Contribution ID: **57**   Type: **Lightning Talk 8 mins**

ELKH Cloud: milestones towards EOSC and ESFRI

Thursday, 22 September 2022 15:45 (8 minutes)

The federated science cloud of the Eötvös Loránd Research Network, *ELKH Cloud* is one of the award-winner research infrastructures in Hungary. Members of the scientific community are not only using but are also developing and operating the cloud services: the Institute for Computer Science and Control (SZTAKI) and the Wigner Research Centre for Physics provide the computing and data services to more than 200 research projects since 2016 (the inauguration with the support from the Hungarian Academy of Sciences).

Based on positive feedback received in recent years, as well as growing demand for artificial intelligence applications, the cloud capacity was significantly expanded by 2022 with support from ELKH. As a result, 5900 vCPU, max. 500+ vGPUs, 28 TB RAM, 338 TB SSD storage, 1.25 PB HDD storage and 100 Gbps network capacities have become available to the users.

Research often requires complex, large-scale platforms based on the coordinated operation of multiple components. The ELKH Cloud therefore provides customisable, reliable and scalable reference architecture templates, among others with the help of cloud orchestration methods.

In addition to operating systems and basic IaaS level cloud functionalities, the most popular artificial intelligence research and data ingestion frameworks are also available at PaaS level. The enhanced ELKH Cloud provides a competitive research infrastructure that also welcomes projects initiated by universities and national laboratories.

ELKH aims to make the enhanced ELKH Cloud an integral part of the *European Open Science Cloud* (in the EGI-ACE project) and the *SLICES ESFRI* initiatives (in the SLICES-SC and SLICES-PP projects).

Any relevant links

https://www.egi.eu/article/inauguration-of-the-enhanced-elkh-cloud-infrastructure/
https://science-cloud.hu

Topic

EOSC Compute Platform

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Session Classification: Global Open Science Cloud Workshop - International Cloud Integration

Track Classification: EOSC Compute Platform