Study on Access Permission Control for the Web of Things

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Abstract— The Web of Things (WoT) research is exploring ways on the interoperation among the smart things, since the Web has proven its potentials as open communication environment for accommodating a variety of Web resources. The Web technologies has enabled the Web-enabled devices to publish and exchange their resource information over the Web, whereas the Web-enabled devices should cope with the security threat regarding the information exposures over the Web, particularly, access permissions for the resources about the things. Thus, in this paper we analyse access permission control mechanism considering both the WoT characteristics and the REST-compliant resource-oriented Web architecture. In contrast to existing access control logics, the proposed mechanism utilizes not only the requester information such as the typical identity and the internet addresses, but also the context of the thing itself. Based on this mechanism, we present web-resource structure for access permission control, and describe an exemplary procedure in detail. This research contributes to the flexible and decentralized access permission control for WoT.


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