



DEFENSE INFORMATION SYSTEMS AGENCY

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

15 May 13

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Joint Interoperability Test Certification of Cisco TelePresence C series, EX series, and MX series Video Codecs with Software from version TC5.0.2 to TC 6.1.0, the ISDN Link with version IL1.0.0, and Video Communication Server (VCS) with version X7.1

References: (a) DoD 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) through (g), see Enclosure

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 Cisco TelePresence C90, C60, and C40 with Software Version TC5.0.2, and ISDN Link with version IL1.0.0, and VCS with version X7.1 is hereinafter referred to as the System Under Test (SUT). The Quickset C20, EX90, EX60, MX200, MX300 Series Codecs in the family series were not tested; however, they utilize the same software and similar hardware and JITC analysis determined them to be functionally identical for interoperability certification purposes and they are also certified for joint use. The SUT meets all of its critical interface and functional interoperability requirements and is certified for joint use within the Defense Information Systems Network (DISN) as a Video Teleconferencing Unit (VTU). The SUT met the conditional requirements for an Internet Protocol (IP) interface with the International Telecommunication Union - Telecommunication Standardization Sector (ITU-T) H.323 protocol; however, Assured Service is not yet defined for an IP interface with ITU-T H.323 protocol. Therefore, Command and Control (C2) VTC users and Special C2 VTC users are not authorized to be served by an IP interface with the ITU-T H.323 protocol. The SUT meets the critical interoperability requirements set forth in Reference (c) using test procedures derived from Reference (d). No other configurations, features, or functions, except those cited within this report, are certified by the JITC. This certification expires upon changes that could affect interoperability, but no later than three years from the date of the original Unified Capabilities (UC) Approved Products List (APL) memorandum (8 November 2012).

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3. The extension of this certification is based upon Desktop Reviews (DTRs) 2 and 4. The original certification, documented in Reference (e), is based on interoperability testing conducted by JITC, review of the vendor's Letters of Compliance (LoC), DISA adjudication of open test discrepancy reports (TDRs), and DISA Certifying Authority (CA) Recommendation. Interoperability testing was conducted by JITC at the Global Information Grid Network Test Facility, Fort Huachuca, Arizona, from 21 May through 8 June 2012. Review of the vendor's LoC was completed on 1 November 2012. DISA adjudication of outstanding TDRs was completed on 1 November 2012 and the IPv6 deficiencies were adjudicated as minor. The DISA CA provided a positive recommendation on 21 September 2012 based on the security testing completed by DISA-led Information Assurance (IA) test teams and published in a separate report, Reference (g). The following DTRs are extensions to the original certification:

a. DTR 2 was requested to update the SUT codec software from version TC5.0.2 to TC 6.1.0. This release also includes software updates that implement corrections with regard to Information Assurance Vulnerability Assessments (IAVAs) for this SUT. The IAVAs were identified, fixed, and validated by the vendor. JITC determined through analysis that this DTR would not impact the interoperability certified features and functions of the SUT, but with the following caveats:

1. The product must be configured as specified in the "Deployment Guide" as provided by Cisco for DoD users.

2. Advanced Encryption Standard (AES) encryption is no longer optional, but mandatory in the Federal Information Processing Standard (FIPS) mode for this new release of software, therefore the user must ensure his or her deployment environment is capable of operation with AES encryption.

3. The touch panel interface was not included in this DTR, and was not tested for version TC5.0.2 or for TC 6.1.0 FIPS mode.

JITC approves this DTR without testing, but with the above caveats. Additionally, the DISA CA has approved this DTR to include TC 6.1.0 without further testing. Therefore, the original IA approval applies to this DTR.

b. DTR 4 was requested to include the SX20, VX Tactical, and VX Clinical Assistant codecs. The SX20, VX Tactical, and VX Clinical Assistant codecs use similar hardware and the same software as the SUT. JITC analysis determined the SX20, VX Tactical, and VX Clinical Assistant codecs are functionally identical to the SUT for interoperability certification purposes. Therefore JITC approves this DTR without further testing. Additionally, the DISA CA has approved this DTR to include the SX20, VX Tactical, and VX Clinical Assistant codecs without further testing. Therefore, the original IA approval applies to this DTR.

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4. The UC APL product Summary is depicted in Table 1. The Functional Requirements (FR) used to evaluate the interoperability of the SUT, certified interfaces and the interoperability statuses are indicated in Table 2.

Table 1. UC APL Product Summary

Hardware (See note 1.)	Software								
<u>Cisco Telepresence C90, C60, C40</u> , Quickset C20, EX90, EX60 MX200, MX300 SX20, VX Tactical, VX Clinical Assistant (See note 2.)	TC 6.1.0 (See note 3.)								
<u>ISDN Link Gateway</u>	IL1.0.0.287829								
<u>VCS</u>	X7.1								
<p>NOTES:</p> <p>1. Components bolded and underlined were tested by JITC. The other components in the family series were not tested; however, they utilize the same software and similar hardware and JITC analysis determined them to be functionally identical for interoperability certification purposes and they are also certified for joint use.</p> <p>2. The SX20, VX Tactical, VX Clinical Assistant codecs were included with DTR 4.</p> <p>3. The SUT was updated from Release TC5.0.2.282462 to TC6.1.0 with DTR 2.</p> <p>LEGEND:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">APL</td> <td style="width: 33%;">Approved Products List</td> <td style="width: 33%;">UC</td> <td style="width: 33%;">Unified Capabilities</td> </tr> <tr> <td>DTR</td> <td>Desktop Review</td> <td>VCS</td> <td>Video Communication Server</td> </tr> </table>		APL	Approved Products List	UC	Unified Capabilities	DTR	Desktop Review	VCS	Video Communication Server
APL	Approved Products List	UC	Unified Capabilities						
DTR	Desktop Review	VCS	Video Communication Server						

Table 2. SUT FRs and Interoperability Status

Interface	Critical	Certified	Requirements Required or Conditional	Status	UCR Reference (See note 1.)
IP (10/100/1000 Mbps) ITU-T H.323	No (See note 2.)	Yes (See note 3.)	The VTC system/endpoints shall meet the requirements of FTR 1080B-2002. (R)	Met	5.2.4.2
			ITU-T H.323 in accordance with FTR 1080B-2002. (C)	Met	5.2.4.2
			Layer 3 DSCP tagging as specified in the UCR, Section 5.3.1. (C)	Partially Met (See note 4.)	5.2.4.2
			A loss of any conferee on a multipoint videoconference shall not terminate or degrade the DSN service supporting VTC connections of any of the other conferees on the videoconference. (R)	Met	5.2.4.2
			Audio add-on interface, implemented independently of an IAS, shall be in accordance with the UCR, Section 5.2.3. (C)	Met	5.2.4.2
			Physical, electrical, and software characteristics shall not degrade or impair switch and associated network operations. (R)	Met	5.2.4.2
			VTC IP interface must be IPv6 capable and meet the Simple Server/Network Appliance IPv6 profile (R)	Met (See notes 5, 6.)	5.3.5
ISDN PRI T1/E1 (See note 7.)	No (See note 2.)	Yes (See notes 7, 8.)	The VTC system/endpoints shall meet the requirements of FTR 1080B-2002. (R)	Met	5.2.4.2
			A loss of any conferee on a multipoint videoconference shall not terminate or degrade the DSN service supporting VTC connections of any of the other conferees on the videoconference. (R)	Met	5.2.4.2
			Audio add-on interface, implemented independently of an IAS, shall be in accordance with the UCR, Section 5.2.3. (C)	Met	5.2.4.2
			Integrated PRI interface shall be in conformance with IAS requirements in the UCR, Section 5.2.6. (C)	Met	5.2.4.2
			Physical, electrical, and software characteristics shall not degrade or impair switch and associated network operations. (R)	Met	5.2.4.2

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Table 2. SUT FRs and Interoperability Status (continued)

Interface	Critical	Certified	Requirements Required or Conditional	Status	UCR Reference (See note 1.)
ISDN BRI	No (See note 2.)	Yes (See note 8.)	The VTC system/endpoints shall meet the requirements of FTR 1080B-2002. (R)	Met	5.2.4.2
			A loss of any conferee on a multipoint videoconference shall not terminate or degrade the DSN service supporting VTC connections of any of the other conferees on the videoconference. (R)	Met	5.2.4.2
			Audio add-on interface, implemented independently of an IAS, shall be in accordance with the UCR, Section 5.2.3. (C)	Met	5.2.4.2
			Integrated BRI interface shall be in conformance with IAS requirements in the UCR, Section 5.2.3.2.4 (C)	Met	5.2.4.2
			Physical, electrical, and software characteristics shall not degrade or impair switch and associated network operations. (R)	Met	5.2.4.2
Serial (ITU-T V.35, EIA-530, EIA-449, EIA-366)	Yes	Yes (See note 8.)	The VTC system/endpoints shall meet the requirements of FTR 1080B-2002. (R)	Met	5.2.4.2
			A loss of any conferee on a multipoint videoconference shall not terminate or degrade the DSN service supporting VTC connections of any of the other conferees on the videoconference. (R)	Met	5.2.4.2
			Audio add-on interface, implemented independently of an IAS, shall be in accordance with the UCR, Section 5.2.3. (C)	Met	5.2.4.2
			A VTC system and/or end point that uses a serial interface(s) to another device, such as a cryptographic device, IAS, or TA, for eventual connection to the DSN, shall be in conformance with the requirements for that serial interface(s) as described in FTR 1080B-2002. (C)	Met	5.2.4.2
			Physical, electrical, and software characteristics shall not degrade or impair switch and associated network operations. (R)	Met	5.2.4.2
Security	Yes	Yes	GR-815 and STIGs (R)	Met (See note 9.)	4.3.1 and 5.4.6.1
<p>NOTES:</p> <ol style="list-style-type: none"> The IPv6 and Information Assurance requirements were derived from the UCR 2008, Change 3. All other requirements were derived from the UCR 2008, Change 1. The VTC system interface requirements can be met with ISDN PRI, Serial, or ISDN BRI. In addition the SUT may include an IP ITU-T H.323 conditional interface. The SUT met the conditional requirements for an IP interface with the ITU-T H.323 protocol; however, Assured Service is not yet defined for an IP interface with ITU-T H.323 protocol. Therefore, C2 VTC users and Special C2 VTC users are not authorized to be served by an IP interface with the ITU-T H.323 protocol. The SUT does not tag IPv6 traffic correctly for call signaling per the reference. All IPv6 media packets are tagged properly. Call Signaling packets are tagged at 0 (best effort), with the exception of Registration Admission Status (RAS) signaling packets. In addition the SUT is not able to set the DSCP tag any value 0-63 for these packets as required by the reference. DISA has accepted and approved the vendor's POA&M and adjudicated this discrepancy as having a minor operational impact. The SUT codecs are capable of supporting IPv4 or IPv6 independently, but in order for the SUT codecs to support IPv4 and IPv6 dual stack operations, the Cisco VCS is required. The SUT is not able to disable all IPv6 services in the IPv6 stack, only media and signaling. DISA has accepted and approved the vendor's POA&M and adjudicated this discrepancy as having a minor operational impact. Video freezes when the ITU-T H.320 to ITU-T H.323 video call is placed via the E1 interface on the TelePresence ISDN Link. This is a known defect that the vendor is working to resolve. DISA adjudicated this as critical for the interface; therefore, the E1 PRI interface is not certified. This is not a critical interface for the SUT. The ISDN PRI, ISDN BRI, and serial interfaces require the TelePresence ISDN Link. Security is tested by DISA-led Information Assurance test teams and published in a separate report, Reference (g). 					

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Table 2. SUT FRs and Interoperability Status (continued)

LEGEND:			
BRI	Basic Rate Interface	H.323	Standard for multi-media communications on packet-based networks
C	Conditional		
C2	Command and Control	IAS	Integrated Access Switch
DCE	Data Circuit-Terminating Equipment	IP	Internet Protocol
DISA	Defense Information Systems Agency	IPv4	Internet Protocol version 4
DSCP	Differentiated Services Code Point	IPv6	Internet Protocol version 6
DSN	Defense Switched Network	ISDN	Integrated Services Digital Network
DTE	Data Terminal Equipment	ITU-T	International Telecommunication Union – Telecommunication Standardization Sector
E1	European Basic Multiplex Rate (2.048 Mbps)		
EIA	Electronic Industries Alliance	kbps	kilobits per second
EIA-366	Standard for interface between DTE and automatic calling equipment for data communication	kHz	kiloHertz
EIA-449	Standard for 37-position and 9-position interface for DTE and DCE employing serial binary data interchange	Mbps	Megabits per seconds
EIA-530	Standard for 25-position interface for DTE and DCE employing serial binary data interchange	PRI	Primary Rate Interface
FRs	Functional Requirements	POA&M	Plan of Action and Milestones
FTR	Federal Telecommunications Recommendation	R	Required
GR	Generic Requirement	STIGs	Security Technical Implementation Guides
GR-815	Generic Requirements For Network Element/Network System (NE/NS) Security	SUT	System Under Test
H.320	Standard for narrowband VTC	T1	Digital Transmission Link Level 1 (1.544 Mbps)
		UCR	Unified Capabilities Requirements
		V.35	Standard for data transmission at 48 kbps using 60-108 kHz group band circuits
		VCS	Video Communication Server
		VTC	Video Teleconferencing

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). 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). Due to the sensitivity of the information, the Information Assurance Accreditation Package (IAAP) that contains the approved configuration and deployment guide must be requested directly through government civilian or uniformed military personnel from the Unified Capabilities Certification Office (UCCO), e-mail: disa.meade.ns.list.unified-capabilities-certification-office@mail.mil. All associated data is available on the DISA UCCO website located at <http://www.disa.mil/Services/Network-Services/UCCO>.

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6. The JITC point of contact is Mr. Dale Fulton, DSN 879-0507, commercial (520) 538-0507, FAX DSN 879-4347, or e-mail to dale.h.fulton.civ@mail.mil. JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The UCCO tracking number for the SUT is 1127303.

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, "Department of Defense Unified Capabilities Requirements 2008, Change 1," 22 January 2010
- (d) Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP), Change 2," 2 October 2006
- (e) Joint Interoperability Test Command, Memo, JTE, "Joint Interoperability Test Certification of Cisco TelePresence C series, EX series, and MX series Video Codecs with Software version TC5.0.2, the Integrated Services Digital Network (ISDN) Link with version IL1.0.0, and Video Communication Server (VCS) with version X7.1," 11 December 2012
- (f) Office of the Department of Defense Chief Information Officer, "Department of Defense Unified Capabilities Requirements 2008 Change 3," 11 September 2011
- (g) Joint Interoperability Test Command, "Information Assurance (IA) Assessment of Cisco TelePresence Codec C90 Release (Rel.) TC5.0.2 (Tracking Number 1127303)," 17 September 2012