How to Assign Privilege Levels in Cisco Router with RADIUS

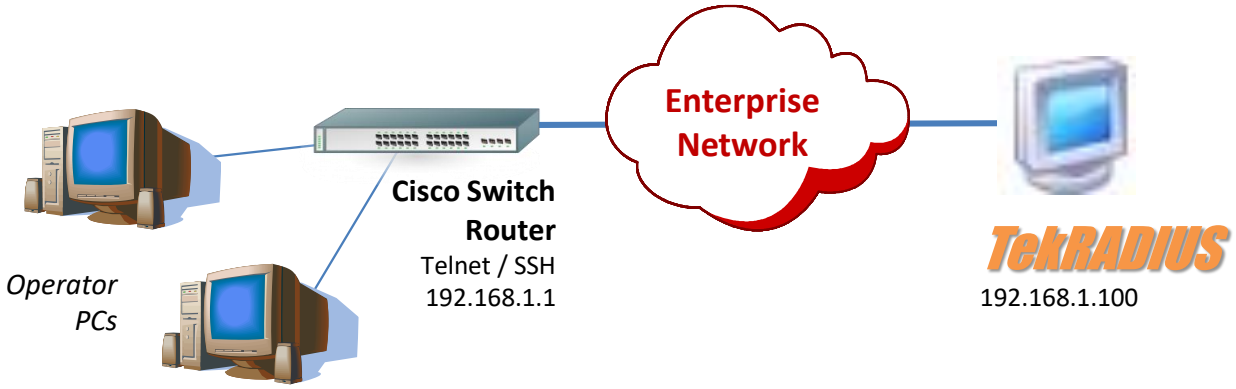
This document explains how to change the privilege level for certain commands and provides an example with parts of sample configurations for a router and TekRADIUS. The information in this document is based on Cisco IOS Software Releases 11.2 and later.

By default, there are three privilege levels on the router.

- privilege level 1 = non-privileged (prompt is router>), the default level for logging in
- privilege level 15 = privileged (prompt is router#), the level after going into enable mode
- privilege level 0 = seldom used, but includes 5 commands: disable, enable, exit, help, and logout

Levels 2-14 are not used in a default configuration, but commands that are normally at level 15 can be moved down to one of those levels and commands that are normally at level 1 can be moved up to one of those levels. This security model involves some administration on the router.

To determine the privilege level as a logged-in user, type the show privilege command. To determine what commands are available at a particular privilege level for the version of Cisco IOS software that you are using, type a ? at the command line when logged in at that privilege level.



Route Configuration

```
aaa new-model
aaa authentication login default group radius local
aaa authorization exec default group radius local
aaa accounting login start-stop group radius
username backup privilege 7 password 0 backup
radius-server host 192.168.1.100
radius-server key cisco
privilege configure level 7 snmp-server host
privilege configure level 7 snmp-server enable
privilege configure level 7 snmp-server
privilege exec level 7 ping
privilege exec level 7 configure terminal
privilege exec level 7 configure
```

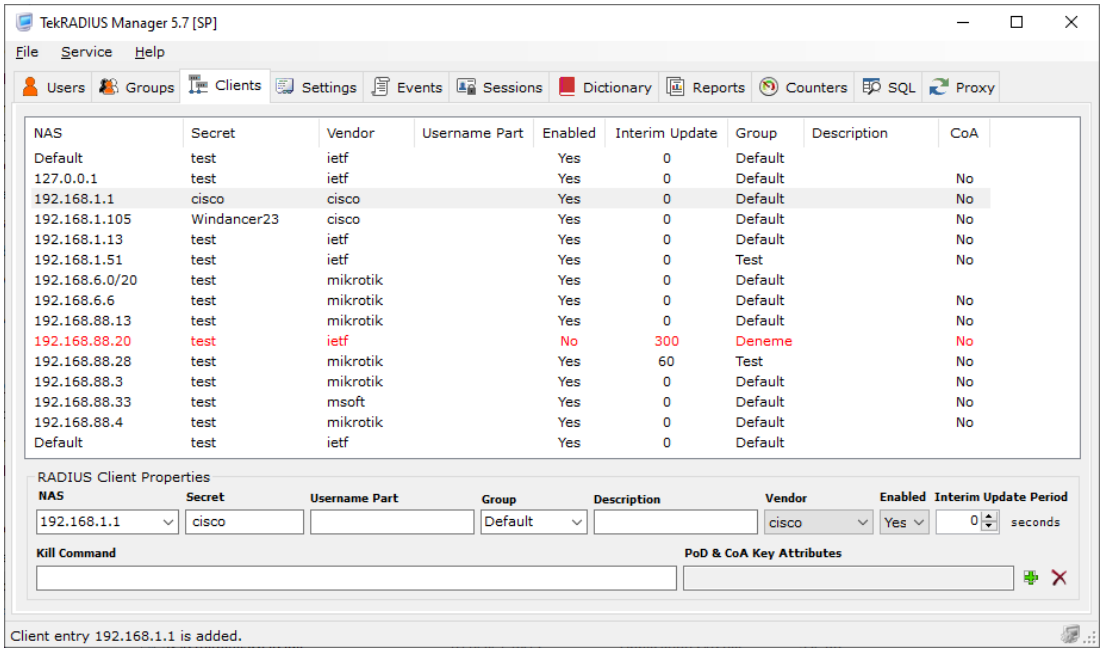
You must add

```
aaa accounting login start-stop group radius
```

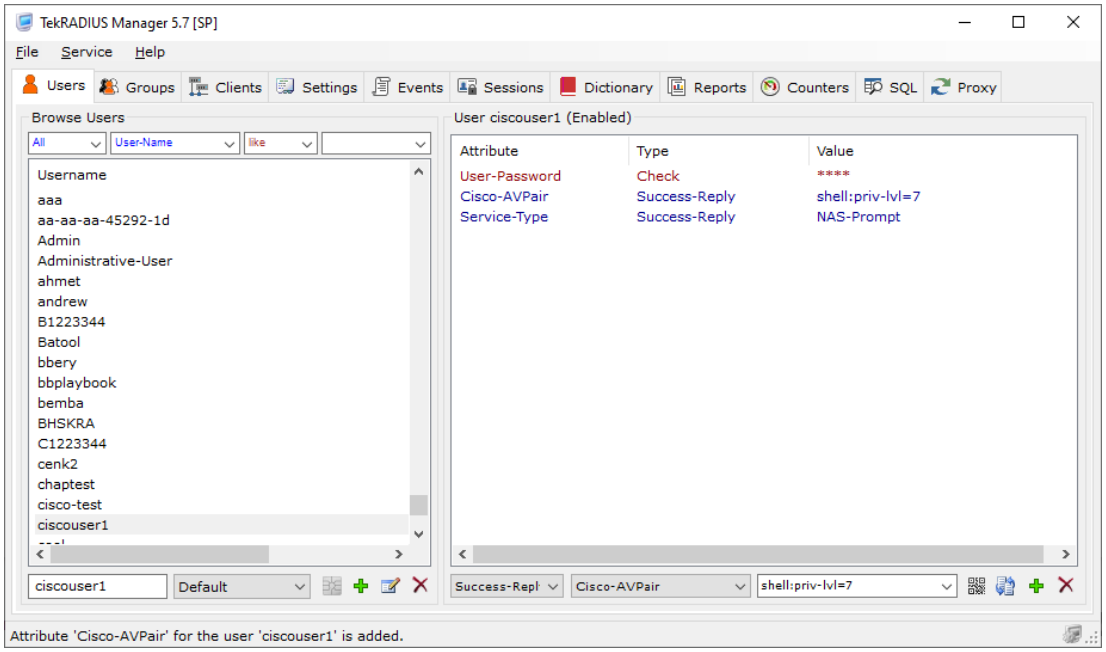
command to see active telnet sessions to the router and generate reports.

TekRADIUS Configuration

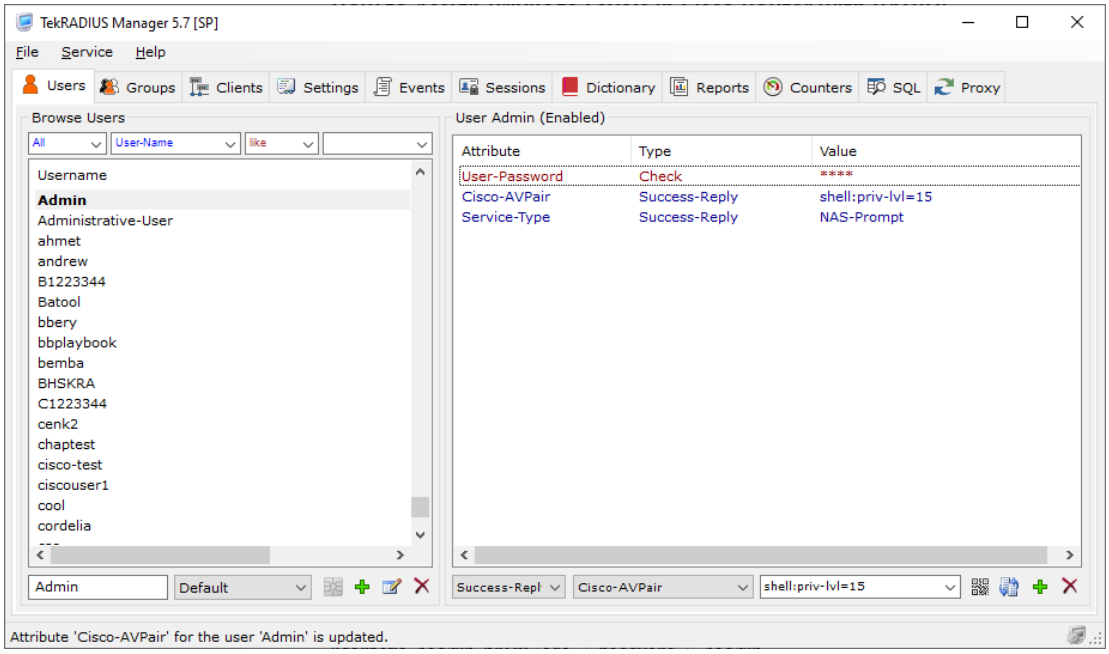
You need to have a RADIUS client entry for the router (It is assumed 192.168.1.1 in this example)



Create user profiles for the users (Standard user)



Admin user


TekRADIUS Manager 5.7 [SP]
File
Service
Help
Users
Groups
Clients
Settings
Events
Sessions
Dictionary
Reports
Counters
SQL
Proxy
Browse Users
All
User-Name
like
Username
Admin
Administrative-User
ahmet
andrew
B1223344
Batool
bbery
bbplaybook
bemba
BHSKRA
C1223344
cenk2
chaptest
cisco-test
ciscouser1
cool
cordelia
User Admin (Enabled)
Attribute
Type
Value
User-Password
Check
****
Cisco-AVPair
Success-Reply
shell:priv-lvl=15
Service-Type
Success-Reply
NAS-Prompt
Admin
Default
Success-Repl
Cisco-AVPair
shell:priv-lvl=15
Attribute 'Cisco-AVPair' for the user 'Admin' is updated.