



, . Linux. , .

WNAM , .



, :sudo su -.

1. MongoDB

(, , Wi-Fi, ..) No-SQL MongoDB. Ubuntu 20.04, AstraLinux 1.7 Debian 11 4.4 . Ubuntu 22.04 Debian 12 MongoDB 6.. , Debian .

1.1. <https://docs.mongodb.com/manual/tutorial/install-mongodb-on-debian/>. MongoDB 4.4 :

```
apt-get install gnupg
wget -qO - 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 enable mongod
systemctl start mongod
systemctl status mongod
```

4.4, MongoDB 6. :
MongoDB :

```
grep -i avx /proc/cpuinfo
```

, MongoDB 6.x :

```
apt-get install gnupg
wget -qO - https://www.mongodb.org/static/pgp/server-6.0.asc | apt-key add -
echo "deb https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/6.0 multiverse"
| tee /etc/apt/sources.list.d/mongodb-org-6.0.list
apt-get update
apt-get install -y mongodb-org
systemctl enable mongod
systemctl start mongod
systemctl status mongod
```

1.2. MongoDB , <http://repo.mongodb.org>, deb- MongoDB 4.4.15 . Debian 10/11 :

```
cd /tmp
wget -m --no-parent http://packages.wnam.ru/mongodb-org/
cd packages.wnam.ru/mongodb-org/
apt install ./*.deb
cd /tmp
rm -rf packages.wnam.ru
systemctl unmask mongod
systemctl enable mongod
systemctl start mongod
```


Debian 9 :

```
cd /tmp
wget -m --no-parent http://packages.wnam.ru/mongodb-org-stretch/
cd packages.wnam.ru/mongodb-org-stretch/
apt install ./*.deb
cd /tmp
rm -rf packages.wnam.ru
systemctl unmask mongod
systemctl enable mongod
systemctl start mongod
```

MongoDB , / , /var /var/lib/mongodb. , (4). , MongoDB XFS SSD.

2. Java

WNAM Java, Java:- JDK/JRE.

 WNAM 1.5 Java 8.

:

```
apt-get install openjdk-8-jdk
```

11 (OpenJDK, Oracle JDK). Debian 10/11 openjdk-11-jdk.

 8 Debian 2023 .

:

```
apt-get install openjdk-11-jdk
```

Debian 12 :

```
apt-get install openjdk-17-jdk
```

,:

```
java -version
```

:

```
openjdk version "11.0.11" 2021-04-20
OpenJDK Runtime Environment (build 11.0.11+9-post-Debian-1deb10u1)
OpenJDK 64-Bit Server VM (build 11.0.11+9-post-Debian-1deb10u1, mixed mode,
sharing)
```

- 8 Debian (, AdoptOpenJDK, <https://linuxize.com/post/install-java-on-debian-10/#installing-openjdk-8>) WNAM 1.5 , .

3. FreeRADIUS.

- WNAM 1.3 -1.5, FreeRADIUS, . WNAM 1.6 FreeRADIUS . FreeRADIUS , , , - FreeRADIUS (radiusd).

4. - nginx

WNAM TCP 8080. , nginx 80, SSL (443), .

Nginx :

|

```
apt-get install nginx
```

/etc/nginx/sites-available/wnam:

```
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, HTTPS, :

```
server {  
    listen 80 default_server;  
    return 301 https://$server_name$request_uri;  
    server_name wnam.provider.ru;  
}  
  
server {  
    listen 443 ssl default_server;  
    ssl_certificate /etc/letsencrypt/live/wnam.provider.ru/fullchain.pem;  
    ssl_certificate_key /etc/letsencrypt/live/wnam.provider.ru/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 wnam.provider.ru;  
  
    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/wnam wnam
```

/etc/nginx/sites-enabled/default:

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

:

```
nginx -t
```

:

```
service nginx restart
```

5.

WNAM **phantomjs** () " " :

```
cd /tmp/  
wget https://bitbucket.org/ariya/phantomjs/downloads/phantomjs-2.1.1-linux-  
x86_64.tar.bz2  
apt-get install bzip2  
tar jxvf phantomjs-2.1.1-linux-x86_64.tar.bz2  
mv phantomjs-2.1.1-linux-x86_64/bin/phantomjs /usr/local/bin/phantomjs  
wget http://www.netams.com/files/wnam/misc/render.js  
wget http://www.netams.com/files/wnam/misc/render.sh  
mv render.sh render.js /usr/local/bin/  
chmod +x /usr/local/bin/render.sh
```

:

```
/usr/local/bin/render.sh
```

/usr/local/bin/render.js .



Ubuntu, , () . , Ubuntu . , :

```
ln -s /usr/lib/x86_64-linux-gnu/libfontconfig.so.1 /usr/lib/phantomjs  
/libfontconfig.so.1  
  
ln -s /usr/share/fonts/truetype/dejavu/ /usr/lib/x86_64-linux-gnu/fonts
```

(, Debian 10):

Auto configuration failed

*140687369703040:error:25066067:DSO support routines:DLFCN_LOAD:could not load the shared library:dso_dlfcn.c:
185:filename(libssl_conf.so): libssl_conf.so: cannot open shared object file: No such file or directory*

140687369703040:error:25070067:DSO support routines:DSO_load:could not load the shared library:dso_lib.c:244:

*140687369703040:error:0E07506E:configuration file routines:MODULE_LOAD_DSO:error loading dso:conf_mod.c:285:
module=ssl_conf, path=ssl_conf*

*140687369703040:error:0E076071:configuration file routines:MODULE_RUN:unknown module name:conf_mod.c:222:
module=ssl_conf*

/usr/local/bin/render.sh:

```
export OPENSSL_CONF=/etc/ssl/
```

6.

, (locale) "ru_RU.UTF-8". "locale", . :

```
dpkg-reconfigure locales
```