DEFENSE INFORMATION SYSTEMS AGENCY
P. O. BOX 549
FORT MEADE, MARYLAND 20755-0549

IN REPLY REFER TO: Joint Interoperability Test Command (JTE) 24 October 2022

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Joint Interoperability Certification of Aruba, a Hewlett Packard Enterprise company, 2930M Switch Series with Software Release 16.11

References: (a) Department of Defense Instruction 8100.04, "DoD Unified Capabilities (UC)," 9 December 2010
(b) Office of the Department of Defense Chief Information Officer, "Department of Defense Unified Capabilities Requirements 2013, Change 2," September 2017
(c) through (f), see Enclosure

1. Certification Authority. Reference (a) establishes the Joint Interoperability Test Command (JITC) as the Joint Interoperability Certification Authority for the Department of Defense Information Network (DoDIN) products, Reference (b).

2. Conditions of Certification. The Aruba, a Hewlett Packard Enterprise company, 2930M Switch Series with Software Release 16.11, hereinafter referred to as the System Under Test (SUT), meets the critical requirements of the Unified Capabilities Requirements, Reference (b), as an Assured Services Local Area Network (ASLAN) Layer 2 (L2)-only Access Switch and is certified for joint use with no conditions (see Table 1). This certification expires upon changes that affect interoperability, but no later than the expiration date specified in the DoDIN Approved Products List (APL) memorandum.

This extension of the certification is for Desktop Review (DTR) 3. DTR 3 was requested to update the SUT Software Release version from 16.08 to 16.11 and add two Aruba 2930M switches (R0M67A and R0M68A) as L2-only Access switches.

See Table 4 for an updated list of certified SUT components and Paragraph 4 for additional details.

Table 1. Conditions

Description	Operational Impact	Remarks
None. The Aruba, a Hewlett Packard Enterprise company, 2930M Switch Series with Software Release 16.11 meets all critical joint interoperability requirements in accordance with the Unified Capabilities Requirements, Reference (b).		

3. Interoperability Status. Table 2 provides the SUT interface interoperability status, Table 3 provides the Capability Requirements and Functional Requirements status, and Table 4 provides the DoDIN APL Product Summary, to include subsequent DTR updates.

Table 2. Interface Status

Interface (See note 1.)	Applicability (ASLAN)			Status	Remarks
	Co	D	A		
Network Management Interfaces (See note 2.)					
IEEE 802.3i (10BaseT UTP)	C	C	C	Not Tested	See note 3.
IEEE 802.3u (100BaseT UTP)	C	C	C	Not Tested	See note 3.
IEEE 802.3ab (1000BaseT UTP)	C	C	C	Met	
Access (User) Interfaces (See note 2.)					
IEEE 802.3i (10BaseT UTP)	C	C	C	Met	See note 4.
IEEE 802.3u (100BaseT UTP)	C	C	C	Met	See note 4.
IEEE 802.3u (100BaseFX)	C	C	C	Not Tested	See note 5.
IEEE 802.3ab (1000BaseT UTP)	C	C	C	Met	
IEEE 802.3z (1000BaseX Fiber)	C	C	C	Met	
IEEE 802.3bz (2.5/5GBaseX)	O	O	O	Not Tested	See note 5.
IEEE 802.3ae (10GBaseX)	C	C	C	Met	
IEEE 802.3by (25GBaseX)	O	O	O	Not Tested	See note 5.
IEEE 802.3ba (40GBaseX)	O	O	O	Not Tested	See note 5.
IEEE 802.3cd (50GBaseX)	O	O	O	Not Tested	See note 5.
IEEE 802.3ba (100GBaseX)	O	O	O	Not Tested	See note 5.
Uplink (Trunk) Interfaces (See note 2.)					
IEEE 802.3ab (1000BaseT UTP)	O	O	O	Not Tested	See note 5.
IEEE 802.3z (1000BaseX Fiber)	C	C	C	Met	See note 6.
IEEE 802.3bz (2.5/5GBaseX)	O	O	O	Not Tested	See note 5.
IEEE 802.3ae (10GBaseX)	C	C	C	Met	See note 6.
IEEE 802.3by (25GBaseX)	O	O	O	Not Tested	See note 5.
IEEE 802.3ba (40GBaseX)	C	C	C	Met	
IEEE 802.3cd (50GBaseX)	O	O	O	Not Tested	See note 5.
IEEE 802.3ba (100GBaseX)	C	C	C	Not Tested	See note 5.

NOTE(S):

1. Table 3 depicts the SUT high-level requirements. Table 3-2 in Enclosure 3 of Reference (c) provides a detailed list of requirements.
2. Core, Distribution, and Access products must minimally support one of the interfaces listed in this table as conditional for the given role. Other rates and standards may be provided as optional interfaces.
3. Testing on management ports was performed on the 1 Gbps interfaces. JITC analysis determined the 10BaseX and 100Base X interfaces are low risk for certification based on the vendor's Letter of Compliance (LoC) compliance with the IEEE 802.3i and 802.3u standards and the testing data collected at higher data rates.
4. All Access (User) link testing was performed on the 1 Gbps and 10 Gbps interfaces. JITC analysis determined the 10BaseX and 100BaseX interfaces are low risk for certification based on the vendor's Letter of Compliance (LoC) compliance with the IEEE 802.3i and 802.3u standards and the testing data collected at higher data rates.
5. The SUT does not support this conditional/optional interface
6. All Uplink (Trunk) testing was performed on the 40 Gbps interfaces. JITC analysis determined the 1000BaseX and 10GBaseX interfaces are low risk for certification based on the vendor's Letter of Compliance (LoC) compliance with the IEEE 802.3u and 802.3ab standards and the testing data collected at higher data rates.

LEGEND:

A	Access	Gbps	Gigabits per second
ASLAN	Assured Services Local Area Network	IEEE	Institute of Electrical and Electronics Engineers
BaseFX	Mbps Ethernet over Fiber	JITC	Joint Interoperability Test Command
BaseT	Mbps (Baseband Operation, Twisted Pair) Ethernet	LoC	Letter of Compliance
BaseX	Mbps Ethernet over Fiber or Copper	Mbps	Megabits per second
C	Conditional	O	Optional
Co	Core	SUT	System Under Test
D	Distribution	UTP	Unshielded Twisted Pair
GBaseX	Gbps Ethernet over Fiber or Copper		

Table 3. ASLAN Capability Requirements and Functional Requirements Status

CR/FR ID	UCR Requirement (See notes 1.)	UCR 2013 Change 2 Reference	Status
1	General LAN Switch and Router Product Requirements (R)	7.2.1	Met (See note 2.)
2	LAN Switch and Router Redundancy Requirements (R)	7.2.2	Met (See note 3.)
3	LAN Product Requirements Summary (R)	7.2.3	Met
4	Multiprotocol Label Switching (O)	7.2.4	Not Tested (See note 4.)
5	IPv6	Section 5	Met (See notes 5.)

NOTE(S):
1. The annotation of "required" refers to a high-level requirement category. Enclosure 3 of Reference (c) addresses the applicability of each sub-requirement.
2. The SUT supports all of the port parameter requirements when configured as a standalone access switch. When configured in a stacked architecture the SUT met this requirement on the egress interface of the stack, but did not prioritize queues on the stacking ports.
3. The redundancy requirements do not apply to the SUT when deployed as a standalone Access switch because it supports less than 96 subscribers. When used in a stacked configuration, the SUT has multiple power supplies, switch fabrics, and processors and meets this requirement.
4. The SUT does not support this optional requirement.
5. A JITC Cybersecurity test team conducted Cybersecurity testing and published the results in a separate report, Reference (d).

LEGEND:

ASLAN	Assured Services Local Area Network	LAN	Local Area Network
CR	Capability Requirement	O	Optional
FR	Functional Requirement	R	Required
ID	Identification	SUT	System Under Test
JITC	Joint Interoperability Test Command	UCR	Unified Capabilities Requirements

Table 4. DoDIN APL Product Summary

Product Identification				
Product Name	Aruba, a Hewlett Packard Enterprise company 2930M Switch Series			
Software Release	16.11 (See note 1.)			
UCR Product Type(s)	ASLAN Layer 2 Access Switch			
Product Description	An Ethernet switch that provides Ethernet services for the ASLAN. It provides 1GbaseT with up to 30 Watts of Power over Ethernet support on 24 or 48 downlink ports. The uplinks support either 1G SFP or 10G SFP+ transceivers. Switching functions include Virtual Switch Framework Stacking, access Open Shortest Path First routing limited to 200 routes, 8 interfaces and one area, tunneled node to tunnel all network traffic to a network controller for detailed control of what the connected device can communicate with and visibility to all traffic, robust Quality of Service, Routing Information Protocol routing, and Internet Protocol version 6.			
DoDIN Certified Function	**Component** (See notes 2 and 3.)	**Sub-component** (See note 3)	**Tested Version** (See note 1.)	**Remarks**
ASLAN L2 Access	**Aruba 2930M**	**JL081A**, **JL083A**, JL078A	16.11	
		JL322A, **JL323A**, **JL324A**, JL319A, JL320A, JL321A, JL325A		

(Table continues next page.)

Table 4. DoDIN APL Product Summary (continued)

Components added with DTR 3 (See note 4.)					
Component (See notes 3 and 4.)	**Tested Version** (See note 1.)	**Sub-Component**	**Function**	**Blocking Factor** (See notes 4 and 5.	
				C/D	**A**
R0M67A L2 Access Switch	16.11	N/A	40 Gigabit (G) 8 Smart Rate Power over Ethernet (PoE) Class 6 1-slot Switch	N/A	Met
R0M68A L2 Access Switch			24 Smart Rate PoE Class 6 1-slot Switch	N/A	Met

NOTE(S):
1. The SUT was initially certified with Software Release version 16.04. The Software Release version was updated with subsequent DTRs as follows: DTR 1 - from 16.04 to 16.08; DTR 3 - from 16.08 to 16.11.
2. Table 3-3 in Enclosure 3 of Reference (c) provides the detailed descriptions on the initially tested components and sub-components.
3. Components bolded and underlined were tested by JITC. The other components in the family series were not tested; however, JITC certified the other components for joint use because they utilize the same software and similar hardware as tested and certified components and JITC analysis determined they were functionally identical for interoperability certification purposes.
4. With DTR 3, the ROM67A and ROM68A switches were added to this certification based on analysis (no testing) and similarity to the previously certified JL322A, JL323A, and JL324A switches.
5. Blocking Factor is defined as the ratio of all traffic to non-blocked traffic (i.e., a blocking factor of 8 to 1 means that 12.5 percent of the traffic must be non-blocking). Access products shall not have a blocking factor that exceeds 8 to 1. Distribution and Core products shall not have a blocking factor that exceeds 2 to 1.

LEGEND:

A	Access	JITC	Joint Interoperability Test Command
APL	Approved Products List	L2	Layer 2
ASLAN	Assured Services Local Area Network	N/A	Not Applicable
C	Core	PoE	Power over Ethernet
D	Distribution	SFP	Small Form-factor Pluggable
DoDIN	Department of Defense Information Network	SFP+	Small Form-factor Pluggable Plus
DTR	Desktop Review	SUT	System Under Test
G	Gigabit	UCR	Unified Capabilities Requirements
GBaseT	Gigabit Ethernet over Copper		

4. Test Details. This extension of the certification is based on DTR 3. The original certification, documented in Reference (c), was based on interoperability (IO) testing, review of the Vendor's Letters of Compliance (LoC), and the Defense Information Systems Agency (DISA) Certifying Authority Recommendation for the inclusion on the DoDIN APL. JITC conducted testing at the Global Network Test Facility, Fort Huachuca, Arizona from 16 July 2018 through 3 August 2018, using test procedures derived from Reference (e), and completed review of the Vendor's LoC on 3 August 2018. A JITC-led CS test team conducted CS testing and published the results in a separate report, Reference (d). Enclosure 2 of Reference (c) documents the test results and describes the tested network and system configurations. Enclosure 3 of Reference (c) provides the detailed interface, capability, and functional requirements and test results.

DTR 3 was requested to update the SUT Software Release version from 16.08 to 16.11 and add two Aruba 2930M switches (R0M67A and R0M68A) as L2-only Access switches.

JITC analysis determined the software update included only minor security enhancements and feature updates that did not change the certified IO features and functions or approved CS posture of the SUT, and the new R0M67A and R0M68A switches had similar hardware and operated on the same 16.11 software as the previously certified JL322A, JL323A, and JL324A switches and were low risk for certification without additional IO testing; therefore, no further

CS or IO testing was required for this request. Analysis of this DTR request was based on current UCR 2013 Change 2 test procedures, Reference (f). See Table 4 for an updated list of certified SUT components.

Based on analysis and no change to the certified SUT IO features and functions, JITC approves DTR 3.

In addition, the current CS posture of the SUT is documented in a separate report, Reference (d).

5. Additional Information. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Sensitive but Unclassified Internet Protocol Data (formerly known as NIPRNet) e-mail. Interoperability status information is available via the JITC System Tracking Program (STP). STP is accessible by .mil/.gov users at https://stp.fhu.disa.mil/. Test reports, lessons learned, and related testing documents and references are on the JITC Industry Toolkit (JIT) at https://jit.fhu.disa.mil/. Due to the sensitivity of the information, the CS Assessment Package containing the approved configuration and deployment guide must be requested directly from the DoDIN Approved Products Certification Office (APCO) via e-mail: disa.meade.ie.list.approved-products-certification-office@mail.mil. All associated information is available on the DISA APCO website located at https://applits.disa.mil/.

6. Point of Contact (POC). JITC POC: Ms. Jenna Valenzuela; commercial phone (520) 538-5436, DSN 879-5436; e-mail address: jenna.s.valenzuela.civ@mail.mil; mailing address: Joint Interoperability Test Command, ATTN: JTE2 (Ms. Jenna Valenzuela), P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The APCO tracking number for the SUT is 1802503.

FOR THE COMMANDER:

DORN.LAWRENCE.T.1168371930 Digitally signed by DORN.LAWRENCE.T.1168371930 Date: 2022.10.24 16:04:29 -07'00'

Enclosure a/s

LAWRENCE T. DORN
Chief
Specialized Test Division

JITC Memo, JTE, Extension of the Joint Interoperability Certification of Aruba, a Hewlett Packard Enterprise company, 2930M Switch Series with Software Release 16.11

Distribution (electronic mail):
DoD CIO
Joint Staff J-6, JCS
ISG Secretariat, DISA, JT
U.S. Strategic Command, J66
USSOCOM J65
USTRANSCOM J6
US Navy, OPNAV N2/N6FP12
US Army, DA-OSA, CIO/G-6, SAIS-CBC
US Air Force, SAF/A6SA
US Marine Corps, MARCORSYSCOM, SEAL, CERT Division
US Coast Guard, CG-64
DISA/ISG REP
OUSD Intel, IS&A/Enterprise Programs of Record
DLA, Test Directorate, J621C
NSA/DT
NGA, Compliance and Assessment Team
DOT&E
Medical Health Systems, JMIS PEO T&IVV
HQUSAISEC, AMSEL-IE-ME
APCO

ADDITIONAL REFERENCES

(c) Joint Interoperability Test Certification (JITC), JTE, Memo, "Joint Interoperability Certification of the Aruba 2930M Switch Series, Software Release 16.04," 28 August 2018
(d) JITC, "Cybersecurity Assessment Report for Aruba, a Hewlett Packard Enterprise company, 2930M Switch Series, Software Release 16.11, Tracking Number (TN) 1802503," September 2022
(e) JITC, "Assured Services Local Area Network (ASLAN) and Non-ASLAN Test Procedures Version 1.2 for Unified Capabilities Requirements (UCR) 2013 Change 2," November 2017
(f) JITC, "Assured Services Local Area Network (ASLAN) and Non-ASLAN Test Procedures Version 1.1 for Unified Capabilities Requirements (UCR) 2013 Change 2," April 2022 (Draft)