GUACAMOLE SU UBUNTU 18.04

VERSIONE LUNGA CON COMPILAZIONE MANUALE

1) **Installare le dipendenze:**
   ```
   apt install -y libcairo2-dev libpng-dev libossp-uuid-dev
   libavcodec-dev libavutil-dev libswscale-dev libpango1.0-dev
   libssh2-1-dev libtelnet-dev libvncserver-dev libpulse-dev
   libssl-dev libvorbis-dev  libwebp-dev gcc-6 g++-6
   libcairo2-dev libjpeg-turbo8-dev libossp-uuid-dev
   libavcodec-dev libavutil-dev libswscale-dev libpango1.0-dev
   libssh2-1-dev libvncserver-dev libssl-dev libvorbis-dev
   libwebp-dev
   ```

2) **Installare tomcat 8**

   ```
   apt install tomcat8 tomcat8-admin tomcat8-common tomcat8-user
   -y
   ```

3) **Scaricare guacamole**

   wget
   http://archive.apache.org/dist/guacamole/1.1.0/source/guacamole-server-1.1.0.tar.gz

4) **Scompattare il pacchetto**
   `tar xzf` guacamole-server-1.1.0.tar.gz

5) **Entrare nella cartella**

   `cd` guacamole-server-1.1.0

6) **Lanciare il comando di configurazione compilazione:**
   `./configure` **`--with-init-dir=/etc/init.d`**

7) **Lanciare il make di compilazione:**
   `make CC=gcc-6`

8) **Lanciare il comando di installazione:**
   make install

9) **Creare un file in /etc/ld.so.conf.d:**

   vim /etc/ld.so.conf.d/usr_local_lib.conf

Scrivere nel file la riga seguente:
/usr/local/lib

10) Abilitare il servizio

ldconfig
systemctl enable guacd

11) Start del servizio:
systemctl start guacd

12) Scaricare guacamole client war:

wget http://archive.apache.org/dist/guacamole/1.1.0/binary/guacamole-1.1.0.war

13) Creare cartella:
`mkdir /etc/guacamole`

14) Spostare il file in /etc/guacamole
mv guacamole-1.1.0.war /etc/guacamole/guacamole.war

15) Creare il link simbolico alla webapps tomcat:
ln -s /etc/guacamole/guacamole.war /var/lib/tomcat8/webapps/

16) Riavviare i servizi tomcat e guacamole:
systemctl restart tomcat8
systemctl restart guacd

17) Creare due directory:
mkdir /etc/guacamole/{extensions,lib}

18) Aggiungere la variabile d'ambiente GUACAMOLE_HOME a tomcat:
echo "GUACAMOLE_HOME=/etc/guacamole" >> /etc/default/tomcat8

19) Ceare il file guacamole.properties per definire la connessione di guacamole a guacd:

```
vim /etc/guacamole/guacamole.properties
```

```
e agigungere al file:
```

```
guacd-hostname: localhost
```

```
guacd-port:    4822
```

```
user-mapping:    /etc/guacamole/user-mapping.xml

auth-provider:
net.sourceforge.guacamole.net.basic.BasicFileAuthenticationPr
ovider
```

20) **Linkare Guacamole alla servlet Tomcat:**
`ln -s /etc/guacamole /usr/share/tomcat8/.guacamole`

21) **Settare autenticazione e connessione:**
`vim /etc/guacamole/user-mapping.xml`

Es:
<user-mapping>

```
    <!-- Per-user authentication and config information -->


    <!-- A user using md5 to hash the password

         amos user and its md5 hashed password below is used to

             login to Guacamole Web UI-->

    <authorize

            username="amos"

            password="d6a6bc0db10694a2d90e3a69648f3a03"

            encoding="md5">


        <!-- First authorized connection -->

        <connection name="Ubuntu-Server">
```

```
            <protocol>ssh</protocol>
            <param name="hostname">192.168.43.154</param>
            <param name="port">22</param>
            <param name="username">mibey</param>
        </connection>

        <!-- Second authorized connection -->
        <connection name="Windows 7">
            <protocol>rdp</protocol>
            <param name="hostname">192.168.43.218</param>
            <param name="port">3389</param>
            <param name="username">mibeyki</param>
        </connection>

    </authorize>

</user-mapping>
```

Per creare hash md5 della password:

```
echo -n password | openssl md5
```

22) **Riavviare tomcat e guacd**

```
systemctl restart tomcat8
```

```
systemctl restart guacd
```

23) Accedere all'interfaccia con l'utenza creata nel file tomcat-users

VERSIONE VELOCE CON SCRIPT AUTOMATICO

1) **sudo su**
2) **Scaricare lo script:**
   `wget https://raw.githubusercontent.com/MysticRyuujin/guac-install/master/guac-install.sh`
3) **Assegnare permessi di esecuzione:**
   `chmod +x guac-install.sh`
4) **Lanciare lo script:**
   `./guac-install.sh`
5) **Rispondere alle domande scegliendo si se volete mysql, scegliere le password di mysql e procedere**
6) **Aprire l'interfaccia da: http://ipserver:8080/guacamole**

IMPOSTARE NGINX CON REVERSE PROXY

1) **Installare nginx:**
   `apt install nginx`
2) **Abilitare nginx all'avvio:**
   `systemctl enable  nginx`
3) **Generare un certificato self-signed o usare uno già in possesso**
4) **Creare il file di conf guacamole per nginx**
   `vim /etc/nginx/sites-available/nginx-guacamole-ssl`

Scrivere:

```
server {
     listen 80;
     server_name guacamole.example.com;
     return 301 https://$host$request_uri;
}
server {
     listen 443 ssl;
     server_name guacamole.example.com;

     root /var/www/html;

     index index.html index.htm index.nginx-debian.html;

     ssl_certificate /etc/ssl/certs/guacamole-selfsigned.crt;
```

```
        ssl_certificate_key
/etc/ssl/private/guacamole-selfsigned.key;

        ssl_protocols TLSv1.2 TLSv1.3;
        ssl_prefer_server_ciphers on;
        ssl_dhparam /etc/nginx/dhparam.pem;
        ssl_ciphers
ECDHE-RSA-AES256-GCM-SHA512:DHE-RSA-AES256-GCM-SHA512:ECDHE-RSA-A
ES256-GCM-SHA384:DHE-RSA-AES256-GCM-SHA384:ECDHE-RSA-AES256-SHA38
4;
        ssl_ecdh_curve secp384r1;
        ssl_session_timeout  10m;
        ssl_session_cache shared:SSL:10m;
        resolver 192.168.42.129 8.8.8.8 valid=300s;
        resolver_timeout 5s;
        add_header Strict-Transport-Security "max-age=63072000;
includeSubDomains; preload";
        add_header X-Frame-Options DENY;
        add_header X-Content-Type-Options nosniff;
        add_header X-XSS-Protection "1; mode=block";

        access_log  /var/log/nginx/guac_access.log;
        error_log  /var/log/nginx/guac_error.log;

        location / {
                proxy_pass
http://guacamole.example.com:8080/guacamole/;
                proxy_buffering off;
                proxy_http_version 1.1;
                proxy_set_header X-Forwarded-For
$proxy_add_x_forwarded_for;
                proxy_set_header Upgrade $http_upgrade;
                proxy_set_header Connection $http_connection;
                proxy_cookie_path /guacamole/ /;
        }

}
```

5) **Avendo cura di modificare hostname e nomi di certificato e chiave secondi i vs.**
6) **Generare la diffie helfman:**
   `openssl dhparam -dsaparam -out /etc/nginx/dhparam.pem 4096`
7) **Abilitare la conf su nginx:**
   `ln -s /etc/nginx/sites-available/nginx-guacamole-ssl /etc/nginx/sites-enabled/`

8) **Riavviare nginx:**
   `systemctl restart nginx`
9) **Aprire guacamole da browser:**
   es: https://guacamole.tuodominio.it