

Iodyne makes its **fio** benchmarking scripts publicly available to prospective customers and users to validate storage performance. Follow these instructions to install fio on your system and run the script(s) on non-boot storage devices.

Install: The easiest way to get started with using fio on the command line is by using **brew**, a UNIX package manager for macOS. Open a Terminal window and use the following command to install brew:

```
/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

Once this is complete, installing fio is as simple as entering `brew install fio` from the Terminal.

Configure: By default, macOS is configured to issue i/o commands to storage using a single path. With the advent of NVMe multi-pathing, we need to tweak this preference in macOS to let 'er rip. Again, from the Terminal, issue this command, and provide an administrator password when prompted:

```
sudo sysctl kern.aiothreads=8
```

Identify: Use `diskutil list` to view the storage devices installed in or attached to your computer. Note the ID for the device you want to benchmark, (disk3, disk8, etc.), as we'll need it for the next command.

Benchmark: Navigate to the directory where the fio script (in this case `rw.fio`) is stored, and type the following command, providing an administrator password when prompted, and replacing `[diskX]` with the device ID, e.g. `/dev/rdisk5`

```
sudo fio --filename=/dev/r[diskX] rw.fio
```

For more information on interpreting fio results, see this Ars Technica article:

<https://arstechnica.com/gadgets/2020/02/how-fast-are-your-disks-find-out-the-open-source-way-with-fio>