

Simple Performance Test on Fletcher32 Filter

By Raymond Lu

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The table below shows the performance comparisons between reading a dataset with Fletcher32 filter enabled and reading a dataset with Fletcher32 filter disabled. The Fletcher32 algorithm was chosen by the HDF5 library for its Error Detection Code (EDC). This algorithm is also called checksum. The dataset is one-dimensional of H5T_NATIVE_INT, with the number of elements listed in the first column. The machine for testing is an Intel workstation running RedHat 8 Linux. For each number of elements, the test was run 5 times. To calculate the time, the fastest and the slowest time were ignored and the 3 time length left were averaged.

Number of elements in dataset	Fletcher32 filter enabled (time in seconds)	Fletcher32 filter disabled (time in seconds)
10^2	0.000113	0.000053
10^3	0.000126	0.000049
10^4	0.000634	0.000172
10^5	0.006369	0.001990
10^6	0.060821	0.023149
10^7	0.565547	0.173770
10^8	8.165811	7.761070