

The challenge is the server seems to be leaking pieces of a secret flag in its log files. these pieces are scattered and sometimes repeated. The task is to reconstruct the original flag from the fragments. So I have to download the provide log file and analyse its contents to find the scattered parts of the flag that appear across different lines and then combine those fragments to form the complete flag in the format

Stage 1: make sure the file has been successfully downloaded and the file name is **server.log**



Stage 2: make sure the file already downloaded and save in the fil. And typing the command, as follows:

```
File Actions Edit View Help

(kali@kali)-[~]
$ cd ~/Downloads

(kali@kali)-[~/Downloads]

/home/kali/Downloads

(kali@kali)-[~/Downloads]

$ ls -1
clean.log
server.log

(kali@kali)-[~/Downloads]
```

Stage 3: make sure to double check again the exact file name because sometimes there are typos like server_log instead of server.log

Stage 4: I make sure to display the file type and it's the size of the file

```
-(kali⊛kali)-[~/Downloads]
└$ file server.log
server.log: ASCII text
  -(kali⊗kali)-[~/Downloads]
stat server.log
  File: server.log
  Size: 108322
                         Blocks: 216
                                              IO Block: 4096
                                                                regular file
Device: 8,1
                                    Links: 1
                 Inode: 3277210
Access: (0664/-rw-rw-r--) Uid: ( 1000/
                                                      Gid: ( 1000/
                                             kali)
                                                                        kali)
Access: 2025-10-11 16:56:02.948844108 -0400
Modify: 2025-10-11 16:54:56.439606147 -0400
Change: 2025-10-11 16:54:56.551662146 -0400
Birth: 2025-10-11 16:54:56.123448145 -0400
  -(kali⊗kali)-[~/Downloads]
_$
```

Stage 5: this is done to view the first 30 lines to understand its format

```
·(kali®kali)-[~/Downloads]
 -$ head -n 30 server.log
[1990-08-09 10:00:10] INFO FLAGPART: picoCTF{us3_
[1990-08-09 10:00:16] WARN Disk space low
[1990-08-09 10:00:19] DEBUG Cache cleared
[1990-08-09 10:00:23] WARN Disk space low
[1990-08-09 10:00:25] INFO Service restarted
[1990-08-09 10:00:33] WARN Disk space low
[1990-08-09 10:00:38] ERROR Connection lost
[1990-08-09 10:00:46] ERROR Failed login attempt
[1990-08-09 10:00:48] INFO User logged in
[1990-08-09 10:00:50] INFO User logged in
[1990-08-09 10:00:59] ERROR Failed login attempt
[1990-08-09 10:01:04] DEBUG System check complete
[1990-08-09 10:01:05] WARN Disk space low
[1990-08-09 10:01:13] INFO Service restarted
[1990-08-09 10:01:17] INFO Service restarted
[1990-08-09 10:01:18] ERROR Failed login attempt
[1990-08-09 10:01:24] ERROR Connection lost
[1990-08-09 10:01:25] WARN High memory usage detected
[1990-08-09 10:01:31] ERROR Connection lost
[1990-08-09 10:01:36] INFO Service restarted
[1990-08-09 10:01:41] ERROR Connection lost
[1990-08-09 10:01:44] WARN High memory usage detected
[1990-08-09 10:01:53] INFO Scheduled task run
[1990-08-09 10:01:54] DEBUG System check complete
[1990-08-09 10:01:57] DEBUG System check complete
[1990-08-09 10:01:58] INFO Scheduled task run
[1990-08-09 10:02:04] WARN Disk space low
[1990-08-09 10:02:07] INFO Service restarted
[1990-08-09 10:02:16] ERROR Failed login attempt
[1990-08-09 10:02:26] DEBUG Cache cleared
```

Stage 6: search for lines containing picoCTF (case-insensitive). This method is more informative to helps find a hints or flags in various possible spellings.

```
(kali⊗kali)-[~/Downloads]
└$ grep -i "picoCTF" server.log
[1990-08-09 10:00:10] INFO FLAGPART:
                                             {us3_
[1990-08-09 11:04:27] INFO FLAGPART:
                                             {us3_
[1990-08-09 11:04:29] INFO FLAGPART:
                                             {us3_
[1990-08-09 11:04:37] INFO FLAGPART:
                                             {us3_
[1990-08-09 12:19:23] INFO FLAGPART:
                                             {us3_
[1990-08-09 12:19:29] INFO FLAGPART:
                                             {us3_
[1990-08-09 12:19:32] INFO FLAGPART:
                                             {us3
  -(kali⊛kali)-[~/Downloads]
```

Stage 7: This is to search for other fragments. And the result shows several other fragments. So the answer for this question is

picoCTF{us3_y0urlinux_sk1lls_cedfa5fb}

```
·(kali⊛kali)-[~/Downloads]
—$ grep "FLAGPART" server.log | less
  -(kali®kali)-[~/Downloads]
 -$ grep "FLAGPART" server.log
                             AGPART: picoCTF{us3_
[1990-08-09 10:00:10] INFO
                            LAGPART: y0urlinux_
[1990-08-09 10:02:55] INFO
[1990-08-09 10:05:54] INFO
                                 ART: sk1lls_
[1990-08-09 10:05:55] INFO
                                  (T: sk1lls
[1990-08-09 10:10:54] INFO
[1990-08-09 10:10:58] INFO
                                   T: cedfa5fb}
[1990-08-09 10:11:06] INFO
                                   T: cedfa5fb}
[1990-08-09 11:04:27] INFO
                                  RT: picoCTF{us3_
[1990-08-09 11:04:29] INFO
                                  RT: picoCTF{us3_
                                  RT: picoCTF{us3_
[1990-08-09 11:04:37] INFO
[1990-08-09 11:09:16] INFO
                                  RT: y0urlinux_
                                  RT: y0urlinux_
[1990-08-09 11:09:19] INFO
[1990-08-09 11:12:40] INFO
                                  T: sk1lls
                                  : sk1lls
[1990-08-09 11:12:45] INFO
                                 KT: cedfa5fb}
[1990-08-09 11:16:58] INFO
[1990-08-09 11:16:59] INFO
                                  RT: cedfa5fb}
                                  RT: cedfa5fb}
[1990-08-09 11:17:00] INFO
[1990-08-09 12:19:23] INFO
                                  T: picoCTF{us3_
[1990-08-09 12:19:29] INFO
                                  T: picoCTF{us3_
                                  T: picoCTF{us3_
[1990-08-09 12:19:32] INFO
[1990-08-09 12:23:43] INFO
                                  T: y0urlinux_
                                 KT: y0urlinux_
[1990-08-09 12:23:45] INFO
[1990-08-09 12:23:53] INFO
                                  RT: y0urlinux
                                  KI: sk1lls
[1990-08-09 12:25:32] INFO
                                 KI: cedfa5fb}
[1990-08-09 12:28:45] INFO
                                MART: cedfa5fb}
[1990-08-09 12:28:49] INFO
[1990-08-09 12:28:52] INFO
                                  RT: cedfa5fb}
   ·(kali⊛kali)-[~/Downloads]
```