ABSTRACT

Big data needs an infrastructure to run the system along with one of the open source big data processing frameworks, namely Hadoop. Hadoop works to process, organize and analyze various types of data. The vulnerability was not noticed initially in Hadoop infrastructure. However, when facing security issues that are becoming a priority in dealing with data distribution and data processing in parallel and therefore vulnerabilities need to be considered in the development of big data, at this time, the main big data problems that are the most challenging are security and privacy.

In overcoming security problems in Hadoop infrastructure, a vulnerability assessment tool is needed that can perform vulnerability scanning followed by hardening data confidentiality. This experiment was conducted to see if the hardening method can help in strengthening the existing security on the Hadoop infrastructure.

So that vulnerability assessment experiments using the Greenbone Security Manager tool for vulnerability testing on Hadoop infrastructure will result in vulnerabilities being found. The results of the vulnerabilities that will be analyzed can then be experimented with hardening data confidentiality on the Hadoop infrastructure. The results of the hardening that have been carried out on the Hadoop infrastructure can be analyzed so that it is known whether the confidentiality of the hardening data can overcome the vulnerabilities in the Hadoop infrastructure.

Keywords: **big data, hadoop, vulnerability assessment, hardening, data confidentiality**