

Improved Secure Internet of Things System using Web Services and Low Power Single-board Computers

Submitted by grigby1 on Mon, 03/29/2021 - 1:16pm

Title Improved Secure Internet of Things System using Web Services and Low Power Single-board Computers

Publication Type Conference Paper

Year of Publication 2020

Authors [Bogdan-Iulian, C.](#), [Vasilic?-Gabriel, S.](#), [Alexandru, M. D.](#), [Nicolae, G.](#), [Andrei, V.](#)

Conference Name 2020 International Conference on e-Health and Bioengineering (EHB)

Date Published Oct. 2020

Publisher IEEE

ISBN Number 978-1-7281-8803-4

Keywords [authentication](#), [authorisation](#), [Authorization](#), [Computer architecture](#), [Computers](#), [cryptography](#), [cyber security](#), [data availability](#), [data confidentiality](#), [data integrity](#), [data privacy](#), [expert systems](#), [human factors](#), [Internet of Things](#), [Internet of Things security](#), [Internet of Things system](#), [IoT architecture](#), [IoT system](#), [message authentication](#), [microcomputers](#), [privacy](#), [pubcrawl](#), [Scalability](#), [security](#), [security vulnerabilities](#), [Sensors](#), [service-oriented architecture](#), [single board computers](#), [single-board computers](#), [web services](#), [Web-based communication](#)

Abstract Internet of Things (IoT) systems are becoming widely used, which makes them to be a high-value target for both hackers and crackers. From gaining access to sensitive information to using them as bots for complex attacks, the variety of advantages after exploiting different security vulnerabilities makes the security of IoT devices to be one of the most challenging desideratum for cyber security experts. In this paper, we will propose a new IoT system, designed to ensure five data principles: confidentiality, integrity, availability, authentication and authorization. The innovative aspects are both the usage of a web-based communication and a custom dynamic data request structure.

URL <https://ieeexplore.ieee.org/document/9280099>

DOI [10.1109/EHB50910.2020.9280099](https://doi.org/10.1109/EHB50910.2020.9280099)

Citation Key bogdan-iulian_improved_2020



[authentication](#) [authorisation](#) [authorization](#) [computer architecture](#) [Computers](#) [Cryptography](#) [cyber security](#) [data availability](#) [data confidentiality](#) [data integrity](#) [data privacy](#) [expert systems](#) [Human Factors](#) [Internet of Things](#) [Internet of Things security](#) [Internet of Things system](#) [IoT architecture](#) [IoT system](#) [message authentication](#) [microcomputers](#) [privacy](#) [pubcrawl](#) [Scalability](#) [security](#) [security vulnerabilities](#) [sensors](#) [service-oriented architecture](#) [single board computers](#) [single-board computers](#) [web services](#) [Web-based communication](#)
