

Telnet Protocol Principles



Foreword

As the enterprise network expands, supported devices may exist over a larger geographical distance due to the presence of branch offices that are considered part of the enterprise domain, and that require remote administration. Additionally the administration of the network is often managed from a central management location from which all devices are monitored and administered. In order to facilitate this administration, the telnet protocol, one of the earliest protocols to be developed, is applied to manage devices. The principles surrounding the protocol and its implementation are introduced in this section.

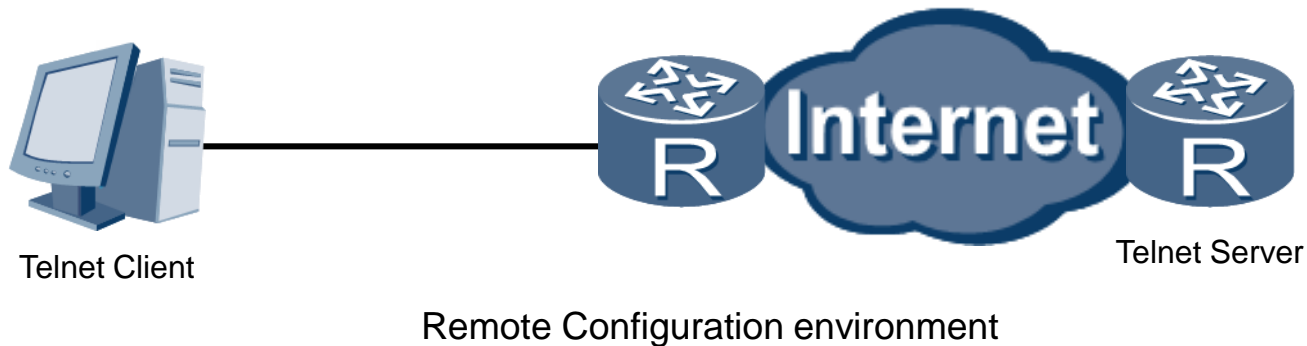
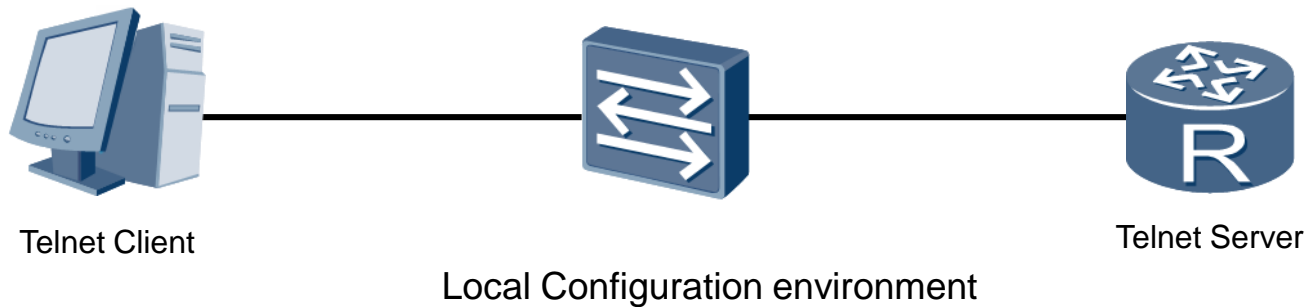


Objectives

Upon completion of this section, trainees will be able to:

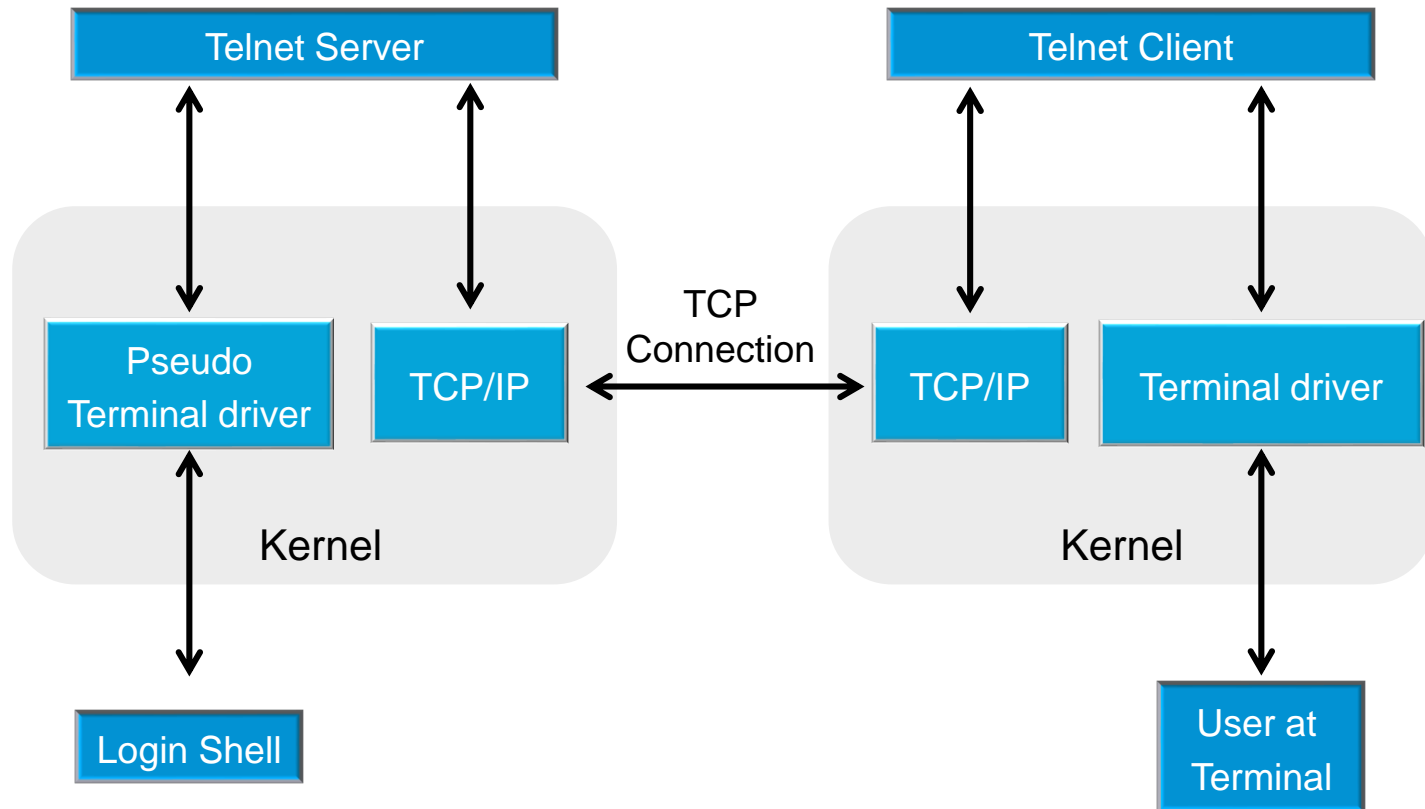
- Explain the application and principles surrounding telnet.
- Establish the telnet service on supporting Huawei devices.

Telnet Application



- Telnet represents a bidirectional text based terminal emulation program for use over local and remote networks.

Telnet Client/Server Model



- The Telnet architecture demonstrates how user keystrokes are interpreted by terminal drivers before delivery over TCP ensues.

Telnet Client/Server Model

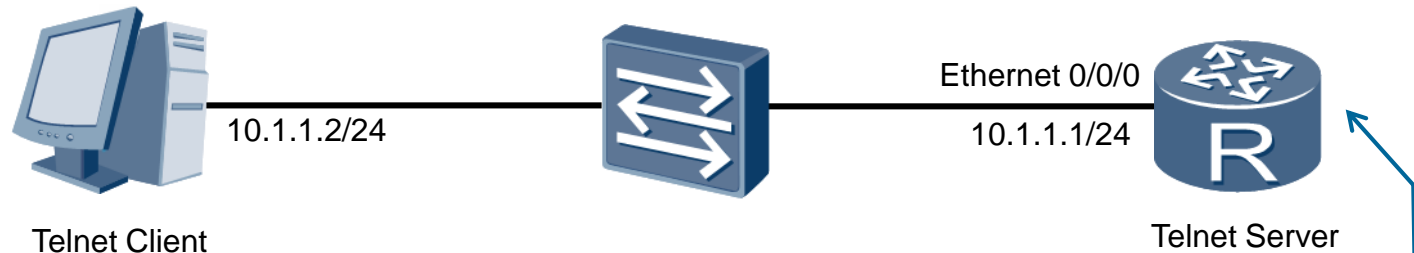


telnet_protocol.pcapng

Authentication Mode

Authentication Mode	Description
None	Login without authentication
AAA	AAA authentication
Password	Authentication through the password of a user terminal interface

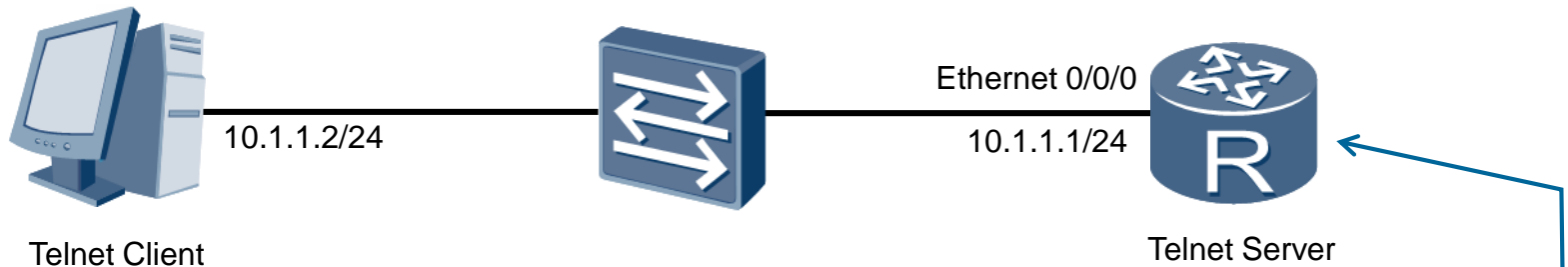
Telnet Configuration



```
[Huawei]interface Ethernet 0/0/0
[Huawei-Ethernet0/0/0]ip address 10.1.1.1 24
[Huawei]user-interface vty 0 4
[Huawei-ui-vty0-4]authentication-mode password
[Huawei-ui-vty0-4]set authentication password cipher
Enter Password(<8-128>): huawei12
```

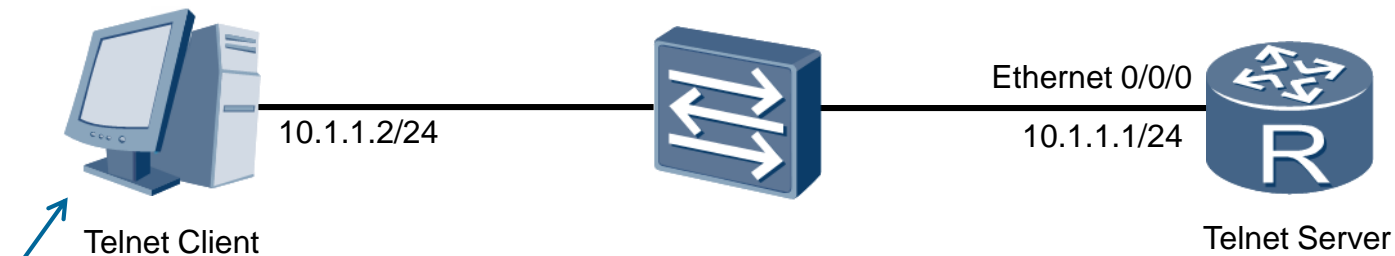
- Telnet requires authentication be applied to the virtual teletype interface before a connection can be established.

Telnet Configuration



```
[Huawei]interface Ethernet 0/0/0
[Huawei-Ethernet0/0/0]ip address 10.1.1.1 24
[Huawei]user-interface vty 0 4
[Huawei-ui-vty0-4]authentication-mode aaa
[Huawei] aaa
[Huawei-aaa] -aaa]local-user huawei password cipher huawei123
[Huawei-aaa] -aaa]local-user huawei service-type telnet
[Huawei-aaa] -aaa]local-user huawei privilege level 4
[Huawei-aaa] -aaa]quit
```

Telnet Configuration



```
<Host>telnet 10.1.1.1
Trying 10.1.1.1 ...
Press CTRL+K to abort
Connected to 10.1.1.1 ...
Login authentication
Password:
Info: The max number of VTY users is 5, and the number
      of current VTY users on line is 1.
      The current login time is 2013-04-19 16:32:00.
<Huawei>
```



Summary

- If the telnet service has been enabled, but a user is unable to establish a telnet connection, what are the possible reasons for this?



Thank you
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