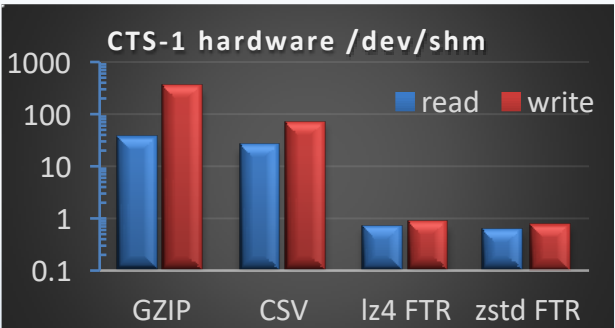


William Seawright

Sandia National Laboratory (Albuquerque, NM) Remote

Overview

Sandia National Laboratory HPC monitoring software development team. Research and develop an efficient method of storing huge data with ease of accessibility. I was able to learn about and make use of different file formats that are commonly used and not so commonly used.

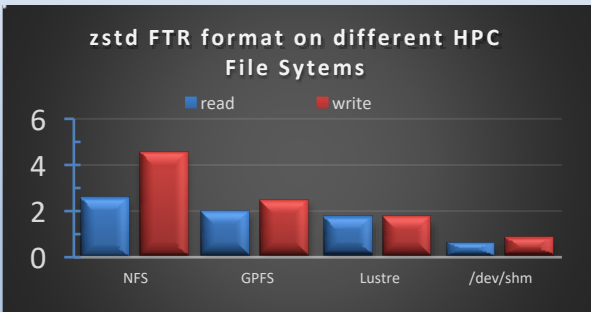


Average performance times of reading and writing 1.4 GB numeric data with different file formats

Outcomes

In the previous summer I was able to learn much more about the importance of visualization and the impact that it has. This time I was able to build on that as I was allowed the pleasure to discover and use new file formats and high-performance file systems that drastically cut down the time that it takes to access, read, and write large data. I was also able to make a program that would help transition to the use of the file format as well as create a baseline visualization of the data.

This work impacts the efficiency of how and where data is stored and accessed, reducing file size and overall time needed to visualize critical information.



Comparison of reading and writing 403 MB with zstd FTR format on different HPC file system types.

“This internship gave me great insight into nuclear security, and the importance of data visualization and efficiency. I gained a better understanding of a lot of things, inside and outside of nuclear security.”



William Seawright,
Sandia National
Laboratory in
Albuquerque, NM
(Remote)

Bachelors of Computer Science, Cyber Security, Alabama Agricultural and Mechanical University.