ABSTRACT

master's degree attestation work

on a theme:

“The use of ontologies in management of data in distributed systems”

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Actuality of work

The clouds grew out of grid computing and is based on the concept of Grid infrastructure. Evolution of the approach is that instead of providing "raw" computing resources and storage resources, the provision of more abstract resources as services. With the adoption of cloud services to enterprises raises a challenge to manage their use and productivity, and integration with internal resources. The result is a new area of activity - the broker cloud services. Such brokers can be a current VAR-resellers, VARs and system integrators. They are especially useful for small and medium-sized businesses that are poorly versed in the intricacies of the market cloud services and have difficulties when using them.

Office of the clouds will cloud the main activities of brokers. Indeed, cloud services providers offer ready-to-use services, but usually does not take into account the specific needs of business and the fact that these services should be integrated into a single solution with other services. To the company could leverage cloud services, someone has to expand, integrate and customize.

The purpose of work

The aim is to study the use of ontologies for cloud brokers who work in distributed systems - clouds. Analysis of the current position vector of the cloud brokers and their development. The study models of service and event management architectures. Develop aggregator cloud services acting as a liaison between the

consumer and provider services, which is based on a semantically structured data providers

The problems solved in the paper:

1. Investigation of cloud computing.
2. The trend of the grid to the clouds.
3. Investigation of cloud service brokers.
4. The use of ontologies in the actions of agents.
5. Investigation of possible implementations of brokers.
6. Create a SaaS service - CBR (Cloud Brokerage Service).

The results achieved

Solving the problem posed in the paper, the author defends:

- Conclusions on cloud brokers.
- Guidelines for the implementation of ontologies in system selection services.
- Possible scenarios for the development of technologies and cloud agents.
- Best practices for working in distributed systems.

The scientific novelty of the work

The scientific novelty of the work lies in the fact that:

1. Spotted in the cloud free niche technologies.
2. Investigated the possible implementation of cloud agents and their application in the cloud infrastructures.

3. Logic of action set forth the broker based on semantically structured data.

The practical value of work

The practical value of the work lies in the fact that formulated the concept of the possible implementations of brokers and studied the trend of the grid to the clouds. A system for semantic matching of cloud services on the basis of the criteria.

Findings

- Studied to date, the actual cloud technology brokers.
- Studied a model of service, the concept of data storage.
- Investigated service-oriented architecture.
- Formed a modular approach to software development based on the use of distributed, loosely coupled components.
- Investigated the architecture of event management.
- Designed aggregator service based on the SaaS model for semantic selection of cloud services.
- Summarized information for users on the use of cloud services.

The work contains 118 p., 32 fig., 26 sources.

Keywords: CLOUD, CLOUD BROKER, ONTOLOGY.