BUILDING A USER-FRIENDLY TAIWAN DATA CUBE SANDDBOX & DEPLOYABLE SYSTEM FOR MULTI-USER ACCESS

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This paper delves into the implementation of advanced features in a user-friendly deployable system, inspired by the Digital Earth Australia Sandbox website. The system provides a convenient login interface for multiple users and leverages powerful tools such as JupyterHub, Data Cube core, and Docker. Through the utilization of Docker Compose, users can effortlessly set up the system, allowing for seamless deployment in Taiwan Data Cube. Once logged in, users are able to select image files and create their independent sandboxes.

One notable feature is the integration of JupyterHub, which allows for efficient management of various users and their respective sandboxes. Users can leverage JupyterLab, a powerful development environment, to write code, access the extensive Formosa satellite database, and utilize the functionalities of the Taiwan Data Cube. The sandbox environment ensures that user operations remain isolated, ensuring a seamless and uninterrupted experience.

Additionally, the system offers the flexibility to adjust image file creation through the configuration of Docker parameters. This feature empowers users to tailor their sandboxes according to their specific requirements, enhancing the overall customization and usability of the system.

By incorporating JupyterHub, Data Cube core,, and Docker into a user-friendly deployable system, this project aims to provide an accessible platform for users to explore, analyze, and manipulate geospatial data effectively, while maintaining a seamless and independent user experience.

Keywords: Syscom, TASA, Taiwan Data Cube, Formosat, Jupyterhub, Docker, Sandbox