

Comparison of DNSSEC and DNSCurve securing the Object Name Service (ONS) of the EPC Architecture Framework

Rosenkranz, Demian, Dreyer, Mark, Schmitz, Patrick, Schönborn, Johannes, Sakal, Peter, Pohl, Hartmut

University of Applied Sciences Bonn-Rhein-Sieg, Sankt Augustin, Germany

Abstract

Using the Electronic Product Code (EPC) in the future mostly stored on a Radio Frequency Identification (RFID)-chip, it is possible via e.g. the ONS of the EPC Architecture Framework to distinguish each item worldwide and to trace it back in the supply chain to the producer and furthermore to the subcontractors. The paper describes the comparison of two mechanisms with different security goals to improve the trust level of ONS: DNSSEC and DNSCurve. DNSSEC enables integrity and authenticity - DNSCurve additionally enables confidentiality and a higher availability. The necessary manpower to install DNSCurve is much lower compared to DNSSEC.