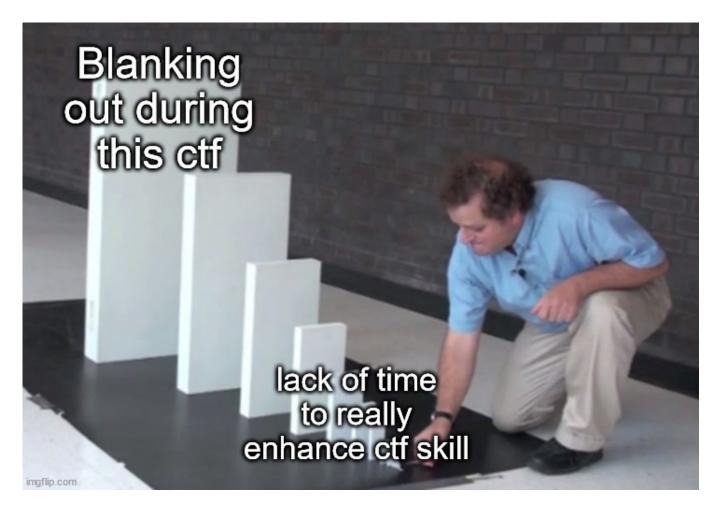
WRITE UP



ctflsMagic

katana

urxry_zhqn

!root

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Reverse Engineering

Code Jugling



Proof of Concept

Masukan file kedalam ghidra untuk diproses, lalu temukan main function "nama function main dipanggil sebagai parameter pertama pada function entry".

```
undefined4 FUN_00401140(int param_1,undefined8 *param_2)

{
    size_t sVar1;
    uint local_20;
    int local_1c;

if (param_1 == 2) {
        FUN_004014a0(param_2[1],0);
        FUN_004014e0(param_2[1],1);
        FUN_00401520(param_2[1],2);
        FUN_004015a0(param_2[1],3);
        FUN_004015a0(param_2[1],4);
```

```
FUN_004015e0(param_2[1],5);
  FUN_00401620(param_2[1],6);
 FUN_00401660(param_2[1],7);
  FUN_004016a0(param_2[1],8);
 FUN_004016e0(param_2[1],9);
 FUN_00401720(param_2[1],10);
 FUN_00401760(param_2[1],0xb);
 FUN_004017a0(param_2[1],0xc);
 FUN_004017e0(param_2[1],0xd);
 FUN_00401820(param_2[1],0xe);
 FUN_00401860(param_2[1],0xf);
  FUN_004018a0(param_2[1],0x10);
  FUN_004018e0(param_2[1],0x11);
 FUN_00401920(param_2[1],0x12);
 FUN_00401960(param_2[1],0x13);
  FUN_004019a0(param_2[1],0x14);
  FUN_004019e0(param_2[1],0x15);
  FUN_00401a20(param_2[1],0x16);
  FUN_00401a60(param_2[1],0x17);
  FUN_00401aa0(param_2[1],0x18);
  FUN_00401ae0(param_2[1],0x19);
  FUN_00401b20(param_2[1],0x1a);
  FUN_00401b60(param_2[1],0x1b);
  FUN_00401ba0(param_2[1],0x1c);
  FUN 00401be0(param 2[1],0x1d);
 FUN_00401c20(param_2[1],0x1e);
  FUN_00401c60(param_2[1],0x1f);
  FUN_00401ca0(param_2[1],0x20);
 FUN_00401ce0(param_2[1],0x21);
 FUN_00401d20(param_2[1],0x22);
 local 20 = 0;
 for (local 1c = 0; local 1c < 35; local 1c = local 1c + 1) {
   local_20 = *(uint *)(&DAT_00404050 + (long)local_1c * 4) | local_20;
 sVar1 = strlen((char *)param_2[1]);
 if (sVar1 != 0x23) {
   local_20 = 1;
 if (local_20 == 0) {
    printf("Congratulations, the flag is: %s\n",param_2[1]);
 else {
   printf("Sorry, wrong flag\n");
else {
```

```
printf("Usage: %s flag\n",*param_2);
}
return 0;
}
```

Berfokus pada banyaknya fungsi

```
FUN 004014a0(param_2[1],0);
    FUN_004014e0(param_2[1],1);
    FUN_00401520(param_2[1],2);
    FUN_00401560(param_2[1],3);
    FUN_004015a0(param_2[1],4);
    FUN_004015e0(param_2[1],5);
   FUN_00401620(param_2[1],6);
    FUN_00401660(param_2[1],7);
    FUN_004016a0(param_2[1],8);
    FUN_004016e0(param_2[1],9);
   FUN_00401720(param_2[1],10);
    FUN_00401760(param_2[1],0xb);
    FUN_004017a0(param_2[1],0xc);
    FUN_004017e0(param_2[1],0xd);
   FUN_00401820(param_2[1],0xe);
    FUN_00401860(param_2[1],0xf);
    FUN_004018a0(param_2[1],0x10);
    FUN_004018e0(param_2[1],0x11);
    FUN_00401920(param_2[1],0x12);
    FUN_00401960(param_2[1],0x13);
    FUN_004019a0(param_2[1],0x14);
    FUN_004019e0(param_2[1],0x15);
    FUN_00401a20(param_2[1],0x16);
    FUN_00401a60(param_2[1],0x17);
    FUN_00401aa0(param_2[1],0x18);
    FUN_00401ae0(param_2[1],0x19);
    FUN_00401b20(param_2[1],0x1a);
    FUN_00401b60(param_2[1],0x1b);
    FUN_00401ba0(param_2[1],0x1c);
    FUN_00401be0(param_2[1],0x1d);
    FUN_00401c20(param_2[1],0x1e);
    FUN_00401c60(param_2[1],0x1f);
    FUN_00401ca0(param_2[1],0x20);
    FUN 00401ce0(param 2[1],0x21);
    FUN_00401d20(param_2[1],0x22);
```

Apabila setiap fungsi dibuka maka terdapat character yang dijadikan pembanding disana.

```
void FUN_004014a0(long param_1,int param_2)

{
    *(uint *)(&DAT_00404050 + (long)param_2 * 4) = (uint)(*(char *)(param_1 +
param_2) != 'G');
    return;
}
```

```
x != 'G'
```

hal tersebut terdapat disemua fungsi sehingga charater tersebut membentuk sebuah flag.

```
Gemastik2022{st45iUn_MLG_k07a_b4rU}
```

Flag

Gemastik2022{st45iUn_MLG_k07a_b4rU}

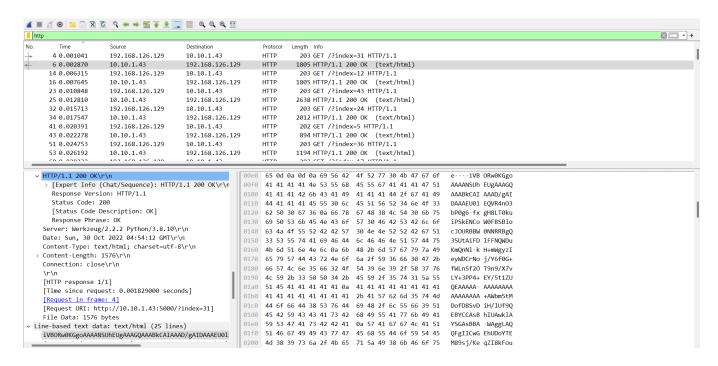
FORENSIC

Traffic Enjoyer

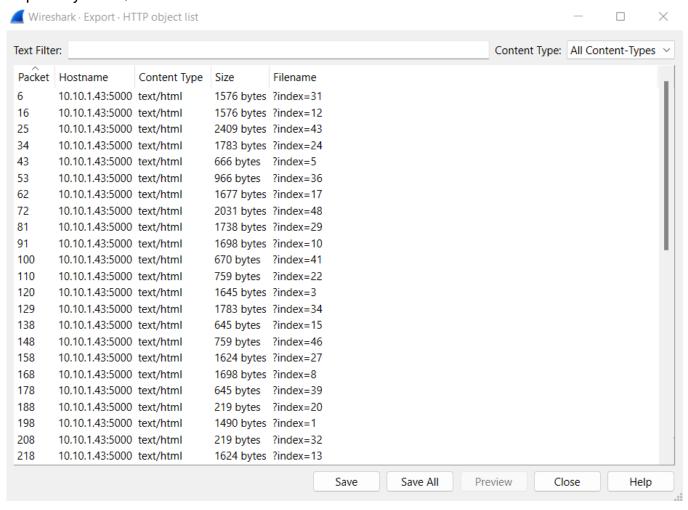
Traffic Enjoyer 500 P balap first blood author - deomkicer#3362 ♣ traffic.pcap Flag Submit

Proof of Concept

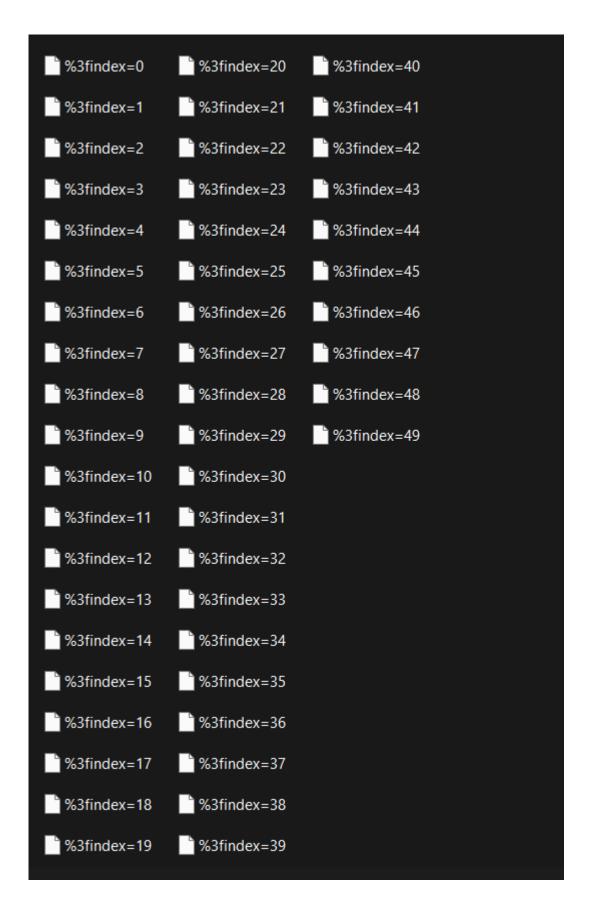
Untuk soal Traffic Enjoyer diberikan sebuah file pcap yang berisikan traffic data. Disini kami menggunakan Wireshark untuk melihat data yang ada.



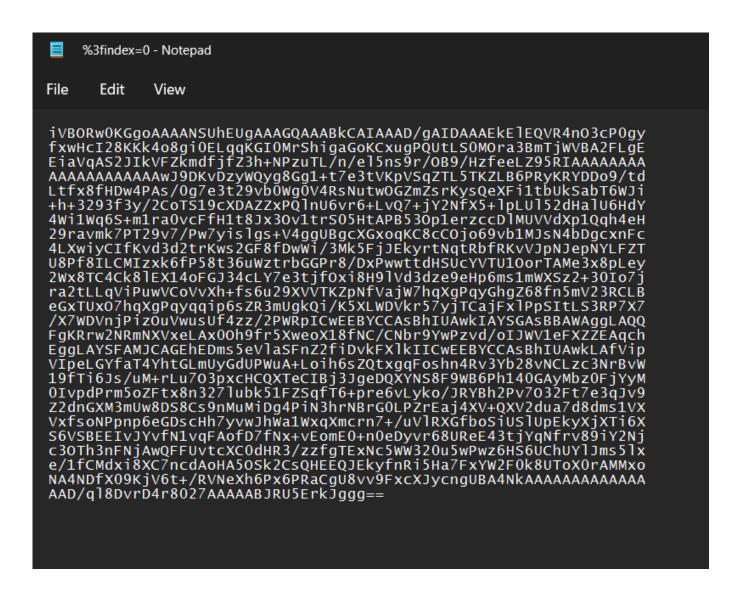
tertarik di sini yaitu pada bagian HTTP, dimana terdapat banyak HTTP get .index dan hasil request nya html/text.



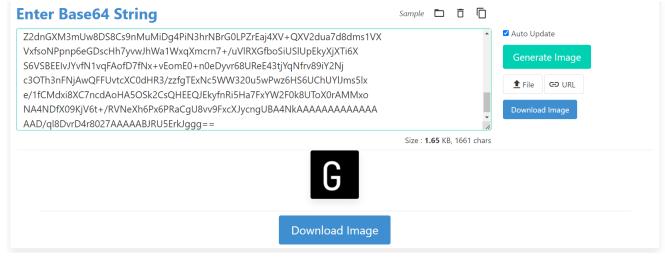
Setelah itu di sini kami mengexport object list HTTP request yang ada.



Setelah kami melihat data yang ada di dalam masing masing index, disni kami menyadari bahwa file yang ada berupa data yang berbentuk **base64**. Selain itu terdapat **ivBO** di dalam nya membuat kami yakin bahwa data tersebut merupakan image file.



Setelah itu disni kami menggunakan tools online untuk mengubah data base64 yang ada menjadi image file menggunakan https://codebeautify.org/base64-to-image-converter

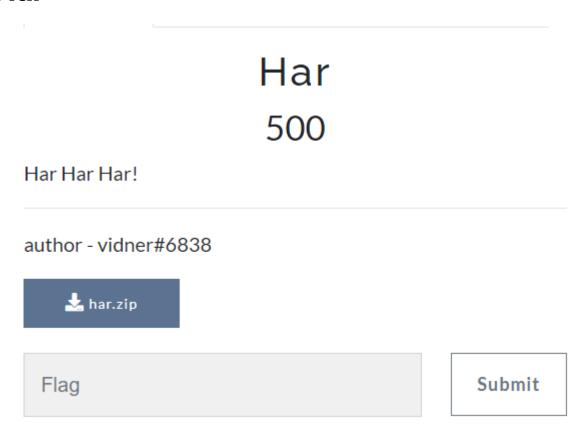


Setelah itu kami mendapatkan sebuah kata dari hasil convert tersebut. Kami melakukan hal yang sama untuk semua file index html yang ada **%3findex=0 sampai %3findex=49**

Flag

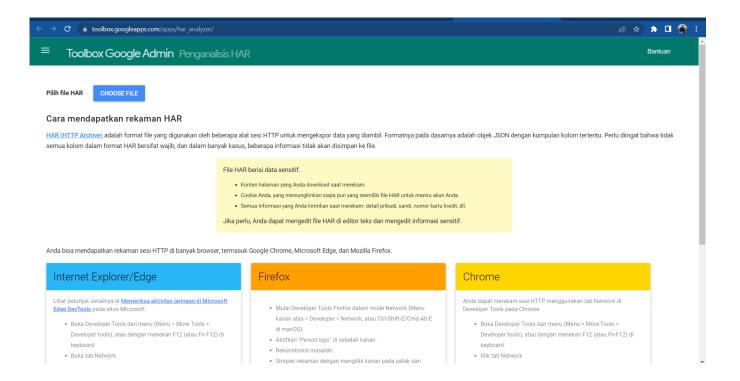
Gemastik2022{balapan_f1rst_bl00d_is_real_f580c176}

Har



Proof of Concept

Untuk soal har ini disana kami setelah searching mengenai apa itu file berformat har, nah disini kami mendapatkan tool https://toolbox.googleapps.com/apps/har_analyzer/ untuk menganalisa file *har yang diberikan.



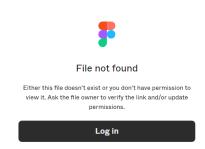
Dari analisa yang kami dapatkan terhadap data yang ada, di sana terdapat banyak traffic yang mengakses ke *figma.com*



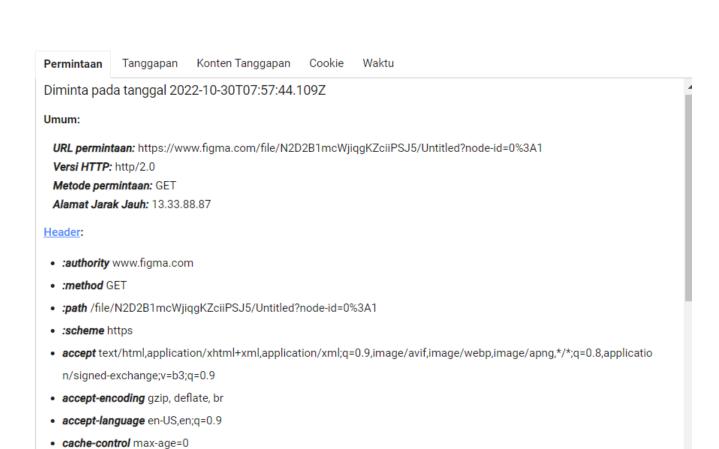


Jenis wa		//www.figma.com/file/i Relatif \(\) Independ		KZCHPSJ5/OHUUE	:u:noue-iu=0%	SAT
Waktu	Respons	Ukuran yang Diperlukan	Ukuran Respons	Analisis	Waktu total	Pewaktuan
07:57:44.109	200	_	-	S Ø □	856 milidetik	‡
	GET https://www.figma.com/file/N2D2B1mcWjiqgKZciiPSJ5/Untitled					
07:57:44.977	200	-	_	Ø	0 milidetik	-
	GET https://static.figma.com/webfont/1/Inter-Regular.woff2					
07:57:44.977	200	-	_	Ø	0 milidetik	-
	GET https://static.figma.com/webfont/1/Inter-Italic.woff2					
07:57:44.977	200	_	_	Ø	0 milidetik	-
	GET https://static.figma.com/webfont/1/Inter-Medium.woff2					
07:57:44.977	200	-	_	Ø	0 milidetik	-
	GET https://static.figma.com/webfont/1/Inter-MediumItalic.woff2					
07:57:44.977	200	_	_	Ø	0 milidetik	-
	GET https://static.figma.com/webfont/1/Inter-SemiBold.woff2					
07:57:44.977	200	-	_	Ø	0 milidetik	_
	GET https://static.figma.com/webfont/1/Inter-SemiBoldItalic.woff2					
07:57:44.977	304	-	-	🖺 🕞 🔐 🛜	256 milidetik	‡
	GET https://static.figma.com/webfont/1/DSEG7Classic-Italic-Custom2.woff2					
07:57:44.977	200	_	-	→ ● □	193 milidetik	‡
	GET https	:://www.figma.com/esbui	ld-artifacts/29700f	1fdbfa0f5e7eb5e9c	d165c7a4f0412	b169/js/figma_app

Setelah kami coba untuk mengakses salah satu method get yaitu https://www.figma.com/file/N2D2B1mcWjiqgKZciiPSJ5/Untitled kami menemukan sebuah figma project file yang mana di tidak dapat diakses.



Nah setelah kami melihat melihat lagi terhadap proses yang ada dalam method request yang diberikan, ternyata di sana terdapat sebuah *cookie*. Nah dari sana kami kepikiran untuk mencoba cookie tersebut untuk mengakses project figma yang ada.

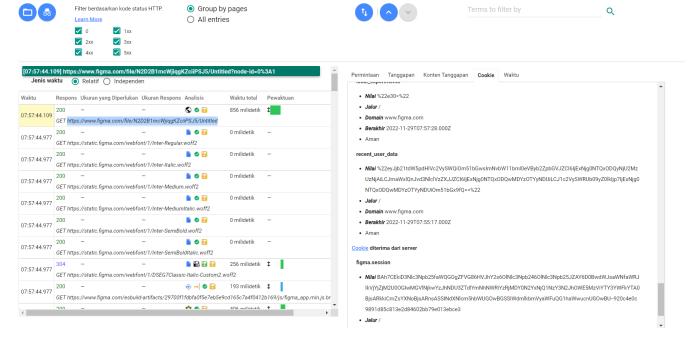


d=null; cb_group_id=null; cb_anonymous_id=%222b3fedda-887a-4fa1-aa29-67177b184c8e%22; __Host-figma.authn=%7 B%221168454184006396245%22%3A%22figtkn.authn.ul5wsHnwRs0KrJjh15JdSc%22%7D; __Host-figma.authn-state= 1; __Host-figma.embed=%7B%221168454184006396245%22%3A%22figtkn.embed.HPqpwVZEu8dc5v90afckEt%22%7

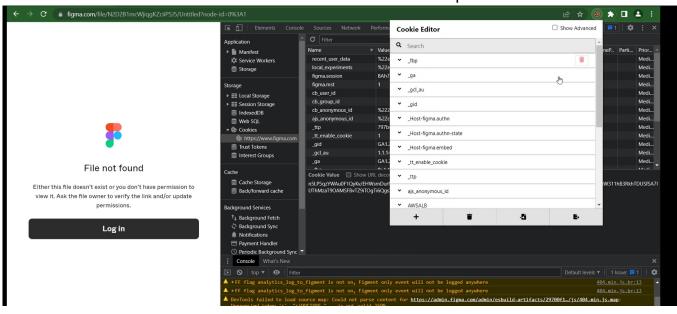
D; figma.mst=1; figma.session=BAh7CEkiD3Nlc3Npb25faWQG0gZFVG86HVJhY2s60lNlc3Npb2460lNlc3Npb25JZAY6

 cookie ajs_anonymous_id=%22c72a5abf-6aa8-4c8c-8b8a-669976da42bb%22; _gcl_au=1.1.1443849903.1667116497; _ fbp=fb.1.1667116497136.1804533433; _tt_enable_cookie=1; _ttp=797bd64b-84c5-4471-8c6b-773fa732cd34; cb_user_i

Nah berikut merupakan tampilan untuk melihat cookie yang ada menggunakan tools tersebut.



Nah kemudian disini kami mencoba untuk menambahkan value pada cookie di browser



```
# Netscape HTTP Cookie File
# http://curl.haxx.se/rfc/cookie spec.html
# This is a generated file! Do not edit.
.www.figma.com TRUE
                     / TRUE
                                     1669812062
                                                   ajs_anonymous_id
a87ae32b-28a6-4cd7-bdcd-0b0557e06652
www.figma.com FALSE /
                             TRUE
                                     1669725662
                                                   ajs_anonymous_id
%22c189b04f-f3be-477c-b895-c878420027fd%22
www.figma.com FALSE
                    / TRUE
                                    1669725663
                                                   experiment_seed
%22882556%22
www.figma.com
              FALSE
                             TRUE
                                    1669736351
                                                   local experiments
%22e30=%22
.figma.com
              TRUE
                             FALSE
                                                   ajs user id
                                     1698670023
%22931897384801461036%22
              TRUE / FALSE
.figma.com
                                    1698670025
                                                   ajs anonymous id
%22c189b04f-f3be-477c-b895-c878420027fd%22
                    FALSE /
marketing.figma.com
                                    TRUE
                                            1701694031
                                                           drift aid
7d4b403b-31ba-4b2e-870f-81a79119f6b4
marketing.figma.com
                                    TRUE
                                            1701694031
                                                           driftt aid
                    FALSE /
7d4b403b-31ba-4b2e-870f-81a79119f6b4
.figma.com TRUE
                             FALSE
                                     1674910033
                                                   _gcl_au
1.1.1178521449.1667134033
                                                    _fbp
.figma.com
              TRUE
                             FALSE
                                     1674920253
```

```
fb.1.1667134034015.678796122
                                                        tt enable cookie
.figma.com
               TRUE
                                FALSE
                                        1700840253
.figma.com
                                                                269b314c-b06a-4572-
                TRUE
                                FALSE
                                        1700840253
                                                        ttp
98d1-0ac08f76e65c
.figma.com
                                FALSE
                                        1698680251
                                                        cb user id
                                                                        null
               TRUE
.figma.com
               TRUE
                                FALSE
                                        1698680251
                                                        cb group id
                                                                        null
.figma.com
               TRUE
                                FALSE
                                        1698670034
                                                        cb anonymous id
%22ac6b46ba-3eec-45e9-b6f4-4b8bcb964113%22
.www.figma.com TRUE
                                TRUE
                                        1670590536
                                                        experiment seed 109226
www.figma.com
                FALSE
                                TRUE
                                        1670590537
                                                        ___Host-figma.authn-state
www.figma.com
                                TRUE
                                        1670590537
                                                        Host-figma.embed
                FALSE
%7B%221168533676738692603%22%3A%22figtkn.embed.umyR5mwoZBwrFQpWXomW2a%22%7D
.www.figma.com TRUE
                                TRUE
                                        1670590537
                                                        figma.mst
                                                                        1
.www.figma.com TRUE
                               TRUE
                                        1670600281
                                                        figma.session
BAh7CEkiD3Nlc3Npb25faWQG0gZFVG86HVJhY2s6O1Nlc3Npb246O1Nlc3Npb25JZAY6D0BwdWJsaWNfaWR
JIkVjMWJhNWI1NDIyZmM4MTkyNjE5MDQxNzE4NGVkNTJmZDIzZDIzMmRmYmMwZjg4MGQ5ZDF1Mzg5N2EyZm
Q1ZWRlBjsARkkiCmZsYXNoBjsARnsASSIJY29udAY7AEZJIjgvZmlsZS90MkQyQjFtY1dqaXFnS1pjaWlQU
0o1L1VudGl0bGVkP25vZGUtaWQ9MCUzQTEGOwBU--3d3243a11954dbd0d062a30b654ade01b383589c
www.figma.com
                FALSE
                               TRUE
                                        1670590537
                                                        Host-figma.authn
%7B%221168454184006396245%22%3A%22figtkn.authn.uI5wsHnwRs0KrJjh15JdSc%22%7D
www.figma.com
                FALSE
                                TRUE
                                        1669736012
                                                        recent user data
%22eyJjb21tdW5pdHlVc2VySWQiOm51bGwsImNvbW11bml0eVByb2ZpbGVJZCI6IjExNjg0NTQxODQyNjU2
MzUzNjAiLCJmaWxlQnJvd3NlclVzZXJJZCI6IjExNjg0NTQxODQwMDYzOTYyNDUiLCJ1c2VySWRUb09yZ0l
kIjp7IjExNjg0NTQxODQwMDYzOTYyNDUiOm51bGx9fQ==%22
www.figma.com
                FALSE
                                FALSE
                                       1667749077
                                                        AWSALBTG
7Dug@ex6PhUo/08oWeWWG1GEoOkwY5iFnRO2bM6cwIvEuYIks5/Xzxw8UavUHVyOxRJhfJ74y7SaBYbRYnv
1tivV+gxcVctP+KlTf8YskQI+yrtNLIln/wBcxgFkXYvbZDZlZ1jPp+HrpELt5d6z+TH4Tm4MkaVYcrFsF+
4jsm+A
www.figma.com
                FALSE
                               TRUE
                                        1667749077
                                                        AWSALBTGCORS
7Dug@ex6PhUo/08oWeWWG1GEoOkwY5iFnRO2bM6cwIvEuYIks5/Xzxw8UavUHVyOxRJhfJ74y7SaBYbRYnv
1tivV+gxcVctP+K1Tf8YskQI+yrtNLIln/wBcxgFkXYvbZDZlZ1jPp+HrpELt5d6z+TH4Tm4MkaVYcrFsF+
4jsm+A
                                                        AWSALB
www.figma.com
                FALSE
                                FALSE
                                        1667749077
qbNROovHP9bueKclvFCDZ5LK+OanW7ccytXKVGlG67gHZOlkY4WZAj0H7fJWoI2wUmaO0GSQgF0jTNkgySz
BnUgHX6KEFbxrkbq0WFfTn9dUBH8YXKVpNn00Bx7e
www.figma.com
                FALSE
                                TRUE
                                        1667749077
                                                        AWSALBCORS
```

qbNROovHP9bueKclvFCDZ5LK+OanW7ccytXKVGlG67gHZOlkY4WZAj0H7fJWoI2wUmaO0GSQgF0jTNkgySzBnUgHX6KEFbxrkbq0WFfTn9dUBH8YXKVpNn0OBx7e

Setelah kami coba untuk memasukkan cookie yanga ada seperti value cookie tersebut kami pun akhirnya bisa mengakses halaman

https://www.figma.com/file/N2D2B1mcWjiqgKZciiPSJ5/Untitled dan mendapatkan flagnya.

Flag

Gemastik2022{kinda_wish_this_werent_text}