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Tape SCSI monitoring and encryption at CERN

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Tape Operations @ CERN

Tape SCSI Monitoring

- Goal:
  - Acquire internally reported metrics from tape drives through SCSI interface and channel into logs
  - Pre-emptively assess of media and drive state

- Results:
  - Failure prediction based on gathered metrics did not lead to meaningful results
  - No correlation observed between high error values and tape or drive failures

Tape Encryption

- Aim to provide data confidentiality without compromises on
  - Compression
  - I/O performance
  - CPU cycles

- Implementation of real-time, AES256 Application Managed Encryption on dedicated tape drive hardware. It offers:
  - Speed
  - Compression
  - Key scope versatility
  - User transparency

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