Fedbird - tutorial - training, inference, visualization and more

We go though a number of tools that could be used to manage the FedBird project.

Dashboard

Type	IP and port
Dashboard	`https://172.25.16.5:8090` (or `https://localhost:8090`)

Connect to the dashboard in order to start training and monitoring the progress.

Training

Once the servers and clients are setup the training could be started in the Dashboard by:

1. Upload client code `package/fedbird.tar.gz`, see Fedbird - tutorial - local setup or Fedbird - tutorial - EdgeLab setup, under the Control tab.
2. Upload initial model `seed/birdweights.npz`, from the FedBird repo, under the History tab.
3. Set the number of `Rounds` and `Timeout` under the Control tab, and press `Submit`. Perhaps use 20 rounds and 600 s timeout.
4. The progress could be followed under the `Dashboard` tab.

Visualization

Type	IP and port
MinIO Browser	`172.25.16.4:9000`(or `localhost:9000`)

Data and model are downloaded from the MinIO Browser and visualized using

```
sh ./run_visualization.sh
```

Change the `run_visualization.sh` to point to your data. An `output.mp4` video fill be created in the `video` folder.

Database

Type	IP and port
Mongo Express	`172.25.16.4:8081`(or `localhost:8081`)

In case the data or mode is changed the database would need to be deleted and restarted. The database is deleted going into Mongo Express application and delete the `fedn-test-network` instance.

Initial model (optional)

Generate input model, in `root_path/fedbird/seed` run

```
sh ./run_seed.sh
```

Note: by default pretrained weights are used. In order to use random weights set `pretrained=False` in `clinet/init_model.py`.