Contribution ID: **359** Type: **not specified**

Methods for modeling of the desktop grid computations

Friday, 7 July 2023 12:15 (15 minutes)

The report is devoted to the practical aspects of modeling the operation of the BOINC computing infrastructure. The practical expediency of preliminary modeling for solving optimization problems by means of an evolutionary algorithm is substantiated. Important attention is paid to modeling the occurrence of abnormal situations in the work of the BOINC project. The main considered abnormal situations include shutdown of the computing node after receiving the job and the lack of jobs on the server. The practice of applying general and special metrics to grid systems from personal computers is considered. Discrete-event and probabilistic modeling methods are considered. The strengths and weaknesses of each of the approaches are given. The practice and prospects for the implementation of these methods will be discussed.

References

Nikolay P. Khrapov, Valery V. Rozen, Artem I. Samtsevich, Mikhail A. Posypkin, Vladimir A. Sukhomlin, Arte

Ivashko, E., Nikitina N., Rumyantsev A.: Discrete Event Simulation Model of a Desktop Grid System. Communi

Khrapov N. P. Metrics of Efficiency and Performance when Using Evolutionary Algorithm on Desktop Grids. Pr

Summary

Primary author: KHRAPOV, Nikolay (Pavlovich)

Presenter: KHRAPOV, Nikolay (Pavlovich)

Session Classification: Distributed Computing Systems

Track Classification: Distributed Computing Systems