

CS581 (Computer & Network Security)

Lab-06

Group No.: 05

Group Members:

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AAA

Configure your Cisco router to use AAA for user authentication via a TACACS+ or RADIUS server (such as Clear box) that you installed on your computer. Submit the configuration files used on the Cisco router. Submit screenshots of decoded packet capture of TACACS+ or RADIUS packets as evidence that AAA authentication works whenever you telnet to your router.

We, Group No. 5, performed this lab in below steps:

Step 1: Configuration of **Server Computer**

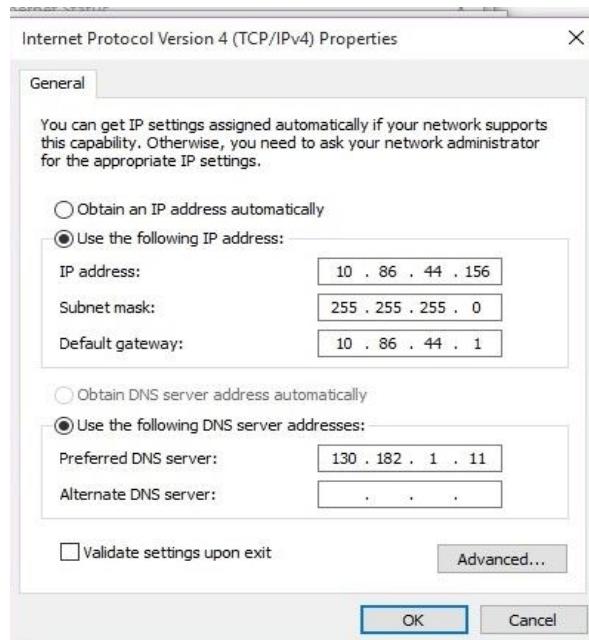
Step 2: Installation of **WinRadius** on Server Computer

Step 3: Configuration of **Cisco Router**

Step 4: Screenshots of Cisco Router's Configuration File

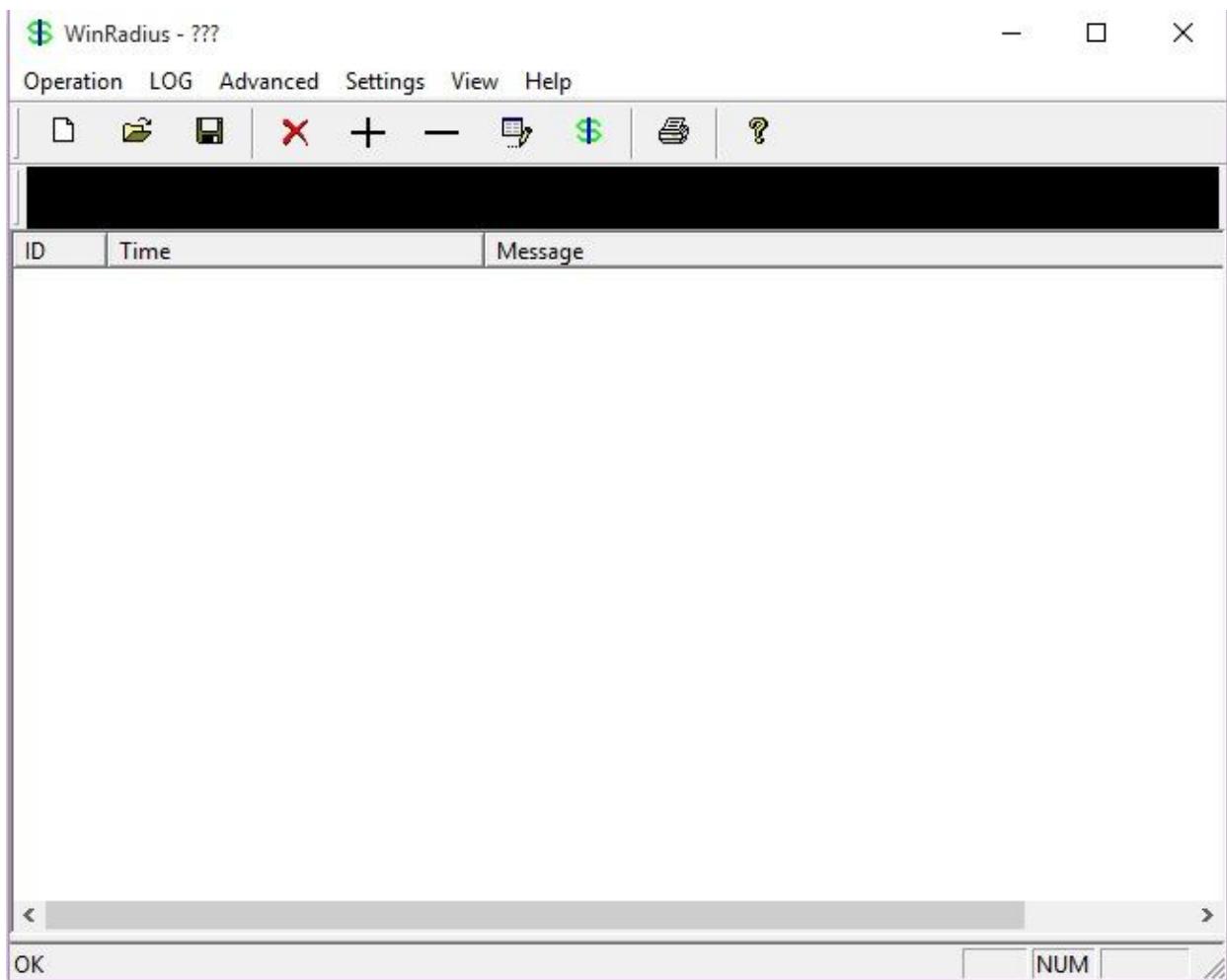
Step 5: Screenshot of WinRadius when We telnet to our Router

Step 1: Configuration of **Server Computer**



Step 2: Installation of **WinRadius** on Server Computer

I installed WinRadius and here is the window when we open WinRadius after installation:



ODBC settings

Please use 'Control panel/ODBC' to set your RADIUS database. Default database is 'WinRadius.mdb'. You can also add this database to your ODBC system by clicking the following button.

ODBC name:

Note: Please input "yourOdbcName;Uid=yourUsername;Pwd=yourPassword" if username/password is needed.

User table name:

Billing table name:

VoIP table name:

Refresh user information every minutes

This database supports

Add user

User name:

Password:

Group:

Calling address:

Please fill MAC address or Calling number, thus this user will be binded to this address. Empty means no limitation, 0 means using first address of first login.

Cash prepaid: Cents

Expiry date:

Note: yyyy/mm/dd means expiry date; digit means valid days since first login; empty means never expired.

Others:

Prepaid user Postpaid user

Accounting method:

\$ WinRadius - ???

Operation LOG Advanced Settings View Help

File Edit View Insert Options Tools Help

ID	Time	Message
1	2015\12\8d 16h6m33s	Could not write to the registry
2	2015\12\8d 16h6m33s	You have changed some important configuration variances, now you must restart WinRadi...
3	2015\12\8d 16h6m55s	You have changed some important configuration variances, now you must restart WinRadi...
4	2015\12\8d 16h7m34s	Add user successfully.

OK

Search the web and Windows

NUM

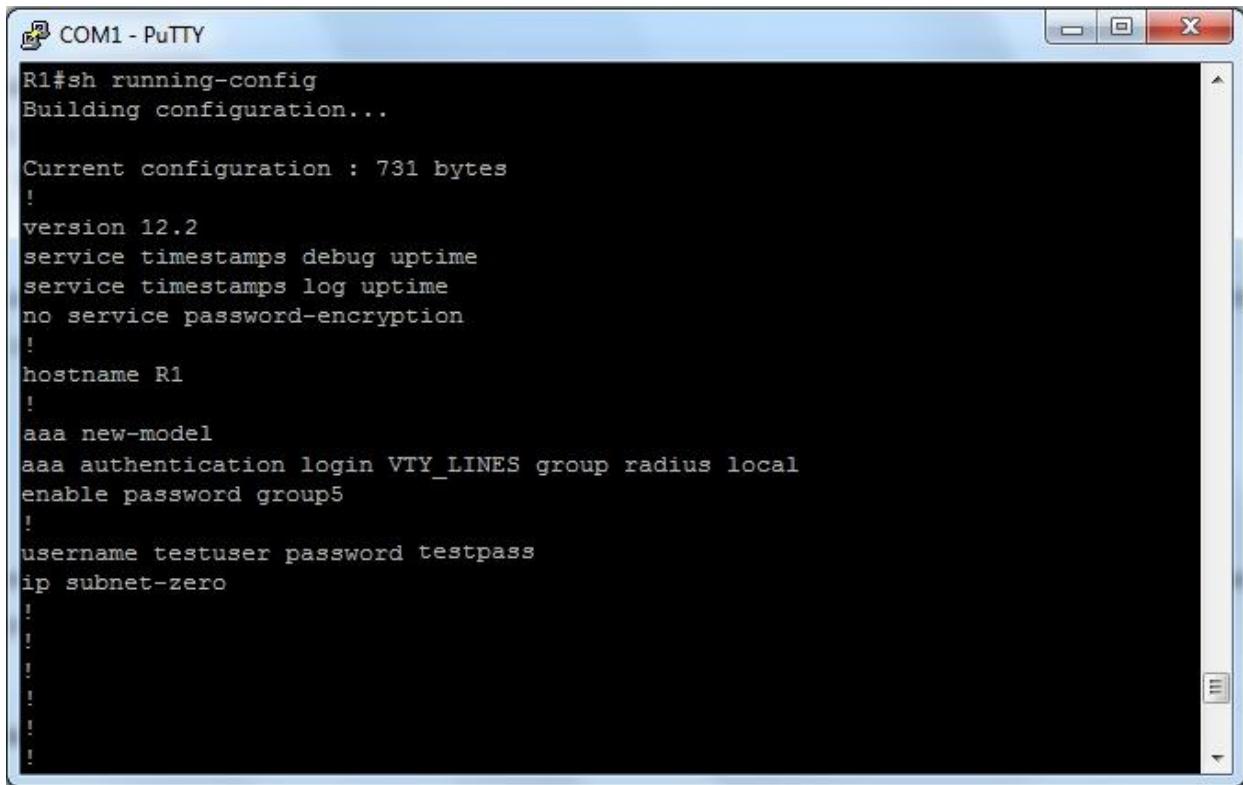
4:07 PM
12/8/2015

Step 3: Configuration of **Cisco** Router

We configured following command to our cisco router:

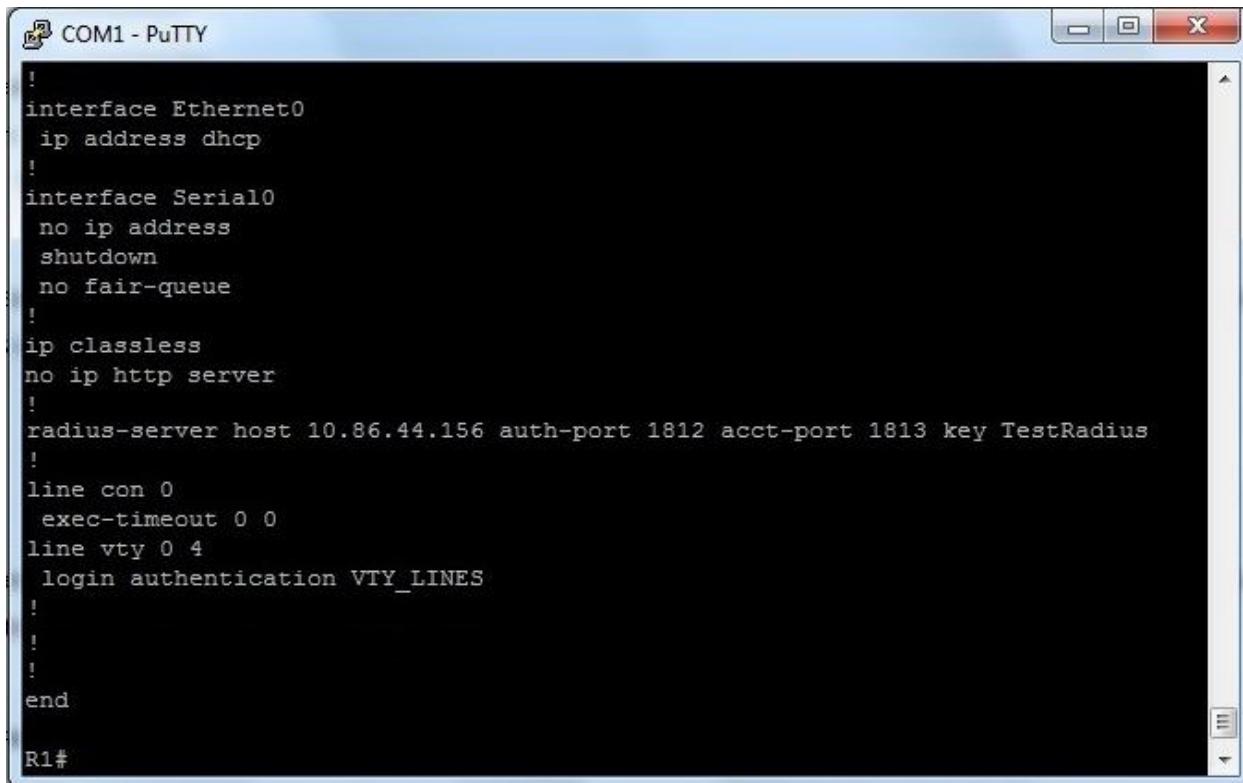
```
R1#  
R1# conf t  
R1 (config)# username testuser password testpass  
R1 (config)# aaa new-model  
R1 (config)# aaa authentication login VTY_LINES group radius local  
R1 (config)# radius-server host 10.86.44.156 auth-port 1812 acct-port 1813 key TestRadius  
R1 (config)# line vty 0 4  
R1 (config-line)# login authentication VTY_LINES  
R1 (config-line)# exit  
R1 (config)# exit  
Router#
```

Step 4: Screenshots of Cisco Router's Configuration File



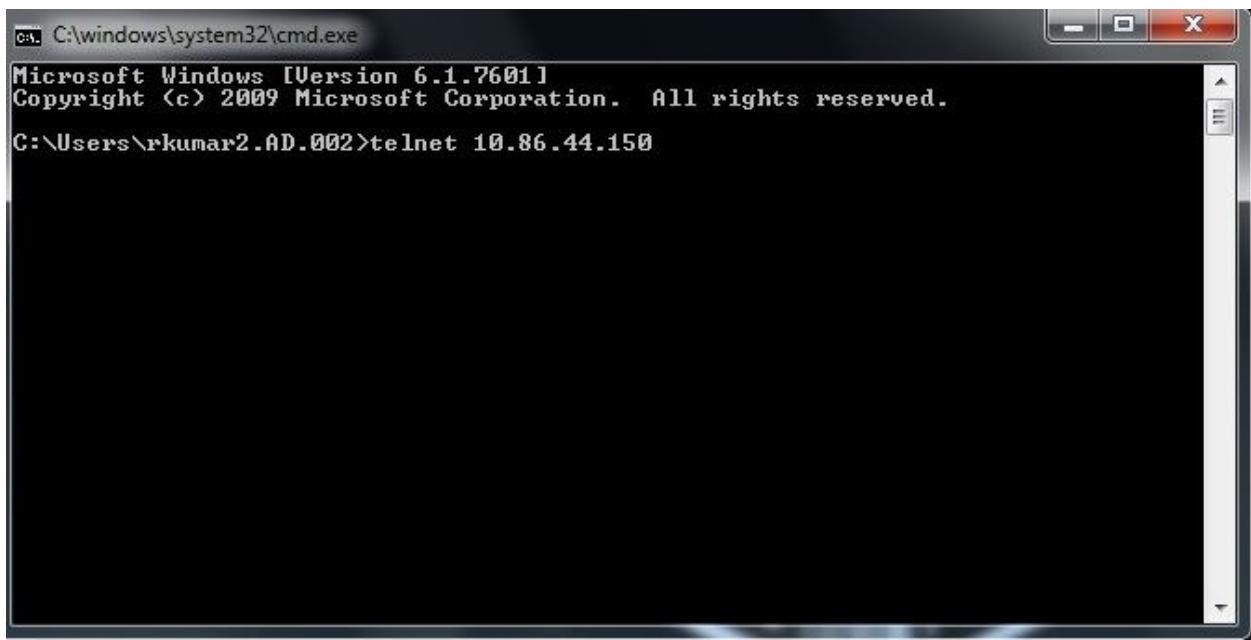
R1#sh running-config
Building configuration...

Current configuration : 731 bytes
!
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname R1
!
aaa new-model
aaa authentication login VTY_LINES group radius local
enable password group5
!
username testuser password testpass
ip subnet-zero
!
!
!
!



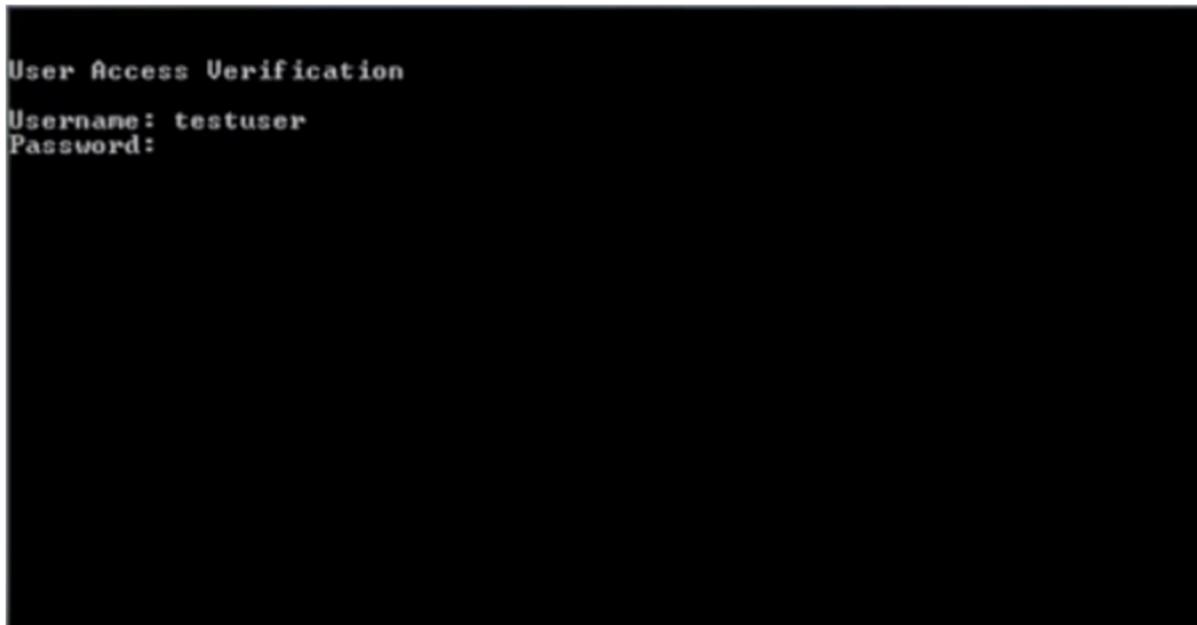
!
interface Ethernet0
ip address dhcp
!
interface Serial0
no ip address
shutdown
no fair-queue
!
ip classless
no ip http server
!
radius-server host 10.86.44.156 auth-port 1812 acct-port 1813 key TestRadius
!
line con 0
exec-timeout 0 0
line vty 0 4
login authentication VTY_LINES
!
!
!
end
R1#

Step 5: Screenshot of WinRadius when We telnet to our Router



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\rkumar2.AD.002>telnet 10.86.44.150
```



```
User Access Verification
Username: testuser
Password:
```

```
User Access Verification
Username: testuser
Password:
R1>
```

WinRadius - ???

Operation LOG Advanced Settings View Help

File Edit View Insert Options Tools Help

ID	Time	Message
.	2015y12m8d 17h21m5s	0 users were loaded
!	2015y12m8d 17h22m5s	WinRadius is running OK, (Auth port=1812, Acct port=1813, Secret=TestRadius)
!	2015y12m8d 17h25m5s	WinRadius is waiting for NAS request packets. If no request packet reached, please
!	2015y12m8d 17h30m5s	Selected collating sequence not supported by the operating system, : INSERT INTO
!	2015y12m8d 17h34m5s	Add user successfully.
!	2015y12m8d 17h46m5s	User (testuser) authenticate OK.
!	2015y12m8d 17h47m5s	User (testuser) authenticate OK.