

```
clear
echo "== : requirements =="
read -p "press ENTER to continue ..."

sudo apt install -y wget apt-transport-https gpg
sudo mkdir -p /etc/apt/keyrings/
sudo mkdir -p /usr/lib/openems
sudo mkdir -p /etc/openems.d
sudo mkdir -p /usr/share/openems
sudo mkdir -p /usr/share/openems/www
sudo mkdir -p /var/log/apache2/openems
sudo chmod -R 750 /var/log/apache2/openems/
sudo chown -R www-data:www-data /var/log/apache2/openems

echo "== : installing sources for Java, Grafana, InfluxDB =="
read -p "press ENTER to continue ..."

wget -qO - https://packages.adoptium.net/artifactory/api/gpg/key/public | sudo gpg --dearmor -o /etc/apt/trusted.gpg.d/adoptium.gpg

curl -fsSL https://repos.influxdata.com/influxdata-archive_compat.key | gpg --dearmor | sudo tee /etc/apt/trusted.gpg.d/influxdata.gpg >/dev/null
wget -q -O - https://packages.grafana.com/gpg.key | sudo gpg --dearmor -o /etc/apt/keyrings/grafana.gpg
sudo chmod a+r /etc/apt/keyrings/grafana.gpg

echo "deb [signed-by=/etc/apt/keyrings/grafana.gpg] https://packages.grafana.com/oss/deb stable main" | sudo tee /etc/apt/sources.list.d/grafana.list
echo "deb https://packages.adoptium.net/artifactory/deb $(awk -F= '/^VERSION_CODENAME/{print $2}' /etc/os-release) main" | sudo tee /etc/apt/sources.list.d/adoptium.list
source /etc/os-release
echo "deb [signed-by=/etc/apt/trusted.gpg.d/influxdata.gpg] https://repos.influxdata.com/debian stable main" | sudo tee /etc/apt/sources.list.d/influxdata.list

echo "== : Update repos / install software =="
read -p "press ENTER to continue ..."

sudo apt-get update

sudo apt-get install -y apache2 influxdb grafana temurin-21-jdk mc

echo "== : creating config files =="
read -p "press ENTER to continue ..."

sudo tee /etc/systemd/system/openems.service > /dev/null << 'EOF'
[Unit]
Description=OpenEMS
After=network.target

[Service]
User=root
Group=root
Type=notify
WorkingDirectory=/usr/lib/openems
LimitCORE=infinity
LimitRTPRIO=2
LimitRTTIME=60000000
CPUSchedulingPolicy=rr
CPUSchedulingPriority=1
ExecStart=/usr/bin/java -Dfelix.cm.dir=/etc/openems.d/ -jar /usr/lib/openems/openems.jar
SuccessExitStatus=143
Restart=always
RestartSec=10
WatchdogSec=60

[Install]
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WantedBy=multi-user.target
EOF
```

```
sudo tee /etc/apache2/sites-available/openems.conf > /dev/null << 'EOF'
<VirtualHost *:80>
#-BASIC-CONFIGURATION
ServerName localhost
ServerAdmin admin@localhost
DocumentRoot "/usr/share/openems/www"

#-SERVER-CONFIGURATION
RewriteEngine On

# REST API
ProxyPass /rest http://127.0.0.1:8084/rest/
ProxyPassReverse /rest http://127.0.0.1:8084/rest/

# WebSocket (corrected)
ProxyPass /websocket ws://127.0.0.1:8085/
ProxyPassReverse /websocket ws://127.0.0.1:8085/

#-DIRECTORY-CONFIGURATION
<Directory "/usr/share/openems/www">
RewriteBase /
RewriteRule ^index\.html$ - [L]
RewriteCond %{REQUEST_FILENAME} !-f
RewriteCond %{REQUEST_FILENAME} !-d
RewriteRule . /index.html [L]
Options Indexes FollowSymLinks
AllowOverride None
Require all granted
</Directory>

#-LOGGING
ErrorLog "/var/log/apache2/openems/error.log"
CustomLog "/var/log/apache2/openems/access.log" common

# SetEnvIf Origin "^([a-z-A-Z\0-9]+\.whatever.com(?:\.[0-9]+)?)$" CORS_ALLOW_ORIGIN=$1
# Header always merge Access-Control-Allow-Origin %{CORS_ALLOW_ORIGIN}e env=CORS_ALLOW_ORIGIN
# Header always merge Access-Control-Allow-Credentials true env=CORS_ALLOW_ORIGIN
# Header always set Vary "Origin"

</VirtualHost>
EOF
```

```
echo "== : enable / configure webserver =="
echo "=== : copy your openems.jar -> /usr/lib/openems/ ==="
echo "=== : copy your /ui/target -> /usr/share/openems/www ==="
```

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read -p "press ENTER to continue ..."
```

```
sudo a2enmod rewrite proxy proxy_http proxy_wstunnel headers
sudo a2ensite openems
sudo a2dissite 000-default
```

```
echo "== : enable / start services =="
read -p "press ENTER to continue ..."
```

```
sudo systemctl daemon-reload
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```
sudo systemctl enable --now influxdb
sudo systemctl enable --now grafana-server
sudo systemctl enable --now openems

sudo systemctl restart apache2

echo "==" : create InfluxDB database and admin user =="
read -p "press ENTER to continue ..."

echo "Waiting a few seconds for InfluxDB to be fully up ..."
sleep 5

# Datenbank 'openems' anlegen
influx -execute "CREATE DATABASE openems" || true

# Admin-User 'admin' mit Passwort 'admin' und allen Rechten anlegen
influx -execute "CREATE USER admin WITH PASSWORD 'admin' WITH ALL PRIVILEGES" || true

# Jetzt Auth aktivieren
sudo sed -i 's/^ *#\? *auth-enabled *= *.* / auth-enabled = true/' /etc/influxdb/influxdb.conf

sleep 5

# InfluxDB mit Auth neu starten
sudo systemctl restart influxdb

echo "InfluxDB setup done: database 'openems' and user 'admin'/admin' created and auth enabled."
```