

Level 1 Strace

[illegible]

Level 3

Guest :-192.168.16.222(ubuntu@benelux)

host :-192.168.16.100(yash@benelux)

```
yash@benelux:~$ ssh -p 22 ubuntu@192.168.16.222
ubuntu@192.168.16.222's password:
Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 5.15.0-112-generic aarch64)

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

System information as of Sun Jun 23 02:25:56 PM UTC 2024

System load:          0.13
Usage of /:           54.8% of 24.90GB
Memory usage:         20%
Swap usage:           0%
Processes:            213
Users logged in:      1
IPv4 address for enp0s1: 192.168.16.222
IPv6 address for enp0s1: 2409:40c2:115f:8fcb:b170:6ae1:ac17:2692
IPv6 address for enp0s1: 2409:40c2:115f:8fcb:947c:2349:e1e7:e58b

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

Last login: Sat Jun 22 18:48:04 2024 from 192.168.16.100
ubuntu@benelux:~$
```

Using ssh guest has login into host terminal.

To Transfer and extract file using bash script

```
transfer_and_extract.sh
~/Desktop

1 #!/bin/bash
2
3 # Define variables for host and guest details
4 HOST_USER="yash"
5 HOST_IP="192.168.16.100"
6 GUEST_USER="ubuntu"
7 GUEST_IP="192.168.16.222"
8 PORT="2222"
9 FILE_NAME="test.cpp"
10 EXE_NAME="test.out"
11 SYSCALLS_FILE="test_syscalls.txt"
12
13 # Define paths
14 HOST_DESKTOP="/home/$HOST_USER/Desktop"
15 GUEST_DESKTOP="/home/$GUEST_USER/Desktop"
16
17 # Step 1: Send the C/C++ file from host to guest
18 scp -P $PORT $HOST_DESKTOP/$FILE_NAME $GUEST_USER@$GUEST_IP:$GUEST_DESKTOP
19
20 # Step 2: SSH into the guest machine to compile the file and extract system calls
21 ssh -p $PORT $GUEST_USER@$GUEST_IP << EOF
22 cd $GUEST_DESKTOP
23 g++ -o $EXE_NAME $FILE_NAME # Compile the C++ file
24 strace -o $SYSCALLS_FILE -c ./$EXE_NAME # Extract system calls
25 EOF
26
27 # Step 3: Retrieve the system calls file from guest to host
28 scp -P $PORT $GUEST_USER@$GUEST_IP:$GUEST_DESKTOP/$SYSCALLS_FILE $HOST_DESKTOP
29
30 echo "System calls extracted and saved to $HOST_DESKTOP/$SYSCALLS_FILE"
```

```
yash@benelux: ~/Desktop
yash@benelux:~/Desktop$ bash transfer_and_extract.sh
ubuntu@192.168.16.222's password:
test.cpp 100% 110 111.1KB/s 00:00
Pseudo-terminal will not be allocated because stdin is not a terminal.
ubuntu@192.168.16.222's password:
Welcome to Ubuntu 22.04.4 LTS (GNU/Linux 5.15.0-112-generic aarch64)

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 * Support:       https://ubuntu.com/pro

System information as of Sun Jun 23 07:08:52 PM UTC 2024

System load:          0.0
Usage of /:           54.8% of 24.90GB
Memory usage:        20%
Swap usage:          0%
Processes:           219
Users logged in:      1
IPv4 address for enp0s1: 192.168.16.222
IPv6 address for enp0s1: 2409:40c2:115f:8fcb:58fd:f1e5:ffb8:42ca
IPv6 address for enp0s1: 2409:40c2:115f:8fcb:947c:2349:e1e7:e58b

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File send Successfully
ubuntu@192.168.16.222's password:
test_syscalls.txt 100% 1259 1.7MB/s 00:00
System calls extracted and saved to /home/yash/Desktop/test_syscalls.txt
yash@benelux:~/Desktop$
```

script has been run successfully

cpp code

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    cout << "File send Successfully\n";
```

```
    return 0;
```

```
}
```