Pengembangan regulatory framework untuk aspek keamanan data dan privasi pada layanan internet of things (IOT) smart health-care menggunakan metode privacy impact assessment (PIA) = The development of regulatory framework for security and privacy data of smart health care internet of things (IOT) service by using privacy impact assessment (PIA) method / Insan Laksana Pribadi

Insan Laksana Pribadi, author

Abstrak

ABSTRAK
Internet of Things IoT merupakan salah satu teknologi yang sedang berkembang dimana memungkinkan setiap benda seperti alat kesehatan, mesin produksi, mobil, TV, benda lainnya dapat saling terhubung melalui internet. Namun, terdapat beberapa tantangan yang perlu menjadi perhatian semua pihak, salah satunya adalah potensi ancaman terhadap keamanan data dan privasi.Di Indonesia sendiri, sudah ada regulasi yang mengatur keamanan data dan transaksi elektronik. Regulasi tersebut antara lain PP No. 82 Tahun 2012, UU No. 11 Tahun 2008, dan Permen Kominfo No. 4 Tahun 2016. Namun ketiga regulasi tersebut tidak secara spesifik mengatur masalah keamanan data dan privasi pada layanan Internet of Things IoT . Sehingga di perlukan sebuah regulasi yang khusus mengatur masalah keamanan data dan privasi pada layanan IoT.Penelitian ini menggunakan metode Privacy Impact Assessment PIA dan mengambil salah satu domain IoT, yakni Smart Healthcare. Sebagai hasil dari penelitian, di dapat 5 faktor yang perlu di atur dalam regulasi terkait aspek keamanan data dan privasi pada layanan Internet of Things Smart Heathcare , yakni security compliance, device security, secure communication, virtualization security, dan application security. Untuk security compliance, di rekomendasikan untuk menerapkan sertifikasi ISO/TC 215 Health Informatics. Untuk aspek device security, direkomendasikan untuk menerapkan Trusted Computing Base TCB . Untuk aspek secure communication di haruskan menggunakan Virtual Private Network VPN . Untuk aspek virtualization security, di haruskan menerapkan beberapa mitigasi seperti provisioning, hardening, firewall, access control, dan IDPS. Dan untuk aspek application security, di haruskan untuk menerapkan beberapa mitigasi seperti secure programming, static code analysis, automated pentest, dan web application firewall.
<hr />
ABSTRACT
Internet of Things IoT is one of the emerging technologies which allow any objects such as medical equipment, production machinery, cars, TVs, and other objects can be interconnected through the Internet. However, there are several challenges that need to be considerate of all parties, one of which is a potential threat to data security and privacy.In Indonesia, there are some existing regulations governing the security of data and electronic transactions. PP No. 82 Tahun 2012, UU No. 11 Tahun 2008, and Permen Kominfo No. 4 Tahun 2016 about Information Security Management System ISMS . However, these three regulations are not specifically control the issue of data security and privacy on the services of Internet of Things IoT . Thus, required a special regulation governing the data security and privacy on services of Internet of Things IoT .This research using Privacy Impact Assessment PIA methods and take one of the IoT domain, Smart

Healthcare. As a result, there are 5 factors that need to be set in regulations related aspects of data security and privacy on the Internet of Things services Smart Heathcare security compliance, device security, secure communications, virtualization security, and application security. For security compliance, it 39 s recommended to apply ISO TC 215 Health Informatics. For the aspects of security devices, it is recommended to implement the Trusted Computing Base TCB . For secure communication aspects in required to use a Virtual Private Network VPN . For security aspects of virtualization, in required to apply some mitigation such as provisioning, hardening, firewalls, access control, and IDPS. And for aspects of application security, be required to implement some mitigation such as secure programming, static code analysis, automated pentest, and web application firewall.