Pedro Luis González Roa
A01651517

Lab 7.2.2.6– Configuring and Verifying Standard IPv4 ACLs

Topology

Questions

Part 3, step 1:

What wildcard mask would you use to allow all hosts on the 192.168.10.0/24 network to access the 192.168.30.0/24 network?
0.0.0.255

Following Cisco's recommended best practices, on which router would you place this ACL?
R3 (destination router).

On which interface would you place this ACL? In what direction would you apply it?
On interface g0/1 out.

To see access list 1 in its entirety with all ACEs, which command would you use?
show access-list 1

What command would you use to see where the access list was applied and in what direction?
show ip int g0/1

Was the ping successful? Why or why not?
No. Because we deny it with the access-list.

Part 3, step 2:

Following Cisco's recommended best practices, on which router would you place this ACL?
R1.

On which interface would you place this ACL? In what direction would you apply it?
On interface g0/1 out.

Looking at the first permit ACE in the access list, what is another way to write this?
permit 192.168.30.3 0.0.0.0

Is there any difference between this ACL on R1 with the ACL on R3? If so, what is it?
We did not declare a deny any.

Part 4, step 1
Do you have to apply the BRANCH-OFFICE-POLICY to the G0/1 interface on R1?
No, because it's already applied.

Reflexion
As you can see, standard ACLs are very powerful and work quite well. Why would you ever have the need for using extended ACLs?
Standard ACLs can only filter based on the source address.

Typically, more typing is required when using a named ACL as opposed to a numbered ACL. Why would you choose named ACLs over numbered?
Because it's a good practice because it gives a descriptive name.

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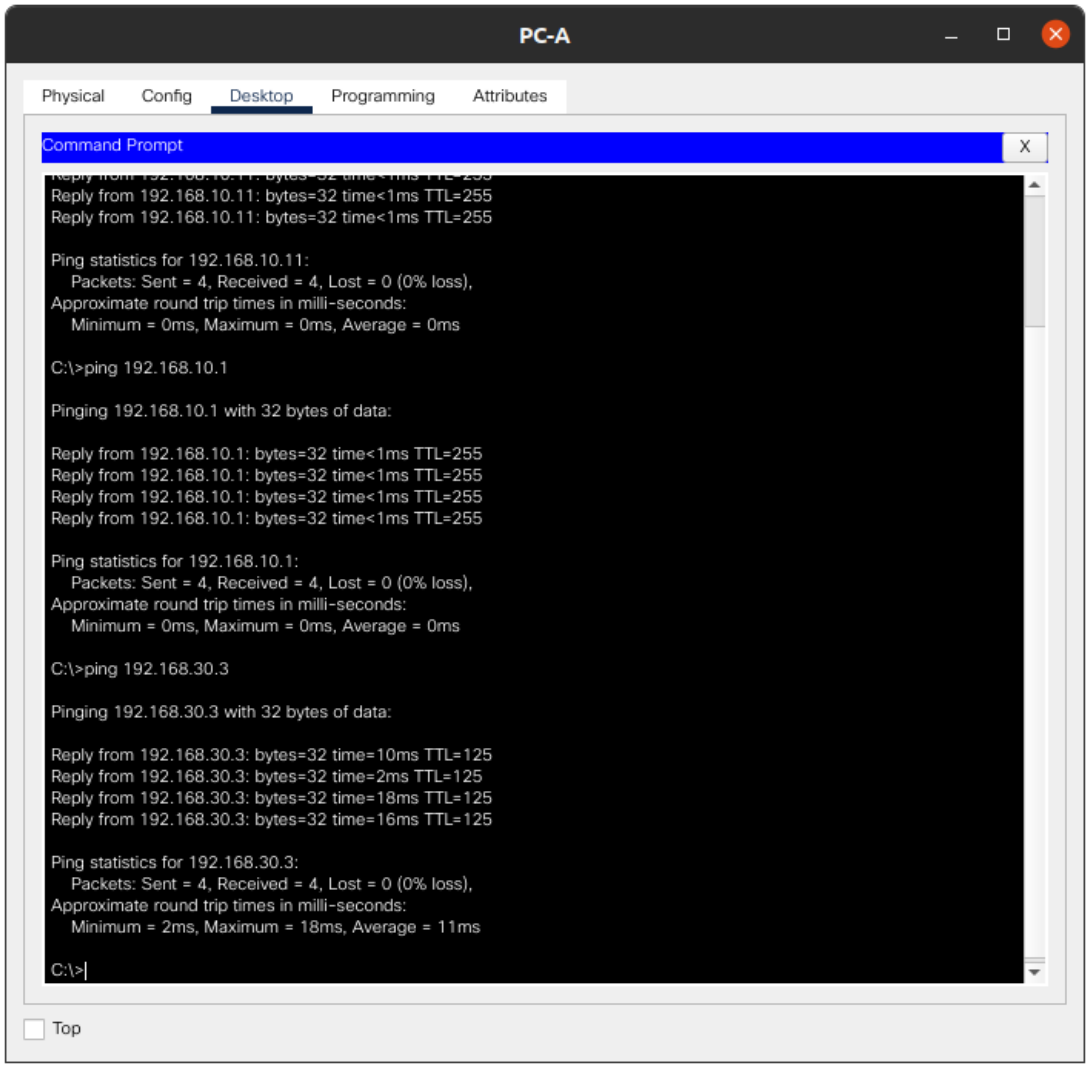
Screenshots

PC-A to S1, R1, PC-C



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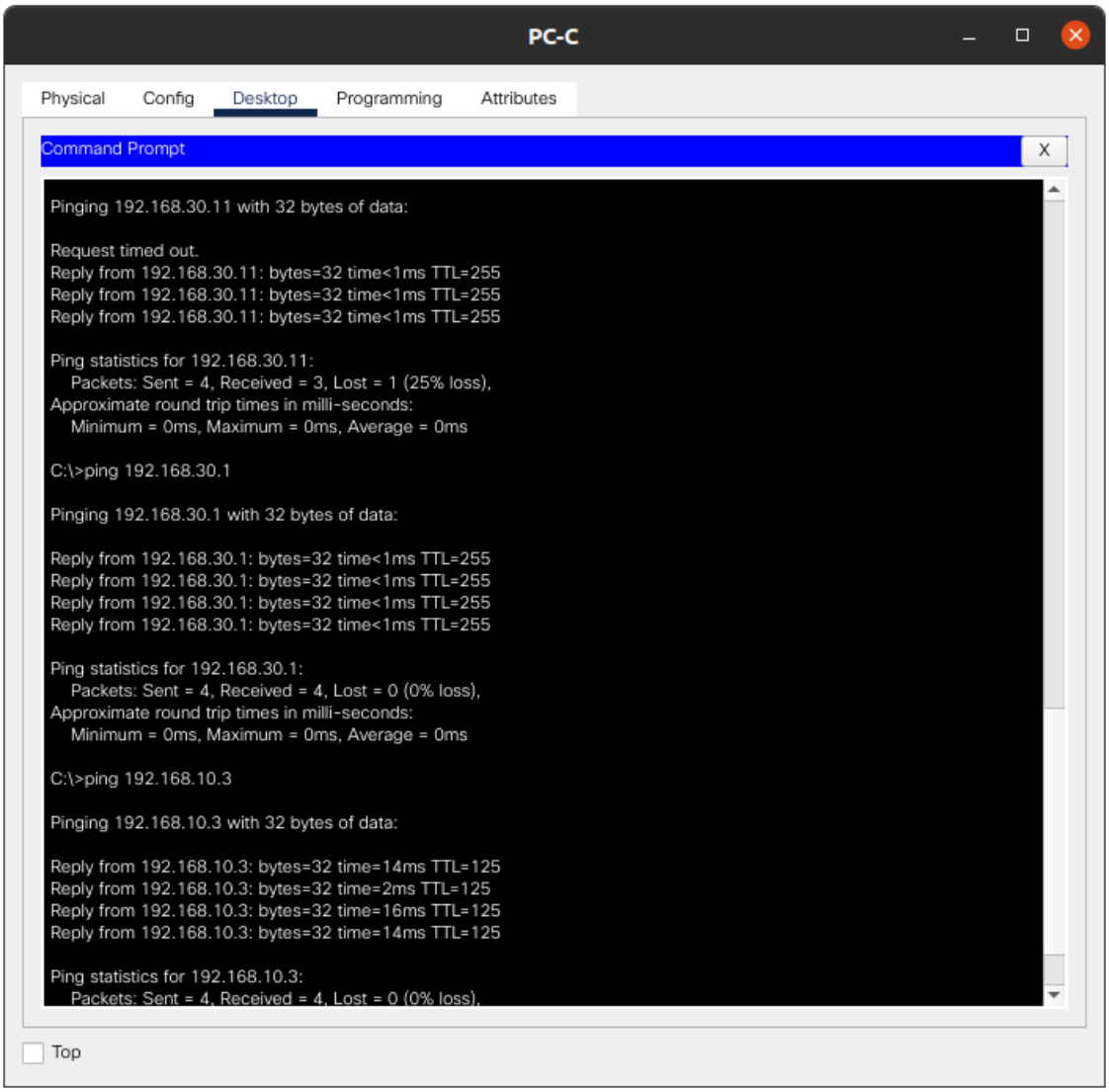
PC-C to S3, R3, PC-A



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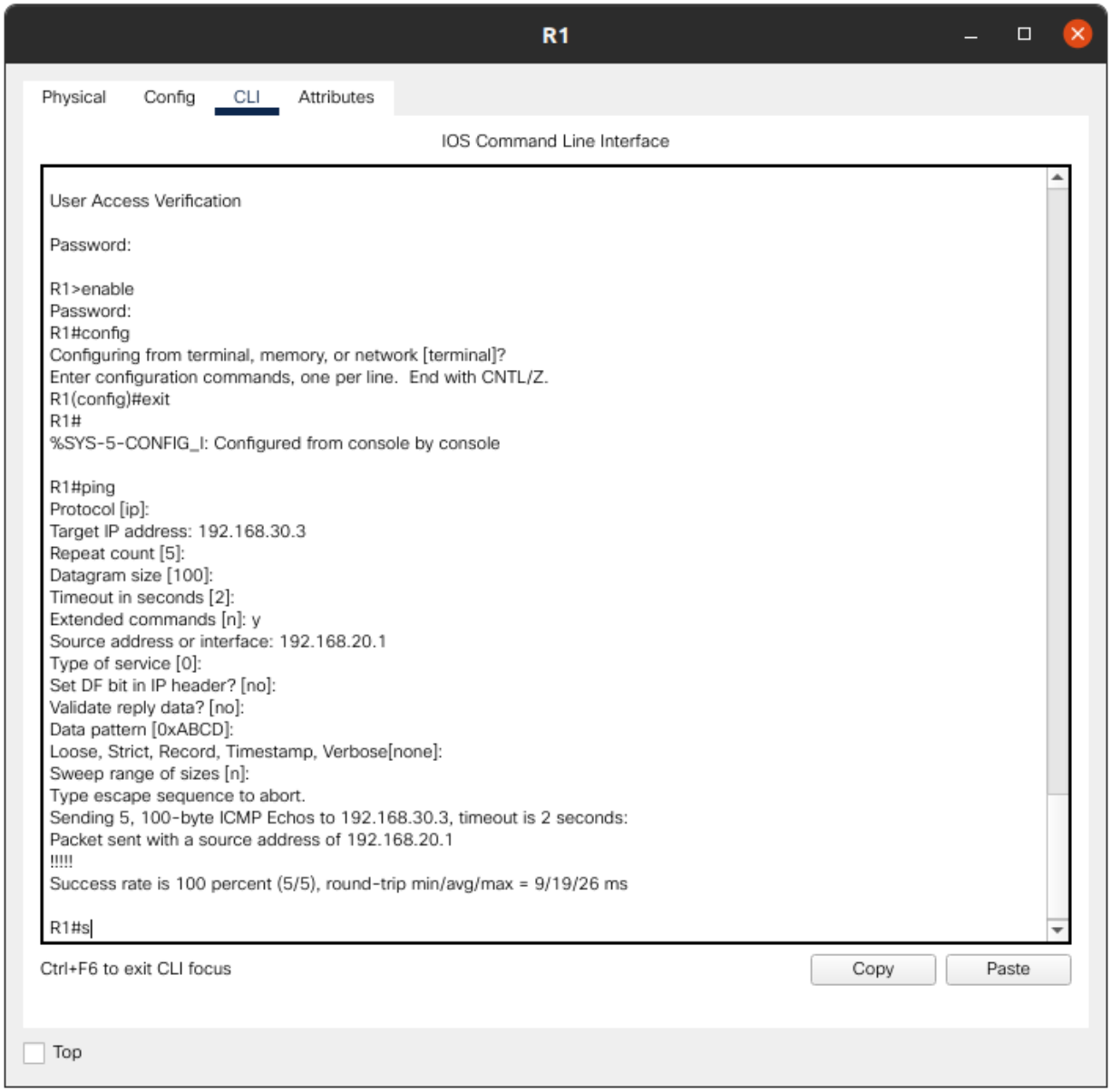
Extended ping



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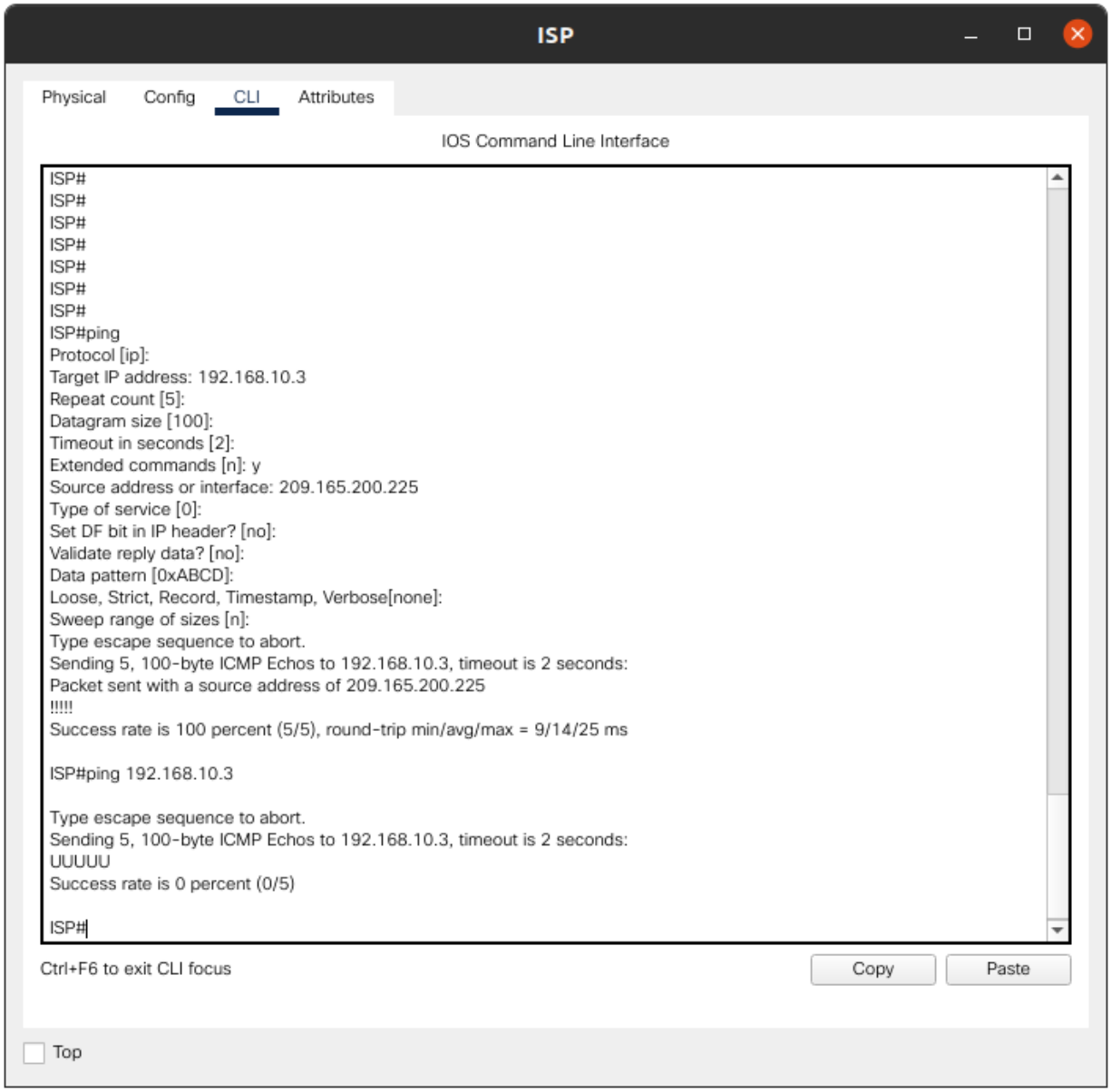
Extended ping ISP



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Configurations

R1

```
enable
config t

hostname R1

service password
no ip domain-lookup

line con 0
password cisco
login
loggin sync

line vty 0 15
password cisco
login
loggin sync

enable password class

int g0/1
ip add 192.168.10.1 255.255.255.0
ip access-group BRANCH-OFFICE-POLICY out
no shut

int lo0
ip add 192.168.20.1 255.255.255.0
no shut

int s0/1/0
ip add 10.1.1.1 255.255.255.252
clock rate 128000
no shut

router rip
version 2
network 192.168.10.0
network 192.168.20.0
network 10.1.1.0

ip access-list standard BRANCH-OFFICE-POLICY
permit host 192.168.30.3
permit 192.168.40.0 0.0.0.255
30 permit 209.165.200.224 0.0.0.31
40 deny any
```

ISP

```
enable
```

```
config t
hostname ISP

service password
no ip domain-lookup

line con 0
password cisco
login
loggin sync

line vty 0 15
password cisco
login
loggin sync

enable password class

int s0/1/0
ip add 10.1.1.2 255.255.255.252
no shut

int s0/1/1
ip add 10.2.2.2 255.255.255.252
clock rate 1280000
no shut

int lo0
ip add 209.165.200.225 255.255.255.224
no shut

router rip
version 2
network 209.165.200.224
network 10.1.1.0
network 10.2.2.0
```

R3

```
enable
config t

hostname R3

service password
no ip domain-lookup

line con 0
password cisco
login
loggin sync

line vty 0 15
password cisco
login
```

```
loggin sync

enable password class

int g0/1
ip add 192.168.30.1 255.255.255.0
ip access-group 1 out
no shut

int lo0
ip add 192.168.40.1 255.255.255.0
no shut

int s0/1/1
ip add 10.2.2.1 255.255.255.252
no shut

router rip
version 2
network 192.168.30.0
network 192.168.40.0
network 10.2.2.0

access-list 1 remark Allow R1 LANs Access
access-list 1 permit 192.168.10.0 0.0.0.255
access-list 1 permit 192.168.20.0 0.0.0.255
access-list 1 deny any
```

S1

```
enable
config t

hostname S1

service password
no ip domain-lookup

line con 0
password cisco
login
loggin sync

line vty 0 15
password cisco
login
loggin sync

enable password class

ip default-gateway 192.168.10.1

int vlan 1
ip add 192.168.10.11 255.255.255.0
no shut
```

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S3

```
enable
config t

hostname S1

service password
no ip domain-lookup

line con 0
password cisco
login
loggin sync

line vty 0 15
password cisco
login
loggin sync

enable password class

ip default-gateway 192.168.30.1

int vlan 1
ip add 192.168.30.11 255.255.255.0
no shut
```