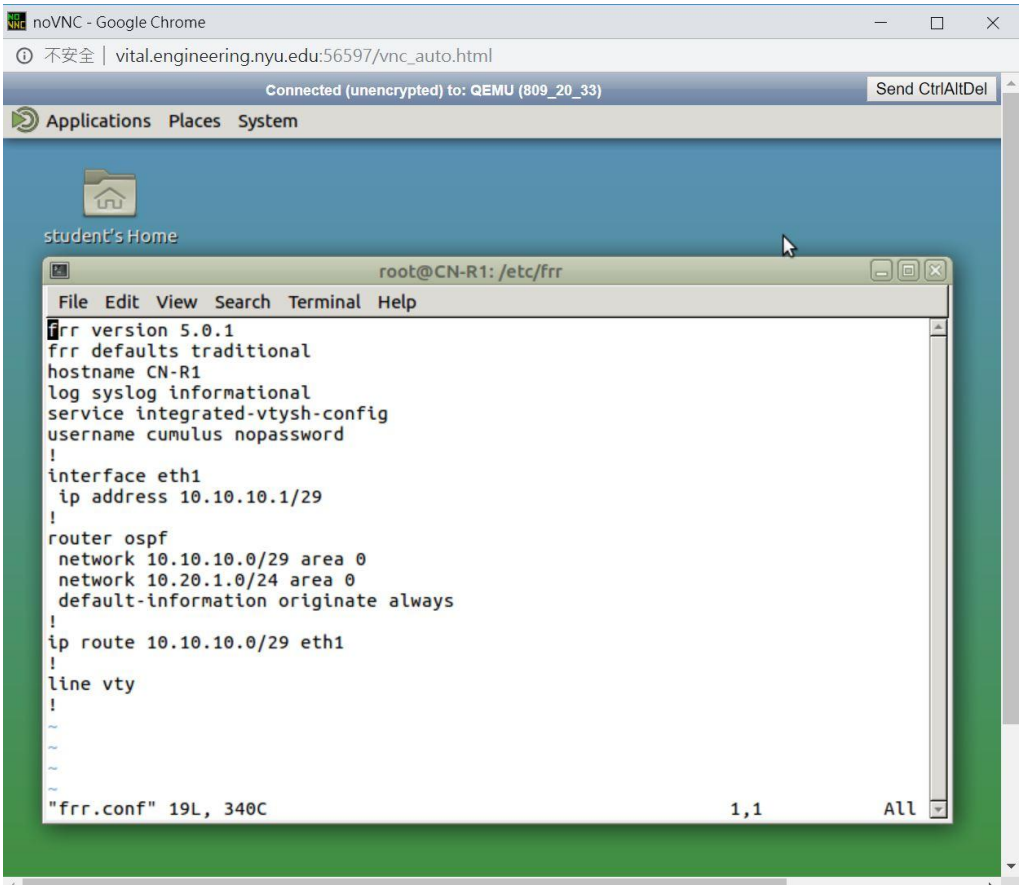
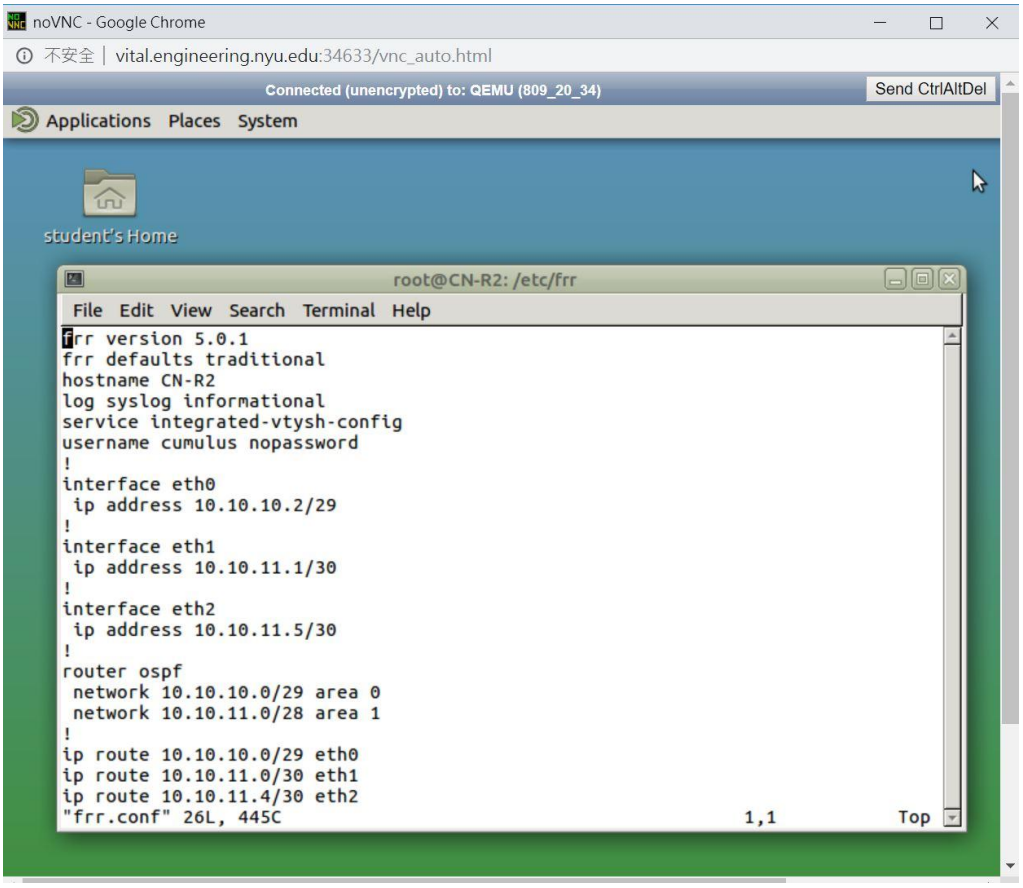
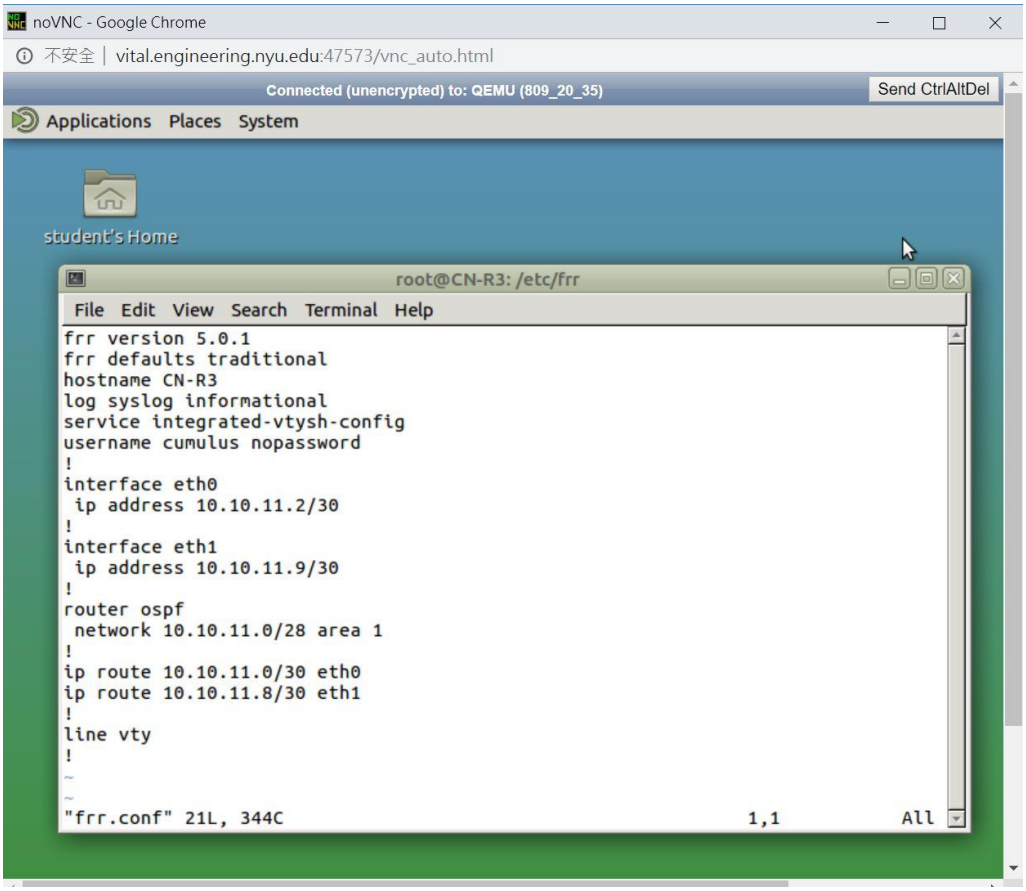
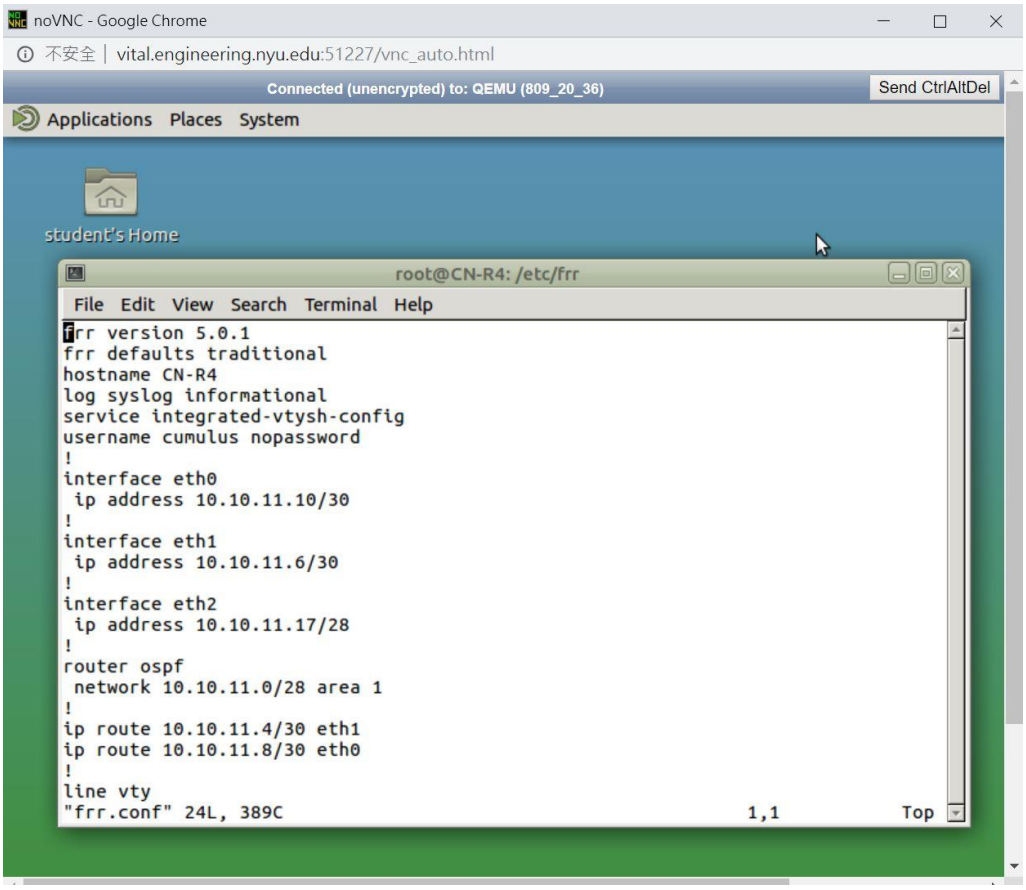
1. Screenshot configurations of R1, R2, R3, and R4.

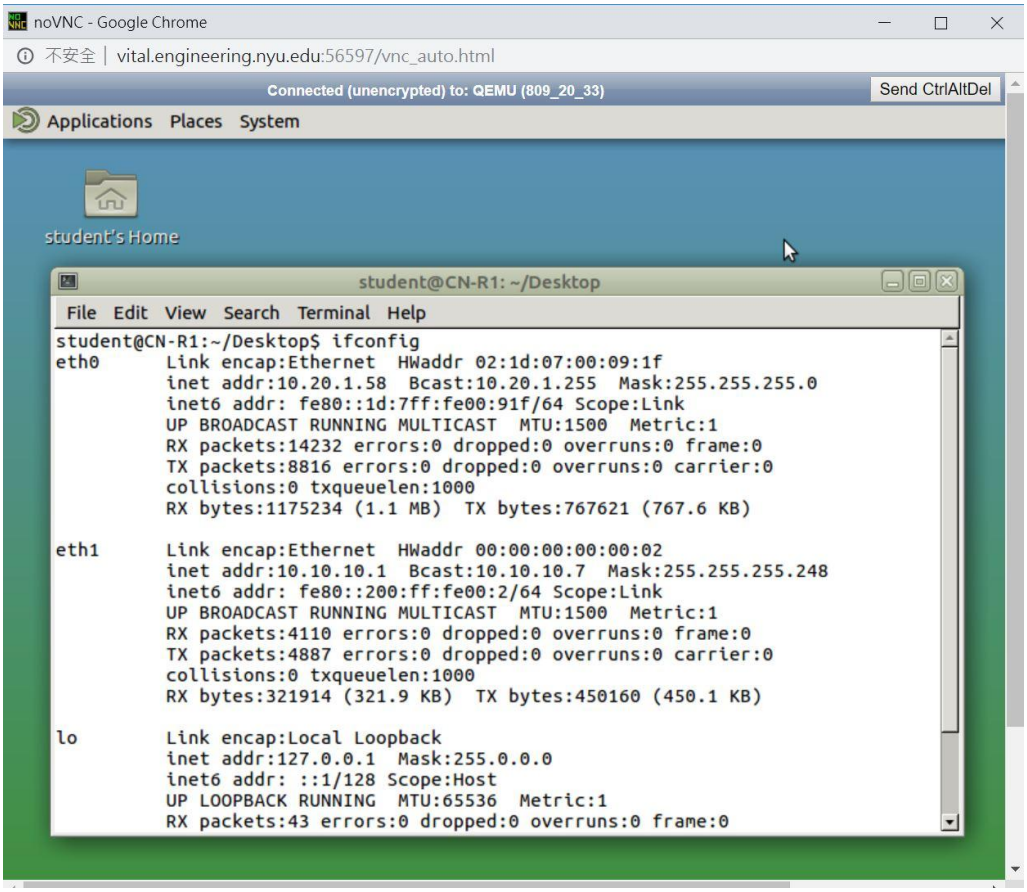


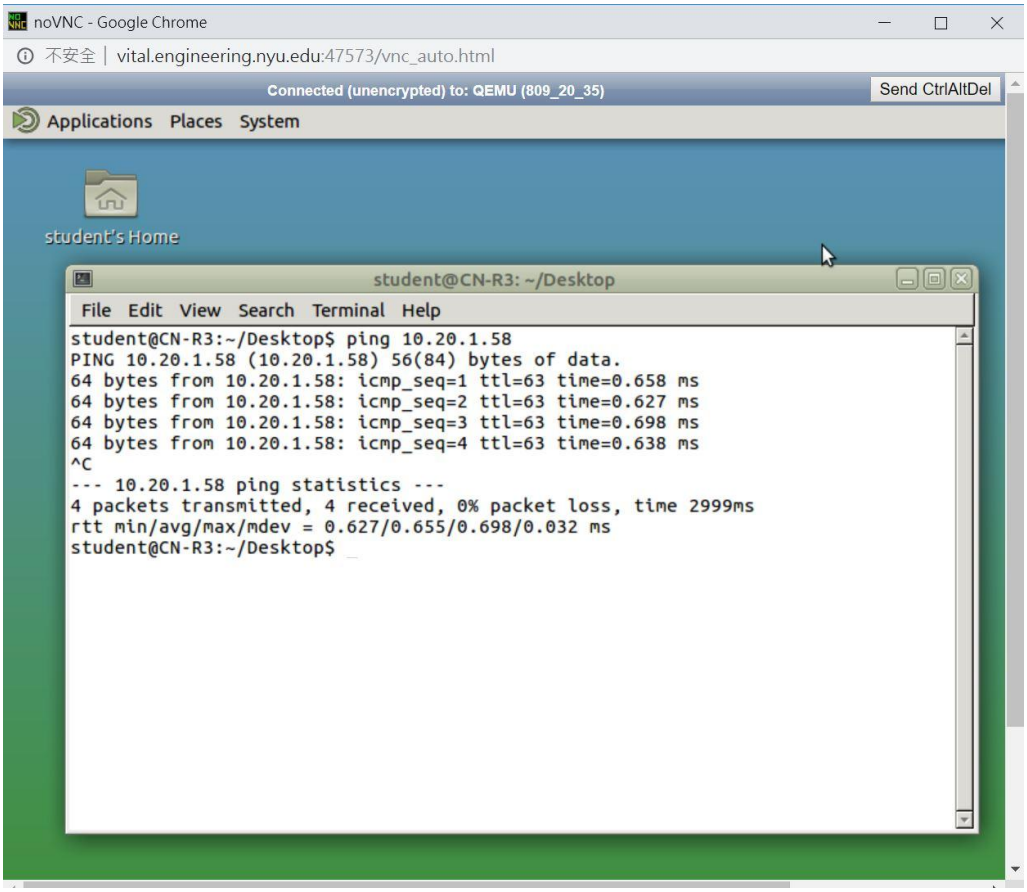


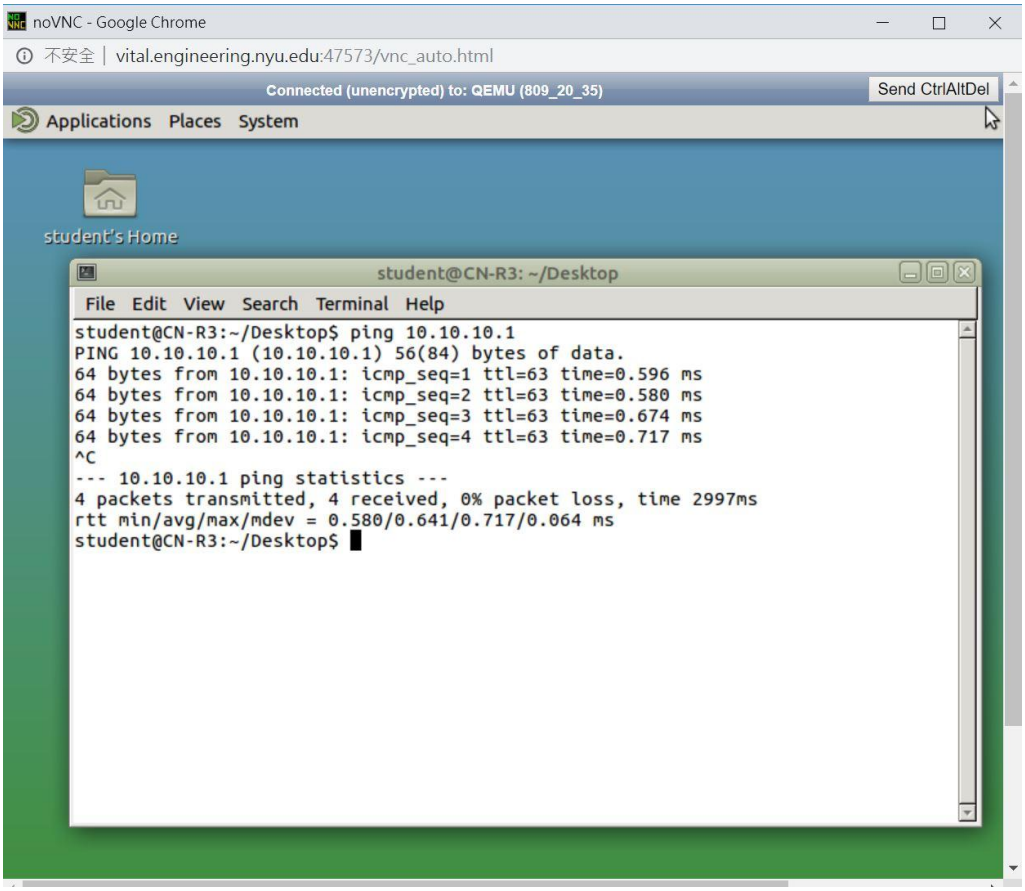

noVNC - Google Chrome
不安全 | vital.engineering.nyu.edu:47573/vnc_auto.html
Connected (unencrypted) to: QEMU (809_20_35)
Send CtrlAltDel
Applications Places System
student's Home
root@CN-R3: /etc/frr
File Edit View Search Terminal Help
frr version 5.0.1
frr defaults traditional
hostname CN-R3
log syslog informational
service integrated-vtysh-config
username cumulus nopassword
!
interface eth0
 ip address 10.10.11.2/30
!
interface eth1
 ip address 10.10.11.9/30
!
router ospf
 network 10.10.11.0/28 area 1
!
ip route 10.10.11.0/30 eth0
ip route 10.10.11.8/30 eth1
!
line vty
!
"frr.conf" 21L, 344C 1,1 All


noVNC - Google Chrome
不安全 | vital.engineering.nyu.edu:51227/vnc_auto.html
Connected (unencrypted) to: QEMU (809_20_36)
Send CtrlAltDel
Applications Places System
student's Home
root@CN-R4: /etc/frr
File Edit View Search Terminal Help
frr version 5.0.1
frr defaults traditional
hostname CN-R4
log syslog informational
service integrated-vtysh-config
username cumulus nopassword
!
interface eth0
 ip address 10.10.11.10/30
!
interface eth1
 ip address 10.10.11.6/30
!
interface eth2
 ip address 10.10.11.17/28
!
router ospf
 network 10.10.11.0/28 area 1
!
ip route 10.10.11.4/30 eth1
ip route 10.10.11.8/30 eth0
!
line vty
"frr.conf" 24L, 389C 1,1 Top

2. ICMP results from R3 to R1, etc.



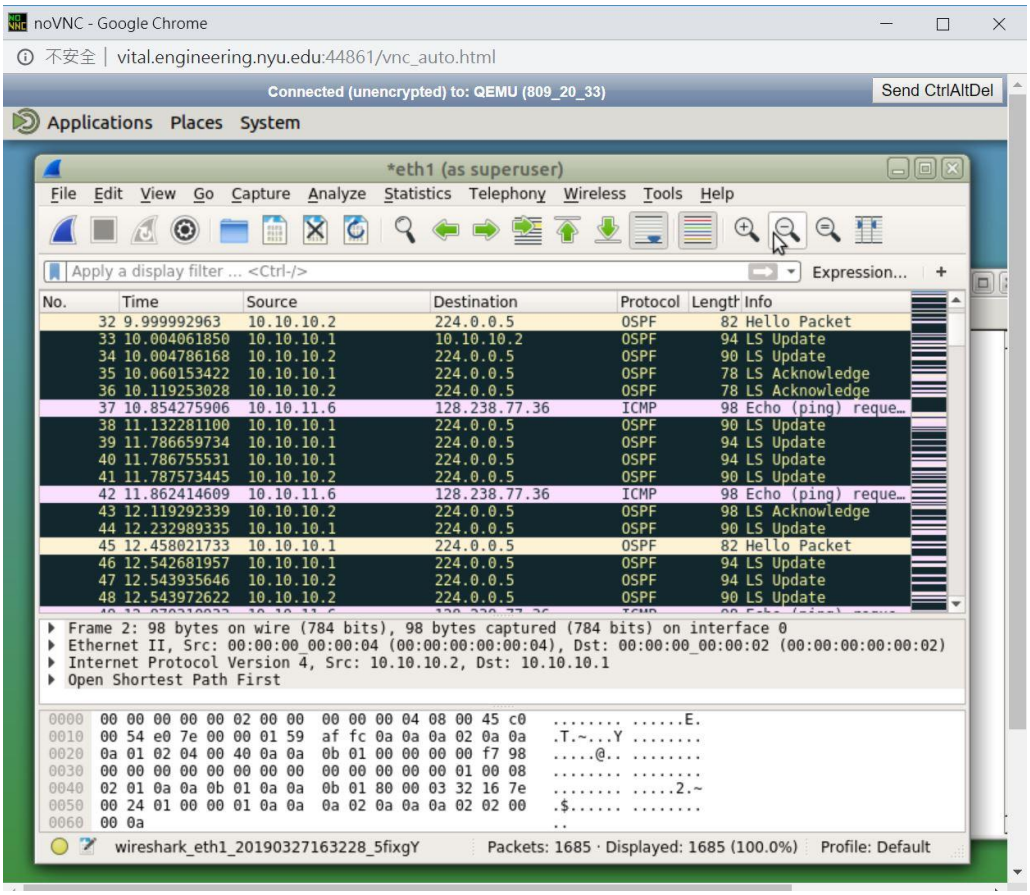




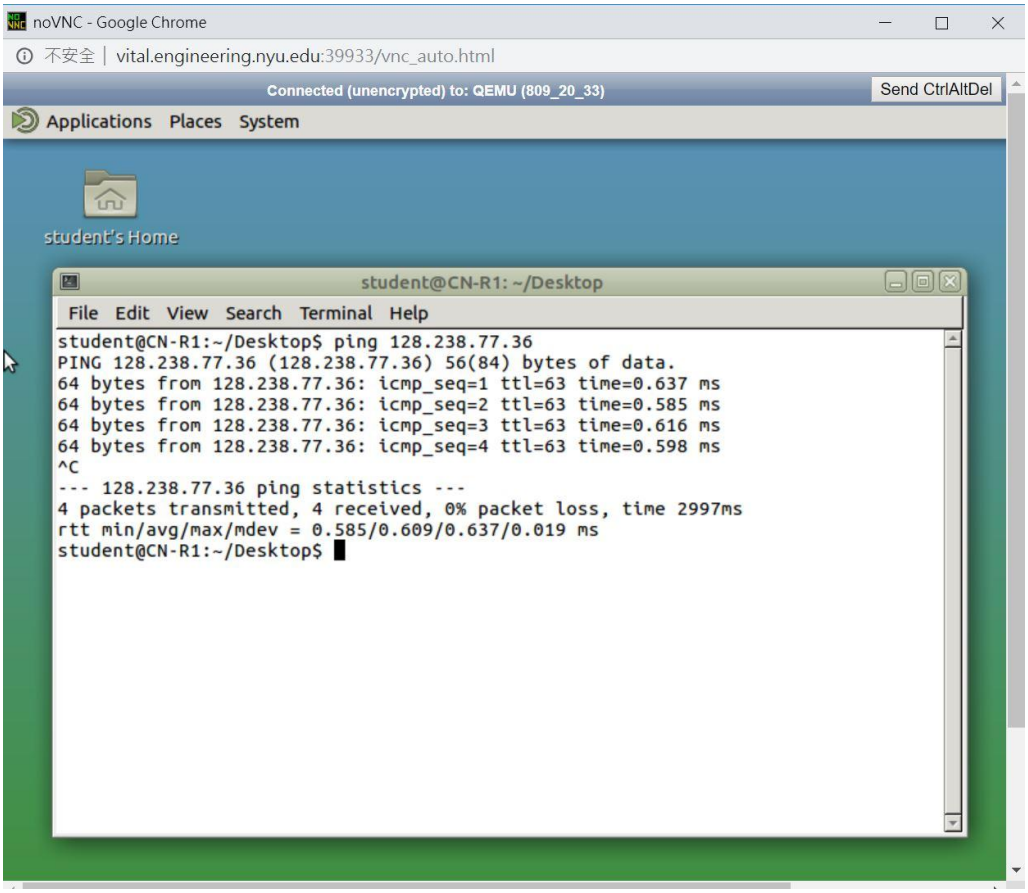
Ping operates by sending ICMP echo request packets to the target host and waiting for an ICMP echo reply. The program reports errors, packet loss, and round-trip times.

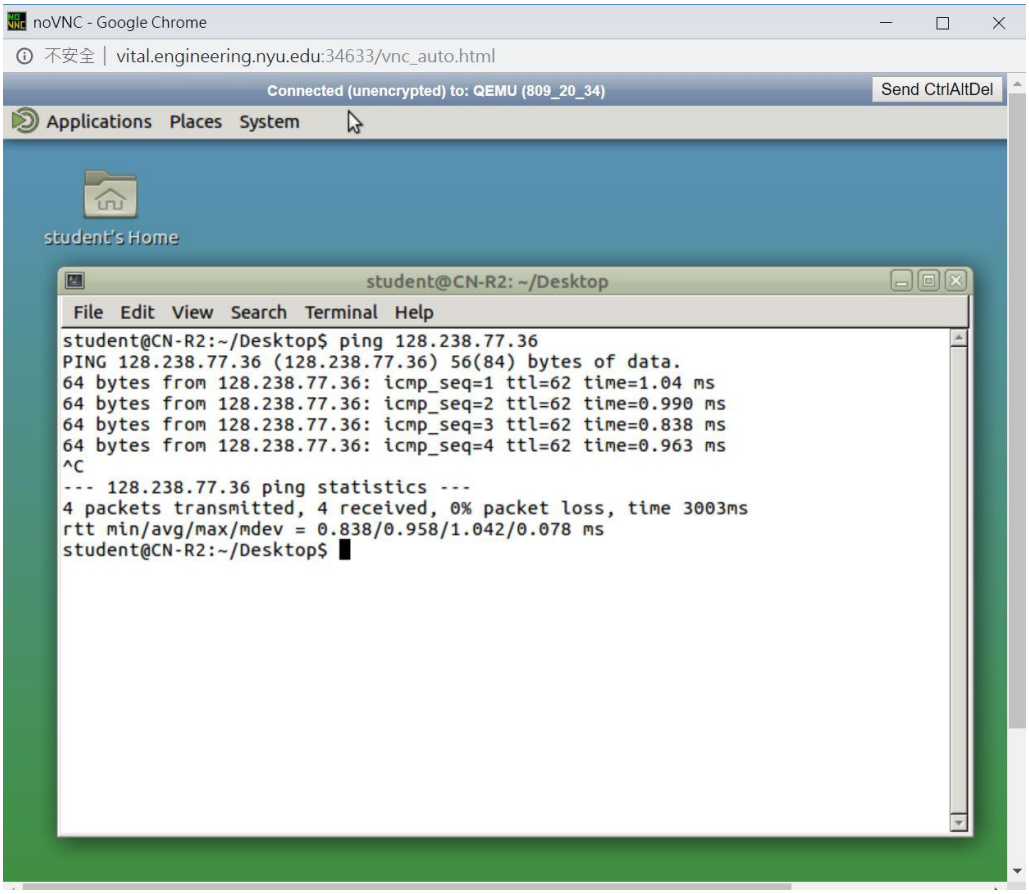
3. Wireshark screenshots on R1.

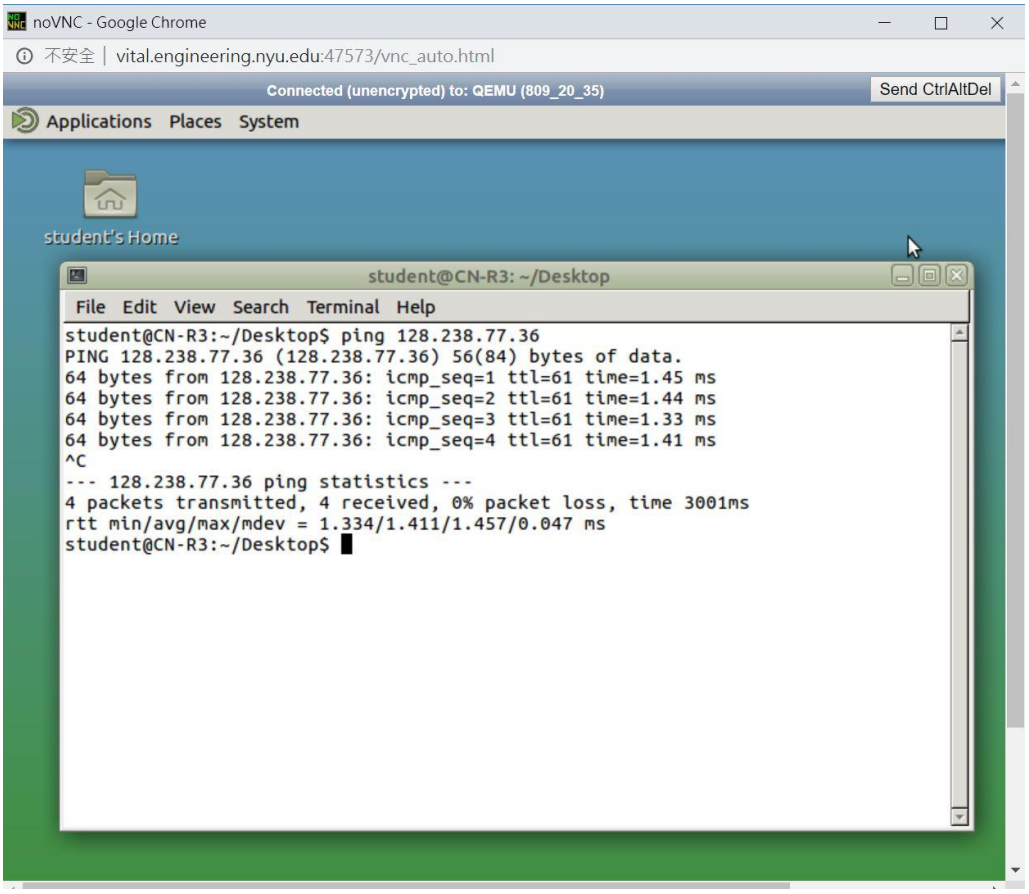
Use sudo wireshark to open Wireshark in order to have permissions. Then choose the interface to see captured network data.

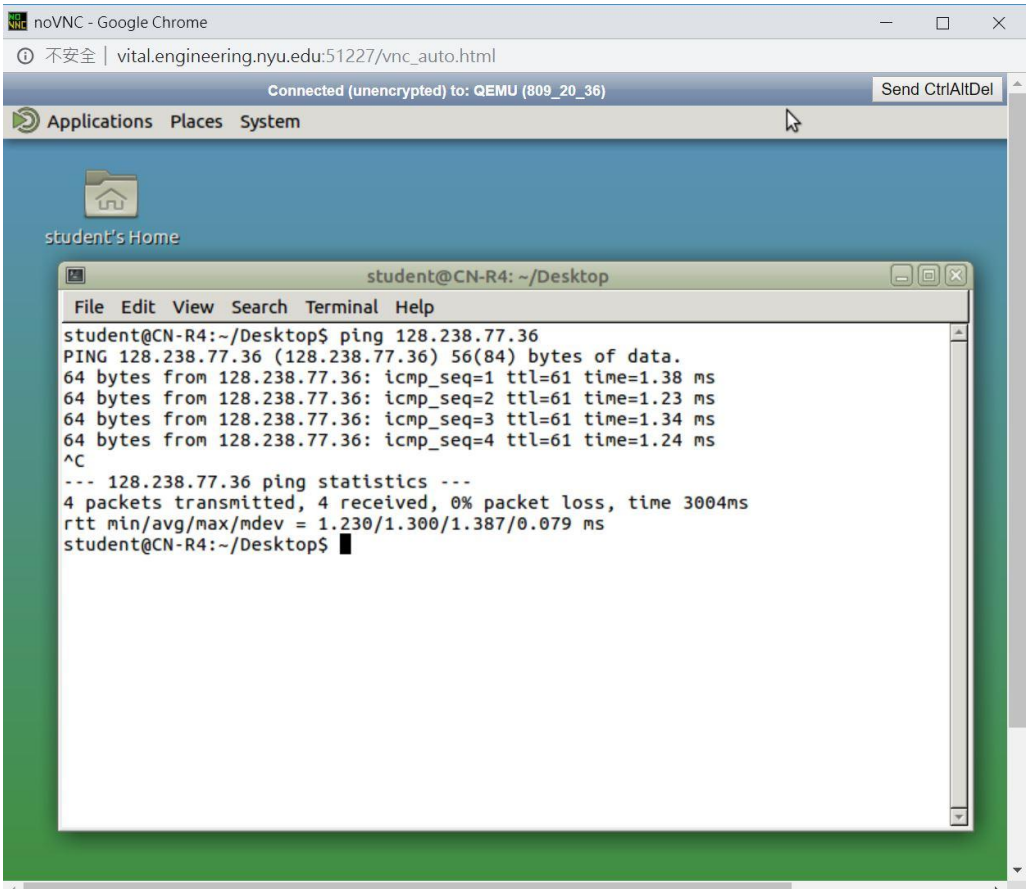


4. Screenshots depicting ping requests to 128.238.77.36 from R1, R2, R3, and R4






noVNC - Google Chrome
不安全 | vital.engineering.nyu.edu:47573/vnc_auto.html
Connected (unencrypted) to: QEMU (809_20_35)
Send CtrlAltDel
Applications Places System
student's Home
student@CN-R3: ~/Desktop
File Edit View Search Terminal Help
student@CN-R3:~/Desktop$ ping 128.238.77.36
PING 128.238.77.36 (128.238.77.36) 56(84) bytes of data.
64 bytes from 128.238.77.36: icmp_seq=1 ttl=61 time=1.45 ms
64 bytes from 128.238.77.36: icmp_seq=2 ttl=61 time=1.44 ms
64 bytes from 128.238.77.36: icmp_seq=3 ttl=61 time=1.33 ms
64 bytes from 128.238.77.36: icmp_seq=4 ttl=61 time=1.41 ms
^C
--- 128.238.77.36 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3001ms
rtt min/avg/max/mdev = 1.334/1.411/1.457/0.047 ms
student@CN-R3:~/Desktop$


noVNC - Google Chrome
不安全 | vital.engineering.nyu.edu:51227/vnc_auto.html
Connected (unencrypted) to: QEMU (809_20_36)
Send CtrlAltDel
Applications Places System
student's Home
student@CN-R4: ~/Desktop
File Edit View Search Terminal Help
student@CN-R4:~/Desktop$ ping 128.238.77.36
PING 128.238.77.36 (128.238.77.36) 56(84) bytes of data.
64 bytes from 128.238.77.36: icmp_seq=1 ttl=61 time=1.38 ms
64 bytes from 128.238.77.36: icmp_seq=2 ttl=61 time=1.23 ms
64 bytes from 128.238.77.36: icmp_seq=3 ttl=61 time=1.34 ms
64 bytes from 128.238.77.36: icmp_seq=4 ttl=61 time=1.24 ms
^C
--- 128.238.77.36 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3004ms
rtt min/avg/max/mdev = 1.230/1.300/1.387/0.079 ms
student@CN-R4:~/Desktop$