Abstract

Cross-border data transfers and their legal aspects have created a daunting landscape for application and service providers, in which rules and regulations need to be constantly monitored and addressed, especially in dynamic scenarios such as cloud brokerage or cloud/edge operations. Even if regulations such as the General Data Protection Regulation (GDPR) have started to mature and be understood by the IT industry, further complexity has been added by relatively recent court rulings (such as the Schrems II decision) that create new challenges for the IT domain. The latter is heavily oriented towards a fully automated operational environment thus the consideration of the legality of data transfer is necessary to comply with current regulations. The aim of this work is to semantically model several concepts surrounding international data transfers based on the current changes and formulate them around a newly defined ontology (CIDaTa). The work exploits 23 existing ontologies, as dictated by the Linked Data paradigm, and introduces 54 links between them.