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The Jonas VRE: a science gateway for noise map visualization and data processing in the North-East Atlantic region

Tuesday, 20 September 2022 19:00 (1 hour)

The objective of this poster is to summarize the process of development of the JONAS VRE, which consisted of three main parts:
1. Capitalization requirements
2. Capitalization development
3. Legacy
For developing the capitalization requirements, we started by presenting the definition of VRE and its main characteristics. The four different steps described in the literature for VRE development were explained. Also, some of the key requirement of VREs were described. The use cases derived
from the JONAS workshop were developed. The functional and non-functional requirements were detailed. The architecture of the JONAS VRE and the development plan were presented. Finally, the binding and optional requirements of the VRE were described.
The capitalization development began with some background information on Kubernetes, k3s, JupyterHub and QGIS, which are layers under the JONAS VRE. Then, a brief description of the deployment of the Kubernetes cluster, JupyterHub and QGIS on the EGI infrastructure were presented. The development of the Jupyter notebooks, with emphasis on processing the netCDF files was given. Also, the folder structure of the VRE was presented. Finally, the functional
requirements as described in the Capitalization requirements were presented and it was explained how the VRE fulfilled each requirement.
For the JONAS VRE legacy, we first cited its overall objective. and a simplified diagram of the JONAS VRE was presented. This simplified diagram displays the inputs to the VRE, the two VRE applications (JupyterHub and QGIS), and the VRE outputs. Each of the VRE inputs were described, emphasizing the data format, what was provided to the VRE by the different JONAS WPs, and the required user inputs. The VRE processing capabilities were explained. Also, each of the VRE
outputs were detailed, showing typical images of the VRE graphic outputs. Finally, a summary of the results of the VRE pilot test was provided.

Any relevant links

Topic

Presenter: DÍAZ, José Antonio (PLOCAN)

Session Classification: Posters (presenters at poster)

Track Classification: A Federated Compute Continuum