

Abstract
Of master's work
Thesis on
“Using of the “cloud technologies” with an open source code”
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Relevance of the work

At the last years a conception of the cloud technologies has begun to develop actively in the sphere of the information technologies. The cloud calculations make IT-structure more dynamic, more modular, and more independent. The cloud technologies allow launching new services effectively, deploying software, storing large volume of data on computational resources of the cloud technologies providers. “Clouds” allow simplifying of the software supporting, facilitating of the installing of updates and extra modules. In our time, when the information technologies reached wide development and large amounts of data, the cloud technologies are indispensable, as they allow calculating and data storing on the dedicated servers.

Purpose of the work

The purpose of the work is a study of the models of services, of mechanisms of realization and standards of cloud calculations, an analysis of the existing cloud technologies with an open source code, and a practical use of analyzed technologies.

Problems which are solved in the work

- Study of the existing models, mechanisms of the realization, and standards of cloud technologies.
- Analysis of the structure, the principles of the work of the cloud technologies with the open source code. Development of their main functional abilities.
- Construction of the cloud on the technologies of Google App Engine, Windows Azure and deploying additions in them.

Achieved results

- The analysis of the cloud technologies Eucalyptus, OpenNebula, Google App Engine, Windows Azure, Stratos, OpenStack, which was elevated into comparison chart of the services.
- During the analysis the main functional abilities, principles and mechanisms of the software deploying in the cloud environment were investigated.
- The Web applications were deployed in the cloud environment on the Google App Engine, Windows Azure technologies.

Scientific originality of the work

The scientific originality of the work is that:

- The technologies of the cloud calculations with the open source code were analyzed; the analyzed data was elevated into the comparison chart of the characteristics.
- The main abilities and principles of the work of cloud technologies Eucalyptus, OpenNebula, Google App Engine, Windows Azure, Stratos, OpenStack are investigated.

- The experiment, which is deploying of the web applications in the cloud technologies, was held.
- The opportunity to create a private cloud on the software with the open source code was demonstrated.

Practical value of the work

The practical value of the work is:

- The conducted researches at the services Google App Engine, Windows Azure can be used in the practical and laboratory works. The established codes can be deployed by students on the “cloud”.
- The constructed chart of the characteristics allows developer to chose technology with the set parameters, which will meet his technical capabilities.
- The experiment, which is deploying of the web applications in the cloud technologies Google App Engine, Windows Azure, was held.

Summary

The technologies of the cloud calculations, such as Eucalyptus, OpenNebula, Google App Engine, Windows Azure, Stratos, OpenStack, were studied and analyzed.

The chart of the characteristics of the analyzed technologies was constructed.

The example of the practical use of cloud calculations is given on the example of Google App Engine, Windows Azure technologies.

The value of the explanatory note is 101 p., the number of the illustrations is 32, number of the charts is 6, number of the applications is 1, and number of the кількість bibliographic items in the list of references is 22.

Keywords: cloud technologies, calculations, deployment of the applications, virtualization, service, IaaS, PaaS, SaaS, software, mechanism of the realization, resource.