



## DEFENSE INFORMATION SYSTEMS AGENCY

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IN REPLY  
REFER TO:

Joint Interoperability Test Command (JTE)

12 Jan 12

### MEMORANDUM FOR DISTRIBUTION

**SUBJECT:** Extension of the Special Interoperability Test Certification of the Callware Technologies Callegra.Unified Communications (UC)<sup>TM</sup> Server with Software Release 6.14-Joint Interoperability Test Command (JITC) Service Pack 1 Release Update 2 (SP1RU2)

**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 (f), see Enclosure

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

2. The Callware Technologies Callegra.UC<sup>TM</sup> Server with Software Release 6.14-JITC SP1RU2 is hereinafter referred to as the System Under Test (SUT). The JITC suffix was attached to the SUT commercial software release 6.14 because it includes Defense Switched Network (DSN) military unique features. The SUT met the interface and functional requirements for automated receiving devices set forth in Reference (c). The SUT is certified for joint use within the DSN with the following interfaces with any voice circuit switch on the Unified Capabilities (UC) Approved Products List (APL) that has the same certified interface: analog and Digital Transmission Link Level 1 (T1) Channel Associated Signaling (CAS) Dual Tone Multifrequency (DTMF) ground start. The SUT is certified for other interfaces with specific switches as specified in Table 1. The SUT offers integrated automated attendant (Auto Attendant) and voice messaging (Voicemail) functionality with the following optional applications: CallegraVOICE<sup>TM</sup>, CallegraFAX<sup>TM</sup>, CallegraINBOX<sup>TM</sup>, CallegraWEB<sup>TM</sup>, CallegraCOMMUNITY<sup>TM</sup>, and CallegraTTS<sup>TM</sup>. The SUT also offers the Callegra.UC SDK<sup>TM</sup> application, which was not tested and is not covered under this certification. All Callware applications run on the Callegra.UC<sup>TM</sup> Server and are administered using the Microsoft Management Console (MMC) module. CallegraADMIN<sup>TM</sup> for MMC is an integral part of the SUT. The SUT was tested with the switching systems and their respective software releases listed in the Certification Testing Summary (Enclosure 2). The specific SUT applications certified on each available interface are depicted in Table 1. Testing was conducted using test procedures derived from Reference (d). No other configurations, features, or functions, except those cited within this report, are certified by JITC. This certification expires upon changes that affect interoperability, but no later than three years from the date of Defense Information Assurance (IA)/Security Accreditation Working Group (DSAWG) accreditation.

3. The extension of this certification is based upon Desktop Review (DTR) 3. The original certification is based on interoperability testing, review of the vendor's Letter of Compliance (LoC), and DSAWG accreditation. Interoperability testing was conducted by JITC at the Global Information Grid Network Test Facility, Fort Huachuca, Arizona, from 30 April through 11 May 2007. Review of the vendor's LoC was completed on 1 June 2007. Regression testing to include Digital Transmission Link Level 1 (T1) Primary Rate Interface (PRI) Q Signaling (QSIG) and National Integrated Services Digital Network (ISDN) 2 (NI2) integration for voicemail, auto attendant and telephone notification functionality was conducted from 5 through 8 January 2009. Additional testing on the Avaya S8710 and Communication Server (CS)1000M switches was conducted from 22 through 26 February 2010. The SUT supports the same software, interfaces, and functionality as when it was tested in 2007. The only difference is that the SUT now supports either Microsoft XP or Microsoft Windows Vista operating system platform. A review of the SUT and comparison with the new requirements in References (c) and (e) was conducted on 15 December 2009 to determine the SUT was compliant to all applicable Unified Capabilities Requirements (UCR) requirements without additional interoperability testing. DSAWG granted accreditation on 16 July 2010 based on the security testing completed by DISA-led IA test teams and published in a separate report, Reference (f). This DTR was requested to certify the SUT ISDN T1 PRI interface with QSIG with Cisco Unified Communication Manager (CUCM) ver. 8.0(2) and the Avaya Communication Manager (CM) 6.0.1 local session controllers. JITC determined Verification and Validation (V&V) testing was required prior to approval. The SUT was tested with the Cisco CUCM 8.0.2 with IOS Software Release 15.1(1)T and the Avaya CM 6.0.1 (00.1.510.1 Service Pack 19211). Testing of the changes associated with this DTR was conducted by St. Julien's Creek Naval Annex at the SPAWAR Atlantic testing facility from 3 through 14 October 2011. After analysis of the test data, JITC approves this DTR. The Information Assurance posture of the SUT was not changed other than the addition of the Avaya and Cisco switches; therefore, the original DSAWG accreditation still applies to this DTR request.

4. The Functional Requirements used to evaluate the interoperability of the SUT and the interoperability statuses are indicated in Table 1. This interoperability test status is based on the SUT's ability to meet:

a. Automated receiving device requirements specified in References (c) and (e) verified through JITC testing and/or vendor submission of LoC.

b. The overall system interoperability performance derived from test procedures listed in Reference (d).

**Table 1. SUT Functional Requirements and Interoperability Status**

Interface	Critical	Certified	Functional Requirements	Status	UCR Paragraph
EIA-232 Serial	No <sup>1</sup>	Yes	ANSI/TIA/EIA-232-F (C)	Met	5.2.12.3.5
2-Wire Analog (GR-506-CORE) <sup>2</sup> 2-Wire Digital Proprietary <sup>3</sup>	No <sup>1</sup>	Yes	FCC Part15/Part 68 (R)	Met	5.2.12.3.5
			DTMF outpulsing (C)	Met	5.2.12.3.5, 5.2.4.4.1, and 5.2.4.4.2
			DISR compliance as applicable (R)	Met	5.2.12.3.5
			ROUTINE precedence only in accordance with UCR, section 5.2.2 (R)	Met	5.2.12.3.5
			TIA/EIA-470-B (R)	Met	5.2.12.3.5.1
T1 CAS (DTMF) (Wink Start) <sup>4</sup>	No <sup>1</sup>	Yes	PCM-24 (R)	Met	5.2.6.1
			DISR compliance as applicable (R)	Met	5.2.12.3.5
			ROUTINE precedence only in accordance with UCR, section 5.2.2 (R)	Met	5.2.12.3.5
T1 CAS (DTMF) (Ground Start) <sup>5</sup>	No <sup>1</sup>	Yes	PCM-24 (R)	Met	5.2.6.1
			DISR compliance as applicable (R)	Met	5.2.12.3.5
			ROUTINE precedence only in accordance with UCR, section 5.2.2 (R)	Met	5.2.12.3.5
T1 ISDN PRI NI 1/2 (ANSI T1.619a) <sup>6</sup>	No	Yes	PCM-24 (R)	Met	5.2.12.3.5.5 and 5.2.6.1
			DISR compliance as applicable (R)	Met	5.2.12.3.5
			ROUTINE precedence only in accordance with UCR, section 5.2.2 (R)	Met	5.2.12.3.5
T1 ISDN PRI Q-SIG (ISDN ITU-T Q.931) <sup>7</sup>	No	Yes	PCM-24 (R)	Met	5.2.12.3.5.5 and 5.2.6.1
			DISR compliance as applicable (R)	Met	5.2.12.3.5
			ROUTINE precedence only in accordance with UCR, section 5.2.2 (R)	Met	5.2.12.3.5
	Yes	Yes	Security (R)	See note 8.	3.2.3, 3.2.5, and 5.4.6.1

**NOTES:**

- The Automated Receiving Device requirements can be met via one of the following interfaces: 2-Wire Analog, 4-Wire Digital, PCM-24, or PCM-30.
- This interface requires a serial SMDI link. The SUT analog interface supports all of the SUT applications which include: Auto Attendant, Voicemail, CallegraVOICE™, CallegraFAX™, CallegraINBOX™, CallegraWEB™, CallegraCOMMUNITY™, and CallegraTTS™. This interface is certified with any voice circuit switch on the UC APL that has a certified analog interface.
- The digital proprietary interface supports the following SUT applications: Auto Attendant, Voicemail, CallegraVOICE™, CallegraINBOX™, CallegraWEB™, CallegraCOMMUNITY™, and CallegraTTS™. The SUT digital proprietary interface emulates the Avaya Meridian 1 M2616 and the Avaya 8434D.
- This interface requires a serial SMDI link. The SUT T1 CAS wink start interface supports the following SUT applications: Auto Attendant, Voicemail, CallegraFAX™, CallegraINBOX™, CallegraWEB™, CallegraCOMMUNITY™, and CallegraTTS™. The SUT is certified with this interface only with the Alcatel-Lucent 5ESS and Nokia-Siemens EWSD switching systems listed on the UC APL.
- This interface requires a serial SMDI link. The SUT T1 CAS ground start interface supports all of the SUT applications which include: Auto Attendant, Voicemail, CallegraVOICE™, CallegraFAX™, CallegraINBOX™, CallegraWEB™, CallegraCOMMUNITY™, and CallegraTTS™. This interface is certified with any voice circuit switch on the UC APL that has a certified T1 CAS ground start interface.
- This interface requires a serial SMDI link. The SUT T1 PRI NI2 interfaces support all of the SUT applications which include: Auto Attendant, Voicemail, CallegraVOICE™, CallegraFAX™, CallegraINBOX™, CallegraWEB™, CallegraCOMMUNITY™, and CallegraTTS™. The T1 PRI NI2 interface is certified only with the Alcatel-Lucent 5ESS and Nokia-Siemens EWSD switching systems listed on the UC APL.
- The SUT T1 PRI QSIG interface supports all of the SUT applications which include: Auto Attendant, Voicemail, CallegraVOICE™, CallegraFAX™, CallegraINBOX™, CallegraWEB™, CallegraCOMMUNITY™, CallegraTTS™, Avaya CM 6.0.(00.1.5.10.1), and Cisco CUCM 8.0.2 with IOS Software Release 15.1(1)T. The T1 PRI QSIG interface is certified only with Avaya S8400, S8500, S87XX series, CS1000M, or CS1000E switching systems on the UC APL.
- Security is tested by DISA-led Information Assurance test teams and published in a separate report, Reference (f).

**Table 1. SUT Functional Requirements and Interoperability Status (continued)**

<b>LEGEND:</b>			
5ESS	Class 5 Electronic Switching System	LSSGR	Local Access and Transport Area (LATA) Switching Systems Generic Requirements
ANSI	American National Standards Institute	Mbps	Megabits per second
APL	Approved Products List	MLPP	Multi-Level Precedence and Preemption
C	Conditional	NI 1/2	National ISDN Standard 1 or 2
CAS	Channel Associated Signaling	NI2	National ISDN Standard 2
CM	Communication Manager	PCM-24	Pulse Code Modulation - 24 Channels
CS	Communication Server	PCM-30	Pulse Code Modulation - 30 Channels
CUCM	Cisco Unified Communication Manager	PRI	Primary Rate Interface
DISA	Defense Information Systems Agency	Q.931	Signaling Standard for ISDN
DISR	Department of Defense Information Technology Standards Registry	QSIG	an ISDN based signaling protocol
DTMF	Dual Tone Multi-Frequency	R	Required
EIA	Electronic Industries Alliance	SMDI	Simple Message Desk Interface
EIA-232	Standard for defining the mechanical and electrical characteristics for connecting Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) data communications devices	SS7	Signaling System 7
		SUT	System Under Test
		T1	Digital Transmission Link Level 1 (1.544 Mbps)
		T1.619a	SS7 and ISDN MLPP Signaling Standard for T1
EWSD	Elektronisches Wählsystem Digital	TIA	Telecommunications Industry Association
FCC	Federal Communications Commission	TIA/EIA-470-B	Performance and Compatibility Requirements for Telephone Sets with Loop Signaling
GR	Generic Requirement	UC	Unified Capabilities
GR-506-CORE	LSSGR: Signaling for Analog Interfaces	UCR	Unified Capabilities Requirements
ISDN	Integrated Services Digital Network		
ITU-T	International Telecommunication Union - Telecommunication Standardization Sector		

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), or <http://199.208.204.125> (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at <http://jitc.fhu.disa.mil/tssi>. 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: [ucco@disa.mil](mailto:ucco@disa.mil).

JITC Memo, JTE, Extension of the Callware Technologies Callegra.Unified Communications (UC)™ Server with Software Release 6.14-Joint Interoperability Test Command (JITC) Service Pack 1 Release Update 2 (SP1RU2)

6. The JITC point of contact is Mr. Khoa Hoang, DSN 879-4376, commercial (520) 538-4376, FAX DSN 879-4347, or e-mail to khoa.hoang@disa.mil. The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The tracking number for the SUT is 0929601.

FOR THE COMMANDER:

1 Enclosure a/s

  
for BRADLEY A. CLARK  
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U.S. Joint Forces Command, Net-Centric Integration, Communication, and Capabilities  
Division, J68

Defense Information Systems Agency, GS23

## ADDITIONAL REFERENCES

- (c) Defense Information Systems Agency (DISA), "Defense Switched Network (DSN) Generic Switching Center Requirements (GSCR), Errata Change 2," 14 December 2006
- (d) Joint Interoperability Test Command, "Generic Switch Test Plan (GST), Change 2," 2 October 2006
- (e) Office of the Assistant Secretary of Defense, "Department of Defense Unified Capabilities Requirements 2008," 22 January 2009
- (f) Joint Interoperability Test Command, "Information Assurance (IA) Assessment of Callware Technologies Inc. (CTI), Callegra.UC Voicemail / Unified Messaging / Unified Communications (UC) Release (Rel.) 6.14 Joint Interoperability Test Command (JITC) Service Pack 1 Release Update 2 (SP1RU2) (Tracking Number 0929601)," 16 July 2010