

1. Overview

Cloud Drive Data Server is a high performance, asynchronous, TCP/IP cloud storage interface. The data server is built on Amazon S3 infrastructure and is robust and reliable. It has been designed to maximize throughput.

2. Connection Information

Parameter	Value
Protocol	TCP
Host	dataserver.clouddrive.com.au
Port	2805

3. Message ID

Message	Value
GET_FILE	3
SEND_FILE	4
LOGIN	5
DELETE_FILE	6
PING	7
GET_FILE_FAST	8
SEND_FILE_FAST	9
DELETE_FILE_FAST	10

4. Message Structure

Message	Structure fields (Bytes)
GET_FILE	MSG(1), FILENAME(256), VERSION(8) , SIZE(8), DATA(N)
SEND_FILE	MSG(1), FILENAME(256), VERSION(8), SIZE(8), DATA(N)
LOGIN	MSG(1), USERNAME(256), PASSWORD(256)
DELETE_FILE	MSG(1), FILENAME(256), VERSION(8) , SIZE(8), DATA(N)
PING	MSG(1)
GET_FILE_FAST	MSG(1), VERSION(8), SIZE(8), DATA(N)
SEND_FILE_FAST	MSG(1), VERSION(8), SIZE(8), DATA(N)
DELETE_FILE_FAST	MSG(1), VERSION(8), SIZE(8), DATA(N)

Notes;

FILENAME is any filename for example "file.dat" or "report.xls".

VERSION is a number. If you aren't using versioning, a version of 0 should be used. Versions don't have to be consecutive. Versions 0, 5, 6 can be stored simultaneously. Different versions can be added and deleted from the the data server at anytime in any order.

VERSION can also be used like an index in an array. This allows you to store different data at each index. For example you need to backup sectors of your hard drive, you can store each 512 byte sector as follows;

```

"file.dat",0          (512 bytes long)
"file.dat",1          (512 bytes long)
"file.dat",2          (512 bytes long)

```

It can also be used to store different spreadsheets each month as follows;

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"report.xls", 0       (1024 bytes long)
"report.xls", 1       (1124 bytes long)
"report.xls", 2       (1234 bytes long)

```

The "FAST" version of the message is exactly the same as the "NORMAL" version. The "FAST" version optimises bandwidth when 2 or more messages in the same direction have the same filename. When operating on a FILENAME for the first time, the "NORMAL" version of the message must be used. Each consecutive message in the same direction may reduce bandwidth by using the "FAST" version of the message. The following example adds a file "file.dat", then deletes it and adds "report.xls". The "FAST" optimisation works between different file operations such as SEND, DELETE and GET.

Message Sent	Message Received
LOGIN(5, "username", "password")	
SEND_FILE(4, "file.dat", 0, SIZE, DATA)	SEND_FILE(4, "file.dat", 0, 1, {1})
SEND_FILE_FAST(9, 1, SIZE, DATA)	SEND_FILE_FAST(9, 1, 1, {1})
PING	PING
SEND_FILE_FAST(9, 2, SIZE, DATA)	SEND_FILE_FAST(9, 2, 1, {1})
GET_FILE_FAST(8, 0, 0, {})	GET_FILE_FAST(8, 0, SIZE, DATA)
GET_FILE_FAST(8, 1, 0, {})	GET_FILE_FAST(8, 1, SIZE, DATA)
GET_FILE_FAST(8, 2, 0, {})	GET_FILE_FAST(8, 2, SIZE, DATA)
GET_FILE_FAST(8, 3, 0, {})	GET_FILE_FAST(8, 3, 0, {})
PING	PING
DELETE_FILE_FAST(10, 0, 0, {})	DELETE_FILE_FAST(10, 0, 1, {1})
DELETE_FILE_FAST(10, 1, 0, {})	DELETE_FILE_FAST(10, 1, 1, {1})
DELETE_FILE_FAST(10, 2, 0, {})	DELETE_FILE_FAST(10, 2, 1, {1})
DELETE_FILE_FAST(10, 3, 0, {})	DELETE_FILE_FAST(10, 3, 0, {})
PING	PING
SEND_FILE(4, "report.xls", 10, SIZE, DATA)	SEND_FILE(3, "report.xls", 10, 1, {1})
GET_FILE_FAST(8, 0, 0, {})	GET_FILE_FAST(8, 0, 0, {})
GET_FILE_FAST(8, 10, 0, {})	GET_FILE_FAST(8, 10, SIZE, DATA)
PING	PING

5. Message Response

Client Message	Success Response	Failure Response
GET_FILE/GET_FILE_FAST	GET_FILE/SEND_FILE_FAST with file data	GET_FILE/GET_FILE_FAST with no data (zero length)
SEND_FILE/SEND_FILE_FAST	SEND_FILE/SEND_FILE_FAST with 1 byte status {1}	SEND_FILE/SEND_FILE_FAST with no data (zero length)
LOGIN	Server does nothing	Connection closed
DELETE_FILE/DELETE_FILE_FAST	DELETE_FILE/DELETE_FILE_FAST with 1 byte status {1}	DELETE_FILE/DELETE_FILE_FAST with no data (zero length)
PING	Server does nothing	Connection closed

6. Limitations

The size of files uploaded to Cloud Drive Data Server is currently limited to 4 MB.