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Implementation of the branch-and-bound method on the desktopgrid systems

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The report considered the effective implementation of the branch-and-bound method on the desktopgrid systems. The description of the BOINC system, its features, significant from the point of view of the implementation of this method. Description of experimental calculations and observed phenomena.

The report contains a description of the approaches to the calculation and analysis of their results. The practice of calculations showed that:

- It is necessary to work out a preliminary assessment of computational complexity of the assignment method.
- Resource efficiency depends on the ratio of the total computational complexity of the problem being solved and the potential of the infrastructure. This ratio must be considered in the development of optimal resource utilization strategies.
- Further computational experiments must be carried out with more computationally-capacious tasks.

Conclusions of the work can be used to solve practical problems, reducible to optimization problems.

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