

Experiment Software and Projects on the Web with VISPA

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The Visual Physics Analysis (VISPA) project defines a toolbox for accessing software via the web. It is based on latest web technologies and provides a powerful extension mechanism that enables to interface a wide range of applications. Beyond basic applications such as a code editor, a file browser, or a terminal, it meets the demands of sophisticated experiment-specific use cases that focus on physics data analyses and typically require a high degree of interactivity. As an example, we developed a data inspector that is capable of browsing interactively through event content of several data formats, e.g., „MiniAOD“ which is utilized by the CMS collaboration. The VISPA extension mechanism can also be used to embed external web-based applications that benefit from dynamic allocation of user-defined computing resources via SSH. For example, by wrapping the „JSROOT“ project, ROOT files located on any remote machine can be inspected directly through a VISPA server instance.

We introduced domains that combine groups of users and role-based permissions. Thereby, tailored projects are enabled, e.g. for teaching where access to student's homework is restricted to a team of tutors, or for experiment-specific data that may only be accessible for members of the collaboration.

We present the extension mechanism including corresponding applications and give an outlook onto the new permission system.

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Secondary Keyword (Optional)

Collaborative tools

Primary Keyword (Mandatory)

Analysis tools and techniques

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