

Sixth IAEA Technical Meeting on Fusion Data Processing, Validation and Analysis

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Initial development of web interface and user access control of IMAS databases

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It is well known that ITER utilizes IMAS for data storage and exchanging between experiments and simulations. The software infrastructure of the synthetic diagnostic platform (SDP) on EAST is based on IMAS. To enable the visualization of the data on SDP through web, a RESTful API has been developed. Benefiting from the mature web technologies, it is also possible to easily integrate the user access control (UAC) feature into the web interface, which could protect the resources owned by the developers and boost the development of synthetic diagnostics on EAST. The Flask web framework has been chosen for the development. The static and responsive frontend has been developed for user registration, data application and data authorization. The backend couples IMAS and SQL databases for retrieving and controlling the data flowing to the web. The administrator can nominate the developers to manage the data application for certain IMAS resources to the IDS level. The developers can review the data application submitted by the users. Once authorized, the users have the access to the limited IMAS resources. To simplify the access of the IMAS data through web, the client API has been developed for local data analysis by the users. The web data visualization feature will be developed in the future to further simplify the visualization of the SDP data anywhere at anytime.

Speaker's email address

xliu@ipp.ac.cn

Speaker's Affiliation

Institute of Plasma Physics, CAS

Member State or International Organizations

China

Author: LIU, Xiang (ASIPP)

Co-authors: ZHANG, Yang (Institute of Plasma Physics, Chinese Academy of Sciences); LIU, haiqing (Institute of Plasma Physics, Chinese Academy of Sciences)

Presenter: LIU, Xiang (ASIPP)

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