

## IEC TS 62443-6-1

Edition 1.0 2024-03

# TECHNICAL SPECIFICATION



Security for industrial automation and control systems – Part 6-1: Security evaluation methodology for IEC 62443-2-4

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 25.040.40

ISBN 978-2-8322-8328-8

Warning! Make sure that you obtained this publication from an authorized distributor.

– 2 –

#### IEC TS 62443-6-1:2024 © IEC 2024

#### CONTENTS

FOREWORD				
INTRODUCTION				
1	Scop	e	. 6	
2	Normative references			
3	3 Terms, definitions and abbreviated terms			
	3.1	Terms and definitions	.6	
	3.2	Abbreviated terms	.8	
4	Over	view	.9	
5	Methodology for the evaluation			
	5.1	Scoping of the subject under evaluation (SuE)	.9	
	5.2	Content of conformity statements and conformance evidence	.9	
	5.3	Evaluation of conformity statement and conformance evidence1	0	
	5.4	Particular requirements for evaluations related to ML-41	0	
6	Table used for evaluation		0	
	6.1	Overview1	0	
	6.2	Evaluation criteria1	1	
	6.3	Conformance evidence related to maturity level ML-11	1	
	6.4	Conformance evidence related to maturity level ML-21	1	
	6.5	Conformance evidence related to maturity level ML-31	1	
	6.6	Conformance evidence related to maturity level ML-41	2	
	6.7	Overview of evaluation criteria and examples of conformance evidence (Table 1)1	3	
Annex A (informative) Legend for maturity levels				
Bibliography				

IEC TS 62443-6-1:2024 © IEC 2024

### 4 - 3 -

#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

#### SECURITY FOR INDUSTRIAL AUTOMATION AND CONTROL SYSTEMS -

#### Part 6-1: Security evaluation methodology for IEC 62443-2-4

#### FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

IEC TS 62443-6-1 has been prepared by IEC technical committee TC 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
65/1030/DTS	65/1042A/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.

- 4 -

IEC TS 62443-6-1:2024 © IEC 2024

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 https://www.iec.ch/members\_experts/refdocs. The main document types developed by IEC are described in greater detail at https://www.iec.ch/standardsdev/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, or
- revised.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

IEC TS 62443-6-1:2024 © IEC 2024

#### - 5 -

#### INTRODUCTION

Repeatable and comparable evaluations of the security program according to IEC 62443-2-4<sup>1</sup> require a common understanding for acceptable evaluation criteria and conformance evidence.

This document supports service providers and evaluators to do a conformity assessment by evaluating the security program against the requirements of IEC 62443-2-4.

This document specifies the evaluation methodology to support interested parties, for example during conformity assessment activities to achieve repeatable and reproducible evaluation results against IEC 62443-2-4 requirements.

<sup>1</sup> Throughout the document, when reference is being made to IEC 62443-2-4 (undated), this means IEC 62443-2-4:2015 and IEC 62443-2-4:2015/AMD1:2017 (Ed.1). A consolidated version of IEC 62443-2-4 is available.

- 6 -

IEC TS 62443-6-1:2024 © IEC 2024

#### SECURITY FOR INDUSTRIAL AUTOMATION AND CONTROL SYSTEMS -

#### Part 6-1: Security evaluation methodology for IEC 62443-2-4

#### 1 Scope

This part of IEC 62443 specifies the evaluation methodology to support interested parties (e.g. during conformity assessment activities) to achieve repeatable and reproducible evaluation results against IEC 62443-2-4 requirements. This document is intended for first-party, second-party or third-party conformity assessment activity, for example by product suppliers, service providers, asset owners and conformity assessment bodies.

NOTE 1 62443-2-4 specifies requirements for security capabilities of an IACS service provider. These security capabilities can be offered as a security program during integration and maintenance of an automation solution.

NOTE 2 The term "conformity assessment" and the terms first-party conformity assessment activity, second-party conformity assessment activity and third-party conformity assessment activity are defined in ISO/IEC 17000.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62443-2-4:2015, Security for industrial automation and control systems – Part 2-4: Security program requirements for IACS service providers IEC 62443-2-4:2015/AMD1:2017