

INDIGO IAM migration to Spring Authorization Server framework with a new customizable React user dashboard

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INDIGO Identity and Access Management (IAM) is a comprehensive solution that enables organizations to manage and control access to their resources and systems effectively. It is a Spring Boot application, based on OAuth/OpenID Connect technologies and the MITREid Connect library. INDIGO IAM has been chosen as the AAI solution by the WLCG community and has been used for years by the INFN DataCloud services, as well as by several other projects and experiments. The constant evolution of identity and access management systems like INDIGO IAM is imperative in the rapidly advancing landscape of cybersecurity and software development. This abstract encapsulates the transformative journey of the INDIGO IAM software, transitioning from its existing frameworks, MITREid Connect and AngularJS web user interface, to the robust and contemporary Spring Authorization Server with a React-based new dashboard.

The MITREid framework has served as a reliable foundation for INDIGO IAM, providing essential identity management capabilities. However, recognizing the need for enhanced security, scalability, and modern features, the decision was made to migrate to the Spring Authorization Server, a powerful and flexible IAM framework built on the widely adopted Spring Security. This migration represents a strategic move towards aligning INDIGO IAM with cutting-edge industry standards and best practices. The Spring Authorization Server offers a comprehensive set of features, including OAuth 2.1 draft and OpenID Connect support, adaptive authentication, and a modular architecture that facilitates seamless integration with other Spring ecosystem components. This abstract highlights the migration benefits, such as improved security protocols, simplified development workflows, and enhanced scalability.

The decision to migrate to React was driven by a desire to harness the latest advancements in User Interface (UI) development, improve performance, and elevate the overall user experience. React, known for its declarative and component-based architecture, offers a modern and efficient approach for building interactive and responsive user interfaces. The abstract addresses the impact of the UI transformation on end-users, highlighting the commitment to preserving a familiar and intuitive experience while introducing new features and improvements. The benefits of React, including virtual DOM efficiency and state management, are underscored as pivotal elements contributing to the enhanced responsiveness and interactivity of the INDIGO IAM Dashboard.

Finally, this abstract elucidates the technical considerations and architectural decisions made during the development process to facilitate multi-backend support. The commitment to a standardized and modular design is highlighted as a key enabler for developers to seamlessly integrate and configure the UI with different backend implementations.

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