This is a preview - click here to buy the full publication

INTERNATIONAL STANDARD

ISO/IEC 15026-3

Second edition 2015-12-01

Systems and software engineering — Systems and software assurance —

Part 3: **System integrity levels**

Ingénierie du logiciel et des systèmes — Assurance du logiciel et des systèmes

Partie 3: Niveaux d'intégrité du système







COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Ch. de Blandonnet 8 • CP 401 CH-1214 Vernier, Geneva, Switzerland Tel. +41 22 749 01 11 Fax +41 22 749 09 47 copyright@iso.org www.iso.org

Contents Foreword			Page
			iv
1	Scop	ne	1
2	-	native references	
3		Terms and definitions	
4	Defining integrity levels		
	4.1	Expected readers of this Clause	5 5
	4.2	Appropriate area to define integrity levels	
	4.3	Specifying context of integrity levels	
		4.3.1 Specifying system-related information	7
		4.3.2 Specifying risk-related information	
	4.4	Specifying integrity levels	8
		4.4.1 Specitying an integrity level claim	9
		4.4.2 Specifying a set of integrity levels. Specifying integrity level requirements 4.5.1 Specifying a set of integrity level requirements	10
	4.5	Specifying integrity level requirements	11
		4.5.1 Specifying a set of integrity level requirements	11
		4.5.2 Specifying the justification between integrity levels and their integrity	
		level requirements	11
	4.6	Specifying integrity level determination process	11
5	Using integrity levels		12
	5.1	Expected readers of this clause Purpose for using integrity levels	12
	5.2	Purpose for using integrity levels	13
	5.3	Outcomes of using integrity levels	13
6	Syste	em integrity level determination	13
	6.1	General	13
	6.2	Purpose of the system integrity level determination process	13
	6.3	Outcome of the system integrity level determination process	14
	6.4	Activities of the system integrity level determination process	14
7	Δcci	gning system element integrity levels	15
,	7.1	Purpose of the assigning system element integrity levels process	15
	7.2	Outcome of the assigning system element integrity levels process	15
	7.3	Activities of the assigning system element integrity levels process	15
8	Moo	ting integrity level requirements	
ŏ	8.1	General	
	8.2	Purpose of meeting integrity level requirements	
	8.3	Outcome of meeting integrity level requirements	
	8.4	Activities of meeting integrity level requirements	
9		ement and approval authorities	
Ann	_	formative) An example of use of ISO/IEC 15026-3	
Bibliography			23

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. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC ITC 1.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword Supplementary information.

The committee responsible for this document is ISQ/IEC JTC 1, Information Technology, Subcommittee SC 7, Software and systems engineering

This second edition cancels and replaces the first edition (ISO/IEC 15026-3:2011), which has been technically revised.

ISO/IEC 15026 consists of the following parts, under the general title *Systems and software engineering* — *Systems and software assurance*:

- Part 1: Concepts and vocabulary
- Part 2: Assurance case
- Part 3: System integrity levels.
- Part 4: Assurance in the life cycle

The IEEE Computer Society collaborated with ISO/IEC JTC 1 in the development of the ISO/IEC 15026 series.

Systems and software engineering — Systems and software assurance —

Part 3:

System integrity levels

1 Scope

This part of ISO/IEC 15026 specifies the concept of integrity levels with corresponding integrity level requirements that are required to be met in order to show the achievement of the integrity level. It places requirements on and recommends methods for defining and using integrity levels and their corresponding integrity level requirements. It covers systems, software products, and their elements, as well as relevant external dependences.

This part of ISO/IEC 15026 is applicable to systems and software and is intended for use by the following:

- a) definers of integrity levels such as industry and professional organizations, standards organizations, and government agencies;
- b) users of integrity levels such as developers and maintainers, suppliers and acquirers, system or software users, assessors of systems or software and administrative and technical support staff of systems and/or software products

One important use of integrity levels is by suppliers and acquirers in agreements; for example, to aid in assuring safety, financial, or security characteristics of a delivered system or product.

This part of ISO/IEC 15026 does not prescribe a specific set of integrity levels or their integrity level requirements. In addition, it does not prescribe the way in which integrity level use is integrated with the overall system or software engineering life cycle processes. It does, however, provide an example of use of this part of ISO/IEC 15026 in Agree A.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC/IEEE 12207, Systems and software engineering — Software life cycle processes

ISO/IEC/IEEE 15288, Systems and software engineering — System life cycle processes