

ДЗ №3

Все БД, а именно директория `volumes` лежит на ЯДиске https://disk.yandex.ru/d/hho_EB50hbOvaQ. С помощью нее можно развернуть контейнер. `docker-compose` лежит в гитхабе

1. Настраиваем асинхронную репликацию

<input type="checkbox"/>	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
<input type="checkbox"/>	socialnetwork		Running (3/3)	0.41%		11 minutes ago	
<input type="checkbox"/>	redis-1 3c92b1d6798a	redis:7	Running	0.26%	6379:6379	1 hour ago	
<input type="checkbox"/>	pgmaster-1 81e79aa4a44d	postgres:15	Running	0%	5432:5432	24 minutes ago	
<input type="checkbox"/>	pgslave-1 6a1a8780f261	postgres:15	Running	0.15%	15432:5432	11 minutes ago	

```
[postgres=# select application_name, sync_state from pg_stat_replication;
 application_name | sync_state
-----+-----
 pgslave         | async
(1 row)

postgres=#
```

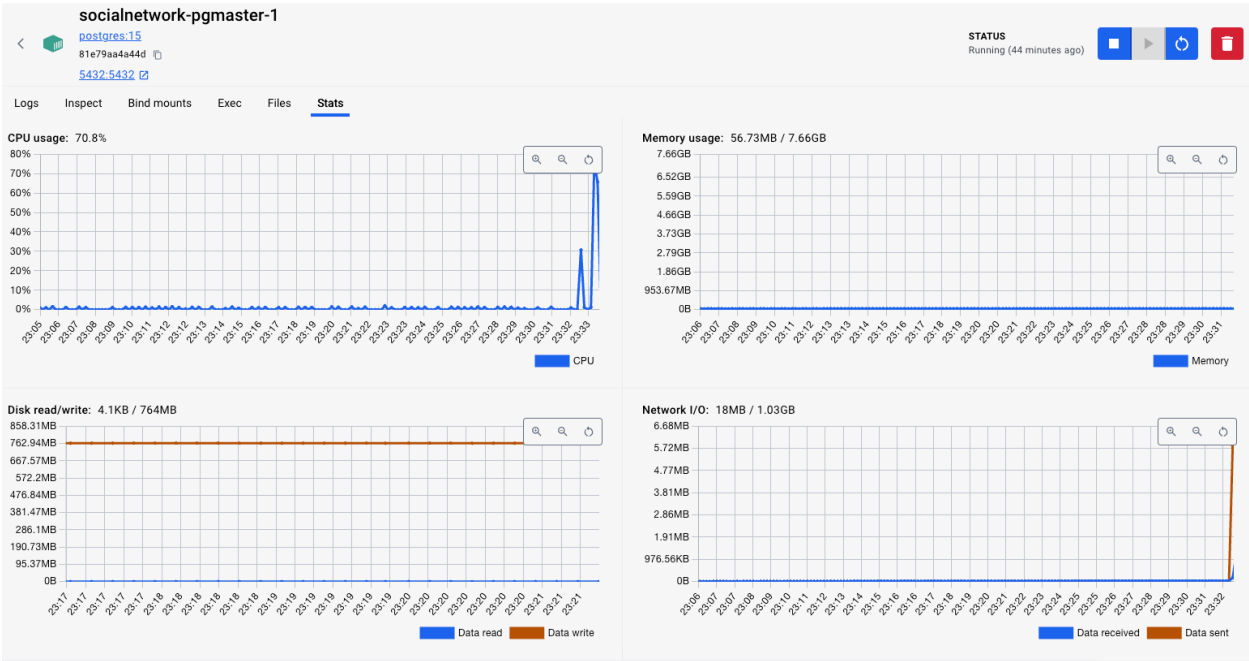
2. Перенесли на чтение ручки

```
main.py  standby.signal  docker-compose.

[postgresql]
host=localhost
port=15432
database=social_network
user=postgres
password=postgres

[redis]
```

3. Даем нагрузку на чтение Замеряем мастер до репликации



Мастер после репликации, нагрузка ушла на слэйв

Container CPU usage 66.53% / 800% (8 CPUs available)

Container memory usage 92.51MB / 7.48GB

Show charts

	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
	socialnetwork		Running (3/3)	66.53%		39 minutes ago	■ : ■
	redis-1	redis:7	Running	0.08%	6379:6379	2 hours ago	■ : ■
	pgmaster-1	postgres:15	Running	0%	5432:5432	52 minutes ago	■ : ■
	pgslave-1	postgres:15	Running	66.45%	15432:5432	39 minutes ago	■ : ■

4. Настроили 2 слейва и 1 мастер. Поточковая репликация включена

```
services:
  pgmaster:
    restart: always
    ports:
      - 5432:5432
    environment: <3 keys>
    networks:
      - pgnet
    volumes:
      - $PWD/volumes/pgmaster:/var/lib/postgresql/data

  pgslave:
    image: postgres:15
    restart: always
    ports:
      - 15432:5432
    environment: <3 keys>
    networks:
      - pgnet
    volumes:
      - $PWD/volumes/pgslave:/var/lib/postgresql/data

  pgasyncslave:
    image: postgres:15
    restart: always
    ports:
      - 25432:5432
    environment: <3 keys>
    networks:
      - pgnet
    volumes:
      - $PWD/volumes/pgasyncslave:/var/lib/postgresql/data

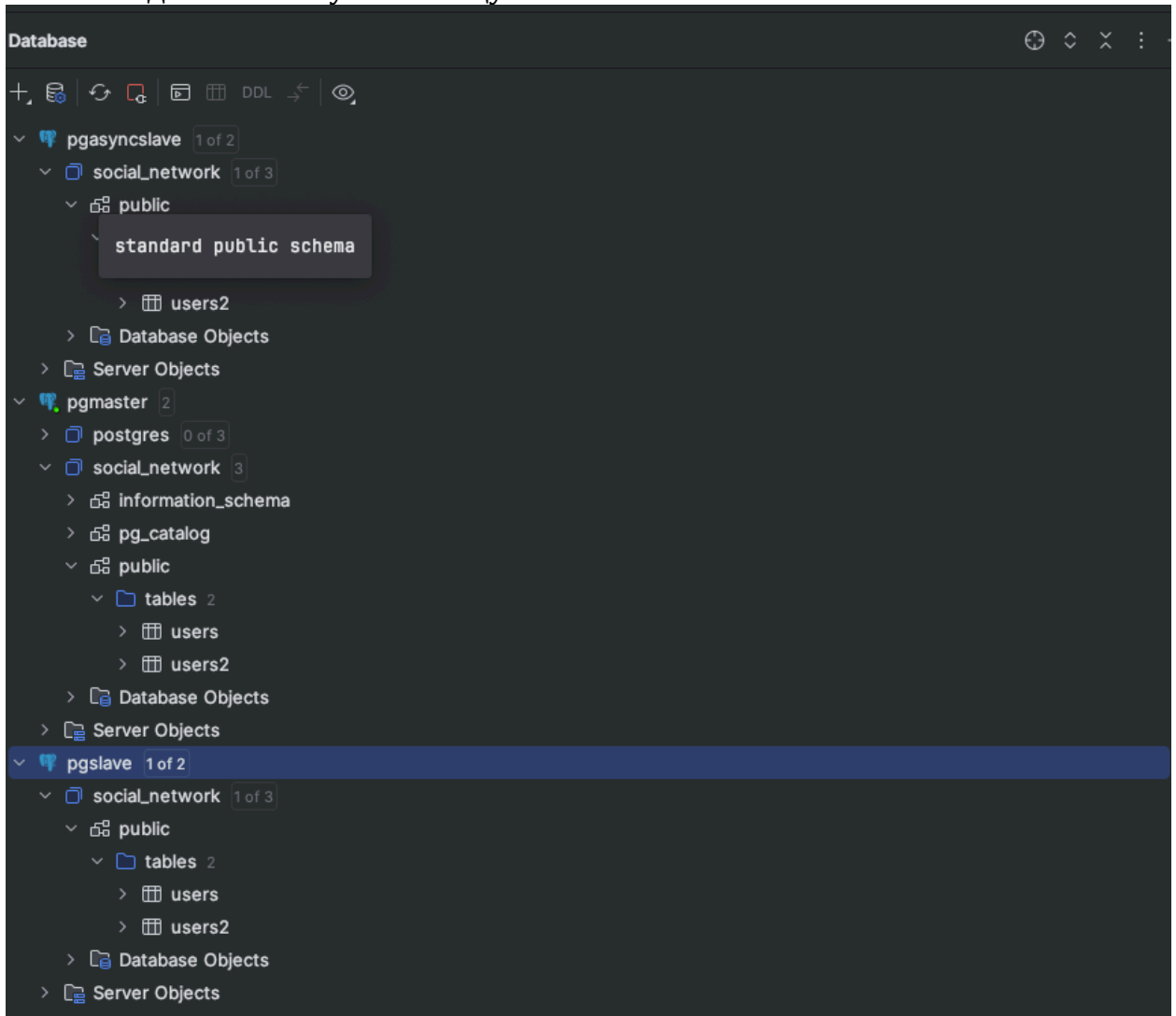
postgres=# select application_name, sync_state from pg_stat_replication;
 application_name | sync_state 
-----+-----
 pgslave          | async
 pgasyncslave     | async
(2 rows)
```

```
postgres=#
```

5. Настроили синхронную репликацию

```
postgres=# select application_name, sync_state from pg_stat_replication;
 application_name | sync_state 
-----+-----
 pgslave          | sync
 pgasyncslave     | potential
(2 rows)
```

6. Создали тестовую таблицу users2



7. Даем нагрузку на запись и убиваем pgasyncslave

Container CPU usage ⓘ 10.05% / 800% (8 CPUs available)

Container memory usage ⓘ 158.38MB / 7.48GB [Show charts](#)

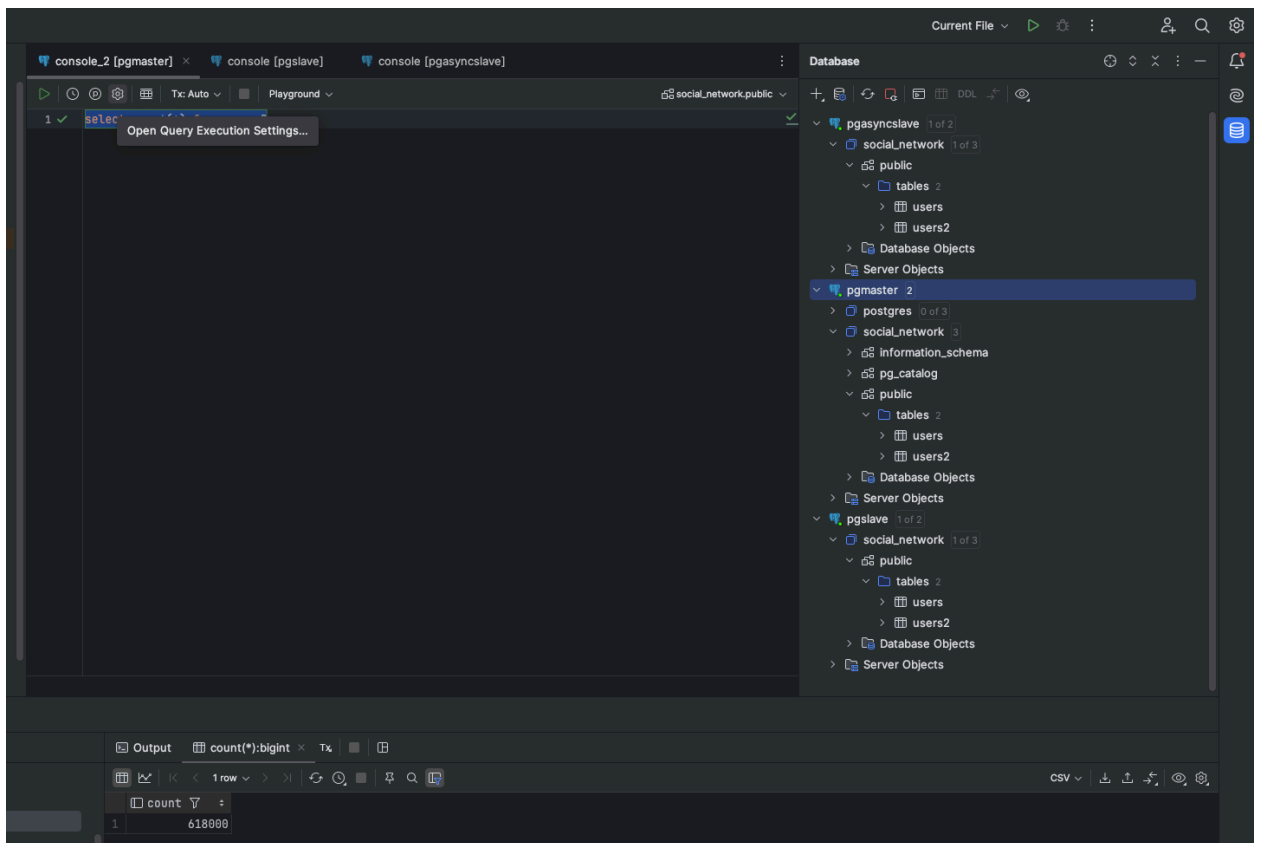
Search

Only show running containers

<input type="checkbox"/>	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
<input type="checkbox"/>	<div><div>socialnetwork</div></div>		Running (4/4)	10.05%		12 minutes ago	<div><div></div><div></div><div></div></div>
<input type="checkbox"/>	<div><div>redis-1</div><div>3c92b1d6798a ⓘ</div></div>	redis:7	Running	0.13%	6379:6379 ⓘ	2 hours ago	<div><div></div><div></div><div></div></div>
<input type="checkbox"/>	<div><div>pgmaster-1</div><div>81e79aa4a44d ⓘ</div></div>	postgres:15	Running	7.67%	5432:5432 ⓘ	12 minutes ago	<div><div></div><div></div><div></div></div>
<input type="checkbox"/>	<div><div>pgslave-1</div><div>6a1a8780f261 ⓘ</div></div>	postgres:15	Running	1.14%	15432:5432 ⓘ	1 hour ago	<div><div></div><div></div><div></div></div>
<input type="checkbox"/>	<div><div>pgasyncslave-1</div><div>6e02e18058cb ⓘ</div></div>	postgres:15	Running	1.11%	25432:5432 ⓘ	40 minutes ago	<div><div></div><div></div><div></div></div>

```
[postgres=# select application_name, sync_state from pg_stat_replication;
 application_name | sync_state 
-----+-----
 pgslave          | sync
(1 row)
```

Записали 618 000 записей в тестовую базу users2



8. Поднимаем pgsyncslave, убиваем pgmaster и промодутируем pgslave до мастера

Containers
[Give feedback](#)

Container CPU usage ⓘ
1.22% / 800% (8 CPUs available)

Container memory usage ⓘ
309.81MB / 7.48GB

[Show charts](#)

☐ Only show running containers

<input type="checkbox"/>	Name	Image	Status	CPU (%)	Port(s)	Last started	Actions
<input type="checkbox"/>	socialnetwork		Running (3/4)	1.22%		2 minutes ago	
<input type="checkbox"/>	redis-1 3c92b1d6798a	redis:7	Running	0.24%	6379:6379	3 hours ago	
<input type="checkbox"/>	pgmaster-1 81e79aa4a44d	postgres:15	Exited	0%	5432:5432	24 minutes ago	
<input type="checkbox"/>	pgslave-1 6a1a8780f261	postgres:15	Running	0.98%	15432:5432	2 hours ago	
<input type="checkbox"/>	pgsyncslave-1 6e02e18058cb	postgres:15	Running	0%	25432:5432	2 minutes ago	

Showing 5 items

Walkthroughs

```
postgres=# select pg_promote();
pg_promote
-----
t
(1 row)

postgres=#
```

Правим конфиги и получаем

```
[postgres=# select application_name, sync_state from pg_stat_replication;
 application_name | sync_state
-----+-----
 pgasynslave      | quorum
(1 row)
```

И видим, что потерь транзакций нет

