```
ilyamzy@ilyamzy:~$ docker -v
Docker version 28.0.1, build 068a01e
ilyamzy@ilyamzy:~$ docker run --name getstart -d docker/getting-started
aa7d6e79a74eea39037c1495a30b5bc5197dad7f099ef9a4a614e4f855f85bc0
ilyamzy@ilyamzy:~$ docker inspect getstart
 'NetworkSettings": {
       "Bridge": "",
       "SandboxID": "9e3c841088be21bd2c32999b6795bef36047a6127914e66d4347cdf4ddd9ce93",
       "SandboxKey": "/var/run/docker/netns/9e3c841088be",
              "80/tcp": null
 ← → ♂ ( localhost:80
                                                                                                                                            D | ⊕ :
 🔡 🔼 YouTube 👔 codeforces.com 🖸 Hosocru 👂 Twitch 💽 Cooбщество S... 🤲 Состояние сче... 😓 KinoGo.la 👵 Киного – Смот... 🧦 Яндекс Музык... 💆 СS:GO News &... 🛕 Мой диск – Go... 🔞 Яндекс Диск
                       dockerLabs Getting Started
                       Getting Started
                                                                                                            Table of contents
                                             Getting Started
                                                                                                            The command you just ran
                       Our Application
                                                                                                            The Docker Dashboard
                       Updating our App
                                            The command you just ran
                       Sharing our App
                                                                                                            What is a container image?
                                            Congratulations! You have started the container for this tutorial! Let's first explain the
                                            command that you just ran. In case you forgot, here's the command:
                       Using Bind Mounts
                                             docker run -d -p 80:80 docker/getting-started
                       Using Docker Compose
                       Image Building Best Practices
                                             You'll notice a few flags being used. Here's some more info on them:
                       What Next?
                                              • -p 80:80 - map port 80 of the host to port 80 in the container

    docker/getting-started - the Image to use

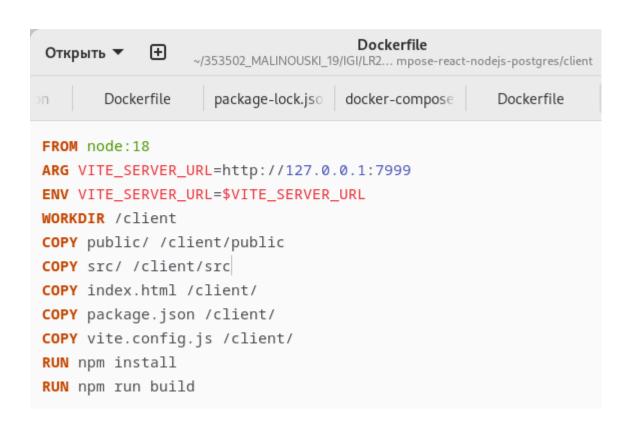
                                              You can combine single character flags to shorten the full command. As an example, the command above could be written as:
                                              docker run -dp 80:80 docker/getting-started
                                             The Docker Dashboard
                                             Before going any further, we want to highlight the Docker Dashboard, which gives you a
                                             quick view of the containers running on your machine. It provides you access to container
                                             logs, lets you get a shell inside the container, and allows you to easily manage container
                                             lifecycle (stop, remove, etc.).
                                             To access the dashboard, follow the instructions in the Docker Desktop manual. If you oper the dashboard now, you will see this tutorial running! The container name (jolly_bouman
                                             below) is a randomly created name. So, you'll most likely have a different n
                                                                           GeometricLib
                            \oplus
  Открыть 🔻
                                                              ~/353502 MALINOUSKI 19/IGI/LR2
 FROM python:3.10-alpine
 WORKDIR /app
 COPY geometric_lib /app/geometric_lib
 COPY script.py /app/script.py
```

CMD ["python", "script.py"]

```
По выборо бол полу типлово

(предоставления в протоворования протоворования в протоворова
```





```
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           \oplus
                                                                                      ~/353502_MALINOUS
  GeometricLib
                   database.js
                                     Dockerfile
                                                     GeomtricLib
                                                                      GeomtricLib
                                                                                    docker-compose.y
services:
   postgres:
       container_name: database
            - "5431:5432"
        image: postgres
        environment:
            POSTGRES_USER: "${POSTGRES_USER}"
            POSTGRES_PASSWORD: "${POSTGRES_PASSWORD}"
            POSTGRES_DB: ${POSTGRES_DB}
        volumes:
            - ./docker_test_db:/var/lib/postgresql/data
        healthcheck:
            test: ["CMD-SHELL", "sh -c 'pg_isready -U ${POSTGRES_USER} -d ${POSTGRES_DB}'"]
            interval: 55
            timeout: 60s
           retries: 5
           start_period: 80s
    server:
        container_name: server
        build:
            context: ./server
            dockerfile: Dockerfile
            - "7999:8000"
        command: bash -c "npx prisma migrate reset --force && npm start"
        environment:
            DATABASE_URL: "${DATABASE_URL}"
            PORT: "${SERVER_PORT}"
        depends_on:
           postgres:
               condition: service healthy
    client:
        container_name: client
        build:
            context: ./client
            dockerfile: Dockerfile
        command: bash -c "npm run preview"
        ports:
            - "4172:4173"
        depends_on:
            - server
```

NETWORK ID	NAME	DRIVER	SCOPE
b1dfe61fa74f	bridge	bridge	local
f2a8bf956e47	docker-compose-react-nodejs-postgres_default	bridge	local
c674bbe2481a	fullstack-react-node-postgresql_fullstack-network	bridge	local
e81d17288974	host	host	local
401f8689ad90	none	null	local
121012aa3d3d	pern-stack_default	bridge	local
425f9b55c90a	starter-postgres-express-react_default	bridge	local

```
-react-nodejs-postgres$ docker network inspect bridg
        "Name": "bridge",
        "Id": "b1dfe61fa74f7c1cb2ebd62384247b8e5c023a8dbc633adf0295c9fe9951d0c8",
        "Created": "2025-03-06T02:05:54.540958737+03:00",
        "Scope": "local",
        "Driver": "bridge",
        "EnableIPv6": false,
        "IPAM": {
            "Driver": "default",
"Options": null,
            "Config": [
                    "Subnet": "172.18.0.0/16",
                    "Gateway": "172.18.0.1"
        "Internal": false,
        "ConfigFrom": {
           "Network": ""
        },
"ConfigOnly": false,
        "Containers": {},
        "Options": {
            "com.docker.network.bridge.default_bridge": "true",
            "com.docker.network.bridge.enable_icc": "true",
            "com.docker.network.bridge.enable_ip_masquerade": "true",
            "com.docker.network.bridge.host_binding_ipv4": "0.0.0.0",
            "com.docker.network.bridge.name": "docker0",
"com.docker.network.driver.mtu": "1500"
        "Labels": {}
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network inspect none
        "Name": "none",
        "Id": "401f8689ad904ce5d68d47c1cf78e1c101edde48f0c5896a961bd5a8aec33a07",
        "Created": "2025-02-27T18:04:11.152425625+03:00",
        "Scope": "local",
        "Driver": "null",
        "EnableIPv6": false,
        "IPAM": {
            "Driver": "default",
"Options": null,
            "Config": []
        "Attachable": false,
        "Ingress": false,
        "ConfigFrom": {
           "Network": ""
        "ConfigOnly": false,
        "Containers": {},
        "Options": {},
        "Labels": {}
```

```
-nodejs-postgres$ docker network inspect host
       "Name": "host",
       "Id": "e81d17288974f6651eda3fc77ebc93fe22444fcbc3ee3a05318f1ef4c4d16eee",
       "Created": "2025-02-27T18:04:11.165516271+03:00",
       "Scope": "local",
       "Driver": "host",
       "EnableIPv6": false,
       "IPAM": {
           "Driver": "default",
           "Options": null,
           "Config": []
       "Ingress": false,
       "ConfigFrom": {
    "Network": ""
       "ConfigOnly": false,
       "Containers": {},
       "Options": {},
       "Labels": {}
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network create
```

-driver bridge my_bridge

```
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network ls
NETWORK ID
              NAME
                                                                  DRIVER
                                                                            SCOPE
b1dfe61fa74f
              bridge
                                                                            local
                                                                  bridge
f2a8bf956e47
              docker-compose-react-nodejs-postgres_default
                                                                  bridge
c674bbe2481a
              fullstack-react-node-postgresql_fullstack-network
                                                                  bridge
                                                                            local
e81d17288974 host
                                                                  host
                                                                            local
91d5c913571f
              my_bridge
                                                                  bridge
                                                                            local
401f8689ad90 none
                                                                            local
121012aa3d3d pern-stack_default
                                                                  bridge
                                                                            local
425f9b55c90a starter-postgres-express-react_default
                                                                  bridge
                                                                            local
```

```
ocker-compose-react-nodejs-postgres$ docker run -d --name my
_container --network my_bridge alpine sleep 1000
Unable to find image 'alpine:latest' locally
latest: Pulling from library/alpine
f18232174bc9: Already exists
Digest: sha256:a8560b36e8b8210634f77d9f7f9efd7ffa463e380b75e2e74aff4511df3ef88c
Status: Downloaded newer image for alpine:latest
efc8f836baa730e2e108232931204037e634dedf7eacced24b6f3b7e747c2a74
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker inspect my_conta
iner
```

```
"NetworkSettings":
   "Bridge": "",
   "SandboxID": "e923bba5eefb9bbfec0220b0b810a6a8aad81c508d19abb262699f82db0826cc",
   "HairpinMode": false,
   "LinkLocalIPv6Address": "",
   "LinkLocalIPv6PrefixLen": 0,
   "Ports": {},
   "SandboxKey": "/var/run/docker/netns/e923bba5eefb",
   "SecondaryIPAddresses": null,
   "SecondaryIPv6Addresses": null,
   "EndpointID": "",
   "Gateway": "",
   "GlobalIPv6Address": "",
   "GlobalIPv6PrefixLen": 0,
   "IPAddress": "",
   "IPPrefixLen": 0,
   "IPv6Gateway": "",
   "MacAddress": "",
   "Networks": {
       "my_bridge": {
           "IPAMConfig": null,
           "Aliases": [
               "efc8f836baa7"
           "NetworkID": "91d5c913571fcd4bc25d3049c30abf4851bd035105aa5547574d9ea031a77581",
           "EndpointID": "d6aee7b27d20af8604fc651ac8fb63d341695246a82d754ccfb4aa3cca41a3dd",
           "Gateway": "172.23.0.1",
           "IPAddress": "172.23.0.2",
           "IPPrefixLen": 16,
           "IPv6Gateway": "",
           "GlobalIPv6Address": "",
           "GlobalIPv6PrefixLen": 0,
           "MacAddress": "02:42:ac:17:00:02",
           "DriverOpts": null
```

```
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network disconne
ct my_bridge my_container
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
efc8f836baa7 alpine "sleep 1000" About a minute ago Up About a minute my_container
```

```
"NetworkSettings": {
      "Bridge": "",
      "SandboxID": "e923bba5eefb9bbfec0220b0b810a6a8aad81c508d19abb262699f82db0826cc",
      "HairpinMode": false,
      "LinkLocalIPv6Address": "",
     "LinkLocalIPv6PrefixLen": 0,
     "Ports": {},
      "SandboxKey": "/var/run/docker/netns/e923bba5eefb",
      "SecondaryIPAddresses": null,
      "SecondaryIPv6Addresses": null,
      "EndpointID": "",
     "Gateway": "",
      "GlobalIPv6Address": "",
      "GlobalIPv6PrefixLen": 0,
      "IPAddress": "",
      "IPPrefixLen": 0,
      "IPv6Gateway": "",
      "MacAddress": "",
      "Networks": {}
                                                             act-nodejs-postgres$ docker network create
-driver bridge my_bridge2
6581887a2455af79fc8b86238d8b844e8e2c766a9471fb47e238ccd866e828cc
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network ls
NETWORK ID
             NAME
                                                                DRIVER
                                                                          SCOPE
b1dfe61fa74f bridge
                                                                         local
                                                                bridge
f2a8bf956e47 docker-compose-react-nodejs-postgres_default
                                                                bridge
                                                                          local
c674bbe2481a fullstack-react-node-postgresql_fullstack-network
e81d17288974 host
                                                                         local
                                                                bridge
                                                                host
91d5c913571f
             my_bridge
                                                                bridae
                                                                          local
6581887a2455 my_bridge2
                                                                bridge
                                                                          local
401f8689ad90
                                                                null
             none
121012aa3d3d
             pern-stack_default
                                                                bridge
                                                                          local
425f9b55c90a
             starter-postgres-express-react_default
                                                                bridge
                                  19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker run -d --name co
ntainer1 --network my_bridge2 alpine sleep 1000
docker run -d --name container2 --network my_bridge2 alpine sleep 1000
docker run -d --name container3 --network my_bridge2 alpine sleep 1000
67268fd2f9f9a134f926a3c93e88f36c01eaf05605d5b7c0225fcf17d9c102db
4402bb6f688f8bc5c4918fad02fd7fb6f81abd70d0d94c8543b0829d9851930f
034aafe58ab2c931a9aca33b43a61b3d34cfb1163972c46487c0087817f9e436
            "Networks": {
               "my_bridge2": {
                   "IPAMConfig": null,
                       "67268fd2f9f9"
                   "NetworkID": "6581887a2455af79fc8b86238d8b844e8e2c766a9471fb47e238ccd866e828cc",
                   "EndpointID": "d63a3c9050a8f8f0c5592577d62ad003ab13e9323cb9300f8b1da73b1b56f303",
                   "Gateway": "172.24.0.1",
                   "IPAddress": "172.24.0.2",
                   "IPPrefixLen": 16,
                   "IPv6Gateway": "",
                   "GlobalIPv6Address": "",
                   "GlobalIPv6PrefixLen": 0,
                   "MacAddress": "02:42:ac:18:00:02",
                   "DriverOpts": null
```

```
"Networks": {
                "my_bridge2": {
                   "IPAMConfig": null,
                   "Aliases": [
                       "4402bb6f688f"
                   "NetworkID": "6581887a2455af79fc8b86238d8b844e8e2c766a9471fb47e238ccd866e828cc",
                   "EndpointID": "5946d8720c0b7465a929fe017e91d31fe575f6342ffe515e0b821a0469080e99",
                   "Gateway": "172.24.0.1",
                   "IPAddress": "172.24.0.3",
                   "IPPrefixLen": 16,
                   "IPv6Gateway": "",
                   "GlobalIPv6Address": "",
                   "GlobalIPv6PrefixLen": 0,
                   "MacAddress": "02:42:ac:18:00:03",
                   "DriverOpts": null
            "Networks": {
                "my_bridge2": {
                    "IPAMConfig": null,
                       "034aafe58ab2"
                   "NetworkID": "6581887a2455af79fc8b86238d8b844e8e2c766a9471fb47e238ccd866e828cc",
                   "Gateway": "172.24.0.1",
                   "IPAddress": "172.24.0.4",
                   "IPPrefixLen": 16,
                   "IPv6Gateway": "",
                   "GlobalIPv6Address": "",
                   "GlobalIPv6PrefixLen": 0,
                   "MacAddress": "02:42:ac:18:00:04",
                   "DriverOpts": null
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker exec -it contain
er1 sh
/ # ping 172.24.03
PING 172.24.03 (172.24.0.3): 56 data bytes
64 bytes from 172.24.0.3: seq=0 ttl=64 time=0.164 ms
64 bytes from 172.24.0.3: seq=1 ttl=64 time=0.140 ms
64 bytes from 172.24.0.3: seq=2 ttl=64 time=0.131 ms
64 bytes from 172.24.0.3: seq=3 ttl=64 time=0.216 ms
64 bytes from 172.24.0.3: seq=4 ttl=64 time=0.160 ms
64 bytes from 172.24.0.3: seq=5 ttl=64 time=0.141 ms
64 bytes from 172.24.0.3: seq=6 ttl=64 time=0.181 ms
64 bytes from 172.24.0.3: seq=7 ttl=64 time=0.215 ms
/ # ping 172.24.0.4
PING 172.24.0.4 (172.24.0.4): 56 data bytes
64 bytes from 172.24.0.4: seq=0 ttl=64 time=0.146 ms
64 bytes from 172.24.0.4: seq=1 ttl=64 time=0.131 ms
64 bytes from 172.24.0.4: seq=2 ttl=64 time=0.183 ms
64 bytes from 172.24.0.4: seq=3 ttl=64 time=0.122 ms
64 bytes from 172.24.0.4: seq=4 ttl=64 time=0.182 ms
64 bytes from 172.24.0.4: seq=5 ttl=64 time=0.212 ms
```

```
Swarm initialized: current node (y4c50sq8um0i30gjmpnl28yna) is now a manager.
To add a worker to this swarm, run the following command:
    docker swarm join --token SWMTKN-1-12crg9w34k7gweql0o4pd3s8d31yu4cearcx5p68txfcf3j3cx-b25w9h9bk0jmtj4mrs
hvdwleo 192.168.1.103:2377
To add a manager to this swarm, run 'docker swarm join-token manager' and follow the instructions.
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network create -
-driver overlay my_overlay
n7zwhi0lgqc3r3zuls17rb0er
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network inspect
my_overlay
        "Name": "my_overlay",
        "Id": "n7zwhi0lgqc3r3zulsl7rb0er",
        "Created": "2025-03-06T01:26:45.715479997Z",
        "Scope": "swarm",
"Driver": "overlay",
        "EnableIPv6": false,
        "IPAM": {
            "Driver": "default",
"Options": null,
            "Config": [
                     "Subnet": "10.0.1.0/24",
                     "Gateway": "10.0.1.1"
        },
"Internal": false,
        "Attachable": false,
        "Ingress": false,
        "ConfigFrom": {
    "Network": ""
        "ConfigOnly": false,
        "Containers": null,
        "Options": {
            "com.docker.network.driver.overlay.vxlanid_list": "4097"
        "Labels": null
```

```
.
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network create
-driver overlay my_overlay2
p03ol3qmub7l1k11fyf8dur1v
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network inspect
my_overlay2
        "Name": "my_overlay2",
        "Id": "p03ol3qmub7l1k11fyf8dur1v",
        "Created": "2025-03-06T01:29:44.39083418Z",
        "Scope": "swarm",
        "Driver": "overlay",
        "EnableIPv6": false,
        "IPAM": {
            "Driver": "default",
            "Options": null,
            "Config": [
                     "Subnet": "10.0.2.0/24",
                     "Gateway": "10.0.2.1"
        "Internal": false,
        "Attachable": false,
        "Ingress": false,
        "ConfigFrom": {
    "Network": ""
        "ConfigOnly": false,
        "Containers": null,
        "Options": {
            "com.docker.network.driver.overlay.vxlanid_list": "4098"
        "Labels": null
                                                                             -postgres$ docker network ls
```

```
NETWORK ID
                                                                             SCOPE
              NAME
                                                                   DRIVER
b1dfe61fa74f
                                                                             local
                                                                   bridge
f2a8bf956e47
              docker-compose-react-nodejs-postgres_default
                                                                   bridge
                                                                             local
edeadcb67d19
              docker_gwbridge
                                                                   bridge
c674bbe2481a
              fullstack-react-node-postgresql_fullstack-network
                                                                   bridae
e81d17288974
                                                                             local
0fczrpjtnmub
                                                                             swarm
              ingress
91d5c913571f
              my_bridge
                                                                   bridge
                                                                              local
6581887a2455
              my_bridge2
                                                                   bridge
              my_overlay
n7zwhi0lgqc3
                                                                   overlay
                                                                             swarm
p03ol3qmub7l
              my_overlay2
401f8689ad90
                                                                   null
                                                                             local
              none
              pern-stack_default
121012aa3d3d
                                                                   bridge
425f9b55c90a starter-postgres-express-react_default
                                                                   bridge
                                                                             local
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network rm my_ov
erlay2
my_overlay2
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network ls
NETWORK ID
              NAME
                                                                   DRIVER
                                                                             SCOPE
b1dfe61fa74f
              bridge
                                                                             local
                                                                   bridge
f2a8bf956e47
              {\tt docker-compose-react-nodejs-postgres\_default}
                                                                   bridge
edeadcb67d19
              docker_gwbridge
                                                                   bridae
c674bbe2481a
              fullstack-react-node-postgresql_fullstack-network
                                                                   bridge
                                                                             local
e81d17288974
                                                                   host
0fczrpjtnmub
              ingress
                                                                   overlay
                                                                             swarm
91d5c913571f
              my_bridge
                                                                   bridge
              my_bridge2
6581887a2455
                                                                   bridge
                                                                             local
n7zwhi0lgqc3
              my_overlay
                                                                              swarm
401f8689ad90
                                                                   null
                                                                             local
              none
              pern-stack_default
121012aa3d3d
                                                                   bridge
425f9b55c90a
              starter-postgres-express-react_default
                                                                   bridge
                                                                             local
```

```
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker network create
-driver host my_host
Error response from daemon: only one instance of "host" network is allowed
                                                                  ct-nodejs-postgres$ docker push docker-compose-react-nodejs-pos
tgres-client:latest
The push refers to repository [docker.io/library/docker-compose-react-nodejs-postgres-client]
e97434324e9a: Preparing
1e41fc496ad4: Preparing
30860e6e88d2: Preparing
cd2b6a45a969: Preparing
7ed19a98ee64: Preparing
98195222df3e: Waiting
b19b86d1bbdb: Waiting
e4857f94a65d: Waiting
f270deee6385: Waiting
e129ba4f1574: Waiting
780658909072: Waiting
eae0a84b6ca2: Waiting
4b017a36fd9c: Waiting
20a9b386e10e: Waiting
f8217d7865d2: Waiting
01c9a2a5f237: Waiting
denied: requested access to the resource is denied
ilyamzy@ilyamzy:~/353502_MALINOUSKI_19/IGI/LR2/docker-compose-react-nodejs-postgres$ docker push docker-compose-react-nodejs-pos
tgres-server:latest
The push refers to repository [docker.io/library/docker-compose-react-nodejs-postgres-server]
d5121b6f409e: Preparing
b90d39e678ae: Preparing
751ea16358fd: Preparing
32dea0c4127a: Preparing
1fc178678329: Preparing
leced85b5efd: Waiting
f270deee6385: Waiting
e129ba4f1574: Waiting
780658909072: Waiting
eae0a84b6ca2: Waiting
4b017a36fd9c: Waiting
20a9b386e10e: Waiting
f8217d7865d2: Waiting
01c9a2a5f237: Waiting
denied: requested access to the resource is denied
```