

ABSTRACT

Data center has become an important part of the organization. Organizational data retrieved, processed and stored back in the data center. Data center security is a matter that must be considered when building a data center. Security in terms of both physical and logical will ensure the information stored in it will be safe.

Faculty of Industrial Engineering (FRI) requires data center to support the sustainability of the organization. So, design of logical security and physical security data center is a must. The basis of this design is the poor server management. Poor management cause server vulnerable to physical and logical threats.

This design uses the Prepare, Plan, Design, Implement, Operate, Optimize (PPDIOO) method with Open Enterprise Security Architecture and TIA 942 standard along with some best practices. This method is a lifecycle. So, it allows for continual improvement. At the initial stage we need to identify the needs and identification of existing condition. This identification will acts as the basis for the design of physical and logical security of the data center. After the simulation is done with the aim of whether this proposed solution can meet the needs and also cover the weaknesses of the existing condition. The proposed technology is the application of IDS to detect DoS / DDoS attacks and attacks on web applications, application of remote VPN for secure connection to the server data center and application of devices such as CCTV camera to monitor the data center rooms.

The test results proved that by using the IDS attacks against web applications and DoS / DDoS can be detected with a detection rate of up to 100%. Using VPN for securing remote connections so not just anyone can perform remote access to server so that security becomes more assured. Application of CCTV also enhances the security of the physical side.

Keywords: Data center, data center physical security, data center logical security