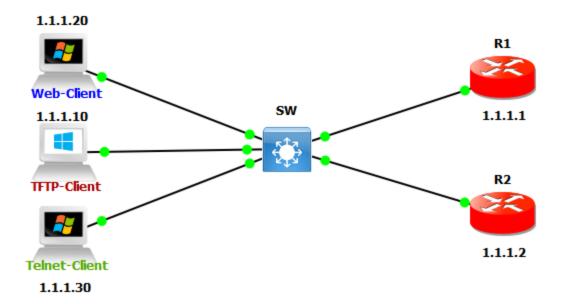
## TFTP (Trivial File Transfer Protocol):

- o TFTP stand for Trivial File Transfer Protocol.
- o TFTP is used to save and restore a router or switch configuration.
- o TFTP is used to backup, restore and upgrade IOS image.
- o TFTP uses UDP (User Datagram Protocol).
- o TFTP uses a well-known UDP port 69.
- o TFTP requires very small amount of memory.
- o TFTP uses the connection-less UDP for communication.
- o Trivial File Transfer Protocol (TFTP) is a simple file transfer protocol.
- o TFTP uses the connection-less UDP for communication.
- o TFTP does not support user authentication & all data is sent in clear text.
- o TFTP uses less resource as compare to FTP.
- o TFTP doesn't provide user authentication.

## FTP (File Transfer Protocol):

- o FTP stands for File Transfer Protocol.
- o FTP is used to send & receive file from the remote device.
- o FTP is a complete, session-oriented file transfer protocol.
- o FTP depends on TCP, is connection oriented, and provides reliable control.
- o FTP provides user authentication.
- o FTP uses usernames and passwords for setup.
- o Devices are required to have a username and password setup for FTP.
- o FTP is faster when compared to TFTP.
- o FTP uses two TCP ports 20 for sending data & 21 for sending control commands.



| TFTP Configuration                |                               |
|-----------------------------------|-------------------------------|
| R1# copy running-config tftp      | R1# copy tftp: running-config |
| R1# copy flash tftp:              | R1# copy tftp: flash          |
| R1# copy startup-config tftp:     | R1# copy tftp: startup-config |
| FTP Configuration                 |                               |
| R1(config)# ip ftp username admin | R1# copy running-config FTP:  |
| R1(config)# ip ftp password 123   |                               |
| R1# copy startup-config FTP:      | R1# copy Flash FTP:           |
| R1# copy FTP: running-config      | R1# copy FTP: startup-config  |
| R1# copy FTP: flash               |                               |