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## HybriLIT : status report

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The paper reviews the present status and the perspectives of development of the heterogeneous computing cluster HybriLIT (<http://hybrilit.jinr.ru/>) which was put into operation in 2014 at the Laboratory of Information Technologies of JINR. HybriLIT provides possibilities to carry out high performance computing within the Multifunctional Information and Computing Complex in LIT JINR.

The current configuration of the cluster includes computational nodes with different types of coprocessors (graphical accelerators (GPU) NVIDIA and Intel Xeon Phi coprocessors) with corresponding installed software. It allows carrying out computations under the use of different parallel programming technologies: CUDA - for computations on computational nodes including GPU; MPI, OpenMP - for computations on the multi-/many-core component of the cluster; OpenMP extensions - for computations on the nodes with Intel Xeon Phi coprocessors. Heterogeneous computations may be done with the use of combined technologies: MPI+CUDA, MPI+OpenMP+CUDA, etc.; and the use of the OpenCL technologies.

To make effective use of the new computing architectures, a software and information environment has been developed. It includes services that allow the users to carry out parallel computations, to develop their own applications, to get up-to-date support and to participate in tutorials on parallel programming technologies.

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