



## DEFENSE INFORMATION SYSTEMS AGENCY

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IN REPLY  
REFER TO: Joint Interoperability Test Command (JTE)

**26 July 12**

### MEMORANDUM FOR DISTRIBUTION

**SUBJECT:** Extension of Special Interoperability Test Certification of the Cisco Systems Lightweight Access Point (LAP) 1131, LAP 1142, LAP 1242, LAP 1252, LAP 1262, LAP 3500e, and LAP 3500i) Wireless Local Area Network Access Systems from Release 7.0.116.0 to 7.0.230.0

**References:** (a) Department of Defense Directive 4630.05, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004  
(b) Department of Defense Instruction 8100.04, "DoD Unified Capabilities (UC)," 9 December 2010  
(c) and (d), see Enclosure

1. References (a) and (b) establish the Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification.
2. The Cisco Systems LAP 1131, LAP 1142, LAP 1242, LAP 1252, LAP 1262, LAP 3500e, and LAP 3500i with Release 7.0.114.76, were originally certified for joint use in the Defense Information System Network as a Wireless Local Area Network Access System (WLAS). The vendor submitted two Desktop Reviews (DTRs) per product with Release 7.0.116.0 to align the software with the Federal Information Processing Standard (FIPS) certification, and update test configuration equipment. The United States Army Information Systems Engineering Command Technology Integration Center (USAISEC TIC) Fort Huachuca, Arizona, conducted testing using wireless requirements derived from the Unified Capabilities Requirements (UCR), Reference (c), and wireless test procedures, Reference (d). The JITC will verify the SUT's certification status during operational deployment and evaluate any new discrepancies noted in the operational environment for impact on the existing certification. These discrepancies will be adjudicated to the satisfaction of Defense Information Systems Agency (DISA) via a vendor Plan of Actions and Milestones that addresses all new critical Test Discrepancy Reports (TDRs) within 120 days of identification. No other configurations, features, or functions, except those cited within this memorandum, are certified by JITC. This certification expires upon changes that affect interoperability, but no later than three years from the date of the Department of Defense (DoD) Unified Capabilities Approved Product List approval memorandum (22 June 2011).
3. JITC approves the extension of this certification for DTRs 3 and 4, submitted for each product to add Hybrid Remote Edge Access Point (H-REAP) functionality as a customer option and to certify the LAPs as a Wireless Access Bridge (WAB). Approval is based on Interoperability (IO) Verification and Validation (V&V) testing on software version 7.0.230.0, conducted from 09-12 April 2012 and 25-26 June 2012 by the USA ISEC TIC, a Department of

JITC Memo, JTE, Extension of Special Interoperability Test Certification of the Cisco Systems Lightweight Access Point (LAP) 1131, LAP 1142, LAP 1242, LAP 1252, LAP 1262, LAP 3500e, and LAP 3500i) Wireless Local Area Network Access Systems from Release 7.0.116.0 to 7.0.230.0

Defense (DoD) Component Test Lab, and DISA Information Assurance (IA) Certification Authority (CA) approval. The results of the tests for these products are published in separate IA reports by Unified Capabilities Certification Officer (UCCO) tracking number (see paragraph 6) and can be found on the Approved Products List Integrated Tracking System (APLITS) at <https://aplits.disa.mil>. The DISA IA CA concurrence was received on 2 June 2011.

4. The requirements for WLASs and WABs were established by Section 5.3.1 of Reference (c) and were used to evaluate the interoperability of the SUT. Tables 1 and 2 list the interface and CR/FR interoperability status of the SUT.

**Table 1. SUT Interface Interoperability Status**

Interface	Critical (See note 1.)	UCR Reference	Threshold CR/FR Requirements (See note 2.)	Status	Remarks
<b>WLAS</b>					
802.11a	No	5.3.1.7.2.3	1, 2, 3, 5, and 7	Certified	
802.11b	No	5.3.1.7.2.3	1, 2, 3, 5, and 7	Certified	
802.11g	No	5.3.1.7.2.3	1, 2, 3, 5, and 7	Certified	
802.16	No	5.3.1.7.2.3	1, 2, 3, 5, and 7	NA	See note 3.
802.3i	No	5.3.1	1, 2, 3, 5, and 7	Certified	
802.3u	No	5.3.1	1, 2, 3, 5, and 7	Certified	
802.3z	No	5.3.1	1, 2, 3, 5, and 7	Certified	See note 4.
802.3ab	No	5.3.1	1, 2, 3, 5, and 7	Certified	See note 4.
<b>WAB</b>					
802.11a	No	5.3.1.7.2.3	1, 2, 3, 6, and 7	Certified	
802.11b	No	5.3.1.7.2.3	1, 2, 3, 6, and 7	Certified	
802.11g	No	5.3.1.7.2.3	1, 2, 3, 6, and 7	Certified	
802.16	No	5.3.1.7.2.3	1, 2, 3, 6, and 7	NA	
802.3i	No	5.3.1	1, 2, 3, 6, and 7	Certified	
802.3u	No	5.3.1	1, 2, 3, 6, and 7	Certified	
802.3z	No	5.3.1	1, 2, 3, 6, and 7	Certified	See note 4.
802.3ab	No	5.3.1	1, 2, 3, 6, and 7	Certified	See note 4.
<b>WEI</b>					
802.11a	No	5.3.1.7.2.3	1, 3, and 4	NA	Products tested did not include WEIs.
802.11b	No	5.3.1.7.2.3	1, 3, and 4	NA	
802.11g	No	5.3.1.7.2.3	1, 3, and 4	NA	
802.16	No	5.3.1.7.2.3	1, 3, and 4	NA	
<b>NOTES:</b>					
1. The UCR does not define any minimum interfaces. The SUT must minimally provide one of the wired interfaces (to the ASLAN) and wireless interfaces (subscriber).					
2. The SUT need not provide wireless capabilities; however, if such capabilities are present, the SUT must meet all threshold CR/FR requirements.					
3. The SUT does not support 802.16.					
4. Supported on controllers using SFP transceivers.					
<b>LEGEND:</b>					
ASLAN	Assured Services Local Area Network		SUT	System Under Test	
CR	Capability Requirement		UCR	Unified capabilities Requirements	
FR	Functional Requirement		WAB	Wireless Access Bridge	
NA	Not Applicable		WEI	Wireless End Instrument	
SFP	Small Form-Factor Pluggable transceiver		WLAS	Wireless Local Area Network Access System	

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**Table 2. SUT Capability Requirements and Functional Requirements Status**

CR/FR ID	Capability/ Function	Applicability (See note 1.)	UCR Reference	Status	Remarks
1	<b>General Wireless Requirements</b>				
	IPv6	Required	5.3.1.7.2.1	Met	See note 2.
	WiFi Certified	Required (See note 3.)	5.3.1.7.2.1	Met	See note 4.
	Redundancy	Required	5.3.1.7.2.1	Met	
	FIPS 140-2 Level 1	Required	5.3.1.7.2.1	Met	See note 4.
	Latency	Required	5.3.1.7.2.1	Met	
	Traffic Prioritization	Required	5.3.1.7.2.1	Met	
	Wireless STIGs	Required	5.3.1.7.2.1	Met	See note 5.
2	<b>WIDS</b>				
	Continuous Scanning	Required	5.3.1.7.2.2	Met	See note 6.
	Location-sensing	Required	5.3.1.7.2.2	Met	
3	<b>Wireless Interface Requirements</b>				
	Interface Standards	Required (See note 7.)	5.3.1.7.2.3	Met	
	802.11 Interface Standards	Required (See note 8.)	5.3.1.7.2.3	Met	
	802.16 Interface Standards	Required (See note 9.)	5.3.1.7.2.3	NA	See note 10.
	Fixed / Nomadic WEIs	Required (See note 11.)	5.3.1.7.2.3	NA	See note 12.
4	<b>Wireless End Instruments</b>				
	VoIP Solution	Required (See note 13.)	5.3.1.7.2.4	NA	The SUT tested does not include WEIs.
	Access Methods	Required (See note 14.)	5.3.1.7.2.4	NA	
	Call Control Authentication	Required (See note 13.)	5.3.1.7.2.4	NA	
Call Termination	Required (See note 11.)	5.3.1.7.2.4	NA		
5	<b>WLAS Requirements</b>				
	Loss of Call upon WLAS failure	Required (See note 15.)	5.3.1.7.2.5	Met	See note 16.
	Maximum supported EIs	Required (See note 15.)	5.3.1.7.2.5	Met	See notes 16 and 17.
	MOS	Required (See note 15.)	5.3.1.7.2.5	Met	See notes 16 and 17.
	Roaming	Required (See note 15.)	5.3.1.7.2.5	Met	See notes 16.
6	<b>Wireless Access Bridge</b>				
	Individual Interface Standards	Required (See note 8.)	5.3.1.7.2.6	Met	
	Maximum Voice Calls Transported	Required (See note 8.)	5.3.1.7.2.6	Met	See notes 15 and 17.
	Voice MOS	Required (See note 8.)	5.3.1.7.2.6	Met	See notes 15 and 17.
	E2E BER	Required (See note 8.)	5.3.1.7.2.6	Met	
	Secure Voice Transmission	Required (See note 8.)	5.3.1.7.2.6	Met	See note 18.
	Call Signaling Transport	Required (See note 8.)	5.3.1.7.2.6	Met	See note 18.
	Latency	Required (See note 8.)	5.3.1.7.2.6	Met	

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**Table 2. SUT Capability Requirements and Functional Requirements Status (continued)**

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6 (cont'd)	<b>Wireless Access Bridge (continued)</b>																																																												
	Jitter	Required (See note 8.)	5.3.1.7.2.6	Met																																																									
	WLAS/WAB Combination	Required (See note 8.)	5.3.1.7.2.6	Met																																																									
7	<b>ASLAN Requirements Applicable to Wireless Products</b>																																																												
	General Performance Parameters	Required	5.3.1.3	Met																																																									
<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>The SUT need not provide wireless capability. However, if wireless capability is present, the SUT must meet the wireless requirements (as applicable for product type WLAS, WAB, or WEI) in order to be certified.</li> <li>Vendor demonstrated IPv6 QoS and IPv6 packet transfer via Ethernet.</li> <li>Only applies to 802.11 interfaces.</li> <li>Verified via vendor LoC.</li> <li>Vendor met STIG requirements with submitted mitigations.</li> <li>Scanning conformed via management console on Cisco WCS.</li> <li>Individual sub-requirements apply to specific interface types.</li> <li>Applicable to 802.11 interfaces only.</li> <li>Applicable to 802.16 interfaces only.</li> <li>SUT does not provide 802.16 (conditional) interface.</li> <li>Applies to WEIs; not applicable to WLASs or WABs.</li> <li>SUT does not include WEIs.</li> <li>The WEI is certified in conjunction with a call-control agent (VoIP solution).</li> <li>The WEI may be dedicated service (single traffic type) or shared service (voice, video, and data).</li> <li>Specified requirements are only applicable to WLAS products.</li> <li>Verified via emulated phone (Ixia).</li> <li>The SUT supports the ability to limit the number of subscribers, thereby controlling number of voice subscribers.</li> <li>The USAISEC TIC did not test with secure instruments. This requirement was deemed to be met through use of test equipment to send emulated traffic.</li> </ol> <p><b>LEGEND:</b></p> <table> <tr> <td>802.11</td> <td>IEEE set of wireless standards in the 2.4,3.6, and 5 GHz</td> <td>QoS</td> <td>Quality of Service</td> </tr> <tr> <td>802.16</td> <td>IEEE series of wireless broadband standards</td> <td>STIG</td> <td>Security Technical Implementation Guide</td> </tr> <tr> <td>ASLAN</td> <td>Assured Services Local Area Network</td> <td>SUT</td> <td>System Under Test</td> </tr> <tr> <td>BER</td> <td>Bit Error Rate</td> <td>UCR</td> <td>Unified Capabilities Requirements</td> </tr> <tr> <td>CR</td> <td>Capability Requirement</td> <td>VoIP</td> <td>Voice over Internet Protocol</td> </tr> <tr> <td>E2E</td> <td>End-to-end</td> <td>WAB</td> <td>Wireless Access Bridge</td> </tr> <tr> <td>EIs</td> <td>End Instruments</td> <td>WCS</td> <td>Wireless Control System</td> </tr> <tr> <td>FIPS</td> <td>Federal Information Processing Standard</td> <td>WEI</td> <td>Wireless End Instrument</td> </tr> <tr> <td>FR</td> <td>Functional Requirement</td> <td>WIDS</td> <td>Wireless Intrusion Detection System</td> </tr> <tr> <td>GHz</td> <td>Gigahertz</td> <td>Wi-Fi</td> <td>Wireless Fidelity, trademark of the Wi-Fi Alliance that refers to a range of connectivity technologies including Wireless Local Area Network</td> </tr> <tr> <td>IEEE</td> <td>Institute of Electrical and Electronics Engineers</td> <td>WLAS</td> <td>Wireless Local Area Network Access System</td> </tr> <tr> <td>IPv6</td> <td>Internet Protocol version 6</td> <td></td> <td></td> </tr> <tr> <td>LoC</td> <td>Letter of Compliance</td> <td></td> <td></td> </tr> <tr> <td>MOS</td> <td>Mean Opinion Score</td> <td></td> <td></td> </tr> </table>						802.11	IEEE set of wireless standards in the 2.4,3.6, and 5 GHz	QoS	Quality of Service	802.16	IEEE series of wireless broadband standards	STIG	Security Technical Implementation Guide	ASLAN	Assured Services Local Area Network	SUT	System Under Test	BER	Bit Error Rate	UCR	Unified Capabilities Requirements	CR	Capability Requirement	VoIP	Voice over Internet Protocol	E2E	End-to-end	WAB	Wireless Access Bridge	EIs	End Instruments	WCS	Wireless Control System	FIPS	Federal Information Processing Standard	WEI	Wireless End Instrument	FR	Functional Requirement	WIDS	Wireless Intrusion Detection System	GHz	Gigahertz	Wi-Fi	Wireless Fidelity, trademark of the Wi-Fi Alliance that refers to a range of connectivity technologies including Wireless Local Area Network	IEEE	Institute of Electrical and Electronics Engineers	WLAS	Wireless Local Area Network Access System	IPv6	Internet Protocol version 6			LoC	Letter of Compliance			MOS	Mean Opinion Score		
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5. In accordance with the Program Manager's request, the JITC did not prepare a detailed test report. The JITC distributes interoperability information via the JITC Electronic Report Distribution system, which uses Non-secure Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at

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<https://stp.fhu.disa.mil>. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at <http://jit.fhu.disa.mil> (NIPRNet). Information related to Defense Switched Network (DSN) testing is on the Telecom Switched Services Interoperability website at <http://jitic.fhu.disa.mil/tssi>. All associated data is available on the Defense Information Systems Agency Unified Capability Coordination Office (UCCO) website located at <http://www.disa.mil/Services/Network-Services/UCCO>.

6. The JITC point of contact is Ms. Lisa Fardsalehi, commercial 520.538.5531 or DSN 879.5531; e-mail address is [lisa.fardsalehi.civ@mail.mil](mailto:lisa.fardsalehi.civ@mail.mil). The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The UCCO tracking numbers are: 1019001, 1019002, 1019003, 1019004, 1019006, 1019301, and 1019302.

FOR THE COMMANDER:

  
for RICHARD A. MEADOR  
Chief  
Battlespace Communications Portfolio

Enclosure a/s

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## **ADDITIONAL REFERENCES**

- (c) Office of the Assistant Secretary of Defense Document, "Department of Defense Unified Capabilities Requirements 2008, Change 2," December 2010
- (d) Joint Interoperability Test Command Document, "Unified Capabilities Test Plan (UCTP)"