

# Инструкция по установке экземпляра программного обеспечения INP.

**Для установки экземпляра программного обеспечения Indoors Navigation Platform используется технология контейнеризации DOCKER.**

**Необходимо наличие сервера со следующими характеристиками:**

Рекомендации к оборудованию и программному обеспечению:

CPU: Intel Xeon E-5 2620-v3 (2 шт.);

RAM: 32 Гбайт;

SSD: 1 Тбайт;

Операционная система Ubuntu Server 20.04

**Процесс установки системы:**

Запустить сервер и загрузить операционную систему Ubuntu Server 20.04.

Пройти авторизацию, запустите командную строку (CLI) и выполните следующие шаги.

## **1. Установка Docker.**

```
sudo apt update
```

```
sudo apt install apt-transport-https ca-certificates curl software-properties-common
```

```
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -
```

```
sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu focal stable"
```

```
sudo apt update
```

```
apt-cache policy docker-ce
```

```
sudo apt install docker-ce
```

```
sudo systemctl status docker
```

## 2. Установка docker-compose

```
sudo curl -L "https://github.com/docker/compose/releases/download/1.26.0/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose  
sudo chmod +x /usr/local/bin/docker-compose  
docker-compose --version
```

## 3. Установка nginx.

```
sudo apt update  
sudo apt install nginx  
sudo ufw app list  
sudo ufw allow 'Nginx HTTP'  
sudo ufw status  
systemctl status nginx
```

## 4. Конфигурирование nginx.

```
sudo mkdir -p /var/www/your_domain/html  
sudo chown -R $USER:$USER /var/www/your_domain/html  
sudo chmod -R 755 /var/www/your_domain  
sudo nano /etc/nginx/sites-available/your_domain  
server {  
    listen 80;  
    listen [::]:80;  
    root /var/www/your_domain/html;  
    index index.html index.htm index.nginx-debian.html;  
    server_name your_domain www.your_domain;  
    location / {  
        proxy_pass http://localhost:2080;  
        proxy_set_header X-Real-IP $remote_addr;  
        proxy_set_header Host $host;  
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;  
    }  
}
```

```
sudo ln -s /etc/nginx/sites-available/your_domain /etc/nginx/sites-enabled/
```

```
sudo nano /etc/nginx/nginx.conf
```

```
...
```

```
http {
```

```
...
```

```
server_names_hash_bucket_size 64;
```

```
...
```

```
}
```

```
...
```

```
sudo nginx -t
```

```
sudo systemctl restart nginx
```

## 5. Размещение файла docker-compose.yml на сервере.

```
version: '3'
```

```
networks:
```

```
  indoors:
```

```
    ipam:
```

```
      config:
```

```
        - subnet: 10.0.0.0/24
```

```
services:
```

```
  mariadb:
```

```
    image: mariadb
```

```
    container_name: mariadb
```

```
    restart: "always"
```

```
    networks:
```

```
      - indoors
```

```
    ports:
```

```
      - '3306:3306'
```

```
    environment:
```

```
      MYSQL_DATABASE: 'inervice'
```

```
      MYSQL_USER: 'developer'
```

```
      MYSQL_PASSWORD: '8NffRHBF^7vrLp'
```

```
      MYSQL_ROOT_PASSWORD: '#QvOCuXekGqvXh'
```



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volumes:

- /data/pods/mariadb:/var/lib/mysql
- /data/pods/mariadb/etc:/etc/mysql

healthcheck:

test: ["CMD", "mysqladmin", "ping", "-h", "localhost"]  
interval: 10s  
timeout: 2s  
retries: 10

deploy:

resources:

limits:

cpus: '2.0'  
memory: 5000M

reservations:

cpus: '1.0'  
memory: 2000M

redis:

image: redis

container\_name: redis

restart: 'always'

networks:

- indoors

environment:

- ALLOW\_EMPTY\_PASSWORD=yes
- REDIS\_DISABLE\_COMMANDS=FLUSHDB,FLUSHALL

ports:

- '6379:6379'

volumes:

- /data/pods/redis/data:/bitnami/redis/data
- /data/pods/redis:/opt/bitnami/redis/mounted-etc/

clickhouse:

image: yandex/clickhouse-server

container\_name: clickhouse

restart: 'always'



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networks:

- indoors

depends\_on:

- zookeeper

ports:

- 8123:8123

- 9000:9000

- 9009:9009

volumes:

- /data/pods/clickhouse:/var/lib/clickhouse/

zookeeper:

image: zookeeper

container\_name: zookeeper

restart: 'always'

networks:

- indoors

ports:

- 2181:2181

- 2182:2182

volumes:

- /data/pods/zookeeper:/var/lib/zookeeper

rabbitmq:

image: rabbitmq

container\_name: rabbitmq

restart: 'always'

networks:

- indoors

environment:

RABBITMQ\_DEFAULT\_USER: 'guest'

RABBITMQ\_DEFAULT\_PASS: 'guest'

RABBITMQ\_ERLANG\_COOKIE: ''

ports:

- 5672:5672

- 15672:15672



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memcached:

image: memcached:1.5.10

container\_name: memcached

restart: 'always'

networks:

- indoors

command: memcached -m 190 -o modern v

ports:

- 11211:11211

kafka:

image: confluentinc/cp-kafka

container\_name: kafka

restart: 'always'

networks:

- indoors

depends\_on:

- zookeeper

ports:

- 9092:9092

- 29092:29092

environment:

KAFKA\_BROKER\_ID: 1

KAFKA\_ZOOKEEPER\_CONNECT: 'zookeeper:2181'

KAFKA\_LISTENER\_SECURITY\_PROTOCOL\_MAP: PLAINTEXT:PLAINTEXT,PLAINTEXT\_INTERNAL:PLAINTEXT

KAFKA\_ADVERTISED\_LISTENERS: PLAINTEXT://kafka:9092,PLAINTEXT\_INTERNAL://localhost:29092

KAFKA\_OFFSETS\_TOPIC\_REPLICATION\_FACTOR: 1

KAFKA\_TRANSACTION\_STATE\_LOG\_MIN\_ISR: 1

KAFKA\_TRANSACTION\_STATE\_LOG\_REPLICATION\_FACTOR: 1

elk:

image: sebp/elk

container\_name: elk

restart: 'always'

networks:

- indoors



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ports:

- 5601:5601
- 9200:9200
- 5044:5044
- 5959:5959

volumes:

- /data/pods/elasticsearch:/var/lib/elasticsearch

deploy:

resources:

limits:

- cpus: '1.0'
- memory: 2000M

reservations:

- cpus: '0.5'
- memory: 1000M

intileserver:

image: registry.indoorsnavi.pro/intileserver:1.0.2

container\_name: intileserver

restart: 'always'

networks:

- indoors

ports:

- 8080:8080

volumes:

- /data/pods/intileserver:/data

inervice:

image: registry.indoorsnavi.pro/inervice:2.0.3

container\_name: inervice

restart: 'always'

environment:

- INSERVICE\_MARIADB\_HOST: 'mariadb'
- INSERVICE\_MARIADB\_USERNAME: 'developer'
- INSERVICE\_MARIADB\_PASSWORD: '8NffRHBF^7vrLp'
- INSERVICE\_REDIS\_HOST: 'redis'

```
INSERVICE_ELASTICSEARCH_HOST: 'elk'  
INSERVICE_ELASTICSEARCH_USERNAME: 'elastic'  
INSERVICE_ELASTICSEARCH_PASSWORD: 'changeme'  
INSERVICE_RABBITMQ_HOST: 'rabbitmq'  
INSERVICE_RABBITMQ_POD_HOST: 'rabbitmq'  
INSERVICE_RABBITMQ_USERNAME: 'guest'  
INSERVICE_RABBITMQ_PASSWORD: 'password'  
INSERVICE_LOGSTASH_HOST: 'elk'  
INSERVICE_LOGSTASH_PORT: '5959'  
INSERVICE_CLICKHOUSE_HOSTS: '["clickhouse"]'  
INSERVICE_CLICKHOUSE_HOST: 'clickhouse'  
INSERVICE_CLICKHOUSE_PORT: '8123'  
INSERVICE_MEMCACHED_HOST: 'memcached'  
KAFKA_HOST_PORT: 'kafka:9092'  
  
networks:  
- indoors  
  
ports:  
- 2080:80  
  
volumes:  
- /data/pods/inservice:/home/developer/inservice/storage
```

## 6. Запуск сервисов при помощи docker-compose.

```
sudo docker login registry.indoorsnavi.pro
```

```
Username: demo
```

```
Password: Demo4096+
```

```
sudo docker-compose up -d
```

## 7. Загрузка шаблона базы данных.

```
sudo docker cp database.sql mariadb:/home
```

```
sudo docker exec -it mariadb bash
```

```
cd /home
```

```
mysql -uroot -p
```

```
CREATE USER 'developer'@'%' IDENTIFIED BY 'password';
```

```
CREATE DATABASE inservice CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci;
```





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```
CREATE DATABASE inservice_demo CHARACTER SET utf8mb4 COLLATE utf8mb4_unicode_ci;  
GRANT ALL PRIVILEGES ON inservice_demo.* TO 'developer'@'%';  
GRANT ALL PRIVILEGES ON inservice.* TO 'developer'@'%';  
FLUSH PRIVILEGES;  
mysql -uroot -p inservice<database.sql  
exit
```