RESEARCH OF SYSTEM-WIDE DEPENDABILITY OF MULTILAYER VIRTUAL INFRASTRUCTURES IN THE CLOUD ENVIRONMENT

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Today, the specifics of technological progress and social events have led to the fact that more and more companies and users began to use cloud resources not only for data storage, but also cloud platforms for software installation, for remote connection to workstations. With that has grown the problem that a failure of server hardware will lead to the downfall of the entire architecture of virtualization [1].

As a subject of research, the assessment of system-wide reliability of cloud infrastructure in relation to the consumer is of great interest with further formalization of the initial indicators of reliability (node and intermediate equipment, software, etc. [2, 3]) and new methods of such an assessment.

The analyses will require access to server architecture configuration changes and several software tools to investigate the impact of server part component changes. The study used software tools to measure network bandwidth and measure the speed of memory media reads and writes, as well as software tools to perform load tests of the central and graphics processors. Power consumption and temperature effects were also measured.

A key drawback of the proposed scenario is that most of the world's cloud vendors do not provide information about the architectural properties of the system to the end user and the end user has no way to interact with them. Hence, if the user chooses between vendors, he can use this method only to compare them with each other. This assessment comparison can be converted into a graphical report for further study and demonstration.

The report presents the results of the studies of the scenarios considered. Experimental studies were carried out on the basis of the technical equipment of the training laboratories of the Department of Computers.

References

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