

Australian/New Zealand Standard™

**Systems and software engineering—
Systems and software assurance**

Part 4: Assurance in the life cycle



AS/NZS ISO/IEC 15026.4:2013

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee IT-015, Software and Systems Engineering. It was approved on behalf of the Council of Standards Australia on 2 May 2013 and on behalf of the Council of Standards New Zealand on 29 April 2013.

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This Standard was issued in draft form for comment as DR AS/NZS ISO/IEC 15026.4.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-015, Software and Systems Engineering.

The objective of this Standard is to provide guidance and recommendations for conducting selected processes, activities and tasks for systems and software products requiring assurance claims for properties selected for special attention, and called ‘critical properties’. It also specifies a property-independent list of processes, activities and tasks, in the context of a defined life cycle model, to achieve the claim and show the achievement of the claim.

This Standard is identical with, and has been reproduced from ISO/IEC 15026-4:2012, *Systems and software engineering—Systems and software assurance—Part 4: Assurance in the life cycle*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) In the source text ‘this part of ISO/IEC 15504’ should read ‘this Australian/New Zealand Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>	<i>Australian/New Zealand Standard</i>
ISO/IEC	SA/SNZ TR
15026 Systems and software engineering— Systems and software assurance	15026 Systems and software engineering— Systems and software assurance
15026-1 Part 1: Concepts and vocabulary	15026.1 Part 1: Concepts and vocabulary
	AS/NZS ISO/IEC
15288 Systems and software engineering— System life cycle processes	15288 Systems and software engineering— System life cycle processes
12207 Systems and software engineering— Software life cycle processes	12207 Information technology—Software life cycle processes

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INTRODUCTION

In its entirety, ISO/IEC 15026 consists of multiple parts:

- a) ISO/IEC TR 15026-1, *System and software engineering — Systems and software assurance — Part 1: Concepts and vocabulary*

NOTE ISO/IEC TR 15026-1 is intended to be replaced by an International Standard.

- b) ISO/IEC 15026-2, *System and software engineering — Systems and software assurance — Part 2: Assurance case*
- c) ISO/IEC 15026-3, *System and software engineering — Systems and software assurance — Part 3: System integrity levels*
- d) ISO/IEC 15026-4, *System and software engineering — Systems and software assurance — Part 4: Assurance in the life cycle*

Many specialized standards and guidelines address specific application areas and topics related to assurance and use different concepts and terminology when addressing common themes. ISO/IEC TR 15026-1 provides terminology and concepts used in all parts of ISO/IEC 15026.

ISO/IEC 15026-2 provides minimum requirements for the structure and contents of assurance cases that treat claims regarding properties of a system or software product selected for special treatment. The results of performing the life cycle activities and tasks referenced in this part of ISO/IEC 15026 can be recorded in the form of the assurance case described in ISO/IEC 15026-2.

ISO/IEC 15026-3 addresses the assignment of integrity levels for selected elements of a system. Where ISO/IEC 15026-2 is applicable, it can bring useful structure, aid, and direction to defining claims and showing their achievement through the use of integrity levels and accompanying integrity level requirements.

ISO/IEC 15026-2, ISO/IEC 15026-3 and ISO/IEC 15026-4 all use the concepts and vocabulary defined in ISO/IEC TR 15026-1; however, any part can be applied independently of the others and the use of one does not require the use of any others.

AUSTRALIAN/NEW ZEALAND STANDARD

Systems and software engineering—Systems and software assurance**Part 4:
Assurance in the life cycle****1 Scope**

This part of ISO/IEC 15026 gives guidance and recommendations for conducting selected processes, activities and tasks for systems and software products requiring assurance claims for properties selected for special attention, called critical properties. This part of ISO/IEC 15026 specifies a property-independent list of processes, activities and tasks to achieve the claim and show the achievement of the claim. This part of ISO/IEC 15026 establishes the processes, activities, tasks, guidance and recommendations in the context of a defined life cycle model and set of life cycle processes for system and/or software life cycle management.

NOTE The stakeholders determine which of the system or software properties are selected for special attention and require assurance claims. This part of ISO/IEC 15026 uses the term “critical” to distinguish those properties from other requirements.

2 Conformance

Conformance may be claimed to this part of ISO/IEC 15026 with respect to the systems assurance process view and/or the software assurance process view. Thus, conformance to this part of ISO/IEC 15026 can be achieved in either or both of the following ways:

- a) Demonstrating that the required outcomes of the systems assurance process view (6.1.2) have been achieved, in addition to conforming to the Agreement, Project, and Technical processes of ISO/IEC 15288.
- b) Demonstrating that the required outcomes of the software assurance process view (6.2.2) have been achieved, in addition to conforming to the Agreement, Project, Technical, and Software Specific processes of ISO/IEC 12207:2008.

A claim of conformance is relevant only to specific claims regarding designated systems or software.

Conformance to ISO/IEC 15026 Part 2 can assist in achieving the outcomes required by the two process views in this part of ISO/IEC 15026.

NOTE Parties to an agreement may choose to incorporate selected portions of this part of the International Standard into the terms of the agreement. However, compliance with the agreement does not justify a claim of conformance to this part of the International Standard. A claim of conformance can only be justified as explained above.

3 Normative references

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

ISO/IEC TR 15026-1, *Systems and software engineering — Systems and software assurance — Part 1: Concepts and vocabulary*