



Contribution ID: 62

Type: **Talk**

The neXt Dirac incarnation

Wednesday 23 October 2024 09:00 (30 minutes)

The Dirac interware has long served as a vital resource for user communities seeking access to distributed computing resources. Originating within the LHCb collaboration around 2000, Dirac has undergone significant evolution. A pivotal moment occurred in 2008 with a major refactoring, resulting in the development of the experiment-agnostic core Dirac, which paved the way for customizable extensions like LHCbDirac and BelleDirac, among others.

Despite its efficacy in meeting experiment-specific requirements, Dirac has accrued technical debt over its 15-year history. Installation management remains intricate, with significant entry barriers and a reliance on bespoke infrastructure. Additionally, the software development process lacks alignment with contemporary standards, impeding the onboarding process for new developers. Notably, integral components such as the network protocol and authentication mechanisms are proprietary and pose challenges for seamless integration with external applications.

In response to these challenges, the Dirac consortium has embarked on the development of DiracX. Drawing upon two decades of experience and battle-tested technological frameworks, DiracX heralds a new era in distributed computing solutions. This contribution describes technical decisions, roadmap and timelines for the development of DiracX.

This article presents an overview of the architecture underpinning DiracX, shedding light on the technological decisions guiding its development. Recognizing the criticality of maintaining a continuously operational Dirac system for numerous user communities, we delve into the intricacies of the migration process from Dirac to DiracX.

Primary author: STAGNI, Federico (CERN)

Co-authors: BOYER, Alexandre Franck (CERN); TSAREGORODTSEV, Andrei (Aix Marseille Univ, CNRS/IN2P3, CPPM, Marseille, France); BURR, Chris (CERN); HAEN, Christophe (CERN)

Presenter: STAGNI, Federico (CERN)

Session Classification: Plenary session

Track Classification: Plenary