



National Accreditation Board for Testing and Calibration Laboratories (NABL)

SPECIFIC CRITERIA FOR ACCREDITATION OF SOFTWARE & IT SYSTEM TESTING LABORATORIES

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AMENDMENT SHEET

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ABBREVIATIONS

APAC	- Asia Pacific Accreditation Cooperation
CAB	- Conformity Assessment Body
CCCS	- Common Control Criteria Standard
CIS	- Centre for Internet Security
CWE	- Common Weakness Enumeration
FRS	- Functional Requirements Selection
GIGW	- Guidelines for Indian Government Websites
IAAS	- Infrastructure as a service
IEC	- International Electro technical Commission
IEEE	- Institute of Electrical and Electronics Engineers
ILAC	- International Laboratory Accreditation Cooperation
IP	- Internet Protocol
ISO	- International Organization for Standardization
IT	- Information Technology
H/W	- Hardware
HTTPS	- Hypertext Transfer Protocol Secure
MPLS	- Multiprotocol Label Switching
MU	- Measurement Uncertainty
NABL	- National Accreditation Board for Testing and Calibration Laboratories
NIST	- National Institute of Standards and Technology
OWASP	- Open Web Application Security Project
PAAS	- Platform as a service
RFP	- Request for Proposal
RUSP	- Requirements for quality of Ready to Use Software Product
S/W	- Software
SOP	- Standard Operating Procedure
SQuaRE	- Systems and Software Quality Requirements and Evaluation
SRS	- Software Requirements Selection
SUT	- Software under Testing
TM	- Testing Methodology
UPS	- Uninterrupted Power Supply
VAPT	- Vulnerability Assessment and Penetration Testing
VPN	- Virtual Private Network
WCAG	- Web Content Accessibility Guidelines

1. INTRODUCTION

- 1.1 NABL has taken proactive approach towards accreditation for “Software and IT System Testing”. The requirements in this document on specific criteria are based on the International Standard i.e. ISO/IEC 17025: 2017- “General requirements for the competence of testing and calibration laboratories”. It specifies requirements for competence and quality that are particular to Software and IT System Testing Laboratories.

This specific criteria document must be used in conjunction with ISO/IEC 17025: 2017. It provides an interpretation of the latter document and describes specific requirements. Further, the laboratory shall follow national, regional, local laws and regulations as applicable.

2. PURPOSE

- 2.1 Purpose of this document is to specify the requirements in addition and supplementary to ISO/IEC 17025: 2017 to assess the software and IT System (Software) testing laboratories ensuring quality of Software product/Systems.

3. SCOPE

- 3.1 This document is applicable for assessing the competence of the laboratory performing the software and IT system testing for test parameters viz. Functionality, Performance/ Efficiency, Usability, Accessibility, Security (Application, Network, VAPT and System), Reliability, Interoperability, Maintainability, Portability, Code review, Conformance (including Unicode) etc.

The software and IT System may include but not limited to the following:

- a) Telecom software/Protocol
- b) Embedded systems.
- c) Mobile Device and Mobile Applications
- d) e-Governance Application and solution Evaluation
- e) Gaming Software, Electronic Gaming Machine, Interactive/Internet Gaming products and Systems (i-Game) etc.
- f) IOT Block Chain, AI or drone software system/ application
- g) Data analytics Software
- h) Lottery Software

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- i) E-Procurement System Software
- j) Process and control software
- k) Web Application and Website
- l) Linguistics Software (if there is linguistic implementation)
- m) Sector specific Software & IT system e.g. Defence/ Railways/Banks/ Public sector etc.
- n) Software product test & evaluation as per regulatory framework/ guidelines

4. TERMS AND DEFINITIONS

4.1 For the purpose of this document, the definitions and concepts given in ISO/IEC/IEEE 29119-1 shall apply.

Note 1: For the purpose of this document, Software under Testing (SUT), wherever mentioned, shall mean Software and IT System.

Note 2: The Laboratory/ Institute/ Organization/ Service provider, which possesses the minimum required infrastructure and capability to perform software testing is termed as Software & IT System Testing Laboratory in this document

5. GENERAL REQUIREMENTS

5.1 Impartiality

- a) The laboratory shall clearly define the responsibilities to avoid conflict of interest when the laboratory staff is holding additional responsibilities such as design, development, implementation, operation, maintenance etc. other than testing.
- b) When the test scripts and tools are developed as part of the software development process, the laboratory shall have procedures for ensuring its independence and that of its staff from the development process and shall validate its suitability before use to avoid any potential conflict of interest.

5.2 Confidentiality

- a) Operational production data containing personally identifiable information or any other confidential information shall be avoided for the purpose of carrying out testing. If personally identifiable information or otherwise confidential information is used as test data, all sensitive details and content are used, it shall be justifiable, masked and protected either by removal or modification.

Refer ISO/IEC 27002: 2003 for guidelines provided under protection of test data (Cl. No.14.3).

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