Code Nation

Docker & MySQL

Running locally

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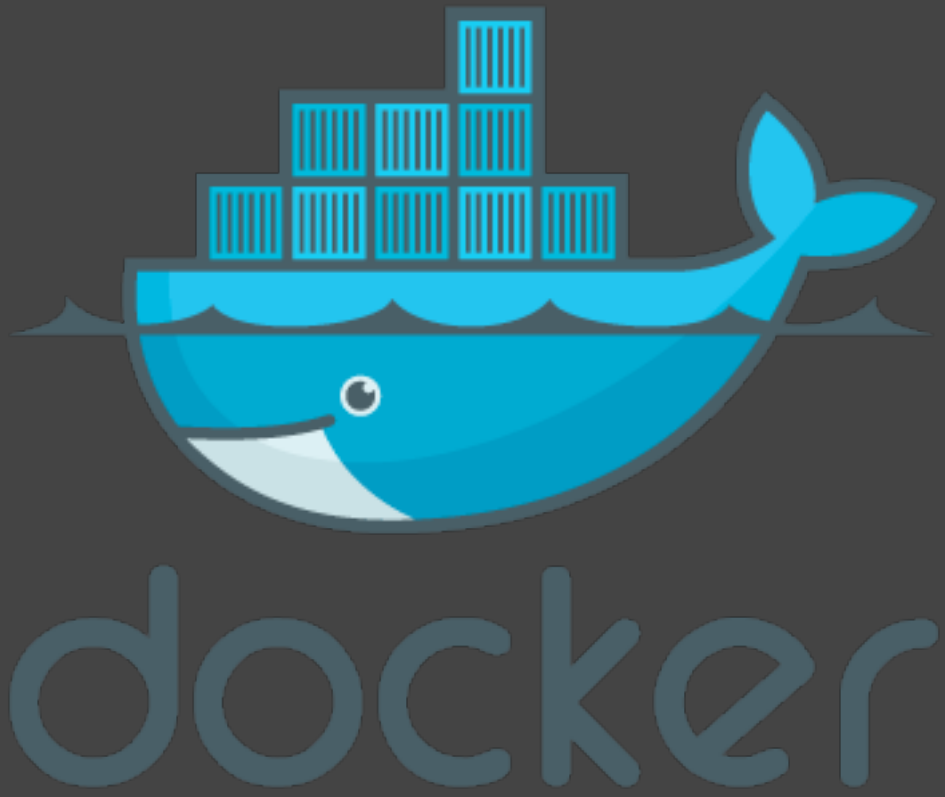

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Acquiring MySQL

- Pull the MySQL image into your local docker registry

- `docker pull mysql/mysql-server:latest`


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Remember: When you start a container you get an ID

Running MySQL

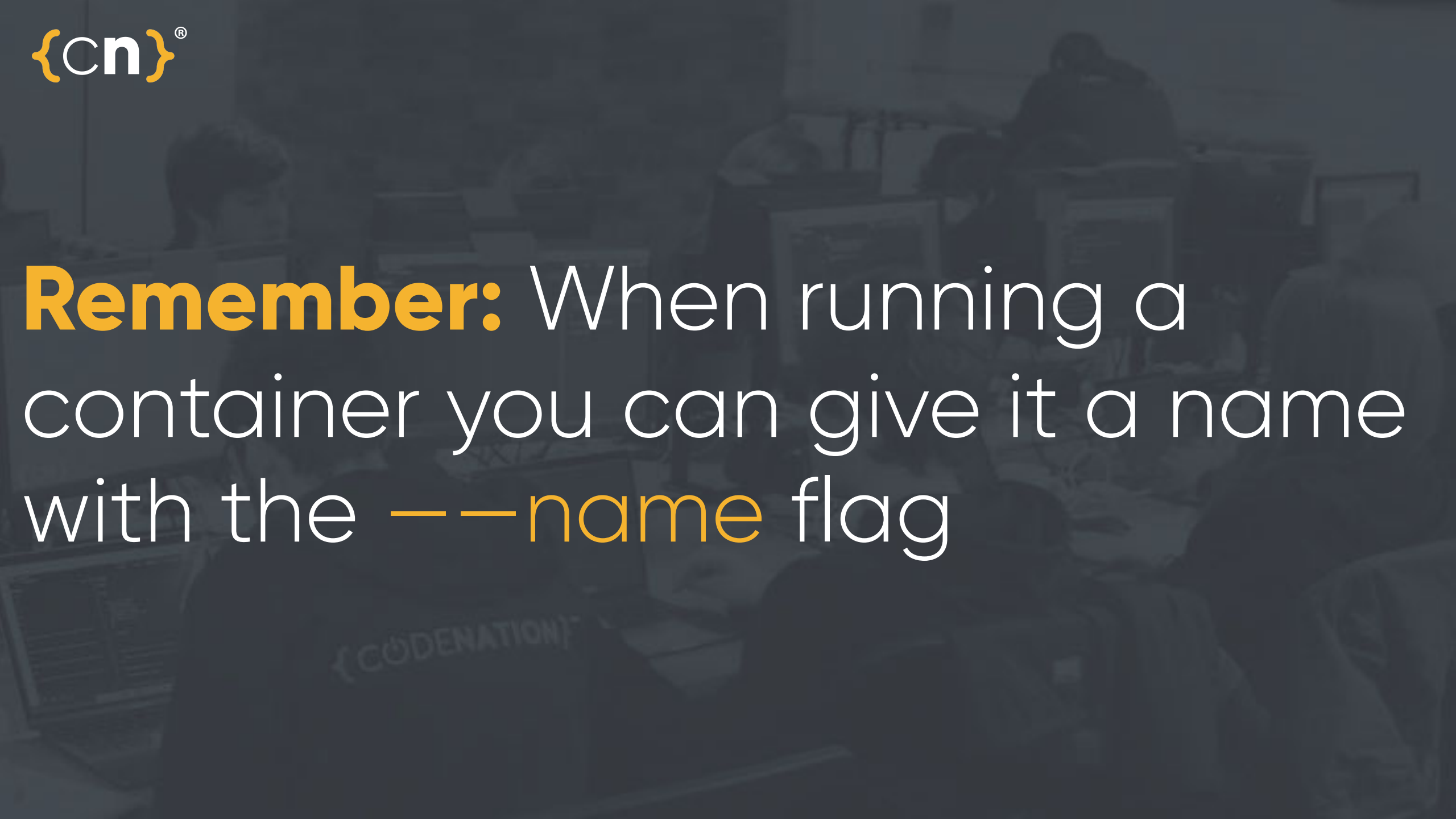
- It's possible to run the container and keep the data in a managed volume

- docker volume create mysql-data
- docker volume create mysql-config
- docker run -dp 3306:3306 -v mysql-config:/etc -v mysql-data:/var/lib/mysql mysql/mysql-server:latest

Running MySQL

- It's possible to run the container and keep the data in a local folder mounted as a volume

- mkdir data
- mkdir config
- docker run -dp 3306:3306 -v $(pwd)/config:/etc -v $(pwd)/data:/var/lib/mysql mysql/mysql-server:latest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Remember: When running a container you can give it a name with the --name flag

Initial Setup

- MySQL requires being set up with a root user, this is standard SQL security practice.
- A one-time first boot auto generated password will be logged when the container first starts, this MUST be captured.
- WARNING: This password will be shown ONCE ONLY, if you miss it, or forget it, you must restart the setup process.

Initial Setup

- To grab the container logs
- docker logs <container name or ID>
- Look for a line that begins with:
- [Entrypoint] GENERATED ROOT PASSWORD:
- The temporary password will be on this line.

Initial Setup

- Once you have the root password, you must configure mysql.
- Enter the container
- docker exec -it <container name or ID> mysql -uroot -p
- Enter the automatically generated password when prompted, note that it will not show you any characters, this is a security feature.

Initial Setup

- Once inside the mysql client (running in the docker container)
- Alter the root user password to something you can remember
- ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY 'PASSWORD';
- Please note 'PASSWORD' should be the password you want to use (the quotes are part of SQL syntax and not part of the password).

Initial Setup

- Allow the root user to connect to the mysql server from outside of the container.
- UPDATE mysql.user SET host="%" WHERE user="root";
- You may now exit the container with:
- exit
- It may be necessary to stop the running container and start a new one for changes to take effect.

Enter the MySQL container

- It's possible to run enter container like so

- docker exec -it <id | name> mysql -uroot -p

Monitoring Docker Containers

- You can list your running containers like so

- List all running containers
- `docker container ls`

- List all containers, running and stopped
- `docker container ls -la`

Stopping & Cleaning up Containers

- docker stop <container id or name>

- To remove one stopped container
- docker rm <docker container or name>

- To remove ALL stopped containers
- docker prune