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Extended static model of user requests processing for a heterogeneous data aggregation platform with S storages

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Inter-disciplinary research and open data access are big trends in modern science. Globalization facilitates the exchange of experiences and ideas between different domains of knowledge, and allows us to expand the horizons of our understanding of the processes taking place in nature and society. To make this happen, aggregated data access systems are being established to link together storages of heterogeneous data. Throughtput optimization for these systems leads to NP-hard problems, involving a wide space search with a vast number of variables.

In this talk we present a mathematical model of a data aggregation system with S heterogeneous storages, and set up an optimization problem of users requests processing in the form of a general job shop problem with precedence constraints. The results of numerical modeling employing CSP heuristics are going to be discussed.

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