

Abstract

Information Security System is one of important factor which determines organization or company life. Because with a good security system the risk of losing some values that's invested becomes small. To manage the risk of information system security needs performed risk assessment to reduce the disvalues that probably happen. One of the risk assessment methods to measure the level of information security of organization is *OCTAVE-S* method (The Operationally Critical Threat, Asset, and Vulnerability Evaluation) which is able to manage organization risk by recognizing the risks that occur in organization which is possible and making the prevent and mitigation plan for each recognized risks. The evaluation for information security risk which is used by *OCTAVE-S* method is comprehensive, systematic, directed, and self direct. To support and make easy for risk assessment with *OCTAVE-S* method needs a system which is based on computer that's able to anylasis risk for organization security according to *OCTAVE-S* method steps.

In this final assignment software application is built "Information Sistem Security Risk Assessment use *OCTAVE-S* Method" hopefully it is able to help organization in measuring the implement security in there and able to make mitigation activity for risks which is possible to occur. This application is built using procedural methodology, and using SQL database design. The tools that used to help the process of building software are : Visio to design system and PHP to programme language.

This application is able to increase efectivity from information system security risk manually becomes risk assessment automatically. Beside that, with this application, the risk assessment is performed easily, directed, and thrift the cost.

The result from this application are organization's security data according to imputation data, the security practice area that's sensitive whit threat and mitigation activity that is able to do by organization it self to prevent risks which have been occurred or possibly have not been occurred yet.

Kata kunci: Information System Security, Asset, Risk Assessment, *OCTAVE-S* Method, Threat, and Impact.