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(ICS 25.040.40)

TECHNICAL REFERENCE

Security for industrial automation and control systems

– Part 1-5 : Scheme for IEC 62443 security profiles

Singapore Standards Council

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National Foreword

This Technical Reference (TR) was prepared by the Working Group on Cyber Security for Industrial Automation set up by the Technical Committee on Smart Manufacturing under the purview of the Manufacturing Standards Committee.

This TR is an identical adoption of IEC/TS 62443-1-5:2023, “Security for industrial automation and control systems – Part 1-5 : Scheme for IEC 62443 security profiles”, published by the International Electrotechnical Commission.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SECURITY FOR INDUSTRIAL AUTOMATION AND CONTROL SYSTEMS –

Part 1-5: Scheme for IEC 62443 security profiles

FOREWORD

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IEC TS 62443-1-5 has been prepared by IEC technical committee 65: Industrial-process measurement, control and automation. It is a Technical Specification.

The text of this Technical Specification is based on the following documents:

Draft	Report on voting
65/947/DTS	65/1009/RVDTS

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Specification is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 62443 series, published under the general title *Security for industrial automation and control systems*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

This document specifies a scheme for defining security profiles for the IEC 62443 series.

The scheme is applicable to IEC 62443 security profiles intended to be published as part of the upcoming IEC 62443 dedicated security profiles sub-series). The document can also be used for the definition of security profiles outside of the IEC 62443 series.

IEC 62443 security profiles can be used by interested parties (e.g., organizations, interested groups/ sectors) to contextually map a defined set of requirements specified in the IEC 62443 series. Examples for the necessity of security profiles include the industry sector specific (area of application) contextual mapping of IEC 62443 terminology and requirements.

NOTE The ISO/IEC 15408 series also uses a concept of profiles (called "Protection Profiles"), but those profiles are based on a different scheme, specific to ISO/IEC 15408.

SECURITY FOR INDUSTRIAL AUTOMATION AND CONTROL SYSTEMS –

Part 1-5: Scheme for IEC 62443 security profiles

1 Scope

This part of IEC 62443 specifies a scheme for defining (selecting, writing, drafting, creating) IEC 62443 security profiles.

This scheme and its specified requirements apply to IEC 62443 security profiles which are planned to be published as part of the upcoming IEC 62443 dedicated security profiles sub-series.

IEC 62443 security profiles can support interested parties (e.g. during conformity assessment activities) to achieve comparability of assessed IEC 62443 requirements.

2 Normative references

There are no normative references in this document.

3 Terms, definitions, abbreviated terms, and acronyms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC TS 62443-1-1:2009 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1.1
contextual mapping
declaration and rationale of how a selected requirement is applied within a specific environment

Note 1 to entry: A contextual mapping is neither intended to undermine principles and concepts of the underlaying IEC 62443 document(s) nor to alter / modify the definition / rationale of a selected requirement.

EXAMPLE 1:

Detailing requirements, e.g.

- the applicable framework for a security risk assessment methodology (e.g. IEC 62443-2-4, SP.03.01 BR)
- required security training courses for service provider staff, subcontractors, or consultants in a particular industry sector (e.g. IEC 62443-2-4, SP.01.01, SP.01.02)
- the central identification and authentication system that should be supported by a component (see IEC 62443-4-2, CR 1.1)

EXAMPLE 2: Detailing roles and responsibilities (e.g. within the oil & gas industry the asset owner could be the owner of an oil drilling platform)