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## HEPCloud Facility Operations at Fermilab—The First Six Years

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The HEPCloud Facility at Fermilab has now been in operation for six years. This facility is used to give a unified provisioning gateway to high performance computing centers, including NERSC, ORLF, and ALCF, other large supercomputers run by the NSF, and commercial clouds. HEPCloud delivers hundreds of millions of core-hours yearly for CMS. HEPCloud also serves other Fermilab experiments including DUNE, Mu2E, Muon  $g-2$ , and NOvA. In this paper we present the practical considerations of operating a distributed facility such as HEPCloud. We also mention some of the interesting research and development that HEPCloud has been used for including GPU-based machine learning inference servers, and tests of Quantum Computing.

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