

Recommendation

ITU-T X.1455 (04/2024)

SERIES X: Data networks, open system communications
and security

Secure applications and services (II) – Application Security
(2)

Security measures for a smart residential community

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Data networks, open system communications and security

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For further details, please refer to the list of ITU-T Recommendations.

Recommendation ITU-T X.1455

Security measures for a smart residential community

Summary

Recommendation ITU-T X.1455 analyses specific threats of a smart residential community service, identifies security requirements, and proposes security measures for stakeholders to safeguard and improve smart residential community services.

Smart residential community is a system based on the information and communication technologies (ICTs) for residents to acquire safe, comfortable and convenient living conditions in a residential community. It includes residential community ICT infrastructure, smart residential community service platform, and smart applications inside of the residential community. The smart residential community services combine multiple community management services (e.g., public facilities management, safety control, environment management, etc.) and smart applications (e.g., smart house service, smart building, smart parking, e-health, smart retail store, etc.) to provide safe, comfortable and convenient living conditions for the residents.

History *

Edition	Recommendation	Approval	Study Group	Unique ID
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Keywords

Security measures, smart residential community, smart residential community service.

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FOREWORD

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The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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Security measures for a smart residential community

1 Scope

This Recommendation specifies security measures for a smart residential community, including:

- an overview of a smart residential community system;
- threats and risks of a smart residential community service;
- security requirements for a smart residential community service;
- security measures for a smart residential community service.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

None.

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

3.1.1 community [b-ITU-T Y.4556]: Group of people with an arrangement of responsibilities, activities and relationships.

3.1.2 residential community [b-ITU-T Y.4556]: A community which resides in a specific area, composed mostly of houses, facilities, residents, as well as government departments, enterprises and other organizations.

3.1.3 smart city platform [b-ITU-T Y.4201]: A city platform that offers the direct integration of city platforms and systems, or through open interfaces between city platforms and third parties, in order to offer urban operation and services supporting the functioning of city services, as well as efficiency, performance, security and scalability.

3.2 Terms defined in this Recommendation

This Recommendation defines the following terms:

3.2.1 smart residential community (SRC): A system that includes residential community information and communication technology infrastructure, smart residential community service platform, and smart applications for residents to acquire safe, comfortable and convenient living conditions in a residential community.

3.2.2 smart residential community service: A service that combines multiple community management services (e.g., public facilities management, safety control, environment management, etc.) and smart applications (e.g., smart house service, smart building, smart parking, e-health, smart retail store, etc.) for residents, public facilities and enterprises.



4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

3DES	Triple Data Encryption Standard
APP	Application
DDoS	Distributed Denial of Service
HMAC	Hash-based Message Authentication Code
ICT	Information and Communication Technology
MAC	Message Authentication Code
PII	Personally Identifiable Information
PSK	Pre-Shared Key
QoS	Quality-of-Service
RBAC	Role Based Access Control
SCP	Smart City Platform
SRC	Smart Residential Community
SRC-CIC	SRC Community Information Collector
SRC-IISP	SRC Integrated Information and Service Platform
SRC-SM	SRC Safety Monitor

5 Conventions

In this Recommendation:

The keywords "is required to" indicate a requirement which must be strictly followed and from which no deviation is permitted if conformance to this document is to be claimed.

The keywords "is recommended" indicate a requirement which is recommended but which is not absolutely required. Thus, this requirement need not be present to claim conformance.

The keywords "may" indicate an optional requirement which is permissible, without implying any sense of being recommended. These terms are not intended to imply that the vendor's implementation must provide the option and the feature can be optionally enabled by the network operator/service provider. Rather, it means the vendor may optionally provide the feature and still claim conformance with the specification.

The words shall, should, sometimes appear, in which case they are to be interpreted, respectively, as is required to, is recommended.

6 Overview of smart residential community

6.1 Introduction of smart residential community

The smart residential community (SRC) is a system for residents to acquire safe, comfortable and convenient living conditions in a residential community which resides in a specific area, composed mostly of houses, facilities, residents, as well as government departments, enterprises and other organizations. It includes residential community information and communication technology (ICT) infrastructure, smart residential community service platform, and smart applications (APPS) inside of a residential community.