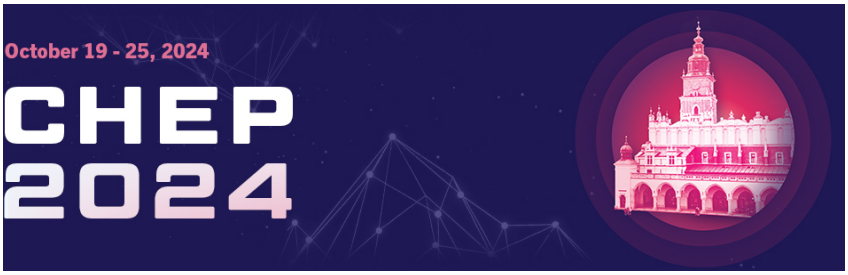

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Implementing XRootD/SciToken-Based Access to Lustre Storage at GSI: A First Step Toward Data Federation for FAIR

Thursday 24 October 2024 16:00 (15 minutes)

The implementation of a federated access system for GSI's local Lustre storage using XRootD and HTTP(s) protocols will be presented. It aims at ensuring a secure and efficient data access for the diverse scientific communities at GSI. This prototype system is a key step towards integrating GSI/FAIR into a federated data analysis model. We use Keycloak for authentication, which issues SciTokens through OpenID Connect, while LDAP manages local users. After successful login, a JSON Web Token (JWT) is created with appropriate read and write permissions. This token is passed to XRootD's multiuser plugin, which performs the requested operations as the specified user. We also developed an easy-to-use web interface to improve the user experience. This federated access model enhances the security, scalability, and usability of GSI's storage systems, making it a strong solution for modern data management needs.

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