An Experimentation on CoAP Multi Factor Authentication Mechanism with Reputation for Internet of Things Constrained Devices and Low Power Wide Area Network

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Wesley Dos Reis Bezerra ; Ricardo Do Nascimento Boing ; Cristiano Antonio de Souza ; Carlos Becker Westphall All Authors

Abstract:
The security of constrained devices in Internet of Things presents itself as a challenge due to the limitation of existing resources. It is important to analyze appropriate security mechanisms for this resource-constrained environment, specifically for authentication. This study presents an experiment that analyzes a proposal for an original Constrained Application Protocol Multi-Factor Authentication with Reputation, in comparison to simple authentication and a reference with no authentication. From this experience it was possible to prove that multi-factor authentication with reputation is also an adequate solution for Low Power Wide Area Network and constrained devices and does not require much more resources than simple authentication. With this work it is possible to evaluate the adoption of Multi Factor Authentication with Reputation on Constrained Devices and to subsidize choices of Internet of Things projects with this type of configuration.

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Authors

Wesley Dos Reis Bezerra
PPGCC —UFSC - Federal University of Santa Catarina, University Campus - Trindade, Florianópolis, Florianópolis, SC, Brazil

Ricardo Do Nascimento Boing
PPGCC —UFSC - Federal University of Santa Catarina, University Campus - Trindade, Florianópolis, Florianópolis, SC, Brazil

Cristiano Antonio de Souza
PPGCC —UFSC - Federal University of Santa Catarina, University Campus - Trindade, Florianópolis, Florianópolis, SC, Brazil

Carlos Becker Westphall
PPGCC —UFSC - Federal University of Santa Catarina, University Campus - Trindade, Florianópolis, Florianópolis, SC, Brazil