Overview

Cloud file systems are remote storage solutions like Dropbox, Box, Google Drive, iCloud Drive, etc. Most folks use Dropbox and/or Google Drive so most of the intel here leans in that direction.

In general “this cloud system always deletes my files/has problems” is due to user error. Learn how to use it, follow an SOP, and you’re good. I’ve been using Dropbox PRO and Dropbox TEAMS for a very long time and the only time I’ve had deleted files is due to operator error.

I lean Dropbox because it does way better at active file syncing. Never had an issue syncing Photoshop files. Google Drive has a lot of issues there. That said, Dropbox is limited, no matter what plan, to 350GB per single-file, whereas, Google Drive is limited to 5TB per single-file. This makes GDrive the clear winner for backing up things like hard drive / system **clones**, and other huge disk images.

Transfers and Transfer Speeds

Transferring files via Cloud File Systems are more reliable and perform much better when used with a desktop sync application, eg installing **Google Drive for Desktop** or **Dropbox** to a computer. Those same files transferred in browser do so at slower speeds and larger files or file sets have a tendency to crash if the xFer takes too long.

I’ve bench-marked these speeds on a number of connections, but my favorite is on fiber line! If you have a 1G connection or below, then you can use GDrive or Dropbox out-of-the-box and it will use a good chunk of your bandwidth.

When you want to go faster, things change

On a 5Gbe fiber connection (capable of ~500M**B**/s), Dropbox maxes out at about 75MB/s for both TX/RX. On that same fiber connection, Google maxes out at about 50MB/s for both TX/RX. This means that the bottleneck is Google and Dropbox servers and how they’ve configured file transfers. Optimized for 1G, it appears.

In order to get better speeds from Google Drive, you can use a tool like FreeFileSync (thank you Dylan Steenkamp), which is donation-ware that makes sync processes more efficient and you can tweak the settings for simultaneous processes. When properly tuned (very easy), I was able to get a sustained speed of 475MB/s for a total of 63GB (17 files). This xFer took 80 seconds. Unbelievable. If I get even better results on a 10Gbe line, this would mean that the bottleneck is your ISP!

My bench test shows that this workflow does great with files that are <60GB each. With big files, the performance is terrible (like a single OS clone at 1.5TB). I’m not sure where the line is between 60GB and 1.5TB, but that higher footprint use case is much rarer.

I have not found a service that does this same xFer speed magic for Dropbox.

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