docker compose

docker-compose.yml file example
version: '3'
services:
  db:
    image: mysql:5.7
    volumes:
      - "mysql-data:/var/lib/mysql" **# volume name**
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: wordpress
      MYSQL_DATABASE: wordpress
  wordpress:
    depends_on:
     - db
    image: wordpress:latest
    links:
     - db
    ports:
      - "8080:80"
    restart: always
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_PASSWORD: wordpress
volumes: **# map mount point to host volume**
  mysql-data: **# volume name**
    driver: cio   **# volume plugin**
    driver_opts: **# volume options**
      profile: "MYSQL" **# profile name**

docker volume cleanup

List unused volume
```
docker volume ls -f dangling=true
```

Remove all unused volumes
```
docker volume prune
```

docker volume create

Create docker volume with volume plugin and profile
```
docker volume create --driver cio --name foo --opt profile=GOLD
```

docker run with -v flag

Launch container with volume from volume plugin cio
```
docker run -it --volume-driver cio -v foo:/tmp --name foo \
alpine sh
```

docker run with --mount flag

Launch container with volume from volume plugin cio
```
docker run -it \
--mount source=foo,target=/tmp,volume-driver=cio --name foo \
alpine sh
```

docker service create

Deploy service with volume from volume plugin cio
```
docker service create \
--replicas 1 \
--detach=false \
-e MYSQL_ROOT_PASSWORD=mysecret \
--mount source=mysql-data,target=/var/lib/mysql,volume-driver=cio,volume-opt=profile=MYSQL \
--name mysql \
mysql
```

glossary

anonymous – unnamed volume assigned long unique id

bind mount – volume with mount point anywhere on host filesystem

named – volume assigned explicit name when mounted

tmpfs – mount stored in host system memory only

volume – mount type managed by docker in /var/lib/docker

-v, --mount flag

driver - name of volume plugin

opt - volume options

source – name of host volume

target – mount point in container

volume-driver – name of volume plugin

volume-opt – volume options supported by volume plugin