



DEFENSE INFORMATION SYSTEMS AGENCY

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

22 February 2024

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Extension of the Joint Interoperability Certification of the Dell PowerScale OneFS with Software Release 9.7

- 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 (d), 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 Dell PowerScale OneFS with Software Release 9.7, hereinafter referred to as the System Under Test (SUT), meets the critical requirements of the Unified Capabilities Requirements, Reference (b), as a Data Storage Controller (DSC) and is certified for joint use with the condition described in Table 1. The PowerScale F200 Cluster was the tested model. The additional PowerScale F600 and PowerScale F900 models listed in Table 4 were not tested; however, JITC also certified the additional models because they utilize the same software and similar hardware as the PowerScale F200 model and JITC analysis determined they were functionally identical for interoperability certification purposes.

This certification expires upon changes that affect interoperability, but no later than the expiration date listed 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 SUT Software Release version from 9.5 to 9.7. See Paragraph 4 for additional details.

Table 1. Conditions

Table with 3 columns: Description, Operational Impact, Remarks. Rows include UCR Waivers, None., and Conditions of Fielding.

(Table continues next page.)

Table 1. Conditions (continued)

Description		Operational Impact	Remarks																
TDR#	Open Test Discrepancies																		
DEL-0809-002	UCR 2013 Change 2, Section 14.8, DAT-000450: SUT does not provide Internet Storage Name Service (iSNS) client functionality per IETF RFC 4171.	Minor	See note.																
<p>NOTE(S): DEL-0809-002: DISA adjudicated this discrepancy as having a minor operational impact with no POA&M. The SUT does not support discovery via the iSNS. iSNS is a protocol used for name discovery by block storage devices; however, PowerScale does not provide block storage, it provides unstructured file storage, and the clusters are discoverable via the Domain Name Service.</p> <p>LEGEND:</p> <table> <tr> <td>DISA</td> <td>Defense Information Systems Agency</td> <td>RFC</td> <td>Request for Comment</td> </tr> <tr> <td>IETF</td> <td>Internet Engineering Task Force</td> <td>SUT</td> <td>System Under Test</td> </tr> <tr> <td>iSNS</td> <td>Internet Storage Name Service</td> <td>TDR</td> <td>Test Discrepancy Report</td> </tr> <tr> <td>POA&M</td> <td>Plan of Action and Milestones</td> <td>UCR</td> <td>Unified Capabilities Requirements</td> </tr> </table>				DISA	Defense Information Systems Agency	RFC	Request for Comment	IETF	Internet Engineering Task Force	SUT	System Under Test	iSNS	Internet Storage Name Service	TDR	Test Discrepancy Report	POA&M	Plan of Action and Milestones	UCR	Unified Capabilities Requirements
DISA	Defense Information Systems Agency	RFC	Request for Comment																
IETF	Internet Engineering Task Force	SUT	System Under Test																
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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. SUT Interface Status

Interface	Applicability R/O/C	Status	Remarks																												
Network Attached Storage Interfaces																															
1 GbE IAW IEEE 802.3ab	C	Met																													
10 GbE IAW IEEE 802.3ae	C	Met																													
Storage Array Network Interface																															
FC physical interfaces and FCP interfaces IAW ANSI X3.230, X3.297, and X3.303	C	Not Tested	The SUT does not support Storage Array Network.																												
Out-of-band Management Interfaces																															
10 Mbps Ethernet	C	Met																													
100 Mbps Ethernet	C	Met																													
1 GbE Ethernet	C	Met																													
Converged Network Adapter Interfaces																															
FCoE services over a 10 GbE physical interface IAW ANSI T11 FC-BB-5 standard for FCoE with a CNA	O	Not Tested	The SUT does not support FCoE.																												
Data Center Bridging also known as Converged Enhanced Ethernet features IAW IEEE 802.1Qbb for Priority-Based Flow Control	O	Not Tested	The SUT does not support FCoE.																												
Data Center Bridging also known as Converged Enhanced Ethernet features IAW IEEE 802.1Qaz for Enhanced Transmission Selection	O	Not Tested	The SUT does not support FCoE.																												
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<p>LEGEND:</p> <table> <tr> <td>ANSI</td> <td>American National Standards Institute</td> <td>GbE</td> <td>Gigabit Ethernet</td> </tr> <tr> <td>BB</td> <td>Backbone</td> <td>IAW</td> <td>In Accordance With</td> </tr> <tr> <td>C</td> <td>Conditional</td> <td>IEEE</td> <td>Institute of Electrical and Electronics Engineers</td> </tr> <tr> <td>CNA</td> <td>Converged Network Adapter</td> <td>Mbps</td> <td>Megabits per second</td> </tr> <tr> <td>FC</td> <td>Fibre Channel</td> <td>O</td> <td>Optional</td> </tr> <tr> <td>FCoE</td> <td>Fibre Channel over Ethernet</td> <td>R</td> <td>Required</td> </tr> <tr> <td>FCP</td> <td>Fibre Channel Protocol</td> <td>SUT</td> <td>System Under Test</td> </tr> </table>				ANSI	American National Standards Institute	GbE	Gigabit Ethernet	BB	Backbone	IAW	In Accordance With	C	Conditional	IEEE	Institute of Electrical and Electronics Engineers	CNA	Converged Network Adapter	Mbps	Megabits per second	FC	Fibre Channel	O	Optional	FCoE	Fibre Channel over Ethernet	R	Required	FCP	Fibre Channel Protocol	SUT	System Under Test
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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 note 2.)
2	IPv6 (R)	Section 5	Met

NOTE(S):
 1. The annotation of ‘required’ refers to a high-level requirement category. Enclosure 3 of Reference (c) provides the applicability of each sub-requirement.
 2. The SUT met the requirements with the exception noted in Table 1.

LEGEND:
 CR Capability Requirement
 DSC Data Storage Controller
 FR Functional Requirement
 ID Identification
 IPv6 Internet Protocol version 6
 R Required
 SUT System Under Test
 UCR Unified Capabilities Requirements

Table 4. DoDIN APL Product Summary

Product Identification			
Product Name	Dell PowerScale OneFS		
Software Release	9.7 (See note 1.)		
UCR Product Type(s)	Data Storage Controller		
Product Description	The PowerScale is deployed with an additional PowerScale cluster to provide redundancy and high availability functions. To meet this requirement the SUT was tested with an additional PowerScale OneFS F200 3-node cluster.		
Product Components (See note 2.)	Component Name (See note 3.)	Version (See note 1.)	Remarks
PowerScale OneFS F200 Cluster	PowerScale F200 , PowerScale F600, PowerScale F900	OneFS 9.7.0 0	DSC
		Apache 2.4.54	
	Admin Workstation (Site Provided)	Windows 11 Enterprise	SUT Management
		ActivClient 6.2.0.50 Axway Desktop Validator SE 4.11.2.753	

NOTE(S):
 1. The SUT was initially certified with Software Release 9.5. With DTR 1, the SUT Software Release version was updated from 9.5 to 9.7.
 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 components and analysis determined they were functionally identical for interoperability certification purposes.

LEGEND:
 APL Approved Products List
 DoDIN Department of Defense Information Network
 DTR Desktop Review
 FS File System
 JITC Joint Interoperability Test Command
 SE Standard Edition
 SUT System Under Test
 UCR Unified Capabilities Requirements

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 Letter 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. JITC completed review of the Vendor’s LoC on 13 March 2023 and conducted IO testing at the JITC Global Network Test Facility at Fort Huachuca, Arizona, from 27 March through 31 March 2023, using test procedures derived from Reference (d). DISA adjudicated one IO test discrepancy, as noted in Table 1. A JITC-led

JITC Memo, JTE, Extension of the Joint Interoperability Certification of the Dell PowerScale OneFS with Software Release 9.7

Cybersecurity (CS) test team conducted CS testing and published the results in a separate report, Reference (e). Enclosure 2 of Reference (c) documents the test results and describes the test network and system configurations. Enclosure 3 of Reference (c) provides a detailed list of the interface, capability, and functional requirements.

DTR 1 was requested to update the SUT Software Release version from 9.5 to 9.7.

JITC analysis determined no additional CS or IO testing was required because the 9.7 software version implemented new features and bug fixes that did not change the certified IO features and functions or approved CS posture of the SUT. Analysis of the DTR 1 request was performed based on current UCR 2013 Change 2 test procedures derived from Reference (d).

Based on analysis and no change to the certified SUT IO features and function, JITC approves DTR 1.

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

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.jitc.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 Approved Products Certification Office (APCO) via e-mail: disa.meade.ie.list.approved-products-certification-office@mail.mil; <mailto:disa.meade.ie.list.unified-capabilities-certification-office@mail.mil>. All associated information is available on the DISA APCO website located at <https://aplits.disa.mil/>.

6. Point of Contact (POC). JITC POC: Ms. Lorraine Gardner; commercial telephone (520) 538-5221, DSN telephone (312) 879-5221, FAX DSN (312) 879-4347; e-mail address: lorraine.gardner.civ@mail.mil; mailing address: Joint Interoperability Test Command, C/O JTE2-Ms. Lorraine Gardner, 2001 Brainard Road, Fort Huachuca, AZ 85613. The APCO tracking number for the SUT is 2223601.

FOR THE COMMANDER:

Enclosure a/s

LAWRENCE T. DORN
Chief
Specialized Test Division

JITC Memo, JTE, Extension of the Joint Interoperability Certification of the Dell PowerScale OneFS with Software Release 9.7

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ADDITIONAL REFERENCES

- (c) Joint Interoperability Test Command (JITC) Memo, JTE, “Joint Interoperability Certification of the Dell PowerScale OneFS with Software Release 9.5.” 11 May 2023
- (d) JITC, “Data Storage Controller (DSC) Test Procedures Version 1.2 for Unified Capabilities Requirements (UCR) 2013 Change 2,” April 2022 (Draft)
- (e) JITC, “Cybersecurity Assessment Report for Dell PowerScale OneFS, Software Release 9.7, Tracking Number (TN) 2223601,” February 2024