

2.telnetlib连接思科网络设备

一.思科设备telnet 与 ssh 开启

STEP1. 开启思科网络设备的telnet配置

username ccna password ccna

enable secret ccna

line vty 0 15

login local

exit

STEP2. 开启思科网络设备的SSH登录

ip domain-name contoso.com

crypto key generate rsa general-keys >> 1024

ip ssh version 2

username ccna password ccna

line vty 0 15

login local

transport input ssh telnet

exit

二. 标准库telnetlib

1.常用方法 help(telnetlib.Telnet)

class Telnet | Telnet interface class. | **init**(self, host=None, port=0, timeout=

tn.read_until("login:") #找到匹配login的结果

| read_until(self, match, timeout=None)

| Read until a given string is encountered or until timeout. |

| When no match is found, return whatever is available instead, | possibly the empty string. Raise EOFError if the connection | is closed and no cooked data is available.

tn.write("root\n") #向socket中写入字符 | write(self, buffer)

| Write a string to the socket, doubling any IAC characters. |

| Can block if the connection is blocked. May raise | socket.error if the connection is closed.

read_very_eager() #尽可能多的从socket当中读取数据 | read_very_eager(self)

| Read everything that's possible without blocking in I/O (eager). |

| Raise EOFError if connection closed and no cooked data | available. Return '' if no cooked data available otherwise. | Don't block unless in the midst of an IAC sequence.

tn.close() ##断开连接

实验1.基于telnetlib客户端工具连接Cisco网络设备(基于Python3)

```
In [2]: import telnetlib
import time
import traceback

class telnetRemote:
    def __init__(self, host, port, username, password, pripassword):
        self.x = self.conn(host, port, username, password, pripassword)

    def conn(self, host, port, username, password, pripassword):
        try:
            tn = telnetlib.Telnet(host,port)
            tn.expect([b"Username:"])
            tn.write(bytes(username + '\n', encoding='utf8'))
            tn.expect([b'Password:'])
            tn.write(bytes(password+'\n', encoding='utf8'))
            tn.expect([b'>'])
            tn.write(b'enable\n')
            tn.expect([b'Password:'])
            tn.write(bytes(pripassword + '\n', encoding='utf8'))
        except Exception as e:
            traceback.print_exc()
            raise ValueError("telnet to host %s error" %host)
        else:
            return tn

    def exeCmd(self, cmd):
        self.x.write(bytes(cmd + '\n', encoding='utf8'))
        time.sleep(5)
        s = str(self.x.read_very_eager(), encoding='utf8')
        return s

if __name__ == '__main__':
    import time
    m = [['172.16.70.121', 23, 'ccna', 'ccna', 'ccna'], ['172.16.70.122', 23, 'ccna', 'ccna', 'ccna']]
    # beg = time.time()
    for j in m:
        # print(j)
        x = telnetRemote(*j)
        print(x.exeCmd('terminal len 0'))
        s = x.exeCmd('show run ')
        print(s)
    # f = open('%s.log' %j[0], 'w')
    # f.write(s)
    # f.close()
    # end = time.time()
    # print(end - beg)
```

In []: