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**Assignment No.3**

**Title :** Using a network simulator configure,

1)Router using router command thrugh CLI

2)Access control list standard and extended

**Theory**

**Execution modes :**

1. User Exec : Default mode after booting.
2. Priviledge EXEC : Uses enable command from user EXEC.
3. Global Configuration : User configuration terminal from priviledged exec mode.
4. Interface configuration : Use interface type number ommand from global configuration mode.

**Assigning IP to router :**

Syntax : ipaddress IP subnetmask

ipaddress 192.168.0.1 255.255.255.0

**Restoring router :**

no shutdown.

**Access Control List :**

ACL are basically a set of commonly grouped together by a number or name that is used filter traffic entering or learnning an interface.

**Inbound ACL :**

Incoming packet are processed before they are routed to an out bounce interface.

**Outbounce ACL:**

Incoming packet are routed to the outbounce interface and then processed through the outbounce ACL.

**Types of ACL :**

1. **Standard ACL :**

An Standard IP ACL is simple,it filters based on source address only.We can filter a source network or a source host , but you cannot filter based on the destination of a packet, the particular protocol being used such as TCP or the UDP or on port number.

1. **Extended ACL :**

An extended ACL gives you much more power than just standar ACL,extended

IP.ACL checks both the source and destination packet address.They can also check for specific protocol,port number and ither parameter which allow administrator more flexibility and control.

1. **Named ACL :**

Named ACL allows us to give a descriptive name to the ACL,unlike extended and standard ACL,which requires use to refer them by number.

**Three basic steps to cinfigure standard access list :**

1. Use access list global configuration command to create an entry in a standard ACL.
2. Use the interface configuration command to select an interface to which to apply ACL.
3. Use the IP access group interface configuration command to activate the existing ACL on an interface.

**Wildcard :**

Wildcard are used with access list to specify an individual host , a network or a certain range of a network or networks.

Wildcard mask = 255.255.255.255 – subnet.

**Conclusion :**

In this way,I have configured router using CLI and access control list ,standard and extended.