



**Department of Computer  
Science and Engineering**

# **Advanced Computer Networks**

**UE16CS346**

## **Lab Assignment 2**

Dweepa Prasad	01FB16ECS138
Ishita Bhandari	01FB16ECS143
Shashank Prabhakar	01FB16ECS356
Shrey Tiwari	01FB16ECS368

## Problem Statement

Connect an end system (host) to a server and fetch a webpage. Connect the host and the server using two routers. Display the results.

## Procedure

- Login into ClayNet and setup the topology as shown.
- Go to each router and configure the IP addresses of each outbound link.
- Deploy the topology and download the .vnc files for each of the systems.
- Login into every system and the IP address as required. (User: test, Password: test)
- For each router, access the console and set the static forwarding tables.
- Access the index.html page from the server on the host.

## Additional

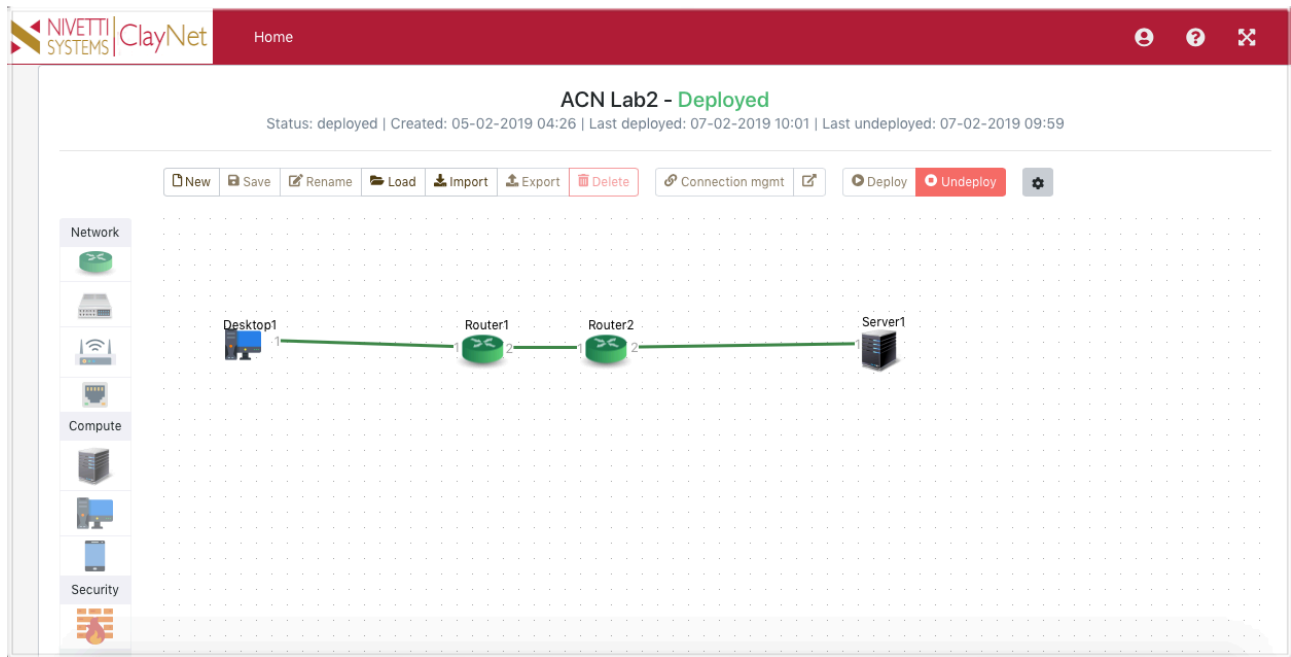
- Modify the static forwarding table entry in one of the routers and set the destination IP address to 0.0.0.0.
- We observe that the topology still functions as intended.
  - This is because there is only one outbound link in each direction and the packet will be forwarded on that link no matter what.
  - This would not work on a larger network with more number of interconnections as the packet would be forwarded onto every outbound link thus increasing the number of duplicates and also the network congestion.

### How to set the static forwarding tables:

- Login into the routers console. (Login: test, Password: test@12345)
- "show route summary -s active data" → to get information of the current setup
- Go to configure console by typing in "configure"
- "create parameter-group ip-route <name>"
- "show draft -c"
- "set enable yes"
- "set destination <IP Address>"
- "set next-hop gateway <IP Address>"
- "save"
- "exit"

# Screenshots

## Topology



Ping: Desktop1 - Server1

```
Terminal
test@Ubuntu-1604: ~
test@Ubuntu-1604:~$ ping 192.168.2.2
PING 192.168.2.2 (192.168.2.2) 56(84) bytes of data:
64 bytes from 192.168.2.2: icmp_seq=1 ttl=62 time=4.91 ms
64 bytes from 192.168.2.2: icmp_seq=2 ttl=62 time=1.41 ms
64 bytes from 192.168.2.2: icmp_seq=3 ttl=62 time=1.07 ms
64 bytes from 192.168.2.2: icmp_seq=4 ttl=62 time=1.02 ms
64 bytes from 192.168.2.2: icmp_seq=5 ttl=62 time=1.30 ms
64 bytes from 192.168.2.2: icmp_seq=6 ttl=62 time=1.55 ms
64 bytes from 192.168.2.2: icmp_seq=7 ttl=62 time=1.22 ms
64 bytes from 192.168.2.2: icmp_seq=8 ttl=62 time=1.13 ms
64 bytes from 192.168.2.2: icmp_seq=9 ttl=62 time=0.984 ms
64 bytes from 192.168.2.2: icmp_seq=10 ttl=62 time=0.980 ms
64 bytes from 192.168.2.2: icmp_seq=11 ttl=62 time=5.78 ms
64 bytes from 192.168.2.2: icmp_seq=12 ttl=62 time=1.15 ms
```

## Accessing webpage

