

Simulation results of BM@N computing infrastructure

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The main task in creating a computing infrastructure of any large experiment is predictive modelling of data storage and processing centres. A software complex is developed at the Meshcheryakov Laboratory of Information Technologies, which allows simulating processes of data handling to find out both how the data storage and processing infrastructure will work with the available computing power, and to estimate the load on computing farms and communication links with the specified parameters of data flows and tasks.

At present, the work on modelling the computer infrastructure for data processing of the BM@N experiment at NICA is in progress. The main goal is the assessment of the current and future resource requirements for the data storing and processing. The results of the modeling the distributed computing infrastructure for the BM@N experiment, according to the available allocated resources for the autumn Run in 2022, are presented. The prospects for the development of the software simulation complex are formulated. In addition, the future task of the simulation is obtaining predictive values for a number of necessary computing resources within the perspective of the development of the BM@N computing infrastructure for 2023-2030.

Primary author: PRIAKHINA, Daria (JIIT)

Co-authors: KORENKOV, Vladimir (JINR); TROFIMOV, Vladimir (JINR); Dr GERTSENBERGER, Konstantin

Presenter: PRIAKHINA, Daria (JIIT)

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