

IoT Object Security towards On-off Attack Using Trustworthiness Management

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Authors [Nasution, A. P.](#), [Suryani, V.](#), [Wardana, A. A.](#)

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Internet of Things (IoT) can create the world with the integration of the physical things with the seamlessly network of information purposely to give a sophisticated and smart service for human life. A variety of threats and attacks to IoT object, however, can lead to the misuse of data or information to the IoT objects. One of the attacks is On-off Attack in which the attacker acts not only as an object with a good manner by sending the valid trust value but also sometimes as a bad object by sending invalid one. To respond this action, there is a need for the object security to such attacks. Here the writer used the Trustworthiness Management as a method to cope with this attack.

Trustworthiness Management can use the aspect of trust value security as a reference for detecting an attack to the object. In addition, with the support of security system using the authentication provided by MQTT, it is expected that it can provide an additional security. The approach used in this research was the test on On-Off Attack detection directly to the object connected to the network. The results of the test were then displayed on the webpage made using PHP and MySQL database as the storage of the values sent by the object to the server. The test on the On-off Attack detection was successfully conducted with the success level of 100% and the execution to detection took 0.5518318 seconds. This then showed that Trustworthiness Management can be used as one of the methods to cope with On-off Attack.

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