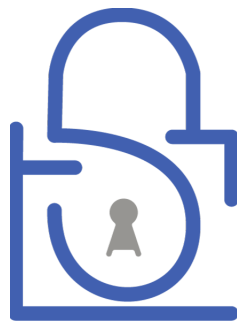


# Target: localhost:4444

Analysis performed on 2025-10-29 17:10



## TLSAssistant

*Version 3.1.0*

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## **Security Tool Report Disclaimer**

The information provided in this report is the result of security testing conducted by [Your Company/Organization] using TLSAssistant. The purpose of this tool is to assess the security of TLS configurations. The findings and recommendations presented in this report are based on the specific conditions and configurations tested at the time of the assessment. We respectfully recommend verifying the identified vulnerability thoroughly.

## **No Warranty or Guarantee**

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# Recap

Modules	localhost:4444
3SHAKE	Potentially Vulnerable
alpaca	Not Vulnerable
BEAST	Not Vulnerable
BREACH	Not Vulnerable
CSS Injection	Not Vulnerable
Missing Certificate Transparency	Not Vulnerable
CRIME	Not Vulnerable
DROWN	Not Vulnerable
Freak	Not Vulnerable
Heartbleed	Not Vulnerable
HSTS not preloaded	Potentially Vulnerable
HSTS not set	Potentially Vulnerable
HTTPS not enforced	Potentially Vulnerable
Logjam	Not Vulnerable
Lucky 13	Not Vulnerable
Bar Mitzvah	Not Vulnerable
RC4 NOMORE	Not Vulnerable
padding_oracle	Not Vulnerable
PFS	Not Vulnerable
Renegotiation attack	Not Vulnerable
ROBOT	Not Vulnerable
sslpoodle	Not Vulnerable
Sweet32	Not Vulnerable
Ticketbleed	Not Vulnerable
tlspoodle	Not Vulnerable

# Detected vulnerabilities

## localhost:4444

### 3SHAKE

CVE:Library dependent - CVSS3:Library dependent

Triple Handshake Attack

*Due to the incorrect handling of the session identifier, an attacker is able to force two sessions to have the same Master Secret and ID. The attacker performs 3SHAKE by providing a server to which the victim deliberately connects. Once connected, the malicious server exploits the renegotiation mechanism to manipulate the session. The attack leads to a client impersonation that, by breaking both confidentiality and authentication, has a serious impact on the transmission.*

### Mitigation

#### Textual

The only acceptable mitigation is to use the **extended\_master\_secret** TLS extension. For this reason it is recommended to update the TLS library to a version that supports the aforementioned extension (e.g. OpenSSL v1.1.0+).

#### Apache

No snippet available

#### nginx

No snippet available

### HSTS not preloaded

*If the HSTS header is preloaded but the webserver does not have a valid certificate, the user will not be able to access the target website.*

### Mitigation

#### Textual

Check if your certificate has expired or it is not valid. If it is not valid, get a new certificate and deploy it on your server. If it has expired, renew it and deploy it on your server.

#### Apache

No snippet available

## nginx

No snippet available

## HSTS not set

*Without the HSTS header, an attacker can use the SSL stripping attack to redirect all the HTTPS connection to their unsecure counterparts. By doing this, all the messages are sent in plaintext and can thus be manipulated.*

## Mitigation

### Textual

Enable the HSTS header transmission within the webserver's settings.

### Apache

1. open your Apache configuration file (default: `/etc/apache2/sites-available/default-ssl.conf`);
2. add the line **Header always set Strict-Transport-Security "max-age=31536000"**.

N.B. restart the server by typing: **sudo service apache2 restart** and be sure that **mod\_headers** is enabled.

## nginx

1. In a default situation, you can edit your website configuration `/etc/nginx/sites-enabled/default` (if you changed your site conf name `/etc/nginx/sites-enabled/YOURSITECONFIGURATION`);
2. Add inside **server{...}** brackets: **add\_header Strict-Transport-Security "max-age=31536000; includeSubdomains; preload"**;

N.B. restart the server by typing: **sudo service nginx restart**.

## HTTPS not enforced

*If HTTPS is not enforced, a client may be tricked into visiting the unsecure (HTTP) version of a website. This would allow an attacker to read and manipulate his messages.*

## Mitigation

### Textual

For each HTTP connection the server must send a response containing:

1. a permanent redirect (i.e. **301 Moved Permanently**);
2. a **Location** field indicating the proper URI to connect to (hostname preceded by `https://`).

### Apache

1. open your Apache configuration file (default: `/etc/apache2/sites-available/default-ssl.conf`);
2. find the VirtualHost that handles the connections to port 80 (it starts with `<VirtualHost :80`);
3. add the string `Redirect / https://website` where "website" is the URL you want to point the users to (e.g. `www.fbk.eu`).

N.B. restart the server by typing: `sudo service apache2 restart`.

## nginx

1. In a default situation, you can edit your website configuration `/etc/nginx/sites-enabled/default` (if you changed your site conf name `/etc/nginx/sites-enabled/YOURSITECONFIGURATION`);
2. add

```
server {  
listen 80 default_server;  
server_name _;  
return 301 https://$host$request_uri;  
}
```
3. remove ALL other `listen 80` inside `server{...}` brackets (except for the previous one)

N.B. restart the server by typing: `sudo service nginx restart`.