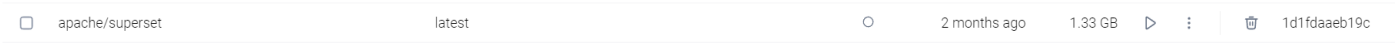
- Установка образа SuperSet

```
sudo docker pull apache/superset
```

```
rsolanov@Main:~$ sudo docker pull apache/superset
[sudo] password for rsolanov:
Using default tag: latest
latest: Pulling from apache/superset
fa911571db18: Download complete
5862c84e1a84: Download complete
038060471cd4: Download complete
59846b9a3e38: Download complete
85f3c3bf960e: Download complete
0eebf436771f: Download complete
2d429b9e73a6: Download complete
96db55eefd49: Download complete
569062951d93: Download complete
22370d9525db: Download complete
afe8284d6858: Download complete
a8b392447c92: Download complete
df6aea6891df: Download complete
08a9cc494c01: Download complete
7626108c66a9: Download complete
d447e55d51db: Download complete
b6562208960a: Download complete
Digest: sha256:1d1fdaaeb19ce9cdba71620ee1cc6117d73813b2f3b422ce5a1bf752c247b7c0
Status: Downloaded newer image for apache/superset:latest
docker.io/apache/superset:latest
```

Image (Docker Desktop):



- Установка ключа

  openssl rand -base64 42

```
rsolanov@Main:~$ openssl rand -base64 42
CpN0/aEvMaU5He2IYUa13MvNS1C2W0fKeSuOo6+kiRnGBHoELhO1RXwc
```

  CpN0/aEvMaU5He2IYUa13MvNS1C2W0fKeSuOo6+kiRnGBHoELhO1RXwc

- Запуск докер-контейнера

  `sudo docker run -d -p 8080:8088 -e "SUPERSET_SECRET_KEY= CpN0/aEvMaU5He2IYUa13MvNS1C2W0fKeSuOo6+kiRnGBHoELhO1RXwc" --name superset apache/superset`

```
rsolanov@Main:~$ sudo docker run -d -p 8080:8088 -e "SUPERSET_SECRET_KEY= CpN0/aEvMaU5He2IYUa13MvNS1C2W0fKeSuOo6+kiRnGBH
oELhO1RXwc" --name superset apache/superset
aea83333a482685d66300ff2ab9c79e2c8d94250a718aaf5f0c4eb645775521e
```

aea83333a482685d66300ff2ab9c79e2c8d94250a718aaf5f0c4eb645775521e

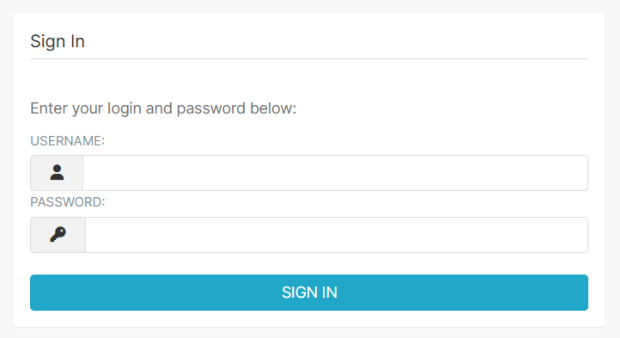
- Проверка что контейнер запущен

Docker Desktop (Container)

CLI Ubuntu (Container)

```
rsolanov@Main:~$ docker ps
CONTAINER ID   IMAGE              COMMAND                  CREATED         STATUS                   PORTS                    NAMES
aea83333a482   apache/superset    "/usr/bin/run-server…"   2 minutes ago   Up 2 minutes (healthy)   0.0.0.0:8080->8088/tcp   superset
```

- Проверка работы сервиса
  `http://localhost:8080/login/`



- Инициализация сервиса

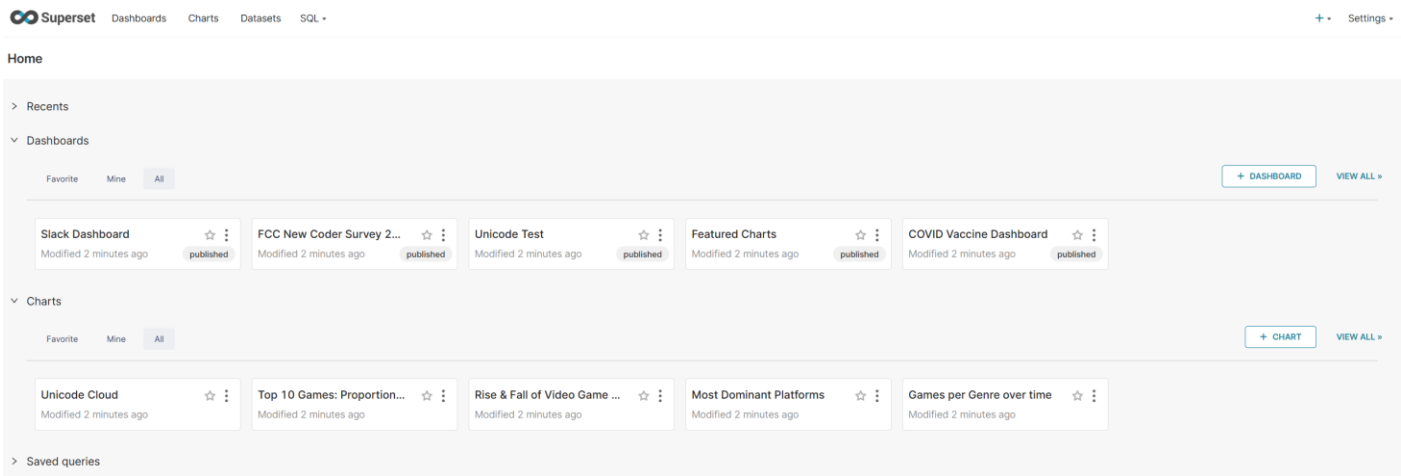
```
sudo docker exec -it superset superset fab create-admin \
          --username admin \
          --firstname Superset \
          --lastname Admin \
          --email admin@superset.com \
          --password admin
```

```
/usr/local/lib/python3.10/site-packages/flask_limiter/extension.py:333: UserWarning: Using the in-memory storage for tra
cking rate limits as no storage was explicitly specified. This is not recommended for production use. See: https://flask
-limiter.readthedocs.io#configuring-a-storage-backend for documentation about configuring the storage backend.
  warnings.warn(
2025-01-15 16:04:55,779:INFO:superset.utils.screenshots:No PIL installation found
2025-01-15 16:04:56,151:INFO:superset.utils.pdf:No PIL installation found
Recognized Database Authentications.
Admin User admin created.
```

sudo docker exec -it superset superset db upgrade
sudo docker exec -it superset superset load_examples
sudo docker exec -it superset superset init

- Проверка работы сервиса

  `http://localhost:8080/superset/welcome/`



- Настройка подключения к ClickHouse

```
sudo docker exec -it aea83333a482 /bin/bash
pip install clickhouse-connect
exit
```

```
rsolanov@Main:~$ sudo docker exec -it aea83333a482 /bin/bash
[sudo] password for rsolanov:
superset@aea83333a482:/app$ pip install clickhouse-connect
Defaulting to user installation because normal site-packages is not writeable
Collecting clickhouse-connect
  Downloading clickhouse_connect-0.8.14-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata (3.4 kB)
Requirement already satisfied: certifi in /usr/local/lib/python3.10/site-packages (from clickhouse-connect) (2024.2.2)
Requirement already satisfied: urllib3>=1.26 in /usr/local/lib/python3.10/site-packages (from clickhouse-connect) (1.26.
18)
Requirement already satisfied: pytz in /usr/local/lib/python3.10/site-packages (from clickhouse-connect) (2024.1)
Requirement already satisfied: zstandard in /usr/local/lib/python3.10/site-packages (from clickhouse-connect) (0.22.0)
Collecting lz4 (from clickhouse-connect)
  Downloading lz4-4.3.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata (3.7 kB)
Downloading clickhouse_connect-0.8.14-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (978 kB)
   ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 978.5/978.5 kB 9.9 MB/s eta 0:00:00
Downloading lz4-4.3.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (1.3 MB)
   ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 1.3/1.3 MB 9.8 MB/s eta 0:00:00
Installing collected packages: lz4, clickhouse-connect
Successfully installed clickhouse-connect-0.8.14 lz4-4.3.3
superset@aea83333a482:/app$
```

- Перезапуск контейнера

  sudo docker restart aea83333a482

```
rsolanov@Main:~$ sudo docker restart aea83333a482
aea83333a482
```

- Проверка работы ClickHouse

```
rsolanov@Main:~$ clickhouse-client
ClickHouse client version 24.3.12.76.altinitystable (altinity build).
Connecting to localhost:9000 as user default.
Password for user (default):
Connecting to localhost:9000 as user default.
Connected to ClickHouse server version 24.3.12.

Warnings:
 * Linux transparent hugepages are set to "always". Check /sys/kernel/mm/transparent_hugepage/enabled
 * Delay accounting is not enabled, OSIOWaitMicroseconds will not be gathered. You can enable it using `echo 1 > /proc/s
ys/kernel/task_delayacct` or by using sysctl.

Main. :) select 1

SELECT 1

Query id: 150b8f51-112e-49bd-acbf-e7f0908ec826

   ┌─1─┐
1. │ 1 │
   └───┘

1 row in set. Elapsed: 0.002 sec.
```

- Гистограмма: "Распределение цен на блюда"

```
SELECT
  round(item_price, -1) as price_range,
  count() as dish_count
FROM raw_layer.item
GROUP BY price_range
ORDER BY price_range
```

- Круговая диаграмма: "Распределение блюд по категориям"

```
SELECT
  item_category_code,
  count(*) as dish_count
FROM raw_layer.item
GROUP BY item_category_code
```

- Линейный график: "Динамика добавления новых блюд в меню"

```
SELECT
  toDate(mt_insert_dt) as insert_date,
  count(*) as new_dishes
FROM raw_layer.item
GROUP BY insert_date
ORDER BY insert_date
```

- Тепловая карта: "Популярность блюд по времени года и категории"

```
SELECT
  toQuarter(mt_insert_dt) as quarter,
  item_category_code,
  count(*) as dish_count
FROM raw_layer.item
GROUP BY quarter, item_category_code
```

- Таблица с сортировкой: "Топ-10 самых дорогих блюд"

```
SELECT
  item_name,
  item_category_code,
  item_price
FROM raw_layer.item
ORDER BY item_price DESC
LIMIT 10
```

- DashBoard «Статистика ресторана»