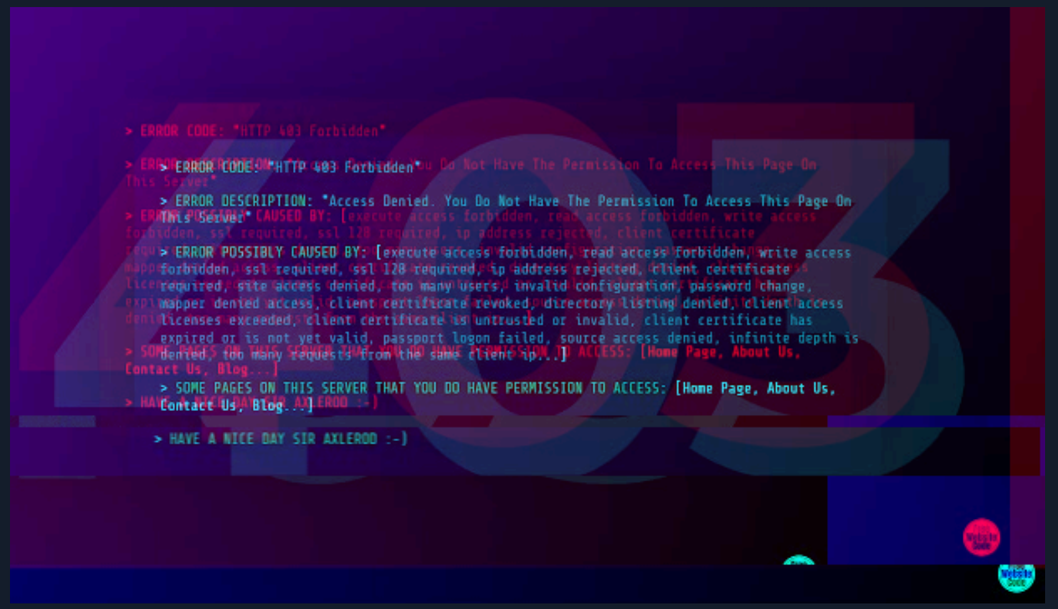
Mastering 403 Bypass

Jesus Lujan (Aka. s4yhii)



Hack The Box Meetup:
Lima, PE.

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$whoami

- Appsec Engineer at Inside Sec (Banco de Chile)
- Mentor CibersecUNI Appsec Squad

Jesus Lujan Montufar (Aka. s4yhii)
OSCP+ | CBBH | eWPTX | eCPPT | eMAPT
Ingeniero de sistemas - UNI (👽)
Blog : s4yhii.github.io
Linked: https://www.linkedin.com/in/jesusluj4n/

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Contenido

Nociones necesarias

1. Cuando debemos tratar de bypassear 403?
2. Ambiente de R.Proxy/Waf
3. En que contexto estamos y cómo lo identificamos?
4. Ejemplos de reportes de Hackerone (X-Rewrite-URL, X-Forwarded-For, Uppercase bypass) (ez $$)
5. Uso de plugin 403 Bypasser en Caido (https://github.com/bebiksior/Caido403Bypasser)

Formas de bypass

- Encoding (encode URL, double URL Encode, unicode normalization)
- # is a delimiter?, uso de # para crear inconsistencia.
- Traversals(./, ../, ..;/, /->\, //, ..;/)
- Diferentes escenarios (SSRF, Desde adentro de la red?)
- Headers para reescribir el path
  - https://book.hacktricks.xyz/network-services-pentesting/pentesting-web/403-and-401-bypasses#http-headers-fuzzing
  - X-Rewrite-Url para cambiar host header, path.
  - Use de param miner para encontrar headers, cookie params, body params, etc.
- Caracteres no imprimibles (ver blog de rafa, espacios, tabs, saltos de linea, null bytes, etc)
- Uso IIS cookieless feature para crear inconsistencia. (/admin/S(x)/main.aspx)

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Kelvin Symbol Normalization?

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bi.tk/utf8.html

```
const kelvin = 'K';
console.log(kelvin.toLowerCase());
```

```
const kelvin = 'K';
const normalizedNFKD = kelvin.normalize('NFKD');
console.log(normalizedNFKD);
```

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Excalidraw

- https://excalidraw.com/#json=T12GEw285Z028Vfvx9jr9,d-azHhZx0zaHBS2G6GA6wQ

Lab (Practica!)

- https://github.com/s4yhii/Talk-Resources/raw/refs/heads/main/403Bypasslab.zip

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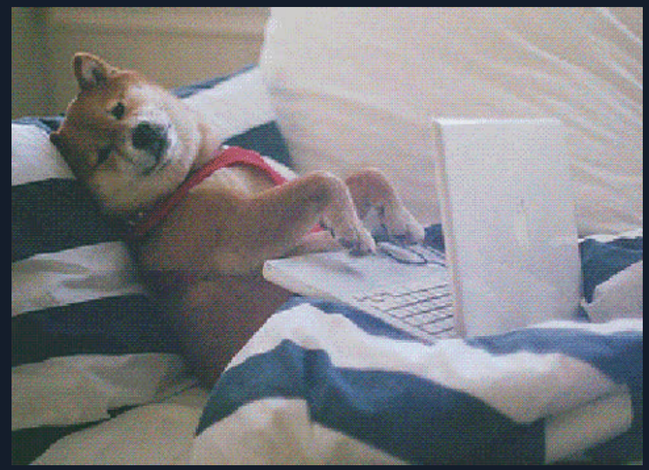
Recursos 403

- https://rafa.hashnode.dev/exploiting-http-parsers-inconsistencies
- https://portswigger.net/research/gotta-cache-em-all
- https://soroush.me/blog/2023/08/cookieless-duodrop-iis-auth-bypass-app-pool-privesc-in-asp-net-framework-cve-2023-36899/
- https://bi.tk/utf8.html
- https://www.youtube.com/watch?v=28xWcRegncw
- https://www.youtube.com/watch?v=euO9WbYHm0s
- https://www.youtube.com/watch?v=PvpXRBor-Jw



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Accede a http://localhost:1337/admin y encuentra la flag.

Premio: htb voucher vip+ al 1ro

OBS: no vale fuzzing, no es por ahi

Instructor: Jesus Lujan Montufar
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