# NATIONAL UNIVERSITY OF COMPUTER & EMERGING SCIENCE
## Computer Network Lab (CL307)
## Lab Session 14

Network Security

# Wild Card Masking

**Choices for Using Wildcard Masks**
**Wildcard masks are usually set up to do one of four things:**
1. Match a specific host.
2. Match an entire subnet.
3. Match a specific range.
4. Match all addresses.

**1. Matching a specific host.**

Example 1
For standard access lists: for **192.168.150.50**

- Access-List 10 permit 192.168.150.50 0.0.0.0

## 2. Matching an entire subnet

Example 1

For Class C Subnets

Address: **192.168.50.0 Subnet Mask: 255.255.255.0**
Access-list 25 deny 192.168.50.0 0.0.0.255

## 3. Match a specific range

**Example 1**

Address: 10.250.50.112 Subnet Mask: 255.255.255.224

```
                    255.255.255.255
Custom Subnet mask: -255.255.255.224
Wildcard:             0.   0.   0.  31
```

Access-list 125 permit udp 10.250.50.112.0.0.0.31 any

## 4. Match everyone

**For standard access lists:**

Access-List 15 deny 0.0.0.0 255.255.255.255

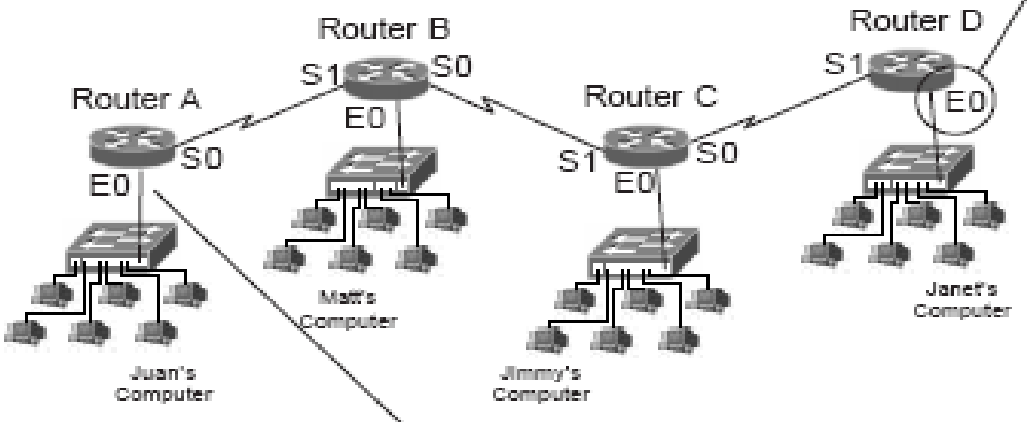
### Standard Access Lists

Standard Access Lists...

- ...are numbered from 1 to 99.
- ...filter (permit or deny) only source addresses.
- ...do not have any destination information so it must placed as close to the destination as possible.
- ...work at layer 3 of the OSI model.

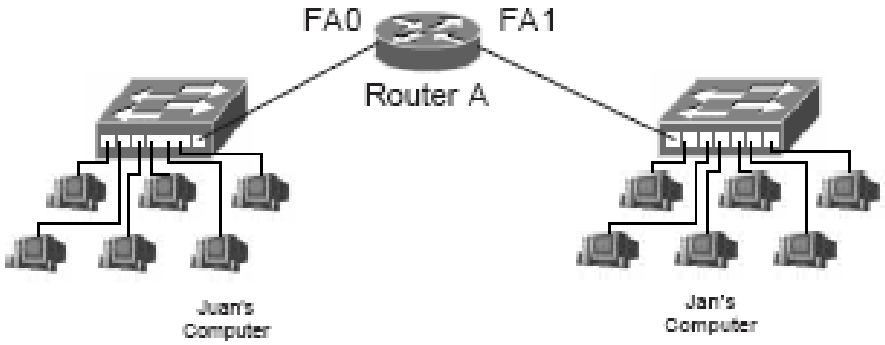
### Why standard ACLs are placed close to the destination.

If you want to block traffic from Juan's computer from reaching Janet's computer with a standard access list you would place the ACL close to the destination on Router D, interface E0. Since its using only the source address to permit or deny packets the ACL here will not effect packets reaching Routers B, or C.




If you place the ACL on router A to block traffic to Router D it will also block all packets going to Routers B, and C; because all the packets will have the same source address.

# Standard Access List Placement
# Sample Problems




In order to permit packets from Juan's computer to arrive at Jan's computer you would place the standard access list at router interface FA1.

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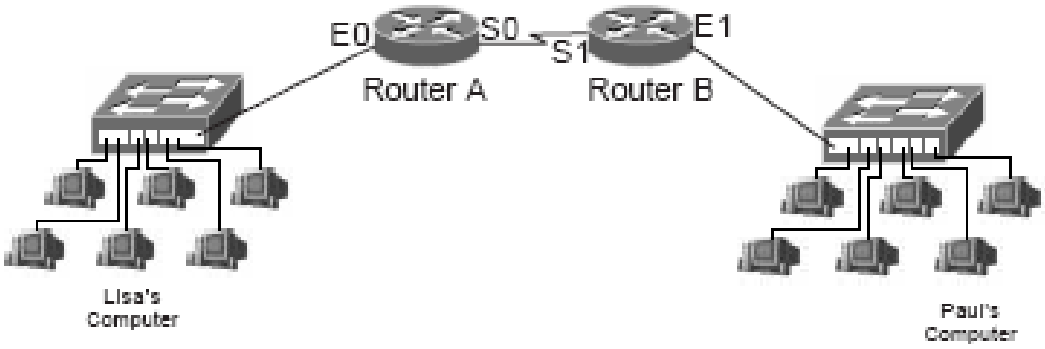
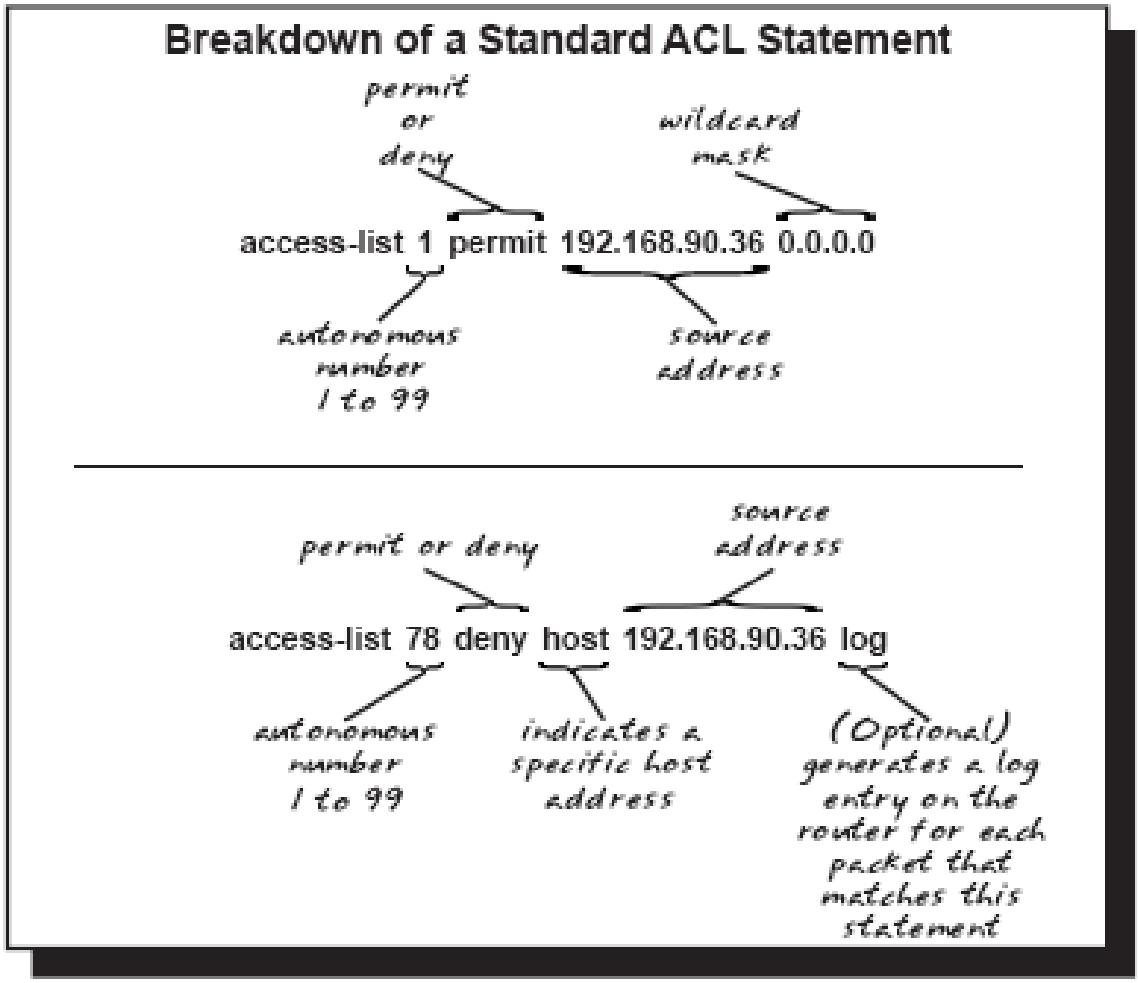



Lisa has been sending unnecessary information to Paul. Where would you place the standard ACL to deny all traffic from Lisa to Paul?
Router Name Router B Interface E1

Where would you place the standard ACL to deny traffic from Paul to Lisa?
Router Name Router A Interface E0




**Assignment**

**Q1. Block the specific traffic user 20.0.0.0/8 network in 10.0.0.0/8 network**