Fedbird - tutorial - local setup

We go through the steps necessary to setup the Fedbird project on a local machine.

The tutorial is tested on Ubunut 18.04 and 20.04.

Prerequisites

The following need to be installed on your local machine: git, docker, docker-composer,

Retrieving the code and data

1. In a `root_path` of your choice.
2. Clone the Scaleout GitHub Fedn repo, and checkout the right version

```
git clone https://github.com/scaleoutsystems/fedn.git
cd fedn
git checkout v0.2.3
```

3. In `root_path/fedn/test` clone the FedBird project

```
git clone https://github.com/aidotse/fedbird.git
cd fedbird
```

4. In `root_path/fedn/test/fedbird` copy the data or make a soft link to the data

```
ln -s <path_to_fedbird_data> data
```

5. Package the client code.

```
tar -cvzf package/fedbird.tar.gz client/
```

Database

In new terminal (terminal number 1) and in `root_path/fedn`.

1. Create docker network

```
docker network create fedn_default
```

2. Start/build data base, skip the `--build` if the image already exists

```
docker-compose -f config/base-services.yaml up --build
```

Reducer

In new terminal (terminal number 2) and in `root_path/fedn`.

1. Copy the settings file

```
cp config/settings-reducer.yaml.template config/settings-reducer.
yaml
```

2. Start/build reducer, skip the `--build` if the image already exists

```
docker-compose -f config/reducer-dev.yaml up --build
```

Combiner

In new terminal (terminal number 3) and in `root_path/fedn`.

1. Copy the settings file

```
cp config/settings-combiner.yaml.template config/settings-combiner.
yaml
```

2. Start/build combiner, skip the `--build` if the image already exists

```
docker-compose -f config/combiner-dev.yaml up --build
```

Clients

In new terminal (terminal number 4) and in `root_path/fedn/test/fedbird`.

1. Start/build clients, skip the `--build` if the image already exists

```
docker-compose --verbose -f docker-compose.dev.yaml up --build
```

Now the FedBird project should be ready to use. For training, inference, visualization and more see Fedbird - tutorial - training, inference, visualization and more