PORT FORWARDING

TERM-MINI PROJECT

CSCI 553 – UNIX NETWORK PROGRAMMING

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Introduction

What if your server program listening at LOOPBACK?
You are serving...........JUST YOURSELF!

What if your server program listening at interface,
which, has NOT got any worldwide IP?

You are serving........... JUST INTRANET.

Can your server program serve
THE INTERNET,
without having a worldwide IP?

The answer is, YES!

Solution

Port Forwarding (sometimes referred to as tunneling) is the act of forwarding a network port from one network node to another.

This technique can allow an external user to reach a port on a private IP address(inside a LAN) from the outside via a NAT-enabled router.

Applications

1. Some people use port forwarding to redirect incoming traffic from a low numbered port to software listening on a higher port.

This is because, Unix computers where port numbers numbered below 1024 can only be accessed by software running as the root user. Running as root can be a security risk,
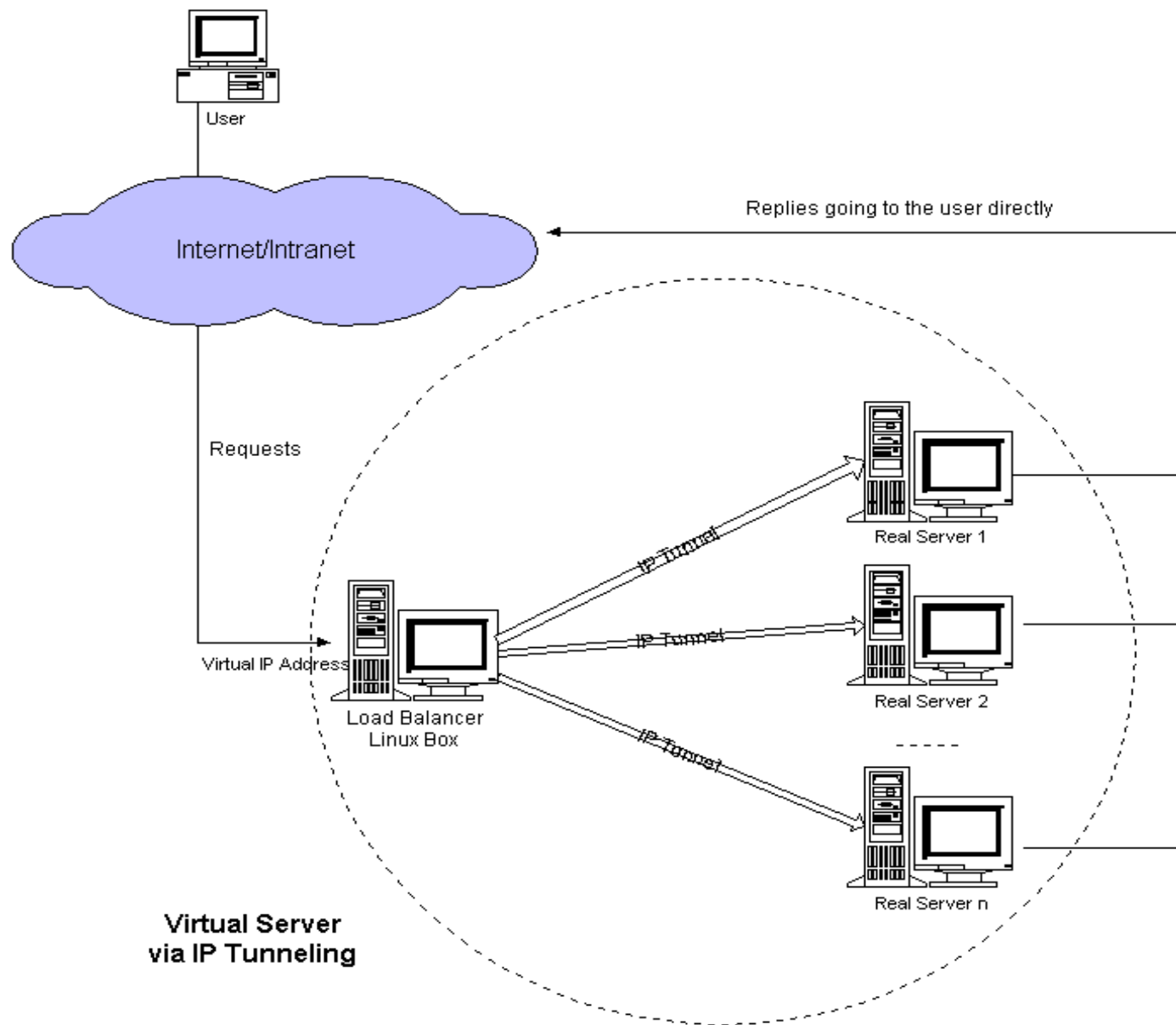
For example, a web server may be listening on a port such as 8080 for traffic redirected from the restricted port 80.

... Applications

2. Internet Connection Sharing

3. Traffic balancing to multiple servers

4. Helping to save IP as limited IPV4 addresses worldwide.

Virtual Server via IP Tunneling

Demo Application
I developed
to understand/use port forwarding

SCENARIO

Networks in a college campus.
Local hosts of one network need to provide services to
external world, can be local hosts of another network.
BUT, not all local hosts are having worldwide IP.
Only Head Nodes of networks having worldwide IP.