

# H5Z-SZ: Handling HDF5 with SZ filter

- Download and install HDF5
- Download SZ and install SZ
  - git clone <https://github.com/disheng222/SZ>
- Compile [SZ-package]/H5Z-SZ
  - Set SZPATH and HDF5PATH in Makefile
  - cd H5Z-SZ; make; make install
  - Add \$SZPATH and \$HDF5PATH in LD\_LIBRARY\_PATH
  - export HDF\_PLUGIN\_PATH=\${SZ\_INSTALL\_PATH}/lib
- Test:
  - Use-case A with library:
    - (1) cd [SZ-package]/H5Z-SZ/test;
    - (2) Set SZPATH and HDF5PATH in Makefile
    - (3) make (Two executables will be generated: szToHDF5 and dszFromHDF5)
    - (4) szToHDF5 will load a 3d array and then write the compressed bytes in a HDF5 file. (See test\_compress.sh for details)
    - (5) dszFromHDF5 will read the HDF5 file generated by test\_compress.h and then decompress the data inside it. (See test\_decompress.sh for details)
  - Use-case B with plugin:
    - (1) Put the sz.config configuration in the current directory. (Please see README in SZ to understand the configuration sz.config)
    - (2) h5repack.sh [input\_hdf5\_file] [compressed\_hdf5\_file] or  
h5repack -f UD=32017,0 [input\_hdf5\_file] [compressed\_hdf5\_file]
    - (3) Read the compressed HDF5 file:  
h5dump [compressed\_hdf5\_file] > data.txt
    - (4) Decompress the data and dump them to a HDF5 file.  
h5repack -f NONE compressed.h5 decompressed.h5

