7 May 2018 Study · Web & Cloud · Digital Identity

Secure Peer-to-Peer Networking Based on Self-Certification

The full text is currently only available in the Deutsch version. A translation will follow.

Archived. This content is no longer updated. It remains available for reference.

Version 2018-05-04
Source https://technology2.a-sit.at/en/publications/secure-peer-to-peer-networking-based-on-self-certification/

Peer-to-peer networks enable separation of identity (identifier) and location (network address). This separation makes it possible to implement virtual, homogeneous networks based on existing, heterogeneous network structures. This separation, however, results in a variety of new security risks, such as identity spoofing, or generation of false routing information.

In this project, existing peer-to-peer concepts have been enhanced with self-certifying identifiers that help prevent a number of known threats. In essence, propagation of inaccurate information is prevented. This work focused on evaluating fully decentralised network models that do not rely on centralised instances, access control, or other mechanisms that are not applicable to fully open, decentralised P2P networks. The practicality of the approach was evaluated using a demonstrator.