Keycloak on Docker

Tekgainers

Running Keycloak on Docker

```
docker run --name keycloak -d -p 8080:8080 -e KEYCLOAK_ADMIN=admin -e KEYCLOAK_ADMIN_PASSWORD=admin quay.io/keycloak/keycloak:latest start-dev
```

Keycloak connecting to mysql database

Step 1: Create Network so that Keycloak can talk to Mysql

docker network create keycloak-network

Step 2: Start Mysql

docker run -p 3306:3306 --name mysql -d --net keycloak-network -e MYSQL_DATABASE=keycloak -e MYSQL_USER=keycloak -e MYSQL_PASSWORD=password -e MYSQL_ROOT_PASSWORD=root_password mysql

Step 3: Run keycloak under the same network with addition env variables.

docker run -p 8080:8080 --name keycloak --net keycloak-network -e KEYCLOAK_ADMIN=admin -e KEYCLOAK_ADMIN_PASSWORD=admin -e KC_DB=mysql -e KC_DB_URL=jdbc:mysql://mysql:3306/keycloak -e KC_DB_USERNAME=keycloak -e KC_DB_PASSWORD=password quay.io/keycloak/keycloak:latest start-dev

Running container with Persistent Volume

Run mysql again with following command:

docker run -v G:/docker/volume:/var/lib/mysql -p 3306:3306 --name mysql -d --net keycloak-network -e MYSQL_DATABASE=keycloak -e MYSQL_USER=keycloak -e MYSQL_PASSWORD=password -e MYSQL_ROOT_PASSWORD=root_password mysql

What about Production Mode?

Don't worry, we have captured that as well here in this video:

docker run -v G:/keycloak:/opt/keycloak/conf -p 8443:8443 --net keycloak-network -e KEYCLOAK_ADMIN=admin -e KEYCLOAK_ADMIN_PASSWORD=admin -e KC_DB=mysql -e KC_DB_URL=jdbc:mysql://mysql:3306/keycloak?useSSL=false -e KC_DB_USERNAME=keycloak -e KC_DB_PASSWORD=password -e KC_HOSTNAME=localhost quay.io/keycloak/keycloak:latest start --auto-build --db=mysql
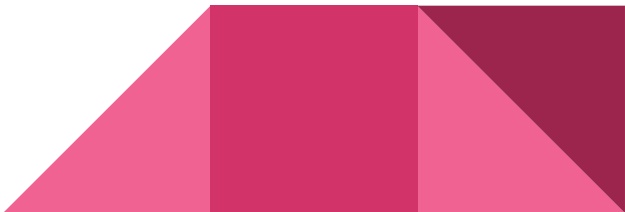
Optimized Keycloak Docker Image

```
FROM quay.io/keycloak/keycloak:latest as builder

ENV KC_HEALTH_ENABLED=true
ENV KC_METRICS_ENABLED=true
ENV KC_FEATURES=token-exchange
ENV KC_DB=mysql
# Install custom providers
RUN curl -sL https://github.com/aerogear/keycloak-metrics-spi/releases/download/2.5.3/keycloak-metrics-spi-2.5.3.jar -o
/opt/keycloak/providers/keycloak-metrics-spi-2.5.3.jar

RUN /opt/keycloak/bin/kc.sh build

FROM quay.io/keycloak/keycloak:latest
COPY --from=builder /opt/keycloak/ /opt/keycloak/
WORKDIR /opt/keycloak
# for demonstration purposes only, please make sure to use proper certificates in production instead
RUN keytool -genkeypair -storepass password -storetype PKCS12 -keyalg RSA -keysize 2048 -dname "CN=server" -alias server -ext
"SAN:c=DNS:localhost,IP:127.0.0.1" -keystore conf/server.keystore
# change these values to point to a running postgres instance
ENV KC_DB_URL=jdbc:mysql://mysql:3306/keycloak
ENV KC_DB_USERNAME=keycloak
ENV KC_DB_PASSWORD=password
ENV KC_HOSTNAME=localhost
ENTRYPOINT ["/opt/keycloak/bin/kc.sh", "start"]
```