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CLOUD ACCOUNTING SYSTEMS: DATA SECURITY ISSUES AND ADVANTAGES FOR SMALL AND MEDIUM BUSINESSES

The use of cloud accounting systems is a progressive trend in business digitalization that has gained significant development in recent years [1; 2]. Cloud accounting demonstrates considerable potential in the modern management of small and medium-sized enterprises (SMEs) due to its flexibility, scalability, and wide range of functional capabilities [3].

The relevance of studying cloud accounting systems is обусловлена the need to improve financial management efficiency, particularly for enterprises requiring high mobility, real-time data access, and minimization of IT infrastructure costs [4; 6].

Cloud accounting is defined as a technological approach to accounting in which remote servers (cloud infrastructure) are used for data storage and processing instead of local computers [5]. The key characteristics of cloud systems include high availability, enabling access to financial data from any location; scalability of computing resources; and high-speed transaction processing [3].

Cloud technologies are primarily used in processes requiring shared database access and automation of routine operations. When using cloud services, enterprise financial data are stored on secure provider servers, where they are processed and archived. Users can access processed data in real time via web interfaces, which significantly transforms the organization of accountants' work, the structure of software costs, and the overall cybersecurity framework of enterprises [2; 6].

Cloud accounting systems typically include the following functions: online bookkeeping, automated tax reporting, payroll management, inventory accounting, integration with banking systems (client-bank), cost management, and business analytics [5].

Cloud data processing offers a number of significant technological and economic advantages, including:

- accessibility from any device (laptop, tablet, smartphone);
- rapid system implementation compared to local server solutions;
- elimination of capital expenditures for server equipment;
- automatic updates in accordance with legislative changes;
- data backup and recovery capabilities;
- support for collaborative work environments [1; 3].

However, the cloud accounting approach also involves certain risks and limitations, such as:

- dependence on stable, high-speed Internet access;
- potential risks of unauthorized access to confidential data in case of insufficient encryption;
- dependence on the service provider's reliability and technical support;
- long-term subscription costs that may exceed initial investments in local solutions [4; 5].

Cloud accounting systems operate based on the SaaS (Software as a Service) model, where the provider delivers software via the Internet. The cloud platform (data centers and servers) functions as a powerful computing environment for storing and

processing large volumes of information. The most common deployment models include public and private clouds [2].

In secure cloud environments, data protection is ensured through modern cryptographic protocols. Security measures are typically implemented at two levels:

- physical security (protection of data centers and hardware infrastructure);
- software security (data encryption, secure communication channels, and multi-factor authentication) [6].

Advanced security tools include SSL certificates, data tokenization, intrusion detection systems (IDS), web application firewalls (WAF), and regular security audits [3; 5].

The architecture of cloud accounting systems consists of a remote server hosting the database and a client interface (web browser or mobile application). Data transmission is secured via encryption protocols, while access control is maintained through authentication mechanisms such as login credentials or electronic digital signatures (EDS) [2].

The operational principle of cloud accounting systems is based on processing user requests on remote servers with instant delivery of results to user devices. After secure authentication, data are transmitted through encrypted channels, processed by the system, and transformed into accounting entries and reports. To ensure reliability, data are duplicated across geographically distributed servers [6].

Thus, the study of data security issues and advantages of cloud accounting systems is critically important for the modernization of accounting practices under current economic conditions. The implementation of such systems contributes to increased business transparency, enhanced data protection, and optimization of administrative processes.

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