MONGODB
PRACTICE ENVIRONMENT
INSTALLATION GUIDE

CONTENTS

1. INTRODUCTION – PRACTICE ENVIRONMENTS FOR EPAM BIG DATA COURSE

- o Practice environments are based on Docker containers, which can be downloaded and invoked on the student machines.
- o To minimize resources, most topics will have their own dockers, running only the minimum required components
- o For each Docker it will be stated what is the optimal resource allocation and what is the minimum resource requirements for using it.

2. PREREQUISITES FOR RUNNING THE PRACTICE ENVIRONMENT

- o Docker
    - ▪ Install Docker
        - • Mac: https://docs.docker.com/docker-for-mac/install/
        - • Windows: https://docs.docker.com/docker-for-windows/install/
        - • Linux: https://docs.docker.com/engine/install/ (Choose your Linux distribution)
    - ▪ Configure Docker
        - • Open Docker settings, and configure to 8GB RAM
        - • For more details see here:
            - • Mac: https://docs.docker.com/docker-for-mac/
            - • Windows: https://docs.docker.com/docker-for-windows/
    - ▪ Install Docker Compose (Linux only):
        - • Mac & Windows: Docker compose already included along with Docker Desktop.
        - • Linux: https://docs.docker.com/compose/install/
- o Minimum system requirements
    - ▪ 8 GB RAM
    - ▪ 2GHz CPU
    - ▪ 10GB free space on hard disk

3. CREATING THE MONGODB DOCKER CONTAINER

- o To install the Docker container for the MongoDB practice, run the following command - `
    - ▪ Be sure to change the IP address to the IP you previously marked

docker create –name mongo -it mongo

- o This can take anywhere from 2 minutes up to an hour, depending on your internet connection.

4. STARTING THE MONGODB DOCKER CONTAINER

- o   Start the Docker container using the following command:

    docker start mongo

- o   Make sure the image is up and running:

    docker ps -a

5. CONNECTING TO THE DOCKER ENVIRONMENT

- o   Open the command prompt and issue the following command:

    docker exec -it mongo /bin/bash

6. USEFUL DOCKER COMMANDS

VIEW DOCKER CONTAINERS AND THEIR STATUS

docker ps -a

STOPPING AND STARTING THE DOCKER CONTAINER

docker stop mongo

docker start mongo

REMOVE A PREVIOUSLY INSTALLED DOCKER CONTAINER

docker rm mongo

CHECK CONTAINER RESOURCE USAGE (RAM ETC)

docker stats

7. STOPPING THE DOCKER ENVIRONMENT

o Run command -

docker stop mongo

8. MONGODB ENVIRONMENT DETAILS

```
# Use root/example as user/password credentials

services:


  mongo:

    image: mongo

    restart: always

    environment:

      MONGO_INITDB_ROOT_USERNAME: root

      MONGO_INITDB_ROOT_PASSWORD: example


  mongo-express:

    image: mongo-express

    restart: always

    ports:

      - 8081:8081

    environment:

      ME_CONFIG_MONGODB_ADMINUSERNAME: root

      ME_CONFIG_MONGODB_ADMINPASSWORD: example
```

9. TROUBLESHOOTING THE DOCKER ENVIRONMENT

o See Guidelines document for troubleshooting issues.