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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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Introduction

Although IoT-domotics have been widely applied worldwide, many IoT-domotics devices, communication protocols and platforms are developed without sufficient security and privacy considerations, which can pose security and privacy risks. Due to the long supply chain and the large number of stakeholders involved, it is important to establish the stakeholders, identify risks during the life cycle, and put forward proposals for resolving security and privacy issues in IoT-domotics. This document provides guidelines to analyse security and privacy risks and identifies controls that should be implemented in IoT-domotics systems.

IoT-domotics have some features that differ from other forms of IoT deployment, such as non-expert users, and ad hoc architecture. This document therefore adapts the general IoT security and privacy principles to IoT-domotics; and provides stakeholders with thorough and tailored guidelines for scenarios specific to IoT-domotics.

The target audiences of this document include IoT-domotics service providers, IoT-domotics service developers, and those who supervise or verify security and privacy for IoT-domotics.

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The goal of this document is to ensure that security and privacy for IoT-domotics are achieved without requiring end-users to have in-depth IT knowledge. Although this document can be used by interested end-users, they are not the target audience.

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[SOURCE: Note 2 to entry: See ISO/IEC 30141:2018, 8.2.1.2].

3.3 Domains

a domain is a major functional group of an Internet of Things (IoT) system.

Note 1 to entry: Every entity (3.2) in an IoT system participates in one or more domains and is said to be included or contained by that domain.

[SOURCE: Note 2 to entry: See ISO/IEC 30141:2018, 8.2.1.3].

4 Abbreviated terms

AI	artificial intelligence
App	application
AR	augmented reality
CRM	customer relationship management
DDoS	distributed denial of service
ICT	information and communication technology
IP	internet protocol
IoT	internetInternet of thingsThings
NB-IoT	narrow band internetInternet of thingsThings
PII	personally identifiable information
RF	radio frequency
TV	television
URL	uniform resource locator
USB	universal serial bus
VR	virtual reality

5 Overview

5.1 General

The security and privacy of IoT-domotics have a bearing on the normal operation of in-domicile services, the well-being of residents, and the integrity of infrastructures that are linked directly or indirectly with devices of services. Stakeholders including users, service providers, device manufacturers, network operators and industry supervisors are becoming increasingly concerned by security and privacy issues of IoT-domotics.

In comparison with other IoT solutions, IoT-domotics have specific features and concerns. It is therefore essential to adapt the general IoT security and privacy principles to IoT-domotics and provide stakeholders with thorough and tailored guidelines in specific scenarios of IoT-domotics.

~~The target audiences of this document include IoT domotics service providers, IoT domotics service developers, and those who supervise or verify security and privacy for IoT domotics.~~

