

CERN introductory keynote: The role of PostgreSQL at CERN

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CERN, the European Organization for Nuclear Research, is at the forefront of scientific exploration, uncovering the fundamental nature of the universe. With groundbreaking experiments from world-wide collaborations conducted at the Large Hadron Collider (LHC), the world's largest and most powerful particle accelerator. The LHC hosts four main experiments: ATLAS and CMS, which investigate the fundamental particles and forces of the universe; ALICE, which studies the properties of quark-gluon plasma; and LHCb, which explores the differences between matter and antimatter. Through these experiments CERN generates petabytes of data that drive cutting-edge research in particle physics, pushing the boundaries of human knowledge. Supporting this ambitious mission requires a robust and scalable IT infrastructure to manage the vast and varied data demands of scientists and engineers across the globe.

Aiding this effort is the Database on Demand service, which provides reliable, scalable, and easy-to-use database solutions for CERN's diverse community of users. This service enables researchers and engineers to rapidly create and manage databases without the need for extensive technical expertise, ensuring they can focus on their primary scientific objectives. It integrates seamlessly with CERN's infrastructure, offering high performance, security, and flexibility to support a wide range of applications, from data analysis to operational tasks.

This brief keynote delves into the role of PostgreSQL in CERN's Database on Demand service. PostgreSQL's advanced features and open-source ethos align seamlessly with CERN's collaborative and innovative spirit. It shows the importance of collaboration between scientific innovation and open-source technologies in driving discoveries that benefit humanity.

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