



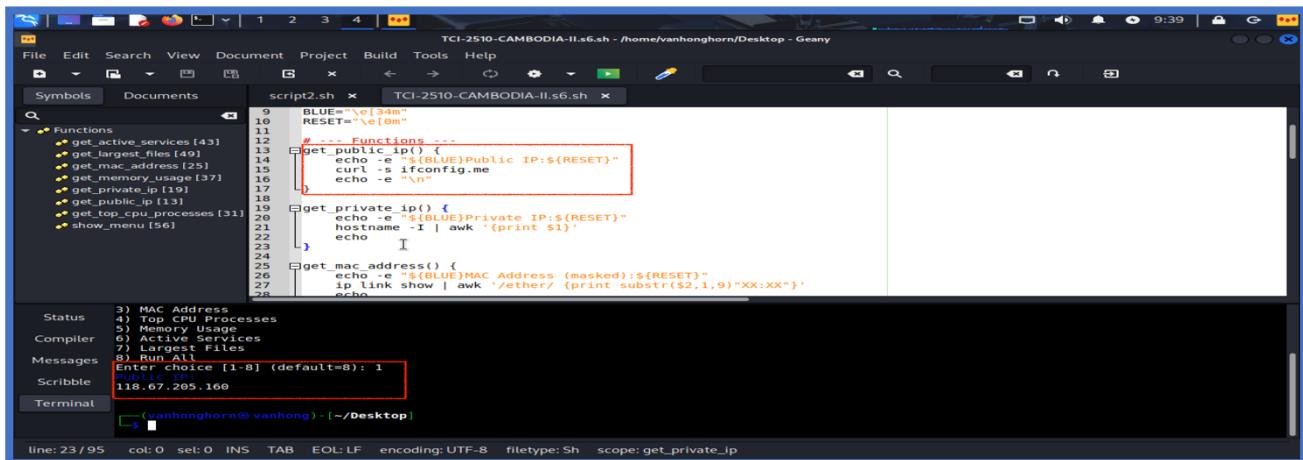
LINUX FUNDAMENTALS | PROJECTS: INFO EXTRACTOR

Project Structure

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System Diagnostics

1. Identify the system's public IP.



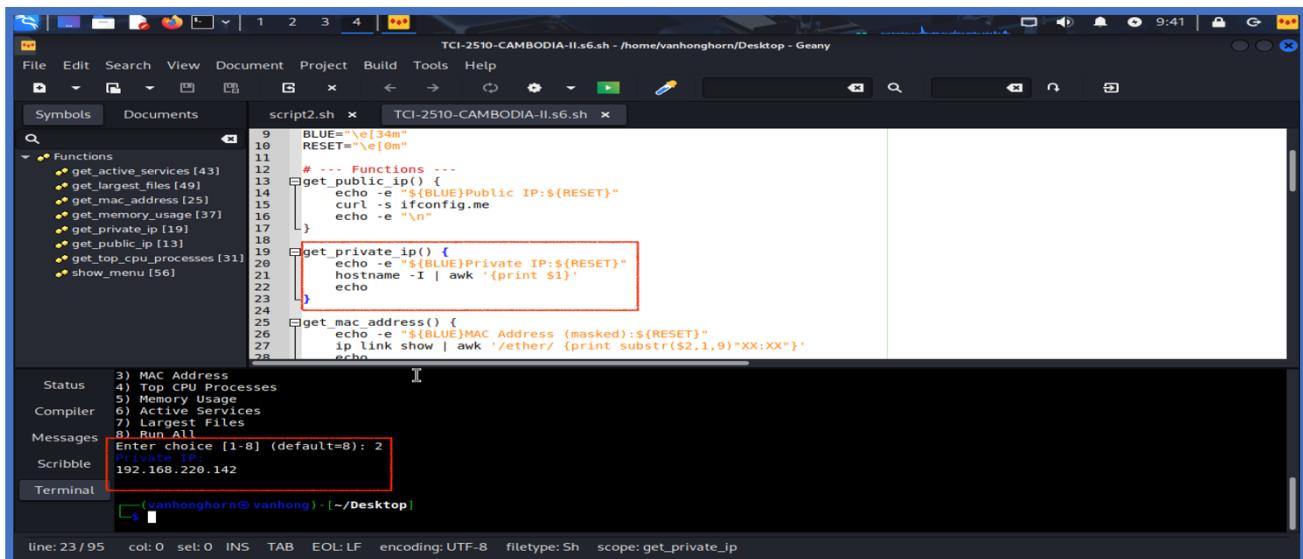
```
script2.sh x TCI-2510-CAMBODIA-II.s6.sh x
9  BLUE="\e[34m"
10 RESET="\e[0m"
11
12 # --- Functions ---
13 get_public_ip() {
14     echo -e "${BLUE}Public IP:${RESET}"
15     curl -s ifconfig.me
16     echo -e "\n"
17 }
18
19 get_private_ip() {
20     echo -e "${BLUE}Private IP:${RESET}"
21     hostname -I | awk '{print $1}'
22 }
23
24
25 get_mac_address() {
26     echo -e "${BLUE}MAC Address (masked):${RESET}"
27     ip link show | awk '/ether/ {print substr($2,1,9)"XX:XX"}'
28 }
```

Status
Compiler
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Enter choice [1-8] (default=8): 1
Public IP:
18.67.205.160

(vanhonghorn@vanhong) - [/Desktop]

2. Identify the private IP address assigned to the system's network interface.



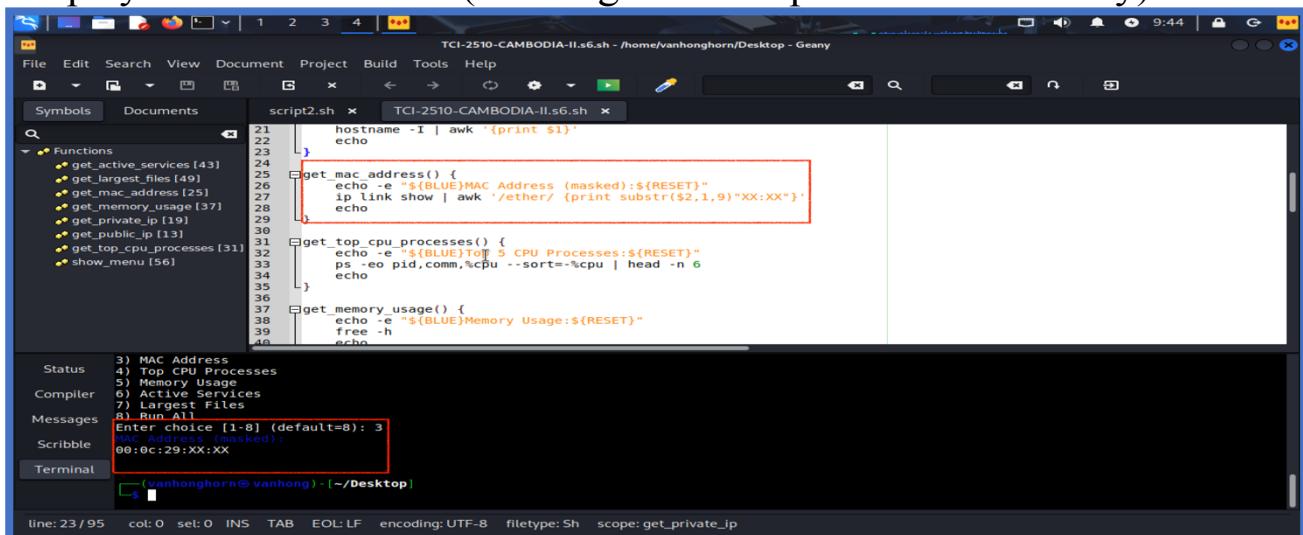
```
script2.sh x TCI-2510-CAMBODIA-II.s6.sh x
9  BLUE="\e[34m"
10 RESET="\e[0m"
11
12 # --- Functions ---
13 get_public_ip() {
14     echo -e "${BLUE}Public IP:${RESET}"
15     curl -s ifconfig.me
16     echo -e "\n"
17 }
18
19 get_private_ip() {
20     echo -e "${BLUE}Private IP:${RESET}"
21     hostname -I | awk '{print $1}'
22 }
23
24
25 get_mac_address() {
26     echo -e "${BLUE}MAC Address (masked):${RESET}"
27     ip link show | awk '/ether/ {print substr($2,1,9)"XX:XX"}'
28 }
```

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Enter choice [1-8] (default=8): 2
Private IP:
192.168.220.142

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3. Display the MAC address (masking sensitive portions for security).



```
script2.sh x TCI-2510-CAMBODIA-II.s6.sh x
21
22
23
24
25 get_mac_address() {
26     echo -e "${BLUE}MAC Address (masked):${RESET}"
27     ip link show | awk '/ether/ {print substr($2,1,9)"XX:XX"}'
28 }
29
30
31 get_top_cpu_processes() {
32     echo -e "${BLUE}Top CPU Processes:${RESET}"
33     ps -eo pid,comm,%cpu --sort=-%cpu | head -n 6
34 }
35
36
37
38 get_memory_usage() {
39     echo -e "${BLUE}Memory Usage:${RESET}"
40     free -h
41     echo
42 }
```

Status
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Enter choice [1-8] (default=8): 3
MAC Address (masked):
00:0c:29:XX:XX

(vanhonghorn@vanhong) - [/Desktop]

4. Display the percentage of CPU usage for the top 5 processes.

The screenshot shows a terminal window titled "TCI-2510-CAMBODIA-II.s6.sh - /home/vanhonghorn/Desktop - Geany". The terminal displays the following output:

```
8) Run All
Enter choice [1-8] (default=8): 4
Top 5 CPU Processes:
 PID COMMAND %CPU
2735389 ps 200
265824 Isolated Web Co 17.0
265612 firefox-esr 1.6
1231 wrapper-2.0 1.5
265817 Utility Process 1.4
```

The command run was `ps -eo pid,comm,%cpu --sort=-%cpu | head -n 6`.

5. Display memory usage statistics: total and available memory.

The screenshot shows a terminal window titled "TCI-2510-CAMBODIA-II.s6.sh - /home/vanhonghorn/Desktop - Geany". The terminal displays the following output:

```
5) Memory Usage
6) Active Services
7) Largest Files
8) Run All
Enter choice [1-8] (default=8): 5
Memory Usage:
      total        used         free      shared   buff/cache    available
Mem:   1.96Gi   1.56Gi   140Mi     18Mi    457Mi   406Mi
Swap:  1.16Gi   1.16Gi   224Ki
```

The command run was `free -h`.

6. List active system services with their status.

The screenshot shows a terminal window within the Geany IDE. The script `script2.sh` is open, displaying code to list active system services. The output of the script is shown in the terminal below:

```
8) Run All
Enter choice [1-8] (default=8): 6
Active Services:
UNIT           LOAD ACTIVE SUB DESCRIPTION
accounts-daemon.service loaded active running Accounts Service
apache2.service    loaded active running The Apache HTTP Server
colord.service   loaded active running Manage, Install and Generate Color Profiles
cron.service     loaded active running Regular Background program processing daemon
dbus.service     loaded active running D-Bus System Message Bus
getty@tty1.service loaded active running Getty on tty1
haveged.service   loaded active running Entropy Daemon based on the HAVEGE algorithm
lightdm.service   loaded active running Light Display Manager
ModemManager.service loaded active running Modem Manager
```

7. Locate the Top 10 Largest Files in /home.

The screenshot shows a terminal window within the Geany IDE. The script `script2.sh` is open, displaying code to find the top 10 largest files in the `/home` directory. The output of the script is shown in the terminal below:

```
8) Run All
Enter choice [1-8] (default=8): 7
Top 10 Largest Files in /home/vanhonghorn:
42M  /home/vanhonghorn/Downloads/MobaXterm_Portable_v25.4.zip
19M   /home/vanhonghorn/Downloads/CygUtils.plugin
17M   /home/vanhonghorn/Downloads/MobaXterm_Personal_25.4.exe
13M   /home/vanhonghorn/Downloads/CygUtils64.plugin
12M   /home/vanhonghorn/.mozilla/firefox/vlavz8j9.default-esr/storage/permanent/chrome/ideb/3870112724rsegmnoittet-es.sqlite
9.3M   /home/vanhonghorn/.cache/mozilla/firefox/vlavz8j9.default-esr/startupCache/scriptCache-current.bin
9.2M   /home/vanhonghorn/.cache/mozilla/firefox/vlavz8j9.default-esr/startupCache/scriptCache.bin
8.9M   /home/vanhonghorn/.cache/mozilla/firefox/vlavz8j9.default-esr/safefrowsing/google4/goog-phish-proto.vlpset
5.0M   /home/vanhonghorn/.mozilla/firefox/vlavz8j9.default-esr/places.sqlite
5.0M   /home/vanhonghorn/.mozilla/firefox/vlavz8j9.default-esr/favicons.sqlite
```