ISO/IEC 23643:2020 (E)

Software and systems engineering — Capabilities of software safety and security verification tools

Contents

		Foreword
		Introduction
1		Scope
2		Normative references
3		Terms and definitions
4		Abbreviated terms
5		Models for software safety and security verification tools
6		Use cases of software safety and security verification tools
	6.1	General
	6.2	Verification for low criticality software
	6.3	Verification for medium criticality software
	6.4	Verification for high criticality software
7	•	Entity relationship chart of software safety and security verification
8		Categories, capabilities of and requirements for software safety and security verification tools
	8.1	General
	8.2	Categories of software safety verification tools
	8.2.1	-
	8.2.2	
	8.2.3	·
	8.2.4	
	8.2.5	· • · · · · · · · · · · · · · · · · · ·
	8.2.6	
	8.2.7	
	8.3	Categories of software security verification tools
	8.3.1	
	8.3.2	
	8.3.3	
	8.3.4	
	8.4	Capabilities of software safety and security verification tools
	8.5	Common requirements for safety and security verification tools
	8.6	Requirements for specification and refinement tools
	8.7	Requirements for model checking tools
	8.8	Requirements for program analysis tools
	8.9	Requirements for proof tools
	8.10	·
	8.11	Requirements for programming rules checking tools
	8.12	
	8.13	
	8.14	Requirements for threat modeling tools
Annex		(informative) Evaluation assurance levels of ISO/IEC 15408 common criteria
	A.1	General
	A.2 A.3	Evaluation assurance level 1 (EAL1) — Functionally tested Evaluation assurance level 2 (EAL2) — Structurally tested
		· · · · · · · · · · · · · · · · · · ·

A.4	Evaluation assurance level 3 (EAL3) — Methodically tested and checked
A.5	Evaluation assurance level 4 (EAL4) — Methodically designed, tested, and reviewed
A.6	Evaluation assurance level 5 (EAL5) — Semi-formally designed and tested
A .7	Evaluation assurance level 6 (EAL6) — Semi-formally verified design and tested
A.8	Evaluation assurance level 7 (EAL7) — Formally verified design and tested

Annex B (informative) How to use this document with ISO/IEC 20741

Page count: 30