



DEFENSE INFORMATION SYSTEMS AGENCY

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

26 November 2018

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Joint Interoperability Certification of the NetApp, Inc. Fabric Attached Storage (FAS)/All Flash FAS (AFF) Data Storage Controllers (DSCs) Release ONTAP 9.3

- 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 (UCR 2013) Change 1," June 2015
(c) through (e), 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 NetApp, Inc. Fabric Attached Storage (FAS)/All Flash FAS (AFF) Data Storage Controllers (DSCs) Release ONTAP 9.3, hereinafter referred to as the System Under Test (SUT), meets the critical requirements of the Unified Capabilities Requirements, Reference (b), and is certified for joint use as a DSC with the conditions described in Table 1. The FAS8040 was the model tested; however, the models listed in Table 4 utilize the same software and similar hardware. JITC analysis determined these systems to be functionally identical to the FAS8040 and therefore, they are covered under this certification. 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) 1. DTR 1 was requested to update the software release from ONTAP 9.1 to ONTAP 9.3. This software update resolves open Cybersecurity (CS) findings. See Paragraph 4 for test details.

Table 1. Conditions

Table with 3 columns: Condition, Operational Impact, Remarks. Row 1: UCR Waivers. Row 2: None.

Table 1. Conditions (continued)

Condition	Operational Impact	Remarks																				
Conditions of Fielding																						
TDR NAI-0648-001: The SUT does not Support the GNS or single Name space functionality. The SUT supports only "in-band" (local) single namespace functionality. Not certified for "out-of-band" Global Namespace support.	Minor	See note 1.																				
Open Test Discrepancies																						
TDR NAI-0648-002: The SUT did not support the 1 Gigabit Ethernet (GbE) for Network Attached Storage.	None	See note 2.																				
TDR NAI-0648-003: Per the vendor LoC, the SUT does not support Redirect requirements for IP6-000350.	Minor	See note 3.																				
TDR NAI-0648-004: The SUT did not support Fiber Channel (FC) zones.	None	See note 2.																				
<p>NOTE(S):</p> <ol style="list-style-type: none"> DISA has accepted and approved the vendor's POA&M and adjudicated this discrepancy as having a minor operational impact with a condition of fielding. The SUT does not support disparate and remote network based file systems because the GNS exists within a DSC cluster, which must be co-located in a campus type environment. The SUT supports only "in-band" (local) single namespace functionality. The SUT is not certified for "out-of-band" Global Namespace support. DISA has accepted and approved the vendor's POA&M and adjudicated this discrepancy as a change requirement and having a no operational impact. DISA stated the intent to change this requirement in the next version of the UCR. DISA has accepted and approved the vendor's POA&M and adjudicated this discrepancy as having a minor operational impact. <p>LEGEND:</p> <table border="0"> <tr> <td>DISA</td> <td>Defense Information Systems Agency</td> <td>LoC</td> <td>Letters of Compliance</td> </tr> <tr> <td>DSC</td> <td>Data Storage Controller</td> <td>POA&M</td> <td>Plan of Action and Milestones</td> </tr> <tr> <td>GNS</td> <td>Global Name Service</td> <td>SUT</td> <td>System Under Test</td> </tr> <tr> <td>IPv6</td> <td>Internet Protocol Version 6</td> <td>TDR</td> <td>Test Discrepancy Report</td> </tr> <tr> <td>LoC</td> <td>Letters of Compliance</td> <td>UCR</td> <td>Unified Capabilities Requirements</td> </tr> </table>			DISA	Defense Information Systems Agency	LoC	Letters of Compliance	DSC	Data Storage Controller	POA&M	Plan of Action and Milestones	GNS	Global Name Service	SUT	System Under Test	IPv6	Internet Protocol Version 6	TDR	Test Discrepancy Report	LoC	Letters of Compliance	UCR	Unified Capabilities Requirements
DISA	Defense Information Systems Agency	LoC	Letters of Compliance																			
DSC	Data Storage Controller	POA&M	Plan of Action and Milestones																			
GNS	Global Name Service	SUT	System Under Test																			
IPv6	Internet Protocol Version 6	TDR	Test Discrepancy Report																			
LoC	Letters of Compliance	UCR	Unified Capabilities Requirements																			

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

Table 2. SUT Interface Status

Interface	Threshold CR/FR Requirements (See Note 1.)	Status	Remarks
Network Attached Storage (NAS) Interfaces			
1 GbE (Ethernet) (R)	1	Not Met	See Note 2.
10 GbE (Ethernet) (R)	1	Met	
Storage Array Net (SAN) Interfaces			
Fiber Channel (FC)	1	Met	
FC Protocol (FCP)	1	Met	
Out-of-band Management Interfaces			
10 Mbps Ethernet (R)	1	Met	
100 Mbps Ethernet (R)	1	Met	
1 GbE Ethernet (R)	1	Met	
Converged Network Adapter (CNA) Interfaces			
10 GbE (Ethernet) (R)	1	Met	

JITC Memo, JTE, Extension of the Joint Interoperability Certification of the NetApp, Inc. Fabric Attached Storage (FAS)/All Flash FAS (AFF) Data Storage Controllers (DSCs) Release ONTAP 9.3

Table 2. SUT Interface Status (continued)

NOTE(S):			
1. The UCR does not identify interface CR/FR applicability. The SUT high-level CR and FR ID numbers depicted in the Threshold CR/FR Requirements column are cross-referenced with Table 3. These high-level requirements refer to a more detailed list of requirements provided in Reference (c), Enclosure 3.			
2. The SUT does not support 1 GbE NAS interfaces. DISA adjudicated this discrepancy as a change requirement with no operational impact.			
LEGEND:			
CR	Capability Requirement	Mbps	Megabits per second
DISA	Defense Information Systems Agency	R	Required
GbE	Gigabit Ethernet	SUT	System Under Test
FR	Functional Requirement	UCR	Unified Capabilities Requirements
ID	Identification		

Table 3. SUT Capability Requirements and Functional Requirements Status

CR/FR ID	UCR Requirement (High-Level) (See note 1.)	UCR 2013 Reference	Status
1	Data Storage Controller (DSC) (R)	Section 14	Partially Met (See notes 2 and 3.)

NOTE(S):			
1. The annotation of “required” refers to a high-level requirement category. The applicability of each sub-requirement is provided in Reference (c), Enclosure 3.			
2. The SUT met the requirements with the exceptions noted in Table 1. DISA adjudicated these exceptions as minor or as change requirements.			
3. JITC-led Cybersecurity test teams accomplished security testing and the results are published in a separate report, Reference (c).			
LEGEND:			
CR	Capability Requirement	JITC	Joint Interoperability Test Command
DISA	Defense Information Systems Agency	R	Required
FR	Functional Requirement	SUT	System Under Test
ID	Identification	UCR	Unified Capabilities Requirements

Table 4. DoDIN APL Product Summary

Product Identification			
Product Name	NetApp, Inc. FAS/AFF DSCs on ONTAP		
Software Release	ONTAP 9.3 (See note 1.)		
DoDIN Product Type(s)	Data Storage Controller		
Product Description	The SUT performs data replication, mirroring, back-up, continuance of operation, and disaster recovery functions.		
Product Components (See note 2.)	Component Name (See note 3.)	Version	Remarks
Primary and Secondary Data Storage Controller (x2)	FAS8040 , FAS2520, FAS2552, FAS2554, FAS2620 AFF A200, FAS2650, FAS8020, FAS8040, AFF8040, FAS8200, AFF A300, FAS8060, FAS8080 EX, AFF8080 EX, FAS9000, AFF 700, AFF A700s	9.3	See notes 1 and 4.

NOTE(S):			
1. DTR 1 updated the software release from ONTAP 9.1 to ONTAP 9.3.			
2. The detailed component and subcomponent list is provided in Reference (c), Enclosure 3.			
3. Components bolded and underlined were tested by JITC. The other components in the family series were not tested, but are also certified for joint use. JITC certifies those additional components because they utilize the same software and similar hardware and JITC analysis determined them to be functionally identical for interoperability certification purposes.			
4. Expanded I/O products have a dual enclosure and 12 PCIe expansion slots instead of a single enclosure and 4 PCIe expansionslots.			

Table 4. DoDIN APL Product Summary (continued)

LEGEND:			
AFF	All Flash FAS	FAS	Fabric Attached Storage
APL	Approved Products List	I/O	Input/Output
DoDIN	Department of Defense Information Network	JITC	Joint Interoperability Test Command
DSC	Data Storage Controller	PCIe	Peripheral Component Interconnect Express
DTR	Desktop Review	SUT	System Under Test

4. Test Details. This extension of the certification is based on DTR 1. The original certification, documented in Reference (c), was based on interoperability (IO) testing, review of the vendor’s Letters of Compliance (LoC), Defense Information Systems Agency (DISA) adjudication of open Test Discrepancy Reports (TDRs), and the DISA Certifying Authority Recommendation for inclusion on the DoDIN APL. Conducted IO testing at JITC’s Global Network Test Facility at Fort Huachuca, Arizona, from 5 through 16 June 2017, using test procedures derived from Reference (d). Completed review of the vendor’s LoC on 5 June 2017. DISA adjudicated outstanding TDRs on 24 August 2017. JITC-led CS test teams conducted CS testing and published the results in a separate report, Reference (e).

DTR 1 was requested to update the software release from ONTAP 9.1 to ONTAP 9.3. This software update resolves open CS findings. JITC analysis determined that CS testing was required to verify and close the associated findings. CS testing was conducted on 8 November 2018, and the results are published in a separate report, Reference (e). JITC analysis also determined no IO testing was required because this update did not change the certified IO features and functions of the SUT. Therefore, JITC approves this DTR.

5. Additional Information. JITC distributes interoperability information via the JITC Electronic Report Distribution 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 that contains the approved configuration and deployment guide must be requested directly from the (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 <http://www.disa.mil/Network-Services/UCCO>.

JITC Memo, JTE, Extension of the Joint Interoperability Certification of the NetApp, Inc. Fabric Attached Storage (FAS)/All Flash FAS (AFF) Data Storage Controllers (DSCs) Release ONTAP 9.3

6. **Point of Contact (POC).** JITC POC: Ms. Sibylle Gonzales, commercial telephone (520) 538-5483, DSN telephone 879-5483, FAX DSN 879-4347; e-mail address: Sibylle.j.gonzales.civ@mail.mil; mailing address: Joint Interoperability Test Command, ATTN: JTE (Ms. Sibylle Gonzales) P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The APCO tracking number for the SUT is 1629202

FOR THE COMMANDER:

Enclosure a/s

for RIC HARRISON
Chief
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ADDITIONAL REFERENCES

- (c) Joint Interoperability Test Command, Memo, JTE, "Joint Interoperability Certification of the NetApp, Inc. Fabric Attached Storage (FAS)/All Flash FAS (AFF) Data Storage Controllers (DSCs) on ONTAP Release 9.1," 22 September 2017
- (d) Joint Interoperability Test Command, "Data Storage Controller (DSC) Test Procedures For Unified Capabilities Requirements (UCR) 2013 Change 1," August 2016
- (e) Joint Interoperability Test Command, "Cybersecurity Assessment Report for NetApp, Inc. Fabric Attached Storage (FAS)/All Flash FAS (AFF) Data Storage Controllers (DSCs) on ONTAP Release 9.3 Tracking Number 1629202," October 2018