

Kollaborate Server Hardware Recommendations

Terminology

Container – a low-overhead, self-contained virtual computer

Host operating system – the main operating system running on the computer

Guest operating system – the operating system running inside the container (this will always be Linux for Kollaborate Server)

Performance Considerations

Disk Drive Speed

Because Kollaborate is chiefly a service for file sharing, it is very dependent on reading and writing to disk. Uploading a file causes multiple disk operations to occur, such as moving the uploaded file to its final location on the storage volume, gathering file metadata, generating thumbnails and converting the file to a playable proxy. A viewer playing back a file in their browser or downloading it also incurs read operations on the storage volume. It is therefore possible that multiple users simultaneously uploading and viewing files can incur considerable demands on the storage volume.

The proxies generated by Kollaborate Server are around 3 - 3.5 Mbps (0.3 – 0.43 MB/s) so you can multiply this by the expected number of concurrent uploads and downloads to arrive at the **minimum** storage speed. This is the speed at which the system is barely usable, so you should add on a buffer of at least 30% to cope with variability and overhead.

We recommend a RAID array that is either RAID 0 or RAID 5/6, attached to your system by an interface with bandwidth significantly above the bandwidth of the drive.

Operating System

Your choice of host operating system can have significant effects on performance. In general, Linux tends to have the best container performance, followed by Windows, with macOS last. macOS is less optimized for disk performance with Docker, which particularly affects Kollaborate as it is disk-intensive.

To be clear, Kollaborate Server is completely usable when macOS is its host OS. In our tests, upload performance is similar to the cloud version of Kollaborate, but the upload speeds achieved will be lower than what you would normally experience when transferring files over your local network.

Processor

The CPU matters less for Kollaborate Server, as it is not particularly CPU intensive; an Intel i5 or higher with at least two cores should suffice.

For Kollaborate Encoder, we recommend at least a quad core i7. We use x264 via ffmpeg for encoding and the following page will give you an idea of the relative x264 performance between different processors: <https://openbenchmarking.org/test/pts/x264>

Memory

Memory has little effect on Kollaborate Server or Encoder. You should aim for at least 4 GB of RAM but a general rule of thumb is 1 GB per CPU core.

Graphics card (GPU)

Neither Kollaborate Server nor Encoder make use of the GPU and it will go unused.