

Nirbhay Sharma (B19CSE114)

Lab-3 - Cyber Security

Difference between Telnet (Telecommunication network) and SSH (Secure Shell)

Telnet	SSH
Telnet is not secure as it does transfers data in plain text format, without any encryption, so security issues are there	SSH on the other hand encrypts the data before sending so that any mallory can get encrypted text and hence it is more secure than telnet
Telnet does not has User Interface it just runs from terminal	SSH can be accessed from terminal and UI as well
Telnet does not use any authentication mechanism	SSH uses public key authentication

Encryption in SSH

SSH protocol uses symmetric key encryption, asymmetric key encryption, hashing mechanisms for securing transmission, so ssh connects between client and server by following these essential steps:

1. verification/authentication of server
2. Then it generates a public key and encrypt the data for sending and using private key the receiver can decrypt the message
3. authentication of cilent

Why use Telnet ?

We may need to use telnet as some of the old network devices allow telnet connections to them, and some of them are not compatible to some modern and advance protocols, that's why they use telnet protocol which exists even when internet was not there.

In telnet we can also do some fun stuffs like

1. watching star-wars in ascii
2. playing freechess
3. Interacting with AI Eliza and much more ...

Encryption of Telnet

some methods to encrypt the Telnet Protocol:

1. **using SSL (secure socket layers)** - since telnet does not apply any security mechanisms so we can configure telnet servers with the ssl connection but in this process we require DCM (Digital Certificate Manager) for the certification purposes to use telnet server.
2. **using kerberos** - Kerberos is an authentication protocol that requires both client and server to prove their identities. so we can basically layer kerberos over telnet communications for the authentication

purposes.

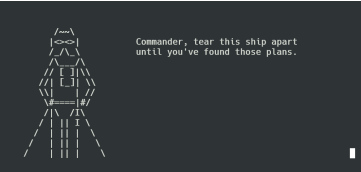
List of commands used in Telnet

commands	usage	demo
open/o	it is used to open connection using telnet. telnet> open www.google.com 80	
quit	it is used to quit from the telnet terminal	
close	it is used to closed the established connection in telnet	
status	it is used to check whether the telnet is connected or not	
?	used for help	

Connect with websites using Telnet

starwars	freechess	talking to AI
telnet towel.blinkenlights.nl	telnet freechess.org 5000	telnet telehack.com

starwars



freecchess



talking to AI

