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Thesis: Research of the monitoring system of the information system infrastructure and risk assessment of the information security of web applications

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4. The number of organizations and users using web applications is growing every day. A web application is a client-server application that corresponds all the standards of the world wide web and where the user's browser acts as a client and the server is a special computer. With the growth of SaaS-services, the probability of threats to information security increases. In the context of this article, under information security we will understand the availability and integrity of any kind of information, the responsibility of which lies with the service provider through a web application. Often, negligence and inattention of developers lead to accidents and unforeseen situations. To ensure uninterrupted operation of the information system and timely automatic notification of the technical support service, infrastructure monitoring system are used. With the help of special agents that are embedded into the source code of the software, errors are detected at the time of interpreting the source code of the web application. In such cases, it is necessary to have information on the core of the error that occurred at the time of the accident, which will make it possible to take an appropriate decision and work out measures for its compensation. A specialized centralized storage is being developed to classify errors according to risk levels. Groups of errors allows to conduct research with which we can assess the risks of information security of a web application and make recommendations for reducing it. The assets in this study are entry points to the web application. The purpose of this work is to study the monitoring system, develop a methodology for assessing the risk of information security of a web application.

At the moment, an infrastructure of monitoring system is being actively developed that allows to aggregate and classify errors according to risk levels. There is no recommendation or regulatory framework governing documents for securing web applications. The main result of the work is the development of a risk assessment methodology for information security of a web application.

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