

ABSTRACT

Master dissertation: 99 p. , 35 fig., 12 tab., 1 app., 52 sources.

Topicality. Today, more and more data is stored on electronic devices such as HDDs, SSDs or optical drives. But with increasing information, there is a problem managing data storage processes, as large enterprises can use hundreds of storage devices, which simultaneously need to access some users. One way to avoid losing information was to offer IT staffers the ability to set up repositories.

The repositories are designed to facilitate management while working with data. This type of save information allows users to reduce the time to back up data, provide the ability to use files at a time with a number of users. Advantages of using them are to improve the speed of access to the necessary files; the ability to increase the amount of memory that can be used to store data by adding additional devices to the repositories; increase data productivity; scalability and the ability to back up files. Storages can be used both at large enterprises and at home.

Relationship of work with scientific programs, plans, themes. The research was carried out at the Department of Computer-Aided Management And Data Processing Systems of the National Technical University of Ukraine «Igor Sikorsky Kyiv Polytechnic Institute» within the theme «Development and implementation of an IT infrastructure management system with consolidated information and computing resources» (№ 0115U000322).

The aim of the research is increasing performance of data storage within hyperconvergence systems.

To achieve the goal, the following tasks must be performed:

- analyze existing solutions for data storage systems;
- develop mathematical models for allocating data management resources;

- configure the input data for data keeping;
- develop algorithms for managing data storage processes;
- develop an environment for implementation of the algorithms;
- implement developed algorithms;
- analyze the results of work.

The object of research is process of managing data keeping with data storages.

The subject of research is a model for distributing resources in storage and methods for managing data storage processes.

Research methods is method of managing data keeping with data storages.

Scientific novelty of the obtained results. In the presented work the method of managing data storage processes in the repositories is investigated using data replication and migration methods in hyperconverting cloud systems.

Publications. The materials of research are published in theses of the 10th All-Ukrainian Scientific and Practical Conference «Computer Intelligent Systems and Networks» 2017 [1]; presented at the International scientific conference «Actual research in the modern world» [2, 4]; published in theses of scientific conference «Informatics and Computer Science – IOT-2018» [3].

PHYSICAL SERVERS, MULTITIERING STORAGEES,
HYPERCONVERGENCE SYSTEMS, DATA BLOCKS, DATA REPLICATION,
DATA MIGRATION