TWIXOR AIM INSTALLATION GUIDE

Contents

Introduction

This document explains steps involved in the installation of all the components to setup Twixor. installation contains below components:

- Web server
- App Server
- Database Server

This document explains installation of all the above three components. Before proceeding to installation let us have a look at the directory structure of installation CD/directory.

Twixor Installation Files – Directory Structure

This section explains the directory structure and files available in Twixor installation files directory. Let us say the root directory is [TWIXOR_INSTALLATION_FILES]. Below is the directory structure.

- [TWXIOR_INSTALLATION_FILES]
    - AppServer
        - Prerequisite installations
            - twixor_MeOnCloud_tomcat_v x_x_xxx.tar.gz
            - MeOnCloud_nginx_v x_x_xxx.tar.gz
            - MOC_v x_x_xxx.tar.gz
            - Twixor_Logger_v x_x_xxx.tar.gz
            - twixor_docker_chatbird_v x_x_xxx.tar.gz
            - twixor_docker_chatbird-core_v x_x_xxx.tar.gz
            - twixor_docker_campaign_v x_x_xxx.tar.gz
            - twixor_docker_mcmi-api_v x_x_xxx.tar.gz
            - twixor_docker_mcmi-dispatcher_v x_x_xxx.tar.gz
            - twixor_richcard_v_x_x_xx.tar.gz

    - WebServer
        - Twixor_v_x_x_xxx.tar.gz
        - Default.conf

    - ThirdpartySoftware
        - Java
            - Jdk1.8.0_171.tar.gz
        - MongoDB
            - Mongodb-linux-x86_64 -5.0.2.tar.gz
        - Apache Tomcat
            - Apache-tomcat-9.0.78.tar.gz
        - Redis
            - Redis-stable.tar.gz
        - Kafka
            - kafka_2.13-3.2.0.tar.gz

Third Party Software Installations

JAVA

Twixor required java version 1.8.0. To install java. This section explains installation of java.

- Copy **[TWIXOR_INSTALLATION_FILES] /ThirdpartySoftware/Java/ jdk1.8.0_171.tar.gz** file to **<PATH>** directory in to the server
- Extract jdk1.8.0_171.tar.gz by running following command
  > *sudo tar -xvf jdk1.8.0_171.tar.gz*
- Export Java Home & PATH
  > *update-alternatives --install /usr/bin/java java /<PATH>/jdk1.8.0_171/bin/java 2*
  > *update-alternatives --config java*
  > *update-alternatives --install /usr/bin/jar jar /<PATH>/jdk1.8.0_171/bin/jar 2*
  > *update-alternatives --install /usr/bin/javac javac /<PATH>/jdk1.8.0_171/bin/javac 2*
  > *update-alternatives --set jar /<PATH>/jdk1.8.0_171/bin/jar*
  > *update-alternatives --set javac /<PATH>/jdk1.8.0_171/bin/java*
  > *export JAVA_HOME=/<PATH>/jdk1.8.0_171*
  > *export JRE_HOME=/<PATH>/jdk1.8.0_171/jre*
  > *export PATH=$PATH:/<PATH>/jdk1.8.0_171/bin:/<PATH>/jdk1.8.0_171/jre/bin*

- Check java version by running **java –version**

Mongo DB

Twixor uses document based No SQL database Mongo DB. This section explains installation of Mongo DB database.

Twixor requires Mongo DB version 5.0.2. Follow below steps to install and configure Mongo DB

- Copy **[TWIXOR_INSTALLATION_FILES] /ThirdpartySoftware/Mongodb/mongodb-linux-x86_64-5.0.2.tar.gz** file to **<PATH>** directory in to the server
- Extract mongodb-linux-x86_64-rhel70-4.0.23.tar.gz by running following command.
  sudo tar -xvf mongodb-linux-x86_64-5.0.2.tar.gz
- Change the directory to /**<PATH>**/mongodb-linux-x86_64-5.0.23/bin and run following command to start Mongo db.
  sudo ./startup.sh
- Now setup the database with initial data by running following command.
  sudo ./mongorestore <dumppath>

Now we are ready with Mongo DB installation.

> ***Note***: *Mongo DB accepts connections on port 27017. It is required to open inbound access to this port on the DB server VM from the VM where Twixor App Server is installed. This can be ignored if both Twixor App Server and DB Server are installed on the same VM.*

APACHE TOMCAT

Twixor requires Apache tomcat version 9.0.78. Follow below steps to install and configure Apache tomcat

- Copy **[TWIXOR_INSTALLATION_FILES] /ThirdpartySoftware/Apache_Tomcat/** file to **<PATH>** directory in to the server
- Extract apache-tomcat-9.0.78.tar.gz by running following command.
  sudo tar -xvf apache-tomcat-9.0.78.tar.gz
- Change the directory to /**<PATH>**/ apache-tomcat-9.0.78/bin and run following command to start apache tomcat.
  sudo ./startup.sh

REDIS

Twixor requires Redis stable version. Follow below steps to install and configure Redis

- Copy **[TWIXOR_INSTALLATION_FILES] /ThirdpartySoftware/Redis/Redis-stable.tar.gz** file to **<PATH>** directory in to the server
- Extract Redis-stable.tar.gz by running following command.
  sudo tar -xvf Redis-stable.tar.gz
- Change the directory to */**<PATH>**/redis-stable* and run following command to start redis.
  sudo nohup src/redis-server redis.conf >log.txt &

KAFKA

Twixor requires kafka version 2.13-3.2.0. Follow below steps to install and configure kafka

- Copy **[TWIXOR_INSTALLATION_FILES] /ThirdpartySoftware/Kafka/ kafka_2.13-3.2.0.tar.gz** file to **<PATH>** directory in to the server
- Extract kafka_2.13-3.2.0.tar.gz by running following command.
  sudo tar -xvf kafka_2.13-3.2.0.tar.gz
- Change the directory to */**<PATH>**/ kafka_2.13-3.2.0* and run following command to start kafka.
  sudo nohup bin/zookeeper-server-start.sh config/zookeeper.properties > zookeeper_log.txt &
  sudo nohup bin/kafka-server-start.sh config/server.properties > server_log.txt &

TWIXOR App Server

Twixor Server Prerequisite

This section explains the prerequisite software for Twixor appserver.

Javagateway Installation

This section of the document explains the installation of Twixor server. Follow below steps to install and configure Twixor.

- Copy the file **[TWIXOR_INSTALLATION_FILES]/*AppServer/MOC_v_x_x_xxx.tar.gz* to** the `<path>` directory
- Extract the file in the `/path` directory using the following command:
  sudo tar -xvf MOC_v_x_x_xxx.tar.gz
- Open and modify the **/<PATH>/moc/ProcessStore/config/ProcessStore.json** file to set up configurations for domain, web URL, context path, MongoDB URL, and the file path for CppGateWayConfig.json.
- Open and edit **/<PATH>/moc/ProcessStore/config/CppGateWayConfig.json** to configure host, port, seedhost and seedport.
- Open and edit **/<PATH>/moc/ProcessStore/config/JavaGateWayConfig.json** to configure host, port, seedhost and seedport.
- Copy or replace the release folder **[TWIXOR_INSTALLATION_FILES]/*AppServer/Release_v_x_x_xxx.tar.gz* to the** **/<PATH>/***moc/ProcessStore/bin* directory
- Extract the file in the `/path` directory using the following command:
  sudo tar -xvf   Release_x_x_xx.tar.gz
- Now change the directory to **/<PATH>/moc/ProcessStore/tools** and run the following command to start Twixor app server
  sudo nohup ./JavaGateway.sh > log.txt &
- Run the following command to stop the server
  sudo ./shutdown.sh

NoteTwixor accepts connections on port 35601. It is required to open inbound access to this port on the Twixor server VM from all the VMs where Web Server and other Twixor App Servers are installed.

CPPGateway Installation

Follow below instructions to install Apache tomcat

- Copy **apache-tomcat-9.0.78.tar.gz**. Copy the same to **/<PATH>/** directory.
- Extract the tar file by running the following command
  sudo tar -xvf apache-tomcat-9.0.78.tar.gz
- Open and edit **/<PATH> /apache-tomcat-x_x/webapps/MeOnCloud/WEB-INF/classes/application.yml** to configure chatbird url, mongodb.
  - chatbird:
      endpointUrl : https://x.x.x.x/chatbird/
  - mongodb:
      uri: mongodb://<HOST>:<PORT>

- Change the directory to */<PATH>/apache-tomcat-9.0.78/bin*
- Start the tomcat by running the following command.
  sudo ./startup.sh
- Run the following command to stop tomcat
  sudo ./shutdown.sh
- Log files can be viewed at */<PATH>/apache-tomcat-9.0.78/logs/catalina.out*

Chatbird Installation

This section of the document explains the installation of CHATBIRD . Follow the steps below to install and configure CHATBIRD.

- Copy *[TWIXOR_INSTALLATION_FILES]/Appserver/chatbird.tar.gz* to the **<PATH>** directory.
  - Extract this file in the **<PATH>** directory by running the following command:
    sudo tar -xzf chatbird.tar.gz
- Open and edit <PATH>/chatbird/env.list to configure the MongoDB IP address, Redis IP address, NLP Address, port and Kafka IP address. Modify the following field values in the env.list file. If above dependencies running in same server no need to change the values.
- Copy the Docker image file twixor_docker_chatbird_v_x_x_xxx.tar.gz
  - To load the Docker image, run the following command:
    sudo docker load -i twixor_docker_chatbird_v_x_x_xxx.tar.gz
- Start the docker by running the following command
  sudo ./docker_startup_chatbird.sh
- To ensure the container has started correctly, check the Docker logs using the following command:
  sudo docker ps
  sudo docker logs -f <ContainerName>
- Log files can be viewed at */<PATH>/chatbird/logs/app.log*

Chatbird-Core Installation

This section of the document explains the installation of CHATBIRD CORE. Follow the steps below to install and configure CHATBIRD CORE.

- Copy *[TWIXOR_INSTALLATION_FILES]/Appserver/chatbird-core.tar.gz* to the **<PATH>** directory.
  - Extract this file in the **<PATH>** directory by running the following command:
    sudo tar -xzf chatbird-core.tar.gz
- Open and edit **<PATH>/**chatbird-core/env.list to configure the MongoDB IP address, MCMI IP address and port . Modify the following field values in the env.list .

- Copy the Docker image file twixor_docker_chatbird-core_v_x_x_xxx.tar.gz
  - To load the Docker image, run the following command:
    sudo docker load -i twixor_docker_chatbird-core_v_x_x_xxx.tar.gz

- Start the docker by running the following command
  sudo ./docker_startup_chatbird-core.sh

- To ensure the container has started correctly, check the Docker logs using the following command
  sudo docker ps
  sudo docker logs -f <ContainerName>
- Log files can be viewed at **/<PATH>/chatbird-core/logs/app.log**

Campaign Installation

This section of the document explains the installation of CAMPAIGN. Follow the steps below to install and configure CAMPAIGN.

- Copy **[TWIXOR_INSTALLATION_FILES]/Appserver/campaign.tar.gz** to the **<PATH>** directory.
  - Extract this file in the **<PATH>** directory by running the following command:
    sudo tar -xzf campaign.tar.gz
- Open and edit **<PATH>/**campaign/env.list to configure the MongoDB, Chatbird, Kafka and Redis IP address and port. Modify the following field values in the env.list .
- Copy the Docker image file twixor_docker_campaign_v_x_x_xxx.tar.gz
  - To load the Docker image, run the following command:
    sudo docker load -i twixor_docker_campaign_v_x_x_xxx.tar.gz

- Start the docker by running the following command
  sudo ./docker_startup_campaign.sh

- To ensure the container has started correctly, check the Docker logs using the following command
  sudo docker ps
  sudo docker logs -f <ContainerName>
- Log files can be viewed at **/<PATH>/Campaign/logs/app.log**

MCMI Installation

This section of the document explains the installation of MCMI API and DISPATCHER. Follow the steps below to install and configure MCMI.

- Copy **[TWIXOR_INSTALLATION_FILES]/Appserver/mcmi.tar.gz** to the **<PATH>** directory.
    - Extract this file in the **/<PATH>/ mcmi.tar.gz** directory by running the following command:
      `sudo tar -xzf mcmi.tar.gz`
- After obtaining the mcmi directory navigate into it, and you will encounter two subdirectories: Api and Dispatcher.

MCMI API Installation

- Navigate to the Api directory to make changes to the env.list files.
- Open and edit **<PATH>/mcmi/api/env.list** to configure the MongoDB IP address, Redis IP address, Kafka IP address and Port. Modify the following field values in the env.list file.
- Copy the Docker image file twixor_docker_mcmi-api_v_x_x_xxx.tar.gz
    - To load the Docker image, run the following command:
      `sudo docker load -i twixor_docker_mcmi-api_v_x_x_xxx.tar.gz`
- Start the api by running the following command:

  `sudo ./mcmi_api_startup.sh`

- The mcmi-api container will start running.
- To ensure the container has started correctly, check the mcmi-api Docker container logs using the following command:
  `sudo docker ps`
  `sudo docker logs -f <ContainerName>`

- Log files can be viewed at **/<PATH>/MCMI/api/logs/app.log**

- Ensure the Docker container is running successfully without any errors.

MCMI Dispatcher Installation

- Navigate to the Dispatcher directory to make changes to the env.list files.
- Open and edit **<PATH>/mcmi/dispatcher/env.list** to configure the MongoDB IP address, Redis IP address, Kafka IP address and port. Modify the following field values in the env.list file.
    - Copy the Docker image file twixor_docker_mcmi-dispatcher_v_x_x_xxx.tar.gz To load the Docker image, run the following command:
      `sudo docker load -i twixor_docker_mcmi-dispatcher_ v x_x_xxx.tar.gz`
- Start the dispatcher by running the following command.
      `sudo ./mcmi_dispatcher_startup.sh`
- The mcmi-dispatcher container will start running.
- To ensure the container has started correctly, check the mcmi-dispatcher Docker container logs using the following command:

```
sudo docker ps
sudo docker logs -f <ContainerName>
```

- Log files can be viewed at **/<PATH>/MCMI/dispatcher/logs/app.log**
- Ensure the Docker container is running successfully without any errors.

Logger Installation

- Copy **[TWIXOR_INSTALLATION_FILES] /Appserver/TwixorLogger.tar.gz** to the <PATH> directory.
  - Extract this file in the **/<PATH>/** directory by running the following command
    ```
    sudo tar -xzf TwixorLogger.tar.gz
    ```
- After obtaining the TwixorLogger directory, navigate into it.
- Copy the TwixorLogger jar file TwixorLogger_v_x_x_xxx.jar
- Open and edit **<PATH>/TwixorLogger/application.yml** to configure the changes.
- Start the Logger by running the following command

  ```
  sudo ./startup.sh
  ```

- Log files can be viewed at **/<PATH>/TwixorLogger/logs/app.log**

RICH CARD Installation

- Copy **[TWIXOR_INSTALLATION_FILES]/Appserver/ twixor_richcard.tar.gz** to the <PATH> directory.
- Extract this file in the /<PATH> directory by running the following command
  ```
  sudo tar -xzf twixor_richcard.tar.gz
  ```
- After obtaining the twixor_richcard directory, navigate into it.
- Open and edit <PATH>/twior_richcard/env.list to configure the changes.
- Copy the Docker image file twixor_richcard_vx.tar.gz
  - To load the Docker image, run the following command:
    ```
    sudo docker load -i twixor_richcard_vx.tar.gz
    ```
- Start the richcard by running the following command.
  ```
  sudo ./docker_startup.sh
  ```

Web Server

Twixor uses NGINX as web server.

NGINX Installation

Follow below steps to install and configure NGINX web server.

- Use following commands to install NGINX.

```
sudo apt install nginx
```

Configuring NGINX

Follow below instructions to configure upstream tomcat proxy servers and to configure Twixor static files.

- Copy **[TWIXOR_INSTALLATION_FILES] /Webserver/Twixor_v_x_x_xxx.tar.gz** folder to **<PATH>** directory.
- Extract this tar file by running the following command.
  sudo tar -xvf Twixor_v_x_x_xxx.tar.gz
- Copy Twixor folder into **<PATH>.** Change Base URL and Web URL in /assets/appconfig.json file
- Copy **[TWIXOR_INSTALLATION_FILES] /Webserver/MeOnCloud_nginx_v_x_x_xxx.tar.gz** folder to **<PATH>** directory.
- Extract this tar file by running the following command.
  sudo tar -xvf **MeOnCloud_nginx_v_x_x_xxx.tar.gz** inside the **<PATH>** where we keep the static files
- Copy **[TWIXOR_INSTALLATION_FILES] /Webserver/default.conf** to **/etc/nginx/conf.d**
- Open and edit the copied default.conf file to configure upstream proxy servers (It is Apache Tomcat in this case). Please note that more than one upstream server can be configured.
  upstream backend {
  *   server APP_SERVER_IP:9080;*
  }

  upstream chatbird_backend {
  *   server CHATBIRD_SERVER_IP:8080;*
  }

  upstream richcard_backend {
  *   server RICHCARD_SERVER_1_IP:3000;*
  }

  upstream mcmi_backend {
  *   server MCMI_SERVER_IP:8084;*
  }

- Make sure that the x_x_x_xxx in the following lines matches with the version of Twixor.
  location ~ ^/(chat-client|build|content|src|images|src_x_x_x_xxx|images_x_x_x_xxx)
  Twixor version can be found in **/moc/ProcessStore/config/ProcessStore.json**
  "Version" : "twixor_x_x_x_xxx"

- Run the following command to start nginx
  sudo service nginx start
- Run the following command to restart nginx
  sudo service nginx restart
- Run the following command to stop nginx
  sudo service nginx stop
- Run the following command just to reload the properties file.
  sudo service nginx reload