

CURL Honest Broker Deployment Guide

Overview

This document describes the steps required to deploy the CURL Honest Broker application. There are currently two options for deploying CURL Honest Broker. Option 1 is with the Docker container system via a docker image file. Option 2 is via a Java JAR file. These options are described further in the following sections.

Option 1: Docker Based Deployment

Requirements

- Desktop operating system: Mac OS X Yosemite 10.10.3 or above, Windows 10, Ubuntu (14.04, 16.04, 16.10, 17.04), CentOS, Debian, Fedora
- Docker CE (latest stable)

Installing Docker Software

1. Download Docker for your platform from www.docker.com.
2. Install Docker by opening the installation file.
3. Login into Docker Hub from a terminal window using your Docker ID and password:

```
$ docker login
```

Login with your Docker ID to push and pull images from Docker Hub. If you don't have a Docker ID, head over to <https://hub.docker.com> to create one.

Username: ***your docker username***

Password: ***your docker password***

Login Succeeded

Deploying CURL Honest Broker Docker Images

From a terminal window, use the following commands to deploy the CURL Honest Broker docker images:

1. Create a directory to hold the configuration file for CURL Honest Broker:

```
$ mkdir ~/curl-honestbroker
```
2. Create a file named *docker-compose.yml* in the *~/curl-honestbroker* directory and add the following to it:

```

version: "3"
services:
  db:
    image: cudd2v/curl-honestbroker-db:1.0.0-BETA
    ports:
      - 5432:5432
    volumes:
      - curl-honestbroker-db:/var/lib/postgresql/data

  app:
    image: cudd2v/curl-honestbroker:1.0.0-BETA
    command: sh -c '/app/wait-for db:5432 -- java -jar
curl-honestbroker.jar'
    depends_on:
      - db
    ports:
      - 8080:8080
    volumes:
      - curl-honestbroker:/curl-honestbroker

volumes:
  curl-honestbroker-db:
  curl-honestbroker:

```

3. Use docker-compose to deploy and start the CURL Honest Broker containers:

```

$ docker-compose up -d
Creating network "docker_default" with the default driver
Creating volume "docker_curl-honestbroker-db" with default
driver
Creating volume "docker_curl-honestbroker" with default driver
Pulling db (cudd2v/curl-honestbroker-db:0.0.8-SNAPSHOT)...
0.0.8-SNAPSHOT: Pulling from cudd2v/curl-honestbroker-db
ad74af05f5a2: Already exists
8996b4a29b2b: Already exists
bea3311ef15b: Already exists
b1b9eb0ac9c8: Already exists
1d6d551d6af0: Already exists
ba16377760f9: Already exists
5c7e398ed428: Already exists
a948a487814f: Already exists
ef71004ea9bc: Already exists
89f456d258cb: Already exists
a870c27b09fd: Already exists

```

```
3a8722c26002: Already exists
86c7c3fcab7c: Already exists
8e460787708a: Pull complete
e876ecde6d4c: Pull complete
Digest:
sha256:a10d8bf04af5e62ebc59d8d45574cf61631ee05adfbec9352d4f5a12
f453499b
Status: Downloaded newer image for
cudd2v/curl-honestbroker-db:0.0.8-SNAPSHOT
Pulling app (cudd2v/curl-honestbroker:0.0.8-SNAPSHOT)...
0.0.8-SNAPSHOT: Pulling from cudd2v/curl-honestbroker
d5c6f90da05d: Already exists
1300883d87d5: Already exists
c220aa3cfc1b: Already exists
2e9398f099dc: Already exists
dc27a084064f: Already exists
c0bf323d5027: Already exists
5b09765af9b4: Already exists
d71f2b157db1: Pull complete
17b05c8c7013: Pull complete
5acf644c4c64: Pull complete
0224834fe0e7: Pull complete
Digest:
sha256:8caa3e56df1421837db8f440c2189fe0d4c6936ae7b2d6ac1f869ffe
2ca69ca0
Status: Downloaded newer image for
cudd2v/curl-honestbroker:0.0.8-SNAPSHOT
Creating docker_db_1 ...
Creating docker_db_1 ... done
Creating docker_app_1 ...
Creating docker_app_1 ... done
```

From a browser navigate to: *http://localhost:8080* to access the CURL Honest Broker application.

Stopping and Starting Docker CURL Honest Broker Containers

From a terminal window, use the following commands to stop the CURL Honest Broker docker container:

1. Change directory to `~/curl-honestbroker` or wherever you created the `docker-compose.yml` file for CURL Honest Broker:
\$ cd ~/curl-honestbroker

2. Use docker-compose to stop the containers:

```
$ docker-compose stop  
Stopping docker_app_1 ... done  
Stopping docker_db_1 ... done
```

From a terminal window, use the following commands to start the CURL Honest Broker docker containers:

1. Change directory to ~/curl-honestbroker or wherever you created the docker-compose.yml file for CURL Honest Broker

```
$ cd ~/curl-honestbroker
```

2. Use docker-compose to start the containers:

```
$ docker-compose start  
Starting db ... done  
Starting app ... done
```

Removing CURL Honest Broker Application

From a terminal window, use the following commands to remove the CURL Honest Broker docker containers, associated volumes, and images. Note that this will also remove all data that was uploaded into the CURL Honest Broker application.

1. Change directory to ~/curl-honestbroker or wherever you created the docker-compose.yml file for CURL Honest Broker:

```
$ cd ~/curl-honestbroker
```

2. Use docker-compose to remove the containers, its associated volumes, and images:

```
$ docker-compose down --volumes --rmi all  
Stopping docker_app_1 ... done  
Stopping docker_db_1 ... done  
Removing docker_app_1 ... done  
Removing docker_db_1 ... done  
Removing network docker_default  
Removing volume docker_curl-honestbroker-db  
Removing volume docker_curl-honestbroker  
Removing image cudd2v/curl-honestbroker-db:1.0.0-BETA  
Removing image cudd2v/curl-honestbroker:1.0.0-BETA
```

Running on a Different Network Port

If you are already running an application on network port 8080, you may configure CURL Honest Broker to use a different port.

1. Change directory to ~/curl-honestbroker or wherever you created the docker-compose.yml file for CURL Honest Broker:

```
$ cd ~/curl-honestbroker
```

2. Use docker-compose to remove any existing containers:

```
$ docker-compose down
Stopping docker_app_1 ... done
Stopping docker_db_1 ... done
Removing docker_app_1 ... done
Removing docker_db_1 ... done
Removing network docker_default
```

3. Edit the *docker-compose.yml* file and change the left occurrence of 8080 to another number, such as 9090 in the following example. Note that if you need to change the PostgreSQL server port number, then change the left occurrence of 5432 to another number.

```
version: "3"
services:
  db:
    image: cudd2v/curl-honestbroker-db:1.0.0-BETA
    ports:
      - 5432:5432
    volumes:
      - curl-honestbroker-db:/var/lib/postgresql/data

  app:
    image: cudd2v/curl-honestbroker:1.0.0-BETA
    command: sh -c '/app/wait-for db:5432 -- java -jar
curl-honestbroker.jar'
    depends_on:
      - db
    ports:
      - 9090:8080
    volumes:
      - curl-honestbroker:/curl-honestbroker

volumes:
  curl-honestbroker-db:
  curl-honestbroker:
```

4. Use docker-compose to deploy an container that will now use the new network port:

```
$ docker-compose up -d
Creating network "docker_default" with the default driver
Creating docker_db_1 ...
Creating docker_db_1 ... done
```

```
Creating docker_app_1 ...  
Creating docker_app_1 ... done
```

5. Navigate to *<http://localhost:9090>* or whatever new port you chose.

Option 2: Java JAR Based Deployment

Requirements

- Desktop operating system: Mac OS X 10.10 or above, Windows 7 or 10, Ubuntu 14 or above, CentOS, Debian, Fedora
- Oracle Java JRE 1.8
- PostgreSQL 9.6

Installing Oracle Java JRE 1.8

1. From a terminal window use the following commands to determine if Oracle Java 1.8 is installed (note that update version may be different on your system):

```
$ java -version  
java version "1.8.0_121"  
Java(TM) SE Runtime Environment (build 1.8.0_121-b13)  
Java HotSpot(TM) 64-Bit Server VM (build 25.121-b13, mixed mode)
```
2. If the java command is not found or version 1.8 is not installed, then download it from the Oracle website at:
<http://www.oracle.com/technetwork/java/javase/downloads/jre8-downloads-2133155.html>
3. Follow the instructions, provided on the Oracle website, to install Java JRE 1.8.

Installing PostgreSQL 9.6

If you are not already running PostgreSQL, then install it using a Linux package manager such as yum, apt, rpm, or brew. Otherwise, download it from the PostgreSQL website.

Deploying CURL Honest Broker Application

Mac OS X or Linux

1. Create a directory where you will install the CURL Honest Broker application files, e.g. ~/curl-honestbroker.
2. From a browser window navigate to <https://github.com/CUD2V/curl-honestbroker/releases> and download the curl-honestbroker.jar, curl-honestbroker.mv.db, and curl-honestbroker.sh files into the the curl-honestbroker directory.

3. Edit the curl-honestbroker.sh file and set the CURL_HONESTBROKER_BASE_DIRECTORY variable to point to the directory you created in step 1.
4. From a terminal window, enable execute permission for the curl-honestbroker.sh file:

```
$ chmod u+x ~/curl-honestbroker/curl-honestbroker.sh
```

Windows

1. Create a directory where you will install the CURL Honest Broker application files, e.g. \Users\username\curl-honestbroker.
2. From a browser window navigate to <https://github.com/CUD2V/curl-honestbroker/releases> and download the curl-honestbroker.jar, curl-honestbroker.mv.db, and curl-honestbroker.sh files into the the curl-honestbroker directory.
3. Edit the curl-honestbroker.sh file and set the CURL_HONESTBROKER_BASE_DIRECTORY variable to point to the curl-honestbroker directory.

TODO: Need to add reference to creating honestbroker database and procedures.

Starting CURL Honest Broker Application

Mac OS X or Linux

1. Execute the curl-honestbroker.sh script.

Windows

1. Execute the curl-honestbroker.bat file.

Stopping CURL Honest Broker Application

1. Type CTRL-C in the terminal window where the CURL Honest Broker application is running.

Removing CURL Honest Broker Application

1. Delete the curl-honestbroker directory and its contents.

Running on a Different Network Port

If you are already running an application on network port 8080, you may configure CURL Honest Broker to use a different port.

1. Change directory to where you copied the CURL Honest Broker files.
2. Edit `curl-honestbroker.sh` (Linux) or `curl-honestbroker.bat` (Windows) and change the `server.port` value to another number, such as 9090 in this example

```
java -jar  
$CURL_HONESTBROKER_BASE_DIRECTORY/curl-honestbroker.jar  
--server.port=9090
```

3. Execute the `curl-honestbroker.sh` (Linux) or `curl-honestbroker.bat` (Windows) to start the CURL Honest Broker application and then navigate to *<http://localhost:9090>* or whatever new port you chose.