Proposal of a security model for information systems based on connected Things (Internet Of Things)

Mots clés :
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Résumé du projet de recherche (Langue 1)
According to International Data Corporation (IDC), the Internet of Things (IoT) is a network of networks of "Things" that communicate without human interaction by using IP connectivity. It is the means to interconnect Things more and more intelligent, able to collect data and to take appropriate decisions locally or collectively, or even to outsource the data to be processed in the cloud. All these Things begins to invade our daily lives, our homes, our cars, our clothes, our bodies, etc. can communicate and generally have memory capacity, processor and limited energy making these Things vulnerable entities that may be compromised by cyber attackers. Threats of IoT in terms of safety, may include the Things themselves but also on the underlying information systems that can be hosted on remote servers or on the Cloud.

Résumé du projet de recherche (Langue 2)
The objective of this thesis is to provide a security model for the Internet of Things with an instantiation of this model in a particular context: - Study the principles of the Internet of Things and specificities of information underlying systems - Identify existing security models in the field of the Internet of Things - Perform risk analysis of the information underlying systems - Propose a security model that handles data protection to allow better control of privacy - This model will be applied to an information system which relies on sensors to collect information, which is processed on mobile platforms or outsourced to the cloud. - Validation of the model using a formal approach.

Informations complémentaires (Langue 1)
Cette thèse se déroulera en cotutelle avec l’école polytechnique de Montréal. Elle sera co-encadrée avec le professeur Hanifa BOUCHENEB.