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From Batch to Interactive: The "INK" for High Energy Physics Data Analysis at IHEP

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IHEP computing platform faces new requirements in data analysis, including limited access to login nodes, increasing demand for code debugging tools, and efficient data access for collaborative workflows. We have developed an Interactive aNalysis workbench (INK), a web-based platform leveraging the HTCondor cluster. This platform transforms traditional batch-processing resources into a user-friendly, web-accessible interface, enabling researchers to utilize cluster computing and storage resources directly through their browsers. A loosely coupled architecture with token-based access ensures platform security, while fine-grained permission management allows customizable access for users and experimental applications. Universal public interfaces abstract the heterogeneity of underlying resources, ensuring environment consistency and seamless integration with interactive analysis tools. Initial feedback from a pilot group of users has been highly positive. The platform is now in its final testing phase and will soon be officially deployed for all users.

Desired slot length

Speaker release

Yes

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