**Requirements for Project tftpd**

**Revision History**

| Revision | Author | Contact Info | Description | Date |
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# Functionalities

The project name tftpd means TFTP server. Its functional requirements are as follows:

* An independent module of switch software that functions as a TFTP server, that is, the server role of TFTP protocol used to upload and download files to and from a switch.
* Support concurrent processing of up to 3 read requests from clients even for the same file. However, it is not allowed for both read and write sessions to occur simultaneously, nor for two or more write sessions to occur simultaneously.
* The server can be enabled and disabled by command: [no] tftp server enable
* Support configurable UDP port of TFTP server by command: [no] tftp server port {*port*}
* Support configurable timeout and retry count for re-transmission by command: [no] tftp server retransmit {*timeout*} {*retry*}. The default values of the two parameters are 3 seconds and 3 times respectively. The value range of timeout is 1~255 inclusive, and retry 1~6inclusive, and their product cannot be greater than 255. Note that the retry value includes the first normal transmission.
* Support negotiation of blocksize, defined by RFC2348
* Support negotiation of windowsize, defined by RFC7440 (optional)
* Support CLI commands:
* [no] tftp server enable: see above
* [no] tftp server port {*port*}: see above
* [no] tftp server retransmit {*timeout*} {*retry*}: see above
* Saving configurations: All the non default configurations can be saved as the above configuration command lines into the startup configuration file using command write.
* show tftp server: show the configurations and status of the TFTP server including current sessions, file names in operation, operations (read or write) etc.
* show running: The configuration commands for non default values of tftpd should be able to be listed by this command.
* show version: the command “show version all” or “show version module tftpd” shows the version of the module tftpd.

# Performance

* For files of the same size, in a single session scenario, the upload and download time is not more than the time of the existing TFTP client method, i.e. the method through the command “copy tftp”.
* In the case of three simultaneous sessions, the download time of one session is not more than 125% of the download time for a file of the same size in a single session scenario.