

# An efficient, modular and simple tape archiving solution for LHC Run-3

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The IT Storage group at CERN develops the software responsible for archiving to tape the custodial copy of the physics data generated by the LHC experiments. Physics run 3 will start in 2021 and will introduce two major challenges for which the tape archive software must be evolved. Firstly the software will need to make more efficient use of tape drives in order to sustain the predicted data rate of 100 petabytes per year as opposed to the current 40 petabytes per year of Run-2. Secondly the software will need to be seamlessly integrated with EOS, which has become the de facto disk storage system provided by the IT Storage group for physics data.

The tape storage software for LHC physics run 3 is code named CTA (the CERN Tape Archive). This paper describes how CTA will introduce a pre-emptive drive scheduler to use tape drives more efficiently, will encapsulate all tape software into a single module that will sit behind one or more EOS systems, and will be simpler by dropping support for obsolete backwards compatibility.

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Storage systems

## Secondary Keyword (Optional)

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