

Create another EC2 inside Private Subnet

EC2 Home_page >> Launch Instances

Buttons: Refresh, Connect, Instance state, Actions, Launch instances

Page: 1

Instance type	Status check	Alarm status	Availability Zone	Public IPv4 D
t2.micro	2/2 checks passed	No alarms	us-east-2a	-

Selecting Amazon Linux 2

Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type - ami-002068ed284fb165b (64-bit x86) / ami-0a5899928eba2e7bd (64-bit Arm)

Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select

64-bit (x86) (selected)
64-bit (Arm)

Selecting Instance Type - Free Tier(t2.micro)

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different workloads. You can choose the appropriate mix of resources for your application.

Filter by: All instance families Current generation

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory)

	Family	Type
<input type="checkbox"/>	t2	t2.nano
<input checked="" type="checkbox"/>	t2	t2.micro Free tier eligible
<input type="checkbox"/>	t2	t2.small
<input type="checkbox"/>	t2	t2.medium

Selecting VPC - Team-D-VPC and Subnet - Pvt-Subnet-1

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of lower prices, or request On-Demand instances to pay for the instance by the hour.

Number of instances ⓘ

Launch into Auto Scaling Group ⓘ

Purchasing option ⓘ☐ Request Spot instances

Network ⓘ

vpc-0537baf72f80d5930 | Team-D-VPC

Create new VPC

Subnet ⓘ

subnet-017289753c7257388 | Team-D-Pvt-Subnet-1

Create new subnet

27 IP Addresses available

Auto-assign Public IP ⓘ

Use subnet setting (Disable)

Hostname type ⓘ

Use subnet setting (IP name)

DNS Hostname ⓘ☒ Enable IP name IPv4 (A record) DNS requests

Creating EBS block of 10 GB

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type ⓘ	Device ⓘ	Snapshot ⓘ	Size (GiB) ⓘ	Volume Type ⓘ	IOPS ⓘ	Throughput (MB/s) ⓘ	Delete Terminated Volumes ⓘ
Root	/dev/xvda	snap-08c6656b1c27d23c5	<input type="text" value="10"/>	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>

Add New Volume

Giving Name - Team-D-EC2-Pvt as Tag

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. A copy of a tag can be applied to volumes, instances or both. Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum)	Value (256 characters maximum)
<input type="text" value="Name"/>	<input type="text" value="Team-D-EC2-Pvt"/>


Add another tag (Up to 50 tags maximum)

Review Page before Launching EC2 instance

Step 7: Review Instance Launch

Select an existing security group or create a new group to determine access to the application in your VPC. You might also want to select an existing security group.

▼ AMI Details

 **Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type - ami-002068ed284fb165b**

Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages from the Amazon Linux Extras Project. This AMI is the successor of the Amazon Linux AMI that is n...
Root Device Type: ebs Virtualization type: hvm

▼ Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

▼ Security Groups

Security group name

launch-wizard-3

Description

launch-wizard-3 created 2021-12-06T00:07:52.451+05:45

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ	Description ⓘ
SSH	TCP	22	0.0.0.0/0	ssh allowed anywhere...

Selecting existing Key Pair team-D-Key

Select an existing key pair or create a new key pair

×

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance. Amazon EC2 supports ED25519 and RSA key pair types.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair

▼

Select a key pair

team-D-key | RSA

▼

☒ I acknowledge that I have access to the corresponding private key file, and that without this file, I won't be able to log into my instance.

Cancel

Launch Instances

Only allow inbound traffic within VPC


NACL_Home_Page

Network ACLs (1/4) Info							Actions	Create network ACL
Filter network ACLs							< 1 >	
	Name	Network ACL ID	Associated with	Default	VPC ID			
<input checked="" type="checkbox"/>	-	acl-07aueb662a9ae1bd6	6 Subnets	Yes	vpc-0537baf72f80d5930 / Team-D-VPC	2		
<input type="checkbox"/>	team-b-public-nacl	acl-073de536f6d75ebf	3 Subnets	No	vpc-0129bda0428def1cf / Team-B-VPC	1		
<input type="checkbox"/>	-	acl-08410bc3e18e24a12	3 Subnets	Yes	vpc-077c7747a9076e6ae / _	2		
<input type="checkbox"/>	-	acl-01b8ac293a01a1f70	3 Subnets	Yes	vpc-0129bda0428def1cf / Team-B-VPC	2		

NACL_Details

DetailsInfo

Network ACL ID

acl-07aueb662a9ae1bd6

Associated with

6 Subnets


Default

Yes

VPC ID

vpc-0537baf72f80d5930 / Team-D-VPC

Owner


949263681218

Inbound rules


Outbound rules

Subnet associations

Tags


 You can now check network connectivity with Reachability Analyzer

Run Reachability Analyzer



Inbound rules (2)


Edit inbound rules



 Filter inbound rules

<

1

>



Rule number	Type	Protocol	Port range	Source	Allow/Deny
100	All traffic	All	All	0.0.0.0/0	 Allow
*	All traffic	All	All	0.0.0.0/0	 Deny

Editing Inbound Rules - Allow traffic only to Team-D VPC network(10.15.32.0/22)

VPC > Network ACLs > acl-07aueb662a9ae1bd6 > Edit inbound rules

Edit inbound rules [Info](#)

Inbound rules control the incoming traffic that's allowed to reach the VPC.

Rule number Info	Type Info	Protocol Info	Port range Info	Source Info	Allow/Deny Info	
100	All traffic ▼	All ▼	All	0.0.0.0/0	Allow ▼	<button>Remove</button>
1	All traffic ▼	All ▼	All	10.15.32.0/22	Allow ▼	<button>Remove</button>
*	All traffic ▼	All ▼	All	0.0.0.0/0	Deny ▼	

Add new rule Sort by rule number

Cancel Preview changes Save changes

Done

✓ You have successfully updated inbound rules for acl-07aueb662a9ae1bd6

Owner
949263681218

Team-D-VPC

Inbound rules | Outbound rules | Subnet associations | Tags

📘 You can now check network connectivity with Reachability Analyzer Run Reachability Analyzer ✕

Inbound rules (3)

< 1 > ⚙️

Rule number ▼	Type ▼	Protocol ▼	Port range ▼	Source ▼	Allow/Deny ▼
100	All traffic	All	All	0.0.0.0/0	✓ Allow
101	All traffic	All	All	10.15.32.0/22	✓ Allow
*	All traffic	All	All	0.0.0.0/0	✗ Deny

Install PostgreSQL and open its port to VPC only.

Login to EC2(Pvt-Subnet) Via EC2 (Pub-Subnet)

```
[ec2-user@ip-10-15-32-4 ~]$ ssh -i team-D-key.pem root@10.15.32.111
The authenticity of host '10.15.32.111 (10.15.32.111)' can't be established.
ECDSA key fingerprint is SHA256:y6yiUJLZOKFvsXUH6PbmH0pd75k005yyDLsikfn99gE.
ECDSA key fingerprint is MD5:3d:77:a1:b9:72:4c:69:58:ae:e9:8f:91:2d:ab:2b:30.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.15.32.111' (ECDSA) to the list of known hosts.
Please login as the user "ec2-user" rather than the user "root".

Connection to 10.15.32.111 closed.
[ec2-user@ip-10-15-32-4 ~]$ ssh -i team-D-key.pem ec2-user@10.15.32.111

  _ | _ | _ |
  _ | ( _ | /   Amazon Linux 2 AMI
  _ | \ _ | _ |

https://aws.amazon.com/amazon-linux-2/
```

To install Postgres-12 (Amazon Linux II)

```
sudo amazon-linux-extras | grep postgre
sudo tee /etc/yum.repos.d/pgdg.repo<<EOF
[pgdg12]
name=PostgreSQL 12 for RHEL/CentOS 7 - x86_64
baseurl=https://download.postgresql.org/pub/repos/yum/12/redhat/rhel-7-x86_64
enabled=1
gpgcheck=0
EOF
sudo yum makecache
```

ScreenShot of Installing Postgres-12

```
[ec2-user@ip-10-15-32-111 ~]$ sudo amazon-linux-extras | grep postgre
 5 postgresql9.6          available \
 6 postgresql10          available [ =10 =stable ]
41 postgresql11          available [ =11 =stable ]
58 postgresql12          available [ =stable ]
59 postgresql13          available [ =stable ]
[ec2-user@ip-10-15-32-111 ~]$ sudo tee /etc/yum.repos.d/pgdg.repo<<EOF
> [pgdg12]
> name=PostgreSQL 12 for RHEL/CentOS 7 - x86_64
> baseurl=https://download.postgresql.org/pub/repos/yum/12/redhat/rhel-7-x86_64
> enabled=1
> gpgcheck=0
> EOF
[pgdg12]
name=PostgreSQL 12 for RHEL/CentOS 7 - x86_64
baseurl=https://download.postgresql.org/pub/repos/yum/12/redhat/rhel-7-x86_64
enabled=1
gpgcheck=0
[ec2-user@ip-10-15-32-111 ~]$ sudo yum makecache
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core                                     | 3.7 kB      00:00
amzn2extra-docker                             | 3.0 kB      00:00
amzn2extra-kernel-5.10                        | 3.0 kB      00:00
pgdg12                                         | 3.6 kB      00:00
```

```
sudo yum install postgresql12 postgresql12-server
```

```
[ec2-user@ip-10-15-32-111 ~]$ sudo yum install postgresql12 postgresql12-server
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
1 packages excluded due to repository priority protections
Resolving Dependencies
--> Running transaction check
---> Package postgresql12.x86_64 0:12.9-1PGDG.rhel7 will be installed
--> Processing Dependency: postgresql12-libs(x86-64) = 12.9-1PGDG.rhel7 for package: postgresql12-12.9-1PGDG.rhel7.x86_64
---> Package postgresql12-server.x86_64 0:12.9-1PGDG.rhel7 will be installed
--> Running transaction check
---> Package postgresql12-libs.x86_64 0:12.9-1PGDG.rhel7 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

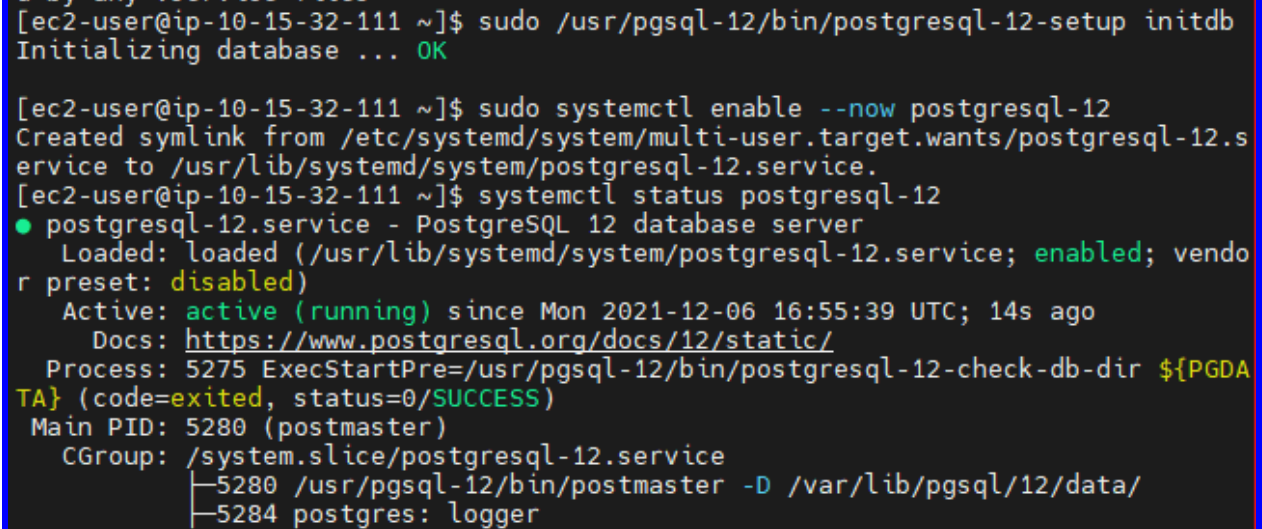
=====
Package                                Arch      Version                                Repository    Size
=====
Installing:
postgresql12                          x86_64    12.9-1PGDG.rhel7                      pgdg12        1.6 M
postgresql12-server                   x86_64    12.9-1PGDG.rhel7                      pgdg12        5.1 M
Installing for dependencies:
postgresql12-libs                      x86_64    12.9-1PGDG.rhel7                      pgdg12        372 k
Transaction Summary

```

Initializing DB , Enable Postgres 12 , Status

```
sudo /usr/pgsql-12/bin/postgresql-12-setup initdb  
sudo systemctl enable --now postgresql-12  
systemctl status postgresql-12
```

Screenshot



```
[ec2-user@ip-10-15-32-111 ~]$ sudo /usr/pgsql-12/bin/postgresql-12-setup initdb  
Initializing database ... OK  
  
[ec2-user@ip-10-15-32-111 ~]$ sudo systemctl enable --now postgresql-12  
Created symlink from /etc/systemd/system/multi-user.target.wants/postgresql-12.s  
ervice to /usr/lib/systemd/system/postgresql-12.service.  
[ec2-user@ip-10-15-32-111 ~]$ systemctl status postgresql-12  
● postgresql-12.service - PostgreSQL 12 database server  
   Loaded: loaded (/usr/lib/systemd/system/postgresql-12.service; enabled; vendor preset: disabled)  
   Active: active (running) since Mon 2021-12-06 16:55:39 UTC; 14s ago  
     Docs: https://www.postgresql.org/docs/12/static/  
  Process: 5275 ExecStartPre=/usr/pgsql-12/bin/postgresql-12-check-db-dir ${PGDATA} (code=exited, status=0/SUCCESS)  
    Main PID: 5280 (postmaster)  
      CGroup: /system.slice/postgresql-12.service  
              └─5280 /usr/pgsql-12/bin/postmaster -D /var/lib/pgsql/12/data/  
                └─5284 postgres: logger
```

Login to Postgres User, Setting Password

```
sudo su - postgres  
psql  
psql -c "alter user postgres with password 'XXXXX'"
```


ScreenShot

```
[ec2-user@ip-10-15-32-111 ~]$ sudo systemctl enable --now postgresql-12
Created symlink from /etc/systemd/system/multi-user.target.wants/postgresql-12.s
ervice to /usr/lib/systemd/system/postgresql-12.service.
[ec2-user@ip-10-15-32-111 ~]$ systemctl status postgresql-12
● postgresql-12.service - PostgreSQL 12 database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql-12.service; enabled; vendo
r preset: disabled)
   Active: active (running) since Mon 2021-12-06 16:55:39 UTC; 14s ago
     Docs: https://www.postgresql.org/docs/12/static/
   Process: 5275 ExecStartPre=/usr/pgsql-12/bin/postgresql-12-check-db-dir ${PGDA
TA} (code=exited, status=0/SUCCESS)
    Main PID: 5280 (postmaster)
      CGroup: /system.slice/postgresql-12.service
              └─5280 /usr/pgsql-12/bin/postmaster -D /var/lib/pgsql/12/data/
                  └─5284 postgres: logger
                      └─5286 postgres: checkpointer
                          └─5287 postgres: background writer
                              └─5288 postgres: walwriter
                                  └─5289 postgres: autovacuum launcher
                                      └─5290 postgres: stats collector
                                          └─5291 postgres: logical replication launcher

Dec 06 16:55:39 ip-10-15-32-111.us-east-2.compute.internal systemd[1]: Starti...
Dec 06 16:55:39 ip-10-15-32-111.us-east-2.compute.internal postmaster[5280]: ...
Dec 06 16:55:39 ip-10-15-32-111.us-east-2.compute.internal postmaster[5280]: ...
Dec 06 16:55:39 ip-10-15-32-111.us-east-2.compute.internal postmaster[5280]: ...
Dec 06 16:55:39 ip-10-15-32-111.us-east-2.compute.internal postmaster[5280]: ...
Dec 06 16:55:39 ip-10-15-32-111.us-east-2.compute.internal postmaster[5280]: ...
Dec 06 16:55:39 ip-10-15-32-111.us-east-2.compute.internal postmaster[5280]: ...
Dec 06 16:55:39 ip-10-15-32-111.us-east-2.compute.internal systemd[1]: Starte...
Hint: Some lines were ellipsized, use -l to show in full.
[ec2-user@ip-10-15-32-111 ~]$ sudo su - postgres
Last login: Mon Dec  6 16:54:23 UTC 2021 on pts/0
-bash-4.2$ psql
psql (12.9)
Type "help" for help.

postgres=#
```

Created database Lf_technology

create database Lf-technology

\l -- to view created database

Screenshot

```
[root@ip-10-15-32-111 data]# sudo su - postgres
Last login: Mon Dec 6 19:05:11 UTC 2021 on pts/0
-bash-4.2$ psql
Password for user postgres:
psql (12.9)
Type "help" for help.

postgres=# create database lf-technology;
ERROR:  syntax error at or near "-"
LINE 1: create database lf-technology;
                        ^
postgres=# create database lf_technology;
CREATE DATABASE
postgres=# \l

               List of databases
   Name          |  Owner   | Encoding | Collate  |  Ctype  | Access privileges
-----+-----+-----+-----+-----+-----
 lf_technology   | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | 
 postgres       | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | 
 template0      | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/postgres
+-----+-----+-----+-----+-----+-----
 stgres         |          |          |          |          | postgres=CTc/po
 template1      | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/postgres
+-----+-----+-----+-----+-----+-----
 stgres         |          |          |          |          | postgres=CTc/po
(4 rows)

postgres=#
```

To listen on all IP addresses

`vi /var/lib/pgsql/12/data/postgresql.conf`

```
#-----
# CONNECTIONS AND AUTHENTICATION
#-----

# - Connection Settings -

listen_addresses = '*'           # what IP address(es) to listen on;
                                  # comma-separated list of addresses;
                                  # defaults to 'localhost'; use '*' for a
ll                                # (change requires restart)
#port = 5432                     # (change requires restart)
```

To allow all hosts to login

`vi /var/lib/pgsql/12/data/pg_hba.conf`

```
# TYPE  DATABASE        USER            ADDRESS          METHOD
# "local" is for Unix domain socket connections only
local   all         all             md5
# IPv4 local connections:
host    all         all             0.0.0.0/0        md5
# IPv6 local connections:
host    all         all             ::1/128          ident
# Allow replication connections from localhost, by a user with the
# replication privilege.
local   replication all             peer
host    replication all             127.0.0.1/32     ident
host    replication all             ::1/128          ident
```

Restarting Postgresql-12

`sudo systemctl restart postgresql-12.service`

`sudo systemctl status postgresql-12.service`

```
[root@ip-10-15-32-111 data]# sudo systemctl status postgresql-12.service
● postgresql-12.service - PostgreSQL 12 database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql-12.service; enabled; vendor preset: disabled)
   Active: active (running) since Mon 2021-12-06 18:34:51 UTC; 18min ago
     Docs: https://www.postgresql.org/docs/12/static/
   Process: 6671 ExecStartPre=/usr/pgsql-12/bin/postgresql-12-check-db-dir ${PGDATA} (code=exited, status=0/SUCCESS)
    Main PID: 6676 (postmaster)
   CGroup: /system.slice/postgresql-12.service
           └─6676 /usr/pgsql-12/bin/postmaster -D /var/lib/pgsql/12/data/
             └─6679 postgres: logger
               └─6681 postgres: checkpointer
                 └─6682 postgres: background writer
                   └─6683 postgres: walwriter
                     └─6684 postgres: autovacuum launcher
                       └─6685 postgres: stats collector
                         └─6686 postgres: logical replication launcher

Dec 06 18:34:51 ip-10-15-32-111.us-east-2.compute.internal systemd[1]: Starti...
Dec 06 18:34:51 ip-10-15-32-111.us-east-2.compute.internal postmaster[6676]: ...
Dec 06 18:34:51 ip-10-15-32-111.us-east-2.compute.internal postmaster[6676]: ...
```

Editing Security Group of EC2 Pvt Instance to only allow postgres(5432) login from VPC Network(10.15.32.0/22)

Edit inbound rules [Info](#)

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules [Info](#)

Security group rule ID	Type Info	Protocol Info	Port range Info	Source Info	Description - optional Info	
sgr-08969ab414b50871a	SSH ▼	TCP	22	Custom ▼ <input data-bbox="933 535 1104 598" type="text" value="10.15.32.0/22"/>		<input type="button" value="Delete"/>
sgr-0022c85284316ecc7	PostgreSQL ▼	TCP	5432	Custom ▼ <input data-bbox="933 619 1104 682" type="text" value="10.15.32.0/22"/>		<input type="button" value="Delete"/>

Connect to PostgreSQL from above created EC2.

We have installed postgresql client in EC2 (launched in Public subnet)

Previous Postgres installation process was used

```
[ec2-user@ip-10-15-32-4 openvpn]$ psql --version
psql (PostgreSQL) 12.9
[ec2-user@ip-10-15-32-4 openvpn]$
```

psql -h 10.15.32.111 -U postgres -d postgres -W
\l – to show database created “Lf-technology”

```
[ec2-user@ip-10-15-32-4 ~]$ psql -h 10.15.32.111 -U postgres -d postgres -W
Password:
psql (12.9)
Type "help" for help.

postgres=# \l
               List of databases
  Name          | Owner   | Encoding | Collate  | Ctype    | Access privileges
-----+-----+-----+-----+-----+-----
 lf_technology  | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | 
 postgres      | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | 
 template0     | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/postgres
+
 postgres      |         |         |         |         | postgres=Ctc/po
+
 template1     | postgres | UTF8     | en_US.UTF-8 | en_US.UTF-8 | =c/postgres
+
 postgres      |         |         |         |         | postgres=Ctc/po
(4 rows)

postgres=#
```

(Optional) Connect to PostgreSQL server from your local PC (hint: use OpenVPN connection)

Allowed port 1194 on OpenVPN-Server for connecting my Host with Public IP

sgr-064baef81682d1c91	Custom TCP ▼	TCP	1194	Custom ▼	Q	bibek	Delete
27.34.104.13/32 ✕							
sgr-067c84a2d93b8613d	SSH ▼	TCP	22	Custom ▼	Q	bibek_ssh	Delete
27.34.104.13/32 ✕							

sgr-07022ba42a8375b01	Custom UDP ▼	UDP	1194	Custom ▼	Q	bibek	Delete
27.34.104.13/32 ✕							

Connected to the OpenVPN through Host on the local Machine

sudo openvpn --config client.ovpn

```
Tue Dec 7 15:00:45 2021 ROUTE_GATEWAY 192.168.1.254/255.255.255.0 IFACE=enp0s3 HWADDR=08:
Tue Dec 7 15:00:45 2021 GDG6: remote_host_ipv6=n/a
Tue Dec 7 15:00:45 2021 ROUTE6: default_gateway=UNDEF
Tue Dec 7 15:00:45 2021 TUN/TAP device tun0 opened
Tue Dec 7 15:00:45 2021 TUN/TAP TX queue length set to 100
Tue Dec 7 15:00:45 2021 /sbin/ip link set dev tun0 up mtu 1500
Tue Dec 7 15:00:46 2021 /sbin/ip addr add dev tun0 10.8.0.2/24 broadcast 10.8.0.255
Tue Dec 7 15:00:46 2021 /sbin/ip -6 addr add fd42:42:42:42::1000/112 dev tun0
Tue Dec 7 15:00:46 2021 /sbin/ip route add 18.222.3.239/32 via 192.168.1.254
Tue Dec 7 15:00:46 2021 /sbin/ip route add 0.0.0.0/1 via 10.8.0.1
Tue Dec 7 15:00:46 2021 /sbin/ip route add 128.0.0.0/1 via 10.8.0.1
Tue Dec 7 15:00:46 2021 add_route_ipv6(2000::/3 -> fd42:42:42:42::1 metric -1) dev tun0
Tue Dec 7 15:00:46 2021 /sbin/ip -6 route add 2000::/3 dev tun0
Tue Dec 7 15:00:46 2021 add_route_ipv6(::/3 -> fd42:42:42:42::1 metric -1) dev tun0
Tue Dec 7 15:00:46 2021 /sbin/ip -6 route add ::/3 dev tun0
Tue Dec 7 15:00:46 2021 add_route_ipv6(2000::/4 -> fd42:42:42:42::1 metric -1) dev tun0
Tue Dec 7 15:00:46 2021 /sbin/ip -6 route add 2000::/4 dev tun0
Tue Dec 7 15:00:46 2021 add_route_ipv6(3000::/4 -> fd42:42:42:42::1 metric -1) dev tun0
Tue Dec 7 15:00:46 2021 /sbin/ip -6 route add 3000::/4 dev tun0
Tue Dec 7 15:00:46 2021 add_route_ipv6(fc00::/7 -> fd42:42:42:42::1 metric -1) dev tun0
Tue Dec 7 15:00:46 2021 /sbin/ip -6 route add fc00::/7 dev tun0
Tue Dec 7 15:00:46 2021 Initialization Sequence Completed
```

Allowing ICMP signals to verify ping to EC2 in Pvt Subnet

ICMP signals is allowed in Security Group of EC2 in Pvt Subnet to VPC Network (10.15.32.0/22)

Inbound rules Info						
Security group rule ID	Type Info	Protocol Info	Port range Info	Source Info	Description - optional Info	
sgr-08969ab414b50871a	SSH	TCP	22	Custom <input type="text" value="Q"/>	<input type="text" value="10.15.32.0/22"/> <input type="button" value="X"/>	<input type="button" value="Delete"/>
sgr-08ce45c876c644247	All ICMP - IPv4	ICMP	All	Custom <input type="text" value="Q"/>	<input type="text" value="10.15.32.0/22"/> <input type="button" value="X"/>	<input type="button" value="Delete"/>
sgr-0022c85284316ecc7	PostgreSQL	TCP	5432	Custom <input type="text" value="Q"/>	<input type="text" value="10.15.32.0/22"/> <input type="button" value="X"/>	<input type="button" value="Delete"/>

Ping to EC2 in Pvt subnet From Host Machine Success

```
bibek@prometheus:~$ ping 10.15.32.111
PING 10.15.32.111 (10.15.32.111) 56(84) bytes of data.
From 192.168.1.254 icmp_seq=3736 Destination Net Unreachable
From 192.168.1.254 icmp_seq=3737 Destination Net Unreachable
64 bytes from 10.15.32.111: icmp_seq=8136 ttl=63 time=256 ms
64 bytes from 10.15.32.111: icmp_seq=8137 ttl=63 time=257 ms
64 bytes from 10.15.32.111: icmp_seq=8138 ttl=63 time=263 ms
64 bytes from 10.15.32.111: icmp_seq=8139 ttl=63 time=258 ms
64 bytes from 10.15.32.111: icmp_seq=8140 ttl=63 time=260 ms
64 bytes from 10.15.32.111: icmp_seq=8141 ttl=63 time=258 ms
64 bytes from 10.15.32.111: icmp_seq=8142 ttl=63 time=256 ms
64 bytes from 10.15.32.111: icmp_seq=8143 ttl=63 time=260 ms
64 bytes from 10.15.32.111: icmp_seq=8144 ttl=63 time=256 ms
64 bytes from 10.15.32.111: icmp_seq=8145 ttl=63 time=257 ms
64 bytes from 10.15.32.111: icmp_seq=8146 ttl=63 time=256 ms
64 bytes from 10.15.32.111: icmp_seq=8147 ttl=63 time=257 ms
64 bytes from 10.15.32.111: icmp_seq=8148 ttl=63 time=256 ms
64 bytes from 10.15.32.111: icmp_seq=8149 ttl=63 time=256 ms
64 bytes from 10.15.32.111: icmp_seq=8150 ttl=63 time=257 ms
64 bytes from 10.15.32.111: icmp_seq=8151 ttl=63 time=258 ms
64 bytes from 10.15.32.111: icmp_seq=8152 ttl=63 time=259 ms
```

Login to PostgreSQL 12 of EC2 in Pvt subnet From the Host Machine

```
bibek@prometheus:~$ psql -h 10.15.32.111 -U postgres -d postgres -W
Password:
psql (14.1 (Ubuntu 14.1-2.pgdg20.04+1), server 12.9)
Type "help" for help.

postgres=#
```