



# CERN Hybrid Cloud Empowers Breakthrough Research

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CERN studies the subatomic building blocks comprising everything in the universe. Their Large Hadron Collider (LHC) is the largest particle accelerator on earth. Every second, extremely sensitive detectors capture petabytes of data resulting from each experimental run using the LHC. To supplement their on-site infrastructure, CERN requires a fast, scalable and budget-friendly compute and storage solution for simulation and modeling of the resulting data. Due to bandwidth limits, the LHC data capture process remains localized to CERN's datacenters architected for the task with Intel® Xeon® Scalable processors. After data collection, hosted cloud solutions manage CERN's data evaluation process with expandable virtual machine (VM) capability and extensive storage to facilitate simulation and modeling.

“Our team continually seeks ways to optimize and accelerate our infrastructure, so hybrid cloud solutions are extremely important to our work. It is our job to make sure that IT does not limit physics.”

**Tim Bell, Compute and Monitoring Group Leader, IT Department, CERN**