

WNAM QoW (on-premises,) . Linux.

:

	CPU	RAM	HDD	
(3 20)	2	8	50	
(10 100)	4	16	50+50	: SSD, xfs
(100 1000)	2	8	50	Proxy+MQTT
	4	16	50	QoW
	4	16	100	, SSD, xfs

(SATA).

, . WNAM QoW , . Debian (10 11).

Windows (MQTT, nginx, mongodb, - qow).

WNAM QoW :

- HTTP - nginx -
- Java 1.8
- MongoDB 4.4
- MQTT, mosquitto

, , . .

Java

```
wget -q0 - https://adoptopenjdk.jfrog.io/adoptopenjdk/api/gpg/key/public | apt-key add -
add-apt-repository --yes https://adoptopenjdk.jfrog.io/adoptopenjdk/deb/
apt install adoptopenjdk-8-hotspot
```

Java JRE , .

```
apt install openjdk-11-jdk-headless
```

-

```
apt-get install nginx
```

/etc/nginx/sites-available/qow:

```
server {
    listen 80;

    access_log /var/log/nginx/access.log;

    location / {
        proxy_pass http://127.0.0.1:8080/;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_read_timeout 120;
        proxy_connect_timeout 120;
    }
}
```

SSL (, Let's Encrypt) WNAM QoW, HTTPS, :

```
server {
    listen 80 default_server;
    return 301 https://$server_name$request_uri;
    server_name __;
}
```

```

server {
    listen 443 ssl default_server;
    ssl_certificate /etc/letsencrypt/live/__/fullchain.pem;
    ssl_certificate_key /etc/letsencrypt/live/__/privkey.pem;

    ssl_protocols TLSv1 TLSv1.1 TLSv1.2;
    ssl_prefer_server_ciphers on;
    ssl_ciphers "EECDH+AESGCM:EDH+AESGCM:AES256+EECDH:AES256+EDH";
    ssl_ecdh_curve secp384r1;
    ssl_session_cache shared:SSL:10m;
    ssl_session_tickets off;
    ssl_stapling on;
    ssl_stapling_verify on;
    resolver 8.8.8.8 8.8.4.4 valid=300s;
    resolver_timeout 5s;
    add_header Strict-Transport-Security "max-age=63072000; includeSubdomains";
    add_header X-Frame-Options SAMEORIGIN;
    add_header X-Content-Type-Options nosniff;

    ssl_dhparam /etc/ssl/certs/dhparam.pem;

    root /var/www/html;

    index index.html;

    server_name __;

    location / {
        proxy_pass http://127.0.0.1:8080/;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_set_header Host $host;
        proxy_set_header X-Forwarded-Proto $scheme;
        proxy_read_timeout 120;
        proxy_connect_timeout 120;
    }
}

```

dhparams:

```
openssl dhparam -out /etc/ssl/certs/dhparam.pem 4096
```

:

```

cd /etc/nginx/sites-enabled
ln -s ../sites-available/qow qow

```

/etc/nginx/sites-enabled/default :

```
rm /etc/nginx/sites-enabled/default
```

:

```
nginx -t
```

:

```
service nginx restart
```

MQTT

```
apt-get install mosquitto mosquitto-clients
```

/etc/mosquitto/mosquitto.conf :

```
pid_file /var/run/mosquitto.pid

persistence true
persistence_location /var/lib/mosquitto/

log_dest file /var/log/mosquitto/mosquitto.log

include_dir /etc/mosquitto/conf.d
```

/etc/mosquitto/conf.d/qow.conf :

```
port 1883

listener 8883
cafile /etc/mosquitto/ca_certificates/qow-ca.crt
certfile /etc/mosquitto/certs/qow-server.crt
keyfile /etc/mosquitto/certs/qow-server.key
tls_version tls1.2
```

! mosquitto 2 :

```
allow_anonymous true
```

qow-ca.crt, qow-server.crt qow-server.key support@netams.com

: systemctl restart mosquitto.service - /var/log/mosquitto/mosquitto.log

MongoDB

! MongoDB 3. 5. !

c : <https://docs.mongodb.com/v4.4/administration/install-on-linux/>

wget -q0 - <https://www.mongodb.org/static/pgp/server-4.4.asc> | apt-key add -

echo "deb http://repo.mongodb.org/apt/debian buster/mongodb-org/4.4 main" | tee /etc/apt/sources.list.d/mongodb-org-4.4.list

apt-get update

```
apt-get install -y mongodb-org
systemctl unmask mongod
systemctl enable mongod
systemctl start mongod
```

QoW

useradd -m -U -s /bin/false qow

mkdir /home/qow/logs

```
mv qos-server.jar /home/qow
chmod +x /home/qow/qos-server.jar
chown qow:qow /home/qow/qos-server.jar /home/qow/logs
```

/etc/systemd/system/qos-server.service -:

```
[Unit]
Description=WNAM QoS Server Service

[Service]
WorkingDirectory=/home/qow
ExecStart=/usr/bin/java -jar -Dspring.profiles.active=qos -Dspring.config.location=/home/qow/application.properties /home/qow/qos-server.jar
SuccessExitStatus=143
Restart=on-failure
RestartSec=10
User=qow
Group=qow

StandardOutput=file:///home/qow/logs/console.log

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

-:

```
systemctl enable qos-server
```

/home/qow/application.properties :

```
spring.application.name=WNAM QoS Server
server.use-forward-headers=true
server.tomcat.protocol-header=x-forwarded-proto
server.tomcat.remote-ip-header=x-forwarded-for
server.tomcat.basedir=.
server.port=8080
server.address=127.0.0.1
server.servlet.session.timeout=300m

netams.createDefaultAdmin=true
netams.serverUri=https://__

ya.apiKey=880c9fc2-78c7-46c5-9457-8dbb5eac419d
ya.auth.clientSecret=
ya.auth.clientId=
ya.auth.callback=https://__/_/ya/auth/callback
ya.locator.
apiKey=AHqZql8BAAAA09JiAwIA1G7QasD2nDWlgY2PiEEozTaXIIIAAAAAAAAAAAAAAi0kd2og83NEZIGkvj0pFHfBkw==

spring.data.mongodb.database=qow

spring.mail.host=__
spring.mail.port=25
netams.mail.from=admin@__

netams.mqtt.serverUri=tcp://localhost:1883

netams.mqtt.clientId=qow
netams.remoteToken=snasjdfhasjkdflasdlkasdkjlasdgf
netams.licenseKey=__
netams.deviceType=qos
```

:

```
systemctl start qos-server
systemctl status qos-server
```

- /home/qow/qos.log

- http:/// https:///

: admin

▪

:

```
wget https://packages.wnam.ru/qow/create_indexes.js.gz
```

:

```
cat create_indexes.js.gz | gzip -d | mongosh mongodb://127.0.0.1:27017/qow
```

