

# A Flash Talk on Tape Storage

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## Features of All-Flash-Storage Arrays

Nowadays, very beneficial:

- Modern technologies using SSD's
- Compact design saving space
- High access speed: about 5 GB/s
- Energy efficient

→ Perfect for fast & dynamic storage ✓

But on the other hand:

- Very complicated & fragile electronics
- Storage medium can be easily damaged

→ Inappropriate for data preservation ✗



Lenovo ThinkSystem DE4000F All Flash Storage Array

# Tape Storage for Data Preservation

- Old, but simple & robust technology
- High durability of storage medium (tapes)
- Moderate access speed: about 300 MB/s
- Tapes kept separate from drives and collected in a library
- Possible tape capacity:
  - 20 TB today,
  - 50 TB in 2 years,
  - much more than 100 TB in 10 years



Oracle T10000D Enterprise Tape Drive & Tape



You might ask yourself

So these have to be picked up by someone and put into the drives?

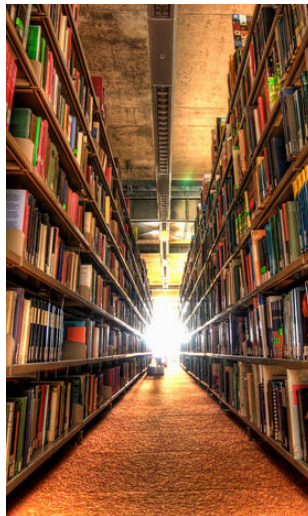
# Inside a (Tape) Library



Verwechslungsgefahr!

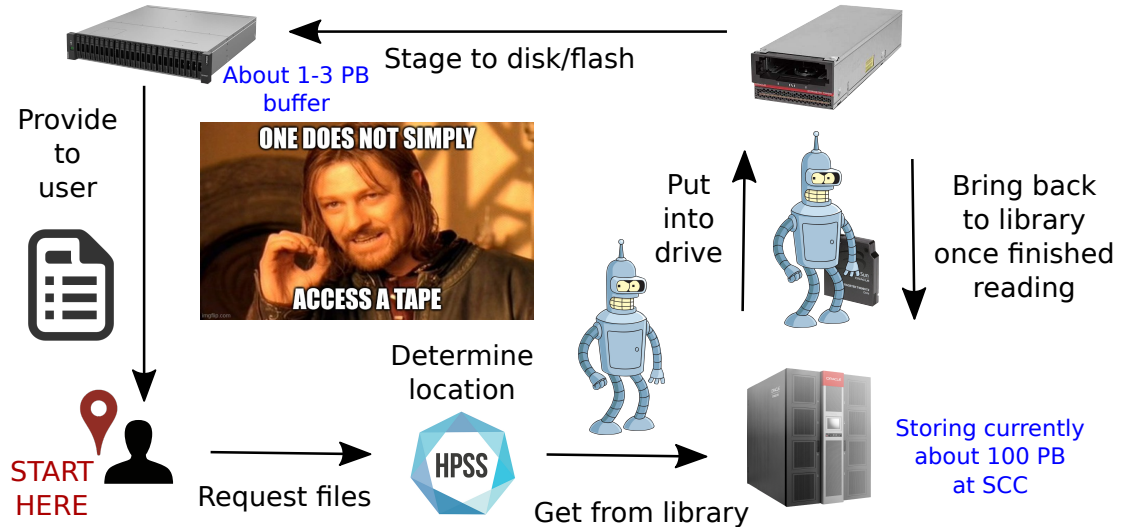
Only a tiny difference

A robot gets a tape for you, not a human

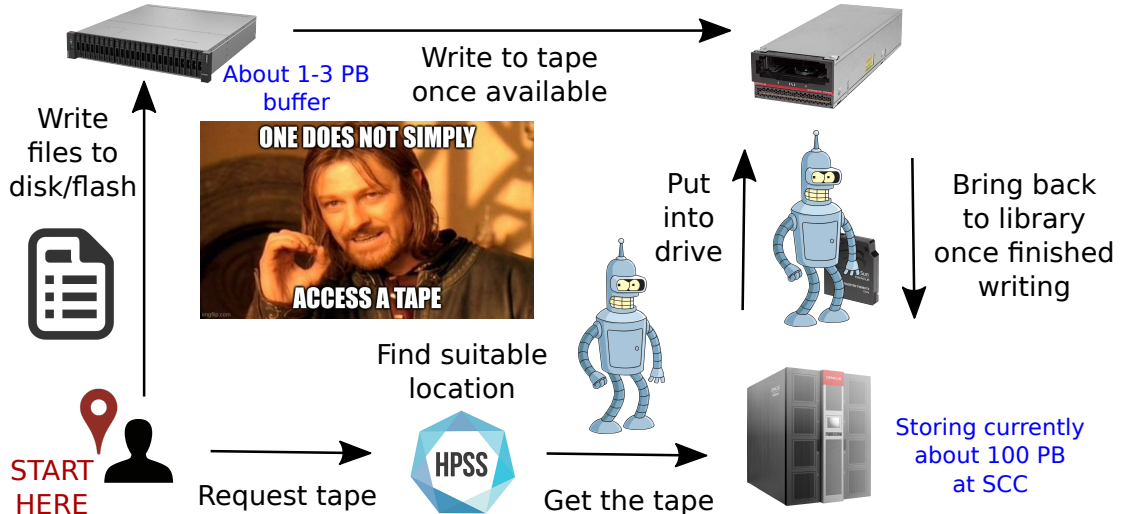




# Reading from Tape



# Writing to Tape



# Conclusion

