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## **Analysis of experimental physics data using distributed systems.**

There are many reasons to use distributed systems in a research area. Unfortunately, they are more advanced solutions than central systems. Nowadays professional computing is made in the distributed way. Firstly, a single host often cannot provide enough computing power to perform required data analysis. Second aspect of using distributed systems is a possibility of proper configuration. Building efficient central system can be unprofitable. Each data set and adequate algorithms requires a different computing power. Distributed systems are scalable so they can be better adjusted to current needs. During my Master Thesis I was analyzing some aspects of data processing using network. I used the client-server architecture. This model of architecture can easily separate management and computing part of system. Unluckily, network and distributed systems can provide some synchronization and performance problems. Implementation and using distributed system without the proper configuration can lead to incorrect work of it. Despite the difficulties, distributed systems are increasingly used in data analysis. Especially in physics experiment.

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