Group Project

Biometric Systems

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The Block-chain database

As database for new faces, we implemented a **Block-chain**.
We used an open-source implementation of it, called BigchainDB[1].
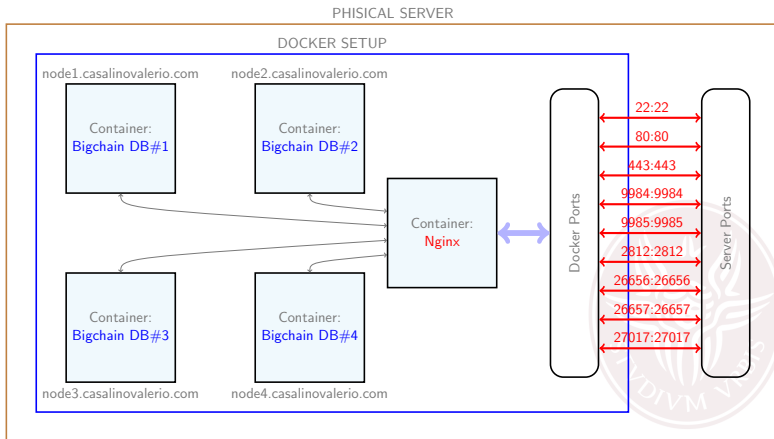We also used Docker[2] to deploy 4 containers running the application.

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[1]Main page: https://www.bigchaindb.com. Documentation here.
[2]Main page: https://www.docker.com.

Architecture Implementation

!!This is absolutely not meant for a real deployment!!

PHISICAL SERVER

DOCKER SETUP

node1.casalinovalerio.com   node2.casalinovalerio.com

Container: Bigchain DB#1

Container: Bigchain DB#2

Container: Nginx

Docker Ports

Server Ports

22:22
80:80
443:443
9984:9984
9985:9985
2812:2812
26656:26656
26657:26657
27017:27017

Container: Bigchain DB#3

Container: Bigchain DB#4

node3.casalinovalerio.com   node4.casalinovalerio.com

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How to interact with the DB

We are assuming that we have an enstablished connection set up.

Query data

```
connection.searchAssets('AwesomeAsset')
.then(assets => console.log('Found assets:', assets))
// Read the console to look at the assets
```

Load data (make a transaction)

```
// Create transaction first (txTransferBob)
driver.Transaction.signTransaction(txTransferBob,
alice.privateKey);
conn.postTransactionCommit(txTransferBobSigned);
```

Simple as that...

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