



DEFENSE INFORMATION SYSTEMS AGENCY

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

1 Dec 11

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Special Interoperability Test Certification of the Acme Packet Net-Net 4500 Session Director (SD) Edge Boundary Controller, Release 6.2.0 with specified patch releases

References: (a) DoD Directive 4630.05, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004
(b) CJCSI 6212.01E, "Interoperability and Supportability of Information Technology and National Security Systems," 15 December 2008
(c) through (e), see Enclosure 1

1. References (a) and (b) establish the Defense Information Systems Agency (DISA) Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification.

2. The Acme Packet Net-Net 4500 Session Director (SD) Edge Boundary Controller (EBC) with Release 6.2.0 with specified patch releases is hereinafter referred to as the System Under Test (SUT). The SUT meets all the critical interoperability requirements as a High-Availability EBC with No Loss of Active Sessions (NLAS) in a dual chassis configuration. The SUT also meets the High Availability EBC requirements without NLAS, and Medium Availability EBC requirements in a dual chassis configuration. The Low Availability EBC requirements are met by the SUT in a single chassis configuration. The SUT is certified for joint use within the Defense Information System Network (DISN) in both classified and sensitive-but-unclassified (SBU) networks. The Defense Information Systems Agency adjudicated Test Discrepancy Reports (TDRs) open at the completion of testing to have a minor operational impact. The minor operational impact of noted discrepancies was based on the SUT's conditions of fielding during the initial transition from legacy to Internet Protocol (IP) based communications. The fielding of the SUT is limited to IP version 4 (IPv4) across the DISN based on the fielding environment and a Plan of Action and Milestones (PoAM) addressing critical IP version 6 (IPv6) discrepancies by 30 April 2011. The certification status of the SUT will be monitored and verified during operational deployment. Any new discrepancy noted in the operational environment will be evaluated for impact on the existing certification. These discrepancies will be adjudicated to the satisfaction of DISA via a vendor PoAM which addresses all new critical TDRs within 120 days of identification. Testing was conducted using EBC requirements derived from the Unified Capabilities Requirements (UCR), Reference (c), and EBC test procedures, Reference (d). 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 this memorandum.

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3. The extension of this certification is based upon Desktop Review (DTR) 1. The original certification is based on interoperability testing conducted by JITC, review of the vendor's Letters of Compliance (LoC), and DISA Information Assurance (IA) Certification Authority (CA) approval of the IA configuration. Interoperability testing was conducted by JITC, Fort Huachuca, Arizona, from 19 through 30 October 2009 and from 1 through 31 March 2010. Review of the vendor's LoC was completed on 29 September 2010. The DISA CA has reviewed the IA Assessment Report for the SUT, Reference (e), and based on the findings in the report has provided a positive recommendation. The acquiring agency or site will be responsible for the DoD Information Assurance Certification and Accreditation Process (DIACAP) accreditation. The JITC certifies the SUT as meeting the UCR for LSC requirements. This DTR was requested to update the software load from 6.2.0 Patch 1 (build 419) to 6.2 M5 (build 777). This new build has been loaded on the SUT in the JITC GNTF lab and has undergone extensive periodic IO testing from 31 January through 28 April 2011. There were no new IO findings. The IA posture has not changed. The original IA approval applies to this DTR. Therefore, JITC approves this DTR without further testing.

4. The interface, Capability Requirements (CR) and Functional Requirements (FR), and component status of the SUT are listed in Tables 1 and 2. The threshold Capability/Functional requirements for EBCs are established by Section 5.3.2.14 of Reference (c) and were used to evaluate the interoperability of the SUT.

Table 1. SUT Interface Interoperability Status

Interface	Critical ¹	UCR Paragraph	Threshold CR/FR ²	Status	Remarks ³
WAN Interfaces					
10Base-X	No	5.3.2.4 / 5.3.3.10.1.2	1-3	Certified	IEEE 802.3i and IEEE 802.3j
100Base-X	No	5.3.2.4 / 5.3.3.10.1.2	1-3	Certified	IEEE 802.3u
1000Base-X	No	5.3.2.4 / 5.3.3.10.1.2	1-3	Certified	IEEE 802.3z
NM Interfaces					
10Base-X	No	5.3.2.4.4	4	Certified	IEEE 802.3i and IEEE 802.3j
100Base-X	No	5.3.2.4.4	4	Certified	IEEE 802.3u
NOTES:					
1. The UCR does not define the provision of any specific interface. The SUT must minimally provide one of the WAN interfaces and one of the NM interfaces.					
2. The SUT's high-level capability and functional requirement ID numbers depicted in the CRs/FRs column can be cross-referenced in Table 3. These high-level CR/FR requirements refer to a detailed list of requirements provided in Enclosure 3.					
3. The SUT must meet IEEE 802.3 standards for interface provided.					
LEGEND:					
10Base-X	Generic designation for 10 Mbps Ethernet		FR	Functional Requirement	
100Base-X	Generic designation for 100 Mbps Ethernet		ID	Identification	
1000Base-X	Generic designation for 1000 Mbps Ethernet		IEEE	Institute of Electrical and Electronics Engineers	
802.3i	IEEE Ethernet standard for 10 Mbps over twisted pair		Mbps	Megabits per second	
802.3j	IEEE Ethernet standard for 10 Mbps over fiber		NM	Network Management	
802.3u	IEEE Ethernet Standard for 100 Mbps over twisted pair and fiber		SUT	System Under Test	
			UCR	Unified Capabilities Requirements	

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802.3z CR	IEEE Ethernet standard for 1000 Mbps over fiber Capability Requirement	WAN	Wide Area Network
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Table 2. SUT CRs and FRs Status

CR/FR ID	Capability/ Function	Applicability ¹	UCR Paragraph	Status	Remarks ²
1	Edge Boundary Controller Requirements				
	AS-SIP Back-to-Back User Agent	Required	5.3.2.15.1	Met ³	
	Call Processing Load	Required	5.3.2.15.2	Met	
	Network Management	Required	5.3.2.15.3 5.3.2.17	Partially Met	This was verified through the vendor's LoC with minor exceptions ^{4,5} .
	DSCP Policing	Required ⁶	5.3.2.15.4	Not Tested ⁷	
	Codec Bandwidth Policing	Required ⁶	5.3.2.15.5	Not Tested ⁷	
	Availability	Required	5.3.2.15.6	Met	The SUT met this requirement for the high availability option. This was verified through the vendor's LoC.
	IEEE 802.1Q Support	Required	5.3.2.15.7	Met	
	Packet Transit Time	Required	5.3.2.15.8	Not Tested	This requirement was not tested at the JITC because of testing limitations. ⁸
	ITU-T H.323 Support	Conditional	5.3.2.15.9	Not Tested	
2	AS-SIP Requirements				
	Requirements for AS-SIP Signaling Appliances	Required	5.3.4.7	Met	
	SIP Session Keep-Alive Timer	Required	5.3.4.8	Met	
	Session Description Protocol	Required	5.3.4.9	Met	
	Precedence and Preemption	Required	5.3.4.10	Met	
3	IPv6 Requirements				
	Product Requirements	Required	5.3.5.4	Partially Met	This was verified through the vendor's LoC with exceptions ^{9,10,11} .
4	NM Requirements				
	VVoIP NMS Interface Requirements	Required	5.3.2.4.4	Met	This was verified through the vendor's LoC.
	General Management Requirements	Required	5.3.2.17.2	Met	This was verified through the vendor's LoC.
	Requirement for FCAPS Management	Required	5.3.2.17.3	Partially Met	This was not tested at the JITC; however, this requirement was partially met based on fielded results ^{4,5} .
	NM requirements of Appliance Functions	Required	5.3.2.18	Met	This was verified through the vendor's LoC.

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Table 2. SUT CRs and FRs Status (continued)

NOTES:			
1. The notation of 'required' refers to the high-level requirement category. These high-level CR/FR requirements refer to a detailed list of requirements provided in Enclosure 3.			
2. Paragraph 11 of Enclosure 2 provides detailed information pertaining to open TDRs and associated operational impacts.			
3. The requirements for paragraph 5.3.2.15.1.6 and all subparagraphs dealing with the ability of an EBC to front a primary and secondary MFSS or SS were not tested. The SUT met these requirements via LoC.			
4. The UCR states that an EBC shall have a pair of Ethernet management interfaces. The SUT supports one Ethernet management interface. The DISA adjudicated this discrepancy as having a low operational impact because DISA will be the only manager initially.			
5. The UCR states that an EBC must support SNMPv3. The SUT currently does not support SNMPv3. The DISA adjudicated this finding as having a low operational impact because the SUT has provided a capability on the platform to encrypt SNMPV2c over IPsec tunnels. The vendor expects to have SNMPV3 (CRD #1415) capability in the S-C6.3.0 release of code.			
6. This requirement represents a new UCR requirement where the vendor has 18-months (July 2011) to comply.			
7. The DISA adjudicated this discrepancy as having a low operational impact because vendor's have until July 2011 to comply with this requirement.			
8. The JITC was unable to test this requirement because it would require special test equipment that could communicate with an EBC using appropriate protocols and security processes. The JITC did not note any issues during the operation of the EBC attributable to packet transit time and therefore determined that the SUT met the overall requirement.			
9. The SUT does not support the following required RFCs 1981, 2710, and 4862. Per email guidance from DISA, these RFCs are no longer applicable to EBCs.			
10. The SUT supports portions of the following required RFCs 4022, 4113, and 4293. The IPv6 portions are under consideration for future development.			
11. The SUT does not support Transport Layer Security over IPv6. The DISA adjudicated this discrepancy as having a low operational impact based on vendor submission of a PoAM addressing IPv6 discrepancies by 30 April 2011.			
LEGEND:			
802.1Q	IEEE VLAN tagging standard	ITU-T	International Telecommunication Union - Telecommunication Standardization Sector
AS-SIP	Assured Services Session Initiation Protocol	JITC	Joint Interoperability Test Command
CR	Capabilities Requirement	LoC	Letters of Compliance
DISA	Defense Information Systems Agency	NM	Network Management
DSCP	Differentiated Services Code Point	NMS	NM System
EBC	Edge Boundary Controller	PoAM	Plan of Actions and Milestones
FCAPS	Fault, Configuration, Accounting, Performance, and Security	RFC	Request for Comment
FR	Functional Requirement	SIP	Session Initiation Protocol
H.323	ITU-T recommendation that defines audio-visual session protocols	SNMPv3	Simple Network Management Protocol version 3
ID	Identification	SS	Softswitch
IEEE	Institute of Electrical and Electronics Engineers	SUT	System Under Test
IPsec	Internet Protocol Security	UCR	Unified Capabilities Requirements
IPv6	Internet Protocol version 6	VVoIP	Voice and Video over Internet Protocol
		WAN	Wide Area Network

5. No detailed test report was developed in accordance with the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive 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 <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 DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at <http://jitc.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/ucco/>.

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6. The JITC point of contact is Anita Mananquil, JITC, commercial (520) 538-5164 or DSN 312-879-5164; e-mail address is anita.mananquil@disa.mil. The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The UCCO tracking number is 0925301.

FOR THE COMMANDER:

Enclosure a/s


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ADDITIONAL REFERENCES

- (c) Office of the Assistant Secretary of Defense, “Department of Defense Unified Capabilities Requirements 2008, Change 1,” 22 January 2010
- (d) Joint Interoperability Test Command, “Unified Capabilities Test Plan (UCTP),” October 2009
- (e) Joint Interoperability Test Command, “JITC Memo, JTE, Information Assurance (IA) Assessment of ACME Packet Session Director (SD) 4500 Release (Rel.) 6.2 (Tracking Number 0925301),” November 2009