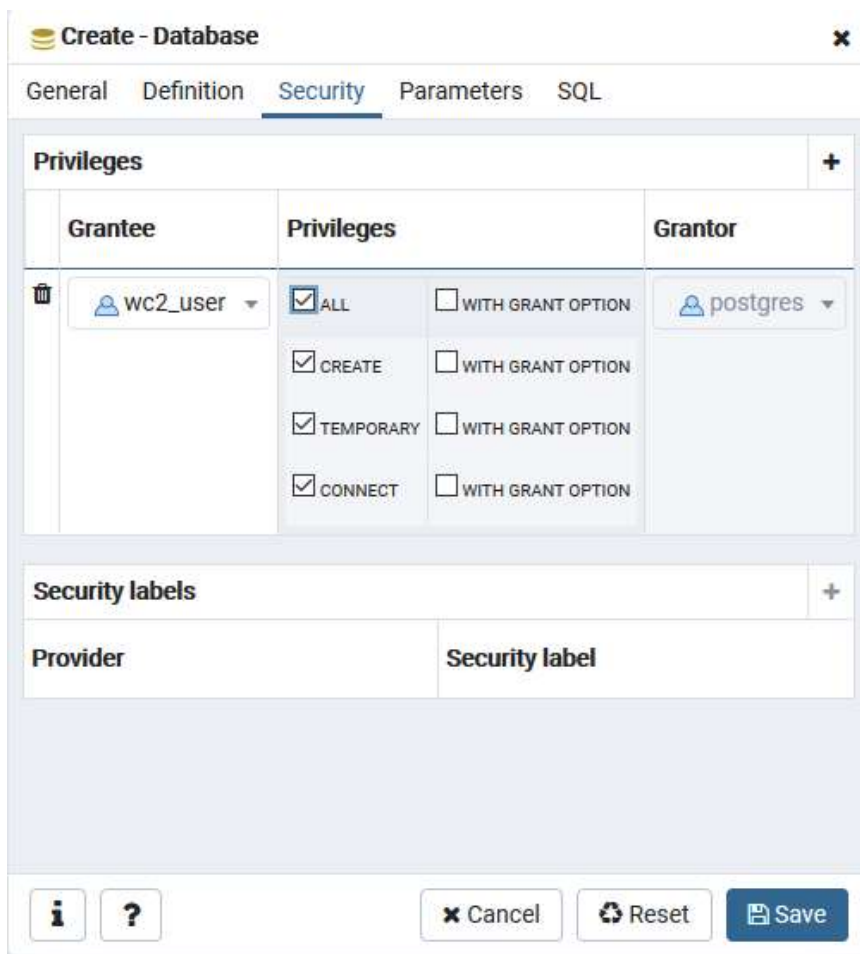
Create four databases. Make the owner the user you just created.



The 'Create - Database' dialog box is shown with the 'General' tab selected. The 'Database' field contains 'wc2_core'. The 'Owner' dropdown menu is set to 'wc2_user'. The 'Comment' field is empty. At the bottom, there are buttons for 'Cancel', 'Reset', and 'Save', along with information and help icons.

| Field | Value |
|----------|----------|
| Database | wc2_core |
| Owner | wc2_user |
| Comment | |

In DB security tab grantee is the same user and select privileges all



The 'Create - Database' dialog box is shown with the 'Security' tab selected. The 'Privileges' section shows a table with columns 'Grantee', 'Privileges', and 'Grantor'. The 'Grantee' is 'wc2_user' and the 'Grantor' is 'postgres'. The 'Privileges' column has checkboxes for 'ALL', 'CREATE', 'TEMPORARY', and 'CONNECT', all of which are checked. The 'WITH GRANT OPTION' column has unchecked checkboxes. Below the table is a 'Security labels' section with columns 'Provider' and 'Security label'. At the bottom, there are buttons for 'Cancel', 'Reset', and 'Save', along with information and help icons.

| Grantee | Privileges | Grantor |
|----------|---|----------|
| wc2_user | <input checked="" type="checkbox"/> ALL <input checked="" type="checkbox"/> CREATE <input checked="" type="checkbox"/> TEMPORARY <input checked="" type="checkbox"/> CONNECT | postgres |

| Provider | Security label |
|----------|----------------|
|----------|----------------|

Grab latest JDBC driver and place in WebCTRL database-drivers folder.

<https://jdbc.postgresql.org/download.html>

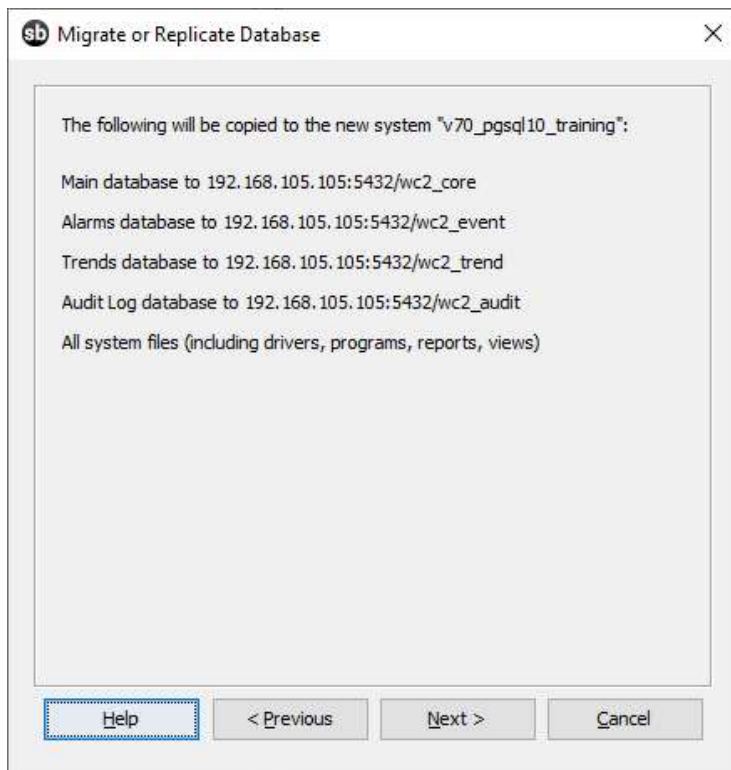
Open SiteBuilder and either create new or use existing job file and replicate the database.

The screenshot shows the 'Migrate or Replicate Database' dialog box with the title bar 'sb Migrate or Replicate Database'. The main instruction is 'Select a system name and the type of database to which you wish to replicate.' Below this, there is a text field for 'New System Name:' containing 'v70_pgsql10_training' and a dropdown menu for 'Database Type:' with 'PostgreSQL' selected. At the bottom, there are four buttons: 'Help', '< Previous', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

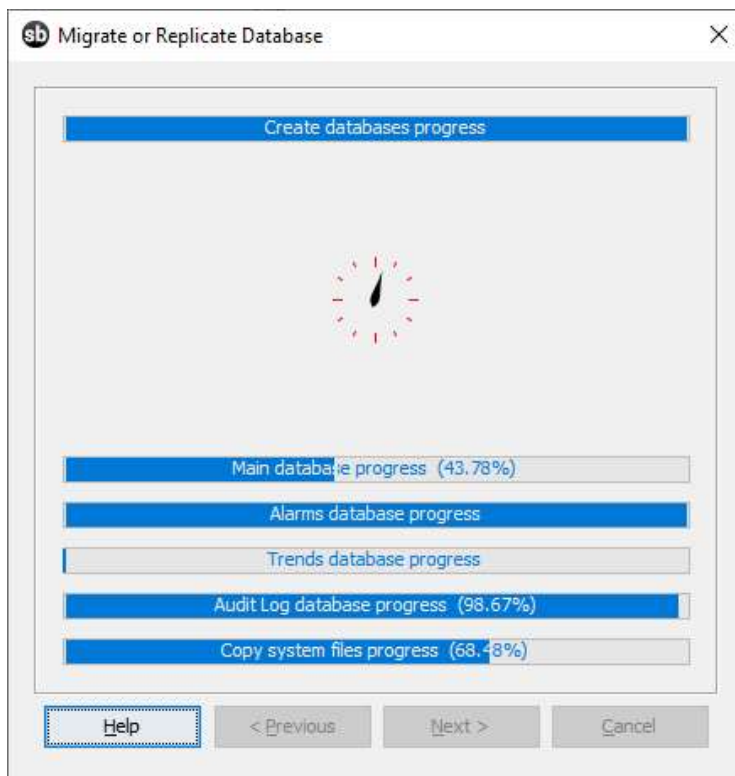
Put in connection info

The screenshot shows the 'Migrate or Replicate Database' dialog box at the connection configuration step. It features five checked checkboxes for connecting to different databases: 'Main Database Connect String:', 'Alarms Database Connect String:', 'Trends Database Connect String:', 'Audit Log Database Connect String:', and 'Copy system files (programs, views, etc.)'. Each checked item has associated fields for 'Server:', 'Port:', and 'Instance:'. All 'Server' fields are set to '192.168.105.105', all 'Port' fields to '5432', and the 'Instance' fields are 'wc2_core', 'wc2_event', 'wc2_trend', and 'wc2_audit' respectively. At the bottom, there are fields for 'Database User:' with 'Login:' set to 'wc2_user' and 'Password:' masked with dots. The same four buttons ('Help', '< Previous', 'Next >', 'Cancel') are at the bottom, with 'Next >' highlighted.

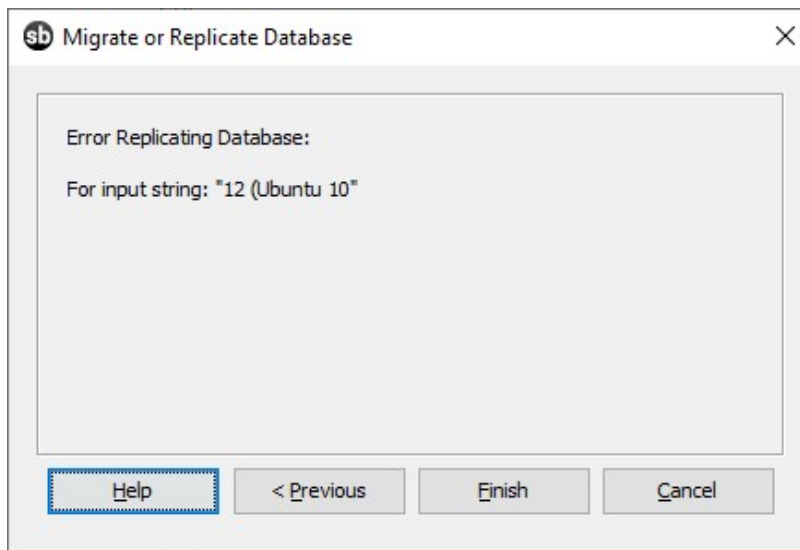
Connection should test good



Data should be pushed to postgresql;



Failure message shown. No SQL or other logs relating to this appear in C:\WebCTRL7.0\logs



On the SQL server there are errors in the log;

```
scottj@ubuntu1604:/var/log/postgresql$ tail -10 postgresql-10-main.log
```

```
2020-04-01 15:07:03.728 EDT [1623] wc1_user@wc1_audit ERROR:  relation "cj_lock" does not exist at
character 46
```

```
2020-04-01 15:07:03.728 EDT [1623] wc1_user@wc1_audit STATEMENT:  Select RUNMODE_, SYSTEM_ID_, LOCK_TIME_
From CJ_LOCK
```

```
2020-04-01 16:10:36.777 EDT [2141] wc2_user@wc2_core ERROR:  relation "cj_lock" does not exist at
character 46
```

```
2020-04-01 16:10:36.777 EDT [2141] wc2_user@wc2_core STATEMENT:  Select RUNMODE_, SYSTEM_ID_, LOCK_TIME_
From CJ_LOCK
```

```
2020-04-01 16:10:36.820 EDT [2142] wc2_user@wc2_event ERROR:  relation "cj_lock" does not exist at
character 46
```

```
2020-04-01 16:10:36.820 EDT [2142] wc2_user@wc2_event STATEMENT:  Select RUNMODE_, SYSTEM_ID_, LOCK_TIME_
From CJ_LOCK
```

```
2020-04-01 16:10:36.848 EDT [2143] wc2_user@wc2_trend ERROR:  relation "cj_lock" does not exist at
character 46
```

```
2020-04-01 16:10:36.848 EDT [2143] wc2_user@wc2_trend STATEMENT:  Select RUNMODE_, SYSTEM_ID_, LOCK_TIME_
From CJ_LOCK
```

```
2020-04-01 16:10:36.884 EDT [2144] wc2_user@wc2_audit ERROR:  relation "cj_lock" does not exist at
character 46
```

```
2020-04-01 16:10:36.884 EDT [2144] wc2_user@wc2_audit STATEMENT:  Select RUNMODE_, SYSTEM_ID_, LOCK_TIME_
From CJ_LOCK
```

```
scottj@ubuntu1604:/var/log/postgresql$
```