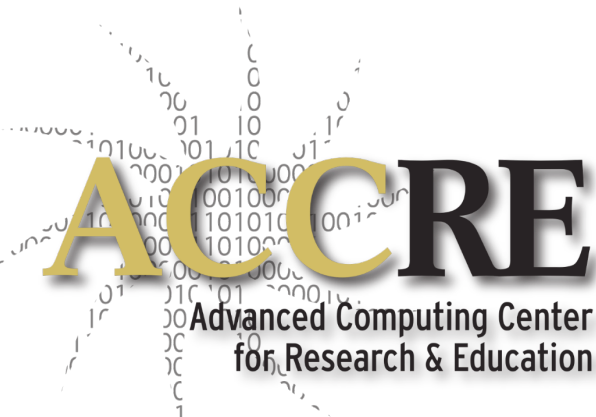


# ACCRE SciLo & Black Pearl or: How I Learned to Stop Worrying and Love the Tape

Warren “NotLarry” Eckstein  
<sup>1</sup>Vanderbilt University, Nashville, TN 37203



## Wait, Tape?

Yes, tape. The Data generated and retained by research is growing at an exponential rate. While storage technology is growing it is not keeping up and the amount of data researchers want to retain is far outstripping the storage they have access to.

While spinning disk technology is improving, as a solution for long term storage of large sets of research data it remains significantly more expensive than LTO (Linear Tape-Open) storage solutions.



## Your New Bucket List

SciLo uses the Spectra Black Pearl, a converged storage solution that exposes the Spectra S3 interface. Combined with their SDK and API users are able to use familiar Put and Get commands to move data to and from SciLo at their convenience.

This self reliance for the user frees ACCRE staff from having to backup or restore the research data making it even more appealing

## SciLo

ACCRE provides backup for our users data. However these backups suffer from standard limitations of backups

- 90 to 100 day lifetime of backups
- Limited to backup of active disk storage
- Data restores use “valuable” staff time



A recent opportunity gave ACCRE, in collaboration with VUIT (Vanderbilt University Hosting Services), the chance to not only upgrade our tape library but also offer live, long term archive as a service to our scientific community and ACCRE SciLo was born.

## The Co\$ of Using SciLo

While the initial investment by ACCRE and VUIT to bring SciLo on-line was significant, this investment enables us to offer our researchers archive storage for their data at a cost well below more “cloudy” options.

As more researchers buy into SciLo and we need to upgrade we can add up to 8 frames with a current estimated capacity of ~11PB each to our T950. The cost of frames and tapes is economical and growth will only reduce the cost to our users.

## Live Long and Transfer

Research data should not be too expensive to keep and with SciLo ACCRE provides our scientists the power to archive and access their data without having to sacrifice it to the cost of storing it.

## References

- Spectra T950:
- ~11 PB per frame
  - 31TB per hour tape transfer rate
  - ~88 PB total in place expansion
- Black Pearl
- Spectra S3 interface
  - Developer SDK and API for integration
  - Up to 450 – 800 MBps to tape sustained

