



The American Association for Laboratory Accreditation

C213 – Specific Checklist: Information Technology Testing Laboratory Accreditation

Document Revised: September 16, 2009

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The following pages present the requirements from *R214 – Specific Requirements: Information Technology Testing Laboratory Accreditation Program* in a checklist format. The policies, procedures and activities of laboratories performing any type of information technology testing must meet these requirements. Quality system documentation and supporting records must be available for the assessor’s review.

These requirements are the application of the general requirements of ISO/IEC 17025 as they apply to a “virtual” testing environment. As such, there are no mandatory document references that your organization must complete (on this checklist) prior to the assessment. However, you may record any/all document identifiers on this checklist that may be useful to the assessor.

This helps both the laboratory and the assessor(s) prepare for the assessment and may save a significant amount of assessment time and cost. The appropriate “document reference” should include quality manual, laboratory manual, SOP, etc. references. The noted references should specify procedure number, page number and section number, if possible, where each checklist item is addressed.

Assessor Instructions: Review the laboratory’s documented management system to verify compliance with the applicable requirements. Assess to verify that the documented management system is indeed implemented as described. Place a tick mark in the yes (Y), no (N) or not applicable (NA) space for each requirement. **Please note that for all N/A indications, you must document the reason why this requirement is N/A in the comments section.** Record comments related to any requirement on the space provided. Assess the laboratory’s technical competence to perform specific tests or specific types of tests. Record comments related to tests/calibrations on **A312 – Method Matrix: ISO/IEC 17025**. Verify that all field testing/calibration personnel and methods have been identified and submitted to A2LA. All deficiencies must be identified and explained in the assessor deficiency report.

Laboratory Name: _____

City: _____ State: _____



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Type of Assessment: Full Assessment; Surveillance Assessment

Master Code: _____

Assessment ID: _____

To the best of my knowledge, actual laboratory practice has been assessed for compliance with the relevant clauses of *R214 – Specific Requirements: Information Technology Testing Laboratory Accreditation Program*. I hereby attest that all ‘Yes’ marked compliance clauses, whether initialed or not, meet the aforementioned requirements. Any areas of noncompliance have been fully described in the Assessor Deficiency Report.

A2LA Assessor Signature: _____ Date: _____

Requirement	Document Reference	{RESERVED FOR A2LA ASSESSORS ONLY}			Comments
		Compliance			
		Y	N	NA	
4.1 Organization					
4.1 IT.1 The management system requirements of ISO/IEC 17025 and the additional requirements of this document apply to the laboratory’s permanent facilities, testing performed at the customer’s facility, and on any testing performed via a remote connection to the customer’s or sub-contracted (such as an ASP) facility.					
4.4 Review of requests, tenders and contracts					
4.4 IT.1 The contract shall define which components of the test environment are being supplied by the laboratory and which are being supplied by the client. This includes				*	



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		Compliance			
		Y	N	NA	
hardware and software. The test environment boundary interface points shall also be clearly defined.					
4.4 IT.2 When ASP services are utilized for testing, it shall be agreed to in writing by the client in the contract review.					
4.6 Purchasing services and supplies					
4.6 IT.1 For the purposes of accreditation in the IT field of testing, the requirements in this section of ISO/IEC 17025 also apply to the purchase of any ASP services that are used to conduct the testing					
4.9 Control of nonconforming testing and/or calibration work					
4.9 IT.1 Errors detected in the SUT do not constitute non-conforming work, but are an aspect of the overall results of the test. These errors shall be documented in the test report in accordance with ISO/IEC 17025 section 5.10.					
4.9 IT.2 See program requirements document for additional guidance.					
4.13 Control of records					
4.13 IT.1 Technical records shall include, as far as possible, the correct and complete identification of the test environment used for the SUT; this includes complete configuration management identification for all system components (both hardware and software).					*



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		Compliance			
		Y	N	NA	
5.3 Accommodation and environmental conditions					
5.3 IT.1 IT See program requirements document for additional guidance.					
5.3 IT.2 Any virtual environments or other special configurations shall be fully documented in the test records (as per 4.13.1 (IT) above) along with a justification as to why it is believed not to affect or invalidate the results.					
5.3 IT.3 When ASP services are utilized for testing, any outside system influences that could be contributed from other ASP users shall be documented in the technical records.					
5.3 IT.4 When a computing hosting center is utilized to house the lab-owned system hardware it is considered within and part of the lab environment.					
5.4 Test and calibration methods and method validation					
5.4 IT.1 The lab shall define and document a testing methodology which shall address the following topics: (a) Test preparation and setup (b) Test coverage and traceability to requirements. (c) Assurance that test case results are not ambiguous and have single thread of execution with objective				*	



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		Y	N	NA	
<p>results relating to expected outcomes.</p> <p>(d) Assurance that any automated test suites will produce valid results.</p> <p>(e) Test document approval prior to testing.</p> <p>(f) Completed test case review and approval.</p> <p>(g) Test reporting with anomaly severity classifications.</p> <p>(h) Test Candidate configuration management.</p>					
<p>It may also include the following, subject to contract review:</p> <p>(i) Test anomaly characterization and priority.</p> <p>(j) Criteria for running partial testing or re-testing candidates.</p> <p>(k) Any other topics with agreement with the customer.</p>					
<p>5.4 IT.2 IT Testing work shall be defined in Test Plans, Test Specifications, Test Cases, or other test suite deliverables as defined in the testing methodology. These can also be encompassed in an overall Validation Plan with matching Validation Report as defined by the methodology.</p>					*



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		Y	N	NA	
<p>5.4 IT.3 The test suites/plans/specifications/cases shall be technically reviewed and approved prior to execution. This can be considered the validation of test method as defined in ISO/IEC 17025 clause 5.4.5. This review shall include:</p> <ul style="list-style-type: none"> (a) Confirmation of adequate test coverage of all requirements. (b) Confirmation that test case results are not ambiguous and have objective pass/fail criteria. (c) Confirmation that any automated test suites will produce valid results. 					
<p>5.4 IT.4 The concept of Measurement Uncertainty (MU) typically is not applicable as IT testing executes digital logic on a pass/fail basis. MU may be applied to IT under the following conditions:</p> <ul style="list-style-type: none"> (a) When the SUT is performing mathematical operations or using approximations and rounding in statistical analysis, calculus, or geometry, an uncertainty may be introduced by the algorithms themselves. Where this becomes significant to the output or functioning of the SUT, MU shall be documented 					



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		Y	N	NA	
5.4 IT.5 See program requirements document for additional guidance.					
5.5 Equipment					
5.5 IT.1 Software test tools significant to testing are considered equipment and shall follow the appropriate ISO/IEC 17025 section 5.5 clauses.					
5.5 IT.2 Software Tool validation confirms that the software tools meet the specified requirements. The software tools shall be validated, documented and include the following objective evidence: (a) Custom software testing tools – Full validation effort. (b) COTS software tools used as is – Acceptance testing for each installed instance. (c) MOTS software tools – Acceptance testing for each installed instance along with validation of the modification or tailoring.				*	



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		Y	N	NA	
5.5 IT.3 Each software test tool installation (instance) shall undergo a documented installation/operational qualification prior to use. There shall be documented evidence of the configuration and inventory of each specific installed software or system and suitable tests to confirm functionality.					
5.5 IT.4 Software test tools can be installed on many systems. Each instance of test tool software shall be uniquely identified on each target environment and be under configuration management.					
5.5 IT.5 The equipment records requirements in ISO/IEC 17025 are defined here as follows: (a) Identity – each instance of software/hardware. (b) Manufacturer – includes manufacturer name, program name, and version number. (c) Checks - installation/operational qualifications (d) Location – target system name or location. (e) Manufacturers instructions – user manuals. (f) Calibrations - as discussed in 5.5.2 (g) Maintenance Plan – N/A this is not applicable (h) Damage – N/A this is not applicable.				*	



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		Y	N	NA	
5.5 IT.6 When software test tools are used by others outside of the laboratory's control, configurations and adaptations shall be checked and possibly reset to ensure proper functioning. Note: For example - when another group outside of the labs' control has access rights to the testing environment.					
5.5 IT.7 See program requirements document for additional guidance.					
5.5 IT.8 See program requirements document for additional guidance.					
5.5 IT.9 Software test tool configurations shall be safeguarded by user roles or other appropriate means.					
5.6 Measurement traceability					
5.6 IT.1 Traceability is not applicable for software test tools that operate in relation to hardware processor clock cycles and /or counters with no dependence on real time.					
5.8 Handling of test and calibration items					
5.8 IT.1 Laboratories shall maintain software test candidates (SUT samples) under configuration management with appropriate metadata to ensure it is unique.					
5.8 IT.2 SUTs maintained under a common configuration					



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		Compliance			Comments
		Y	N	NA	
management system accessible by customers shall be controlled and isolated.					
5.9 Assuring the quality of test and calibration results					
5.9 IT.1 See program requirements document for additional guidance.					
5.10 Reporting the results					
5.10 IT.1 When test reports contain multiple tests or partial tests, the test report shall describe how they interrelate to show a complete accredited test.					*
5.10 IT.2 Test reports containing open errors shall have them described in an unambiguous way and should include severity descriptions in user terms.					
5.10 IT.3 See program requirements document for additional guidance.					