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DEVELOPMENT OF EFFECTIVE ACCESS TO THE DISTRIBUTED SCIENTIFIC AND EDUCATIONAL E-INFRASTRUCTURE

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The article describes approaches to the modernization of a distributed electronic infrastructure that combines various types of resources aimed at supporting the research **and educat**ional activities in Moldova. The development trends of computer infrastructures and technologies aimed at creating conditions for solving complex scientific problems with high requirements for computing resources are analyzed. Expanding the possibilities of external channels for interaction with the pan-European academic network GEANT, improving regional connections and Internet access are the main directions of the development of the external connectivity for the national R&E electronic infrastructure RENAM. In this direction, a significant role belongs to the implementation of the EU funded EaPConnect project focused on creation of new Cross-Border Fiber (CBF) channels for connecting PoP RENAM (Chisinau) - PoPs of the Ukrainian NREN URAN in Odessa and Kiev - PoP GEANT in Poznan, Poland. At the same time, it is of special interest creating opportunities for storing and accessing growing volumes of research data, including in Moldova. The relatively new European Open Science Cloud (EOSC) initiative, which aims to accumulate various scientific information in the cloud for open access, has a further significant impact on the intensification of the use of distributed computing resources. An initiative aimed at creating open repositories of research data to support open science and the development of technologies for support of FAIR (Findable, Accessible, Interoperable and Reusable) data principles implementation based on the widespread of open research data repositories. The trends in the development of tools for automating the configuration and administration of complex cloud infrastructures for hosting data storing and archiving platforms are described. Identified problems limiting the scalability of the existing cloud infrastructure. Solutions are proposed to overcome the existing limitations by using new tools for configuring and administering cloud infrastructure. Research work now focused on deploying new types of cloud infrastructure that will benefit end users by combining the computational resources of multiprocessor clusters with efficient application platforms, user interfaces, and infrastructure management tools. For example, RENAM provides a service for scientific and educational organizations to support video conferencing based on the BigBlueButton (BBB) platform and its integration with the Moodle Learning Management System. To implement effective access to the distance learning systems various options of ready to use configurations of the BBB platform are offered that based on using resources of the RENAM infrastructure and servers'resources of connected organizations.
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Summary

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