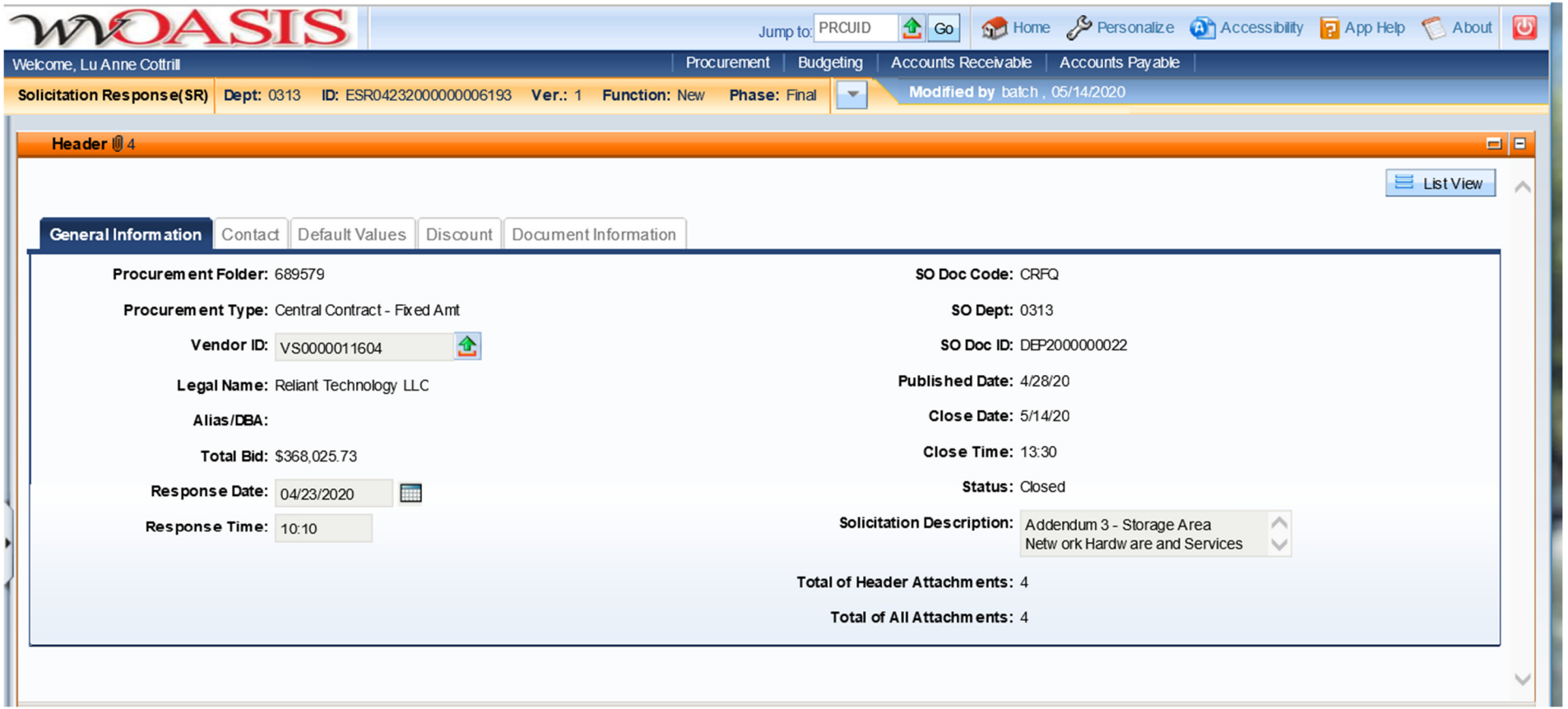
The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.


WVOASIS
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Solicitation Response(SR) Dept: 0313 ID: ESR04232000000006193 Ver.: 1 Function: New Phase: Final
Modified by batch , 05/14/2020
Header 4
List View
General Information
Contact
Default Values
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Document Information
Procurement Folder: 689579
Procurement Type: Central Contract - Fixed Amt
Vendor ID: VS0000011604
Legal Name: Reliant Technology LLC
Alias/DBA:
Total Bid: $368,025.73
Response Date: 04/23/2020
Response Time: 10:10
SO Doc Code: CRFQ
SO Dept: 0313
SO Doc ID: DEP2000000022
Published Date: 4/28/20
Close Date: 5/14/20
Close Time: 13:30
Status: Closed
Solicitation Description: Addendum 3 - Storage Area Netw ork Hardw are and Services
Total of Header Attachments: 4
Total of All Attachments: 4

Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder : 689579

Solicitation Description : Addendum 3 - Storage Area Network Hardware and Services

Proc Type : Central Contract - Fixed Amt

Date issued	Solicitation Closes	Solicitation Response	Version
	2020-05-14 13:30:00	SR 0313 ESR04232000000006193	1

VENDOR

VS0000011604

Reliant Technology LLC

Solicitation Number: CRFQ 0313 DEP2000000022

Total Bid : $368,025.73 **Response Date:** 2020-04-23 **Response Time:** 10:10:26

Comments: We are pleased to offer our proposal and know that we can meet and exceed all requirements. We do ask for a services scoping call to gain additional details for the service required.

FOR INFORMATION CONTACT THE BUYER

Guy Nisbet

(304) 558-2596
guy.l.nisbet@wv.gov

Signature on File **FEIN #** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Storage Area Network Hardware and Services				$264,440.00

Comm Code	Manufacturer	Specification	Model #
43212200			

Extended Description : Storage Area Network Hardware and Services for Storage Array's for Charleston and Logan. All professional services related to this solicitation (hardware installation, configuration and updating, software installation, software licensing, migration services and any additional equipment needed to complete with this solicitation) must be bid as a lump sum. Storage Area Network Hardware, and first (1) year Licenses and Support Services.

Comments: without knowing the details to questions raised about the professional services, we estimated 2 weeks but will only charge for actual hours. Are we able to have a services scoping call to better estimate hours?

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Support for storage array - renewal for year two (2) support				$33,940.52

Comm Code	Manufacturer	Specification	Model #
56112005			

Extended Description : Support for storage array, 24x7 remote and on-site support renewal for year two (2) support

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Support for storage array-renewal for year three (3) support				$34,595.23

Comm Code	Manufacturer	Specification	Model #
56112005			

Extended Description : Support for storage array, 24x7 remote and on-site support renewal for year three (3) support

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Support for storage array- renewal for year four (4) support				$35,049.98

Comm Code	Manufacturer	Specification	Model #
56112005			

Extended Description : Support for storage array, 24x7 remote and on-site support renewal for year four (4) support

RELIANT TECHNOLOGY

QUOTE

04JN2120V1

1371 Southland Circle NW
Atlanta, GA 30318
404.551.4534 phone
404.393.2833 fax
www.Reliant-Technology.com

Prepared By: **Jon Nolan**
Email: jnolan@reliant-technology.com
Direct Phone: 404.917.1103
Quote Date: April 23, 2020
Terms: NET 45

Bill to:
West Virginia Environmental Protection Office of Administration
601 57th Street SE
Charleston, WV 25304

Point of Contact:
Guy Nisbet (Buyer)
Phone: (304) 558-2596 x57506
Email: guy.l.nisbet@wv.gov

Item	Description	Qty	Cost	Extended Cost
Production Site: 601 57th Street SE Charleston, WV 25304				
DR Site: 1101 George Kostas Dr. Logan, WV 25801				
1	Netapp AFF A220A All Flash dual controller single chassis (2U) w/24x 3.8TB 12gbps X356A-R5 SSD. Onboard 4x UTA2 ports per ctrl (16/8gb fc/10gbe sfp+/10gbe fcoe) Includes DS224C (2U) w/ 24 x 3.8TB 12gbps X356A-R5 SSD. CDOT clustermode (9.4-9.7) license keys TPM, VE (NVE), Snapvault, Snaprestore, Snapmirror, Snapmanager Suite, Flexcone, NFS, CIFS, ISCSI, FCP Full configuration (4U) Est. 100TB useable	1	$264,440.00	$264,440.00
2	Support - AFF A220A - 24x7xNBD - Year One	1	included	included
3	NetApp FAS8200A Dual controller single chassis (3U) All Flash Optimized. Includes 2TB NVMe Flashcache. Onboard 4x UTA2 ports per ctrl (16/8gb fc/10gbe sfp+/10gbe fcoe). CDOT clustermode (9.4-9.7) license keys TPM, VE (NVE), Snapvault, Snaprestore, Snapmirror, Snapmanager Suite, Flexcone, NFS, CIFS, ISCSI, FCP. Includes 2 x DS224C (2U) w/ 24 x 3.8TB 12gbps X356A-R5 SSD. Full configuration (7U) Est. 100TB useable	1	included	included
4	Support - FAS8200A - 24x7xNBD - Year One	1	included	included
5	CISCO Nexus 3524-XL 24port 10Gb SFP+ Switches	2	included	included
6	QLogic 57810S 10GB SFP+ DP Network Card Adapter	16	included	included
7	CISCO 10Gbase-SR SFP+ (SFP-10G-SR)	24	included	included
8	Support - CISCO Nexus & SFP + QLogic - 24x7xNBD - Yr One	1	included	included
9	Services - Onsite & Remote (normal business hours)	1	included	included
10	Services assumes customer has host based software for migration services			

*All Equipment is 100% Original; RoHS Compliant
*Racks not included
*All accessories (rails, bezels, cables) for install included
*Shipping time estimated as 5 days; includes liftgate truck
*Lead Time 7-12 days
*Professional Services needs call and SOW completed
*Support Services require executed Service Agreement

Subtotal	$264,440.00
Sales Tax	TBD
Shipping	$2,100.00
Purchase Price	**$266,540.00**

11	Yr 2 support (all equipment above) 24x7x365; NBD onsite	1	$33,940.52	$33,940.52
12	Yr 3 support (all equipment above) 24x7x365; NBD onsite	1	$33,940.52	$33,940.52
13	Yr 4 support (all equipment above) 24x7x365; NBD onsite	1	$33,940.52	$33,940.52

Terms and Conditions

Customer is responsible for all applicable taxes and duties. Prices are in US currency. All items are considered used and subject to prior sale. Software relicensing and hardware recertification are the responsibility of the end user. Returns are subject to a restocking fee. Price does not include freight, installation or taxes unless noted. Purchase order, EFT and credit cards are acceptable methods of payment; please note, credit card purchases carry a (3) three percent processing fee in addition to purchase price. By signing this document, you are entering into an agreement with Reliant Technology, LLC to purchase the above products and/or services. The terms of your agreement with Reliant Technology are subject to Reliant Technology's standard terms and conditions provided at www.Reliant-Technology.com (the "Site"). By signing this quote, you represent and acknowledge that you have accessed the Site, reviewed the standard terms and conditions, and agree to the terms thereof. Simply sign and date and fax this sheet back to 404.393.2833 or email to jnolan@reliant-technology.com to accept this quote.

Print Name _____ Company _____

Signature _____ Date _____

Addendum A

04JN2120V1

1371 Southland Circle NW
Atlanta, GA 30318
404.551.4534 phone
404.393.2833 fax
www.Reliant-Technology.com

West Virginia Environmental Protection Office of Administration
601 57th Street SE
Charleston, WV 25304

Point of Contact:
Guy Nisbet (Buyer)
Phone: (304) 558-2596 x57506
Email: guy.l.nisbet@wv.gov

NetApp Experience

Our support team members have more than 30 YEARS COMBINED EXPERIENCE supporting NetApp products. All have over 3 years experience working on AFF and FAS systems.

Experience includes:	• 17 years with NetApp including 12 years as escalations engineer. • 13 years with NetApp as a support engineer providing operational support to customers that heavily use NetApp products as part of their storage infrastructure. • 2 years with NetApp as a support engineer providing operational support to customers.
Certifications:	NCIE NetApp Certified Implementation Engineer - SAN
Certifications:	NCDA NetApp Certified Data Management Administrator
Certifications:	NCSA NetApp Certified Storage Associate

NetApp problem resolution:

1	Trained new and exisiting support staff including introduction and continuing education course material and regular meetings to inform and educate staff on new and ongoing issues.
2	Responsible for promptly handling cases referred by senior or executive management for resolution, from “system down” to complex hardware or software issues that took some time to identify and resolve through analysis and reproduction in concert with engineering efforts.
3	Tier 4 support for urgent or complex controller, storage subsystem, FC or NFS technical issues
4	Troubleshooting for chassis components (backplane, front panel), motherboard and components (CPU, memory, expansion slots, service processor), environmental (PSU, fan, battery), storage disk shelf components (chassis, backplane, front panel) and drives (SAS, SATA/BSAS, SSD).

Escalations Engineer:

1	Tier 3 customer support for urgent or complex issues including on-call rotation.
2	Specialized in controller and storage subsystem hardware components and FC, iSCSI and NFS protocols.
3	Responsible for “system down” or where data integrity was threatened (multi-disk failure).
4	Specialized in data recovery cases - never lost any data!

TABLE OF CONTENTS

Specifications	FAS8200 	FAS9000 
	9.1 ONTAP	9.1 ONTAP
System Maximums and Limits		
Max Raw capacity (HA)	7344 TB	14400 TB
Max Storage Devices (HA)	480 (drives & array LUNs)	1440 (drives & array LUNs)
Max Nodes per Cluster (NAS / SAN)	24 / 12	24 / 12
Max Aggregate Size 32-bit	Not Supported	Not Supported
Max Aggregate Size 64-bit	400 TiB	400 TiB
Min Root Aggregate Size	431 GiB	1 TiB
Max FabricPool Size	Not Supported	Not Supported
Max FlexVol Size 32-bit	Not Supported	Not Supported
Max FlexVol Size 64-bit	100 TiB	100 TiB
Max Infinite Volume Data Constituent Size	70 TiB	100 TiB
Max FlexGroup Data Constituent Size	100 TiB	100 TiB
Max Volume Count (Per Node)	1000	1000
Min Root Volume Size	350 GiB	962 GiB
NetApp Volume Encryption	Supported	Supported
FlexArray Specifications		
Spray Core Array LUNs Recommended Min Raw Capacity	28.13 TiB [1]	119.53 TiB [1]
Spray Core Array LUNs Absolute Min Raw Capacity	16.88 TiB [2]	71.72 TiB [2]
Max Array LUN Size	15.31 TiB [3]	15.31 TiB [3]
Min Array LUN Size	1.05 GiB	1.05 GiB
Min Size for an Array LUN Aggregate	300.00 GiB	1.25 TiB
Min Array LUN Size – Root Volume	634.00 GiB	1.70 TiB
Spare Core Array LUN Min Size	326.00 GiB	1.35 TiB
Max RAID Groups in an Aggregate	150	150
Block Size	512 bytes	512 bytes
Neighborhood Visible and Assigned Devices	-	-
Technical Specifications - Processor		
Processor Model	64-bit 16-core 1.70 Ghz	64-bit 18-core 2.30 Ghz
Processor Architechture	64 bit	64 bit
Processor Speed	1.70 Ghz	2.30 Ghz
Processor Count (Per Node)	1	2
Processor Count (Per HA Pair)	2	4
Processor Cores	16	18
Total Processor Cores (Per Node)	16	36
Total Processor Cores (Per HA Pair)	32	72
Technical Specifications per HA pair		
Memory	256 GB	1024 GB
Ethernet Ports	4 x RJ45 (10Gb) 4 x SFP+ (10Gb)	-
Fibre Channel Ports	-	-
UTA2 Ports	8 x SFP+ (10Gb/16Gb) [4]	-

Specifications	FAS8200 	FAS9000 
	9.1 ONTAP	**9.1 ONTAP**
Expansion Slots	4 x PCIe3	20 x IO Module
SAS Ports	8 x MiniSAS HD (12Gb)	-
Physical Characteristics		
Rack Units	3	8
Chassis Height	5.12" (13 cm)	14.02" (35.6 cm)
Chassis Width with Mounting Flanges	18.98" (48.2 cm)	19.02" (48.3 cm)
Chassis Width without Mounting Flanges	17.6" (44.7 cm)	17.72" (45 cm)
Chassis Depth with Cable Mgmt	28.94" (73.5 cm)	36.81" (93.5 cm)
Chassis Depth without Cable Mgmt	23.94" (60.8 cm)	30.79" (78.2 cm)
Chassis Weight - One Controller Module	-	-
Chassis Weight - Two Controllers Module	76.00 lb (34.473 kg)	214.47 lb (97.28 kg)
Chassis Weight - Controller + IOXM	-	-
System Clearance Dimensions		
Front Clearance (Cooling)	5.91" (15 cm)	6.03" (15.3 cm)
Front Clearance (Maintenance)	29.94" (76 cm)	31.01" (78.7 cm)
Rear Clearance (Cooling)	5.91" (15 cm)	6.03" (15.3 cm)
Rear Clearance (Maintenance)	20.09" (51 cm)	22.02" (55.9 cm)
Environmental Requirements		
Operating Temperature Range	41 to 113 deg F 5 to 45 deg C	41 to 113 deg F 5 to 45 deg C
Storage Temperature Range	-40 to 158 deg F -40 to 70 deg C	-40 to 158 deg F -40 to 70 deg C
Transit Temperature Range	-40 to 158 deg F -40 to 70 deg C	-40 to 158 deg F -40 to 70 deg C
Operating Relative Humidity	8 to 90 %	8 to 90 %
Storage Relative Humidity	10 to 95 %	10 to 95 %
Transit Relative Humidity	10 to 95 %	10 to 95 %
Operating Altitude Range	Up to 10000.0 ft Up to 3048.0 m	Up to 10000.0 ft Up to 3048.0 m
Storage Altitude Range	Up to 40000.0 ft Up to 12192.0 m	Up to 40000.0 ft Up to 12192.0 m
Transit Altitude Range	Up to 39989.8 ft Up to 12192 m	Up to 39989.8 ft Up to 12192 m
Acoustic Noise - Sound Power	6.9 bels	7.4 bels
Acoustic Noise - Sound Pressure	53.1 dBA	65 dBA
Input Power Voltage	100 to 120, 200 to 240	100 to 120, 200 to 240
Storage O/S Requirements		
Min ONTAP version	9.1RC1, 9.2RC1, 9.3RC1, 9.4RC1, 9.5RC1, 9.6RC1, 9.7RC1	9.1RC2, 9.2RC1, 9.3RC1, 9.4RC1, 9.5RC1, 9.6RC1, 9.7RC1
Max ONTAP version	9.1P20, 9.2P4, 9.3P18, 9.4P8, 9.5P10, 9.6P5, 9.7	9.1P20, 9.2P4, 9.3P18, 9.4P8, 9.5P10, 9.6P5, 9.7
Software and Firmware * indicates that firmware is bundled with Storage OS Version		

Specifications	FAS8200 	FAS9000 
	9.1 ONTAP	**9.1 ONTAP**
BIOS	11.0, 11.0.1, 11.0.2*, 11.1, 11.2, 11.2.1, 11.4, 11.5, 11.7	10.0*, 10.1, 10.3, 10.4, 10.5, 10.7
CFE	N/A	N/A
Service Processor Firmware	5.0, 5.0.1, 5.1*, 5.1P1, 5.1P4, 5.6P3, 5.7	4.0, 4.1*, 4.1P1, 4.1P2, 4.1P7, 4.7
System Availability & Support		
Release Date	Oct 2016	Oct 2016
End of Availability (EOA)	-	-
End of Support (EOS)	-	-
Platform Maximum & Limits	**Config: Single Chassis HA Pair**	**Config: Single Chassis HA Pair**
Core Cluster Limits		
Maximum number of storage virtual machines (SVMs) - NAS	1,024	1,024
Maximum number of LIFs - NAS	512	512
Maximum number of connections - NAS	100,000	100,000
Maximum number of flexible volumes - NAS	2,000	2,000
Maximum number of flexible volumes with DPO - NAS	N/A	N/A
Maximum number of lock manager locked objects (CIFS and NFS combined)	1,200,000	3,000,000
NFS Cluster Limits		
Maximum number of Export Policies	12,000	12,000
Maximum number of Export Rules	140,000	140,000
Maximum NFSv4 Access Control Entries	N/A	N/A
Maximum number of client objects	100,000	100,000
Maximum number of pNFS objects	1,024,000	1,024,000
WAFL Cluster Limits		
Maximum Size of a 64-bit Aggregate (TiB)	N/A	N/A
Maximum Size of a 64-bit Volume (TiB)	N/A	N/A
Maximum file size in a 64-bit Volume (TiB)	N/A	N/A
Maximum number of Volume Snapshot Copies	510,000	510,000
Maximum character length for Snapshot copy names	N/A	N/A
Maximum number of hard links	N/A	N/A
Maximum number of inodes/files	N/A	N/A
Maximum number of qtrees	200,000	200,000
Maximum number of concurrent DataMotion for Volumes (vol move) operations	16	16

Specifications	FAS8200 	FAS9000 
	9.1 ONTAP	9.1 ONTAP
Quality of Service Cluster Limits		
Maximum number of Policy Groups	12,000	12,000
Maximum number of QoS user workloads	12,000	12,000
Maximum number of nodes participating in QoS	N/A	N/A
SAN Cluster Limits		
Maximum number of storage virtual machines (SVMs) - SAN	250	250
Maximum number of flexible volumes - SAN	2,000	2,000
Maximum number of flexible volumes with DPO - SAN	N/A	N/A
Maximum number of LUNs	24,576	24,576
Maximum number of LUN mappings	24,576	24,576
Maximum LUN size (TiB)	N/A	N/A
Maximum FC queue depth available	N/A	N/A
Maximum ITNs	16,384	16,384
Maximum number of LIFS - iSCSI	1,024	1,024
Maximum number of LIFS - FCP	1,024	1,024
Maximum number of igroups	8,192	8,192
Maximum number of initiators	8,192	8,192
Maximum number of portsets	8,192	8,192
Maximum number of iSCSI sessions	16,384	16,384
CIFS Cluster Limits		
Maximum number of connected shares	1,000,000	1,000,000
Maximum number of regular shares	300,000	300,000
Maximum number of open files	1,500,000	1,500,000
Maximum number of local users	35,000	35,000
Maximum number of local groups	320,000	320,000
Maximum number of local group members	640,000	640,000
Data Protection Cluster Limits		
Maximum number of NDMP sessions	36	36
Maximum number of data protection (DP) mirrors and/or SnapVault relationships	2,000	2,000

Specifications	FAS8200 	FAS9000 
	9.1 ONTAP	9.1 ONTAP
Maximum number of data protection (DP) mirrors and/or SnapVault relationships for FabricPool	N/A	N/A
Maximum number of load sharing (LS) mirrors	N/A	N/A
Maximum number of concurrent Snap Mirror or SnapVault transfers	200	200
Maximum fan-out from source for DP mirror	N/A	N/A
Maximum fan-out from source for LS mirror	N/A	N/A
Maximum number of clusters that can be peered	255	255
Maximum Number of constituent volumes in a SnapMirror relationship	100	100
Maximum number of concurrent NDAS relationship transfers	N/A	N/A
Maximum number of SnapMirror Synchronous relationships	N/A	N/A

Notes ID	Notes Description
1	A spray core occurs when there is no suitable spare core or if the spare core increase disruption time, then the system attempts to stripe the coredump over the non-file system region of multiple array LUNs. For a spray core to operate, a minimum total capacity of array LUNs assigned to the system is required which is defined by this value. If greater than 2 TiB array LUNs are used, the required capacity is increased five times because the non-file system region is a smaller percentage of the total space (0.2% compared to 1%).
2	A spray core occurs when there is no suitable spare core or if the spare core increase disruption time, then the system attempts to stripe the coredump over the non-file system region of multiple array LUNs. If there is no enough capacity available as per the Spray Core Array LUNs Recommended Min Raw Capacity (GiB) attribute value, the system attempts to first compress the data before spraying. Assuming 60% compression, the system should have at least the total assigned capacity as per the Spray Core Array LUNs Absolute Min Raw Capacity (GiB) attribute value for a compressed spray core to work. If greater than 2 TiB array LUNs are used, the required capacity is increased five times because the non-file system region is a smaller percentage of the total space (0.2% compared to 1%)".
3	The maximum LUN size provided is a number determined by the V-Series/FlexArray product team. Supported maximum LUN size will be the lesser of published maximum LUN size by NetApp and maximum LUN size supported by the backend array
4	The onboard UTA2 ports can be configured as FC Target/Initiator or CNA (FCoE target/Ethernet). The UTA2 ports are based on a dual port ASIC and both ports on each ASIC must be set to the same mode (enforced by Data ONTAP). Install X6599A-R6 10GbE SFP+ modules or approved copper twinax cables when using in CNA (FCoE target/Ethernet) mode. Install X6596-R6 16Gb FC SFP+ module when using in FC Target/Initiator mode.

INTERPRETING THESE MEASUREMENTS

The headings for the electrical requirements tables are defined as follows:

• Worst-case - Power consumption with system running on one PSU, high fan speed and power distributed over one power cord. DS4xxx disk shelves are an exception, in that they require two PSUs.

• Per PSU - Typical power needs, per PSU, for a system operating under normal conditions.

• System - Typical total power needs for two PSUs in a system operating under normal condition and power distributed over two power cords or four power cords for DS4243 disk shelves.

HOW THESE MEASUREMENTS ARE MADE

These published system measurements are conservative. The following assumptions, conditions and observations apply to these measurements:

• Line voltage is either 100V AC, 200V AC or -48V DC.

• Current and power are steady state rms values.

• Heat dissipation in BTU/hour is based on Watts multiplied by 3.4129

• Measurements are taken at room ambient.

• Data is collected for each individual controller, controller module, or disk shelf, not for clustered systems or other combinations. Except for platforms that have two controllers in one chassis.

• Each disk shelf is fully populated with a particular drive type and speed and exercised with multiple threads of a disk stress test program.

• Controllers or controller modules with PCI slots are fully populated and are exercised with test program.

• To account for customer work loads that exceed these conditions, the total system workload is calculated using random read disk_qual to obtain electrical current, power, and heat dissipation values.

• If the system configuration causes fan speed to increase or decrease, the data is collected in that mode.

Size, Weight, Acoustic, Power

FAS8200 9.1 ONTAP

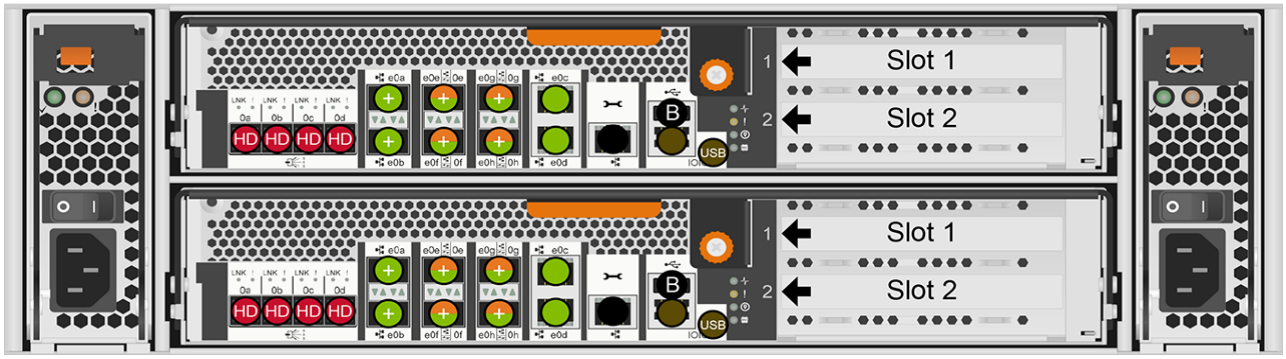
Associated Part No.	Configuration	Rack Units	Weight	Sound Power	Sound Pressure	Line Voltage Actual	Amps Typical	Amps Worst	Watts Typical	Watts Worst	BTU/Hr Typical	BTU/Hr Worst
FAS8200												
FAS8200A	FAS8200 2 PCM	3	76.0 lb (34.5 kg)	6.9 Bels	53 dBA	100	5.65	6.49	553	636	1888	2171
FAS8200A	FAS8200 2 PCM	3	76.0 lb (34.5 kg)	6.9 Bels	53 dBA	200	2.77	3.19	542	624	1850	2130

FAS9000 9.1 ONTAP

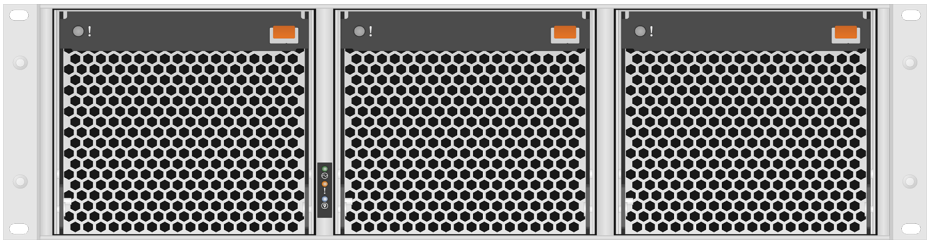
Associated Part No.	Configuration	Rack Units	Weight	Sound Power	Sound Pressure	Line Voltage Actual	Amps Typical	Amps Worst	Watts Typical	Watts Worst	BTU/Hr Typical	BTU/Hr Worst
FAS9000												
FAS9000A	FAS9000 2 PCM 2xSAS, 6xUTA, 6x40G, 4x10Gb-T, 2x8TB	8	214.5 lb (97.3 kg)	7.4 Bels	65 dBA	100	18.97	19.84	1859	1944	6345	6635
FAS9000A	FAS9000 2 PCM 2xSAS, 6xUTA, 6x40G, 4x10Gb-T, 2x8TB	8	214.5 lb (97.3 kg)	7.4 Bels	65 dBA	200	9.30	9.73	1822	1906	6219	6505
FAS9000A	FAS9000 2 PCM 4xSAS, 2xUTA, 6x40G, 2x2TB	8	198.0 lb (89.8 kg)	7.4 Bels	65 dBA	100	17.50	18.36	1715	1799	5854	6140
FAS9000A	FAS9000 2 PCM 4xSAS, 2xUTA, 6x40G, 2x2TB	8	198.0 lb (89.8 kg)	7.4 Bels	65 dBA	200	8.58	9.00	1681	1764	5738	6021
FAS9000A	FAS9000 2 PCM 4xSAS, 2xUTA, 6x40G, 2x8TB	8	198.0 lb (89.8 kg)	7.4 Bels	65 dBA	100	17.50	18.36	1715	1799	5854	6140
FAS9000A	FAS9000 2 PCM 4xSAS, 2xUTA, 6x40G, 2x8TB	8	198.0 lb (89.8 kg)	7.4 Bels	65 dBA	200	8.58	9.00	1681	1764	5738	6021

Alternate View Images

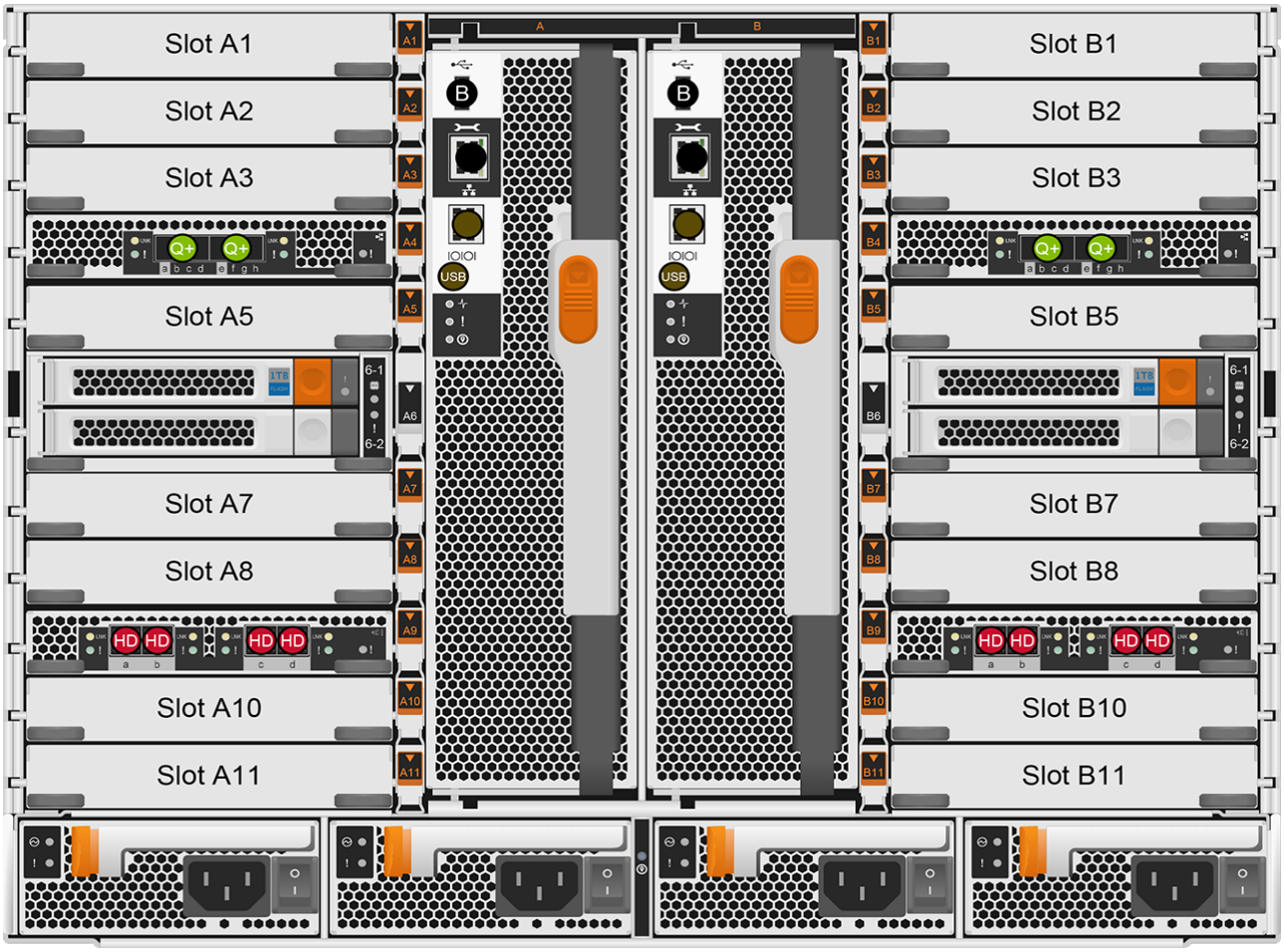
Rear View - FAS8200 (Controller + Controller)

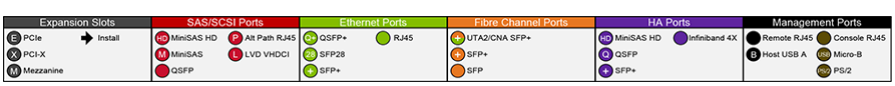


FAS8200 - Front Open



Rear View - FAS9000 (Controller + Controller)





Datasheet

NetApp AFF A-Series

Leading the future of flash

Key Benefits

Accelerate Applications

- Speed up your critical applications with the industry's fastest end-to-end NVMe enterprise all-flash array.
- Accelerate artificial intelligence and machine learning applications with lowest latency.
- Support 2 times more workloads and cut application response time in half with a modern NVMe-based SAN infrastructure.

Reduce Data Center Costs

- Minimize your data center footprint by storing up to 2PB of data in a 4U compact system.
- Save SSD storage by 5 to 10 times with inline data reduction technologies.
- Reduce power and cooling, rack space, and support costs dramatically.

Simplify IT Operations

- Unify data services across SAN and NAS environments, both on the premises and in the cloud.
- Set up and configure a complete system and serve data within 10 minutes.
- Safeguard your data with best-in-class integrated data protection and seamless cloud backup and recovery.

Data driven organizations require an agile and efficient IT infrastructure to meet the demand for fast, secure, and continuous data access. A fundamental first step in undertaking an IT transformation is to modernize your infrastructure with all-flash storage to improve speed and responsiveness for critical business applications. New workloads, such as data analytics, artificial intelligence (AI), and deep learning (DL), demand extreme performance that first-generation flash systems cannot deliver. Additionally, more and more organizations are adopting a "cloud first" strategy, driving the need for enterprise-grade data services for a shared environment across on-premises data centers and the cloud. As a result, modern all-flash arrays must provide robust data services, integrated data protection, seamless scalability, and new levels of performance—plus deep application and cloud integration.

Cloud-Connected All-Flash Storage Powered by ONTAP

IT departments need smart, powerful, trusted solutions that take advantage of modern cloud technologies. NetApp® AFF A-Series systems are designed to help organizations accelerate their infrastructure transformation and fuel data-driven strategies. Powered by NetApp ONTAP® data management software, AFF systems deliver the industry's highest performance, superior flexibility, and best-in-class data services and cloud integration to help you accelerate, manage, and protect your business-critical data in the hybrid cloud.

A wide range of customers, from enterprise to midsize businesses, rely on AFF to:

- Simplify operations with seamless data management, on the premises and in the cloud.
- Accelerate traditional and new-generation applications.
- Keep business-critical data available, protected, and secure.

AFF A-Series systems support end-to-end NVMe technologies, from NVMe-attached SSDs to front-end NVMe over Fibre Channel (NVMe/FC) host connectivity. These systems deliver the industry's lowest latency for an enterprise all-flash array, making them a superior choice for driving the most demanding workloads and AI/DL applications. With a simple software upgrade to the modern NVMe/FC SAN infrastructure, you can drive more workloads with faster response times, without disruption or data migration.

NetApp®

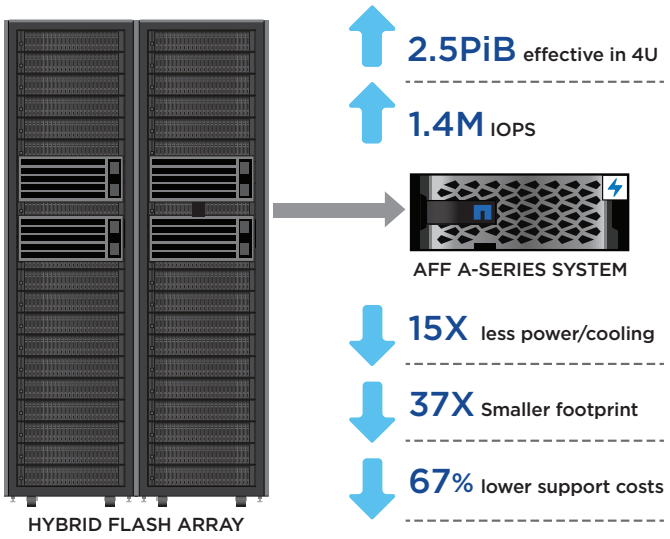


Figure 1) Benefits of Modernizing with All-Flash.

Increase Operational Efficiency for Your Business

IT departments are striving to make budgets go further and to allow IT staff to focus on new value-added projects rather than on day-to-day IT management.

Provision storage in minutes

NetApp AFF systems offer broad application ecosystem support and deep integration for enterprise applications, virtual desktop infrastructure (VDI), database, and server virtualization, supporting Oracle, Microsoft SQL Server, VMware, SAP, MySQL, and more. You can quickly provision storage in less than 10 minutes with NetApp ONTAP System Manager (formerly OnCommand® System Manager).

Infrastructure management tools simplify and automate common storage tasks so that you can:

- Easily provision and rebalance workloads by monitoring clusters and nodes.
- Use one-click automation and self-service for provisioning and data protection.
- Import LUNs from third-party storage arrays directly into an AFF system to seamlessly migrate data.

In addition, the NetApp Active IQ® intelligence engine enables you to optimize your NetApp systems with predictive analytics and proactive support. Fueled by NetApp's massive user base, AI and machine learning create actionable insights that help you prevent problems, optimize your configuration, save time, and make smarter decisions.

Achieve storage savings, backed by the industry's most effective guarantee

NetApp employs various capabilities to promote optimal capacity savings and to drive down your TCO. AFF system's support for solid-state drives (SSDs) with multistream write technology, combined with advanced SSD partitioning, provides maximum usable capacity, regardless of the type of data that you store. Thin provisioning; NetApp Snapshot™ copies; and inline data reduction features, such as deduplication, compression, and compaction, provide substantial additional space savings—without affecting performance—enabling you to purchase the least amount of storage capacity possible. With AFF, you can dramatically reduce your data center costs with the best effective capacity for any workload, backed by the industry's most effective guarantee.

Build your hybrid cloud with ease

The NetApp Data Fabric helps your organization simplify and integrate data management across cloud and on-premises to meet business demands and gain a competitive edge. With AFF, you can connect to more clouds for more data services, data tiering, caching, and disaster recovery. You can also:

- Maximize performance and reduce overall storage costs by automatically tiering cold data to the cloud with FabricPool.
- Greatly simplify hybrid cloud backup and recovery with cloud-resident NetApp Data Availability Services.
- Accelerate read performance for data that is shared widely throughout your organization and across hybrid cloud deployments.

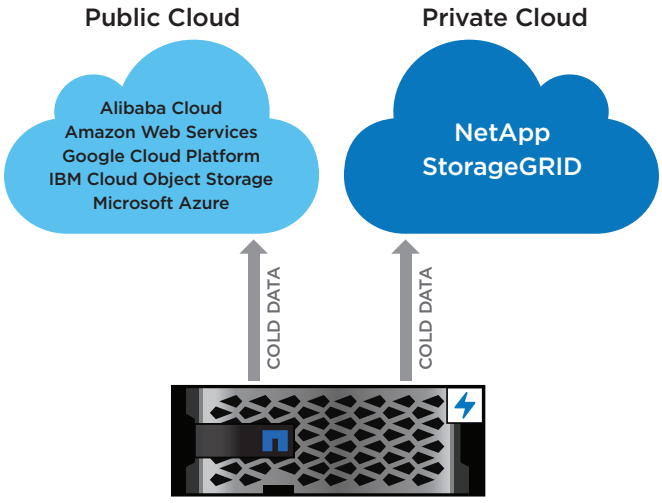


Figure 2) Automatic tiering to the cloud.

Accelerate Applications and Future-Proof Your Infrastructure

In the modern data center, IT is charged with driving maximum performance for business-critical workloads, scaling without disruption as the business grows, and enabling the business to take on new data-driven initiatives.

Get the best performance for your most demanding applications

NetApp AFF systems deliver industry-leading performance proven by SPC-1 and SPEC SFS industry benchmarks, making them ideal for demanding, highly transactional applications such as Oracle, Microsoft SQL Server, MongoDB databases, VDI, and server virtualization. With the power of front-end NVMe/FC host connectivity combined with back-end NVMe-attached SSDs, the AFF systems deliver latency as low as 100µs, making them an optimal fit for your most demanding workloads. The midrange AFF A400 system puts best performance within your budget. Supporting NVMe/RoCE connectivity on the back end to the NVMe drive shelf and NVMe/FC on the front end to the host, the AFF A400 leads the market with the most advanced host network connectivity to support a wide variety of deployments. The hardware acceleration significantly enhances performance and storage efficiency: You can also:

- Drive your mission-critical SAN workloads with symmetric active-active host connectivity that delivers continuous availability and instant failover.
- Consolidate workloads on AFF systems, which can deliver up to 11.4 million IOPS at 1ms latency in a cluster with a truly unified scale-out architecture. You also get built-in adaptive quality of service (QoS) that safeguards SLAs in multiworkload and multitenant environments.
- Manage massively scalable NAS containers of up to 20PB and 400 billion files with a single namespace.
- Improve the speed and productivity of collaboration across multiple locations and increase data throughput for read-intensive applications with NetApp FlexCache® software.

Modernize with advanced NVMe

Designed specifically for flash, the AFF A-Series all-flash systems deliver industry-leading performance, density, scalability, security, and network connectivity. AFF A-Series systems support NVMe/FC host connectivity on all midrange and high-end systems, so you can get twice the IOPS and cut application response time in half compared with traditional FC. These systems support a range of ecosystems, including VMware, Microsoft Windows 10, and Linux, with storage path failover. For most customers, integrating NVMe/FC into an existing SAN is a simple, nondisruptive software upgrade.

Scale without disruption

You can integrate new technologies and private or public cloud into your infrastructure nondisruptively. AFF is the only all-flash array that enables you to combine different controllers, SSD sizes, and new technologies so that your investment is protected. The newer NVMe-based AFF systems also support SAS SSDs, maximizing the flexibility and cost effectiveness of your upgrade.

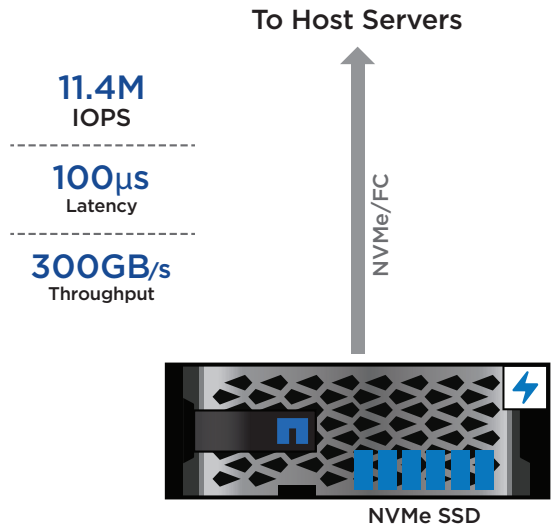


Figure 3) Industry-leading NVMe performance.

Keep Important Data Available, Protected, and Secure

As organizations become more data driven, the business impact of data loss can be increasingly dramatic—and costly. IT must protect data from both internal and external threats, ensure data availability, eliminate maintenance disruptions, and quickly recover from failures.

Integrated data protection

AFF systems come with a full suite of acclaimed NetApp integrated and application-consistent data protection software. Key capabilities include:

- Native space efficiency with cloning and NetApp Snapshot copies reduce storage costs and minimize performance impact. Up to 1,023 copies are supported.
- NetApp SnapCenter® software provides application-consistent data protection and clone management to simplify application management.
- NetApp SnapMirror® technology replicates to any NetApp FAS or AFF system on the premises or in the cloud, reducing overall system costs.

Business continuity and fast disaster recovery

With AFF, you can maintain constant data availability with zero data loss and zero downtime. NetApp MetroCluster™ software provides synchronous replication to protect your entire system, and NetApp SnapMirror Synchronous provides more granular replication of selected critical data.

Security everywhere
Flexible encryption and key management help guard your sensitive data on the premises, in the cloud, and in transit. With the simple and efficient security solutions, you can:

- Achieve FIPS 140-2 compliance (Level 1 and Level 2) with self-encrypting drives and use any type of drives with software-based encryption.
- Meet governance, risk, and compliance requirements with security features such as secure purge; logging and auditing monitors; and write once, read many (WORM) file locking.
- Protect against threats with multifactor authentication, role-based access control, secure multitenancy, and storage-level file security.

Get More Business Value with Services

NetApp Services and NetApp Services Certified Partners collaborate with you to enhance your IT capabilities through a full portfolio of services that cover your IT lifecycle. To help you get the most value from your flash technology investment, NetApp offers:

- Assessment services to help evaluate the performance and efficiency of workloads across your heterogeneous environments.
- Advisory services to help you determine the best workload candidates to move to flash.
- Deployment and optimization services to prepare your environment and to deliver continuous operation of your AFF systems.
- Managed upgrade services to secure your storage environment and to protect your investment by ensuring your ONTAP software is the most current version.

Learn more at netapp.com/services.

About NetApp

NetApp is the data authority for hybrid cloud. We provide a full range of hybrid cloud data services that simplify management of applications and data across cloud and on-premises environments to accelerate digital transformation. Together with our partners, we empower global organizations to unleash the full potential of their data to expand customer touchpoints, foster greater innovation and optimize their operations. For more information, visit www.netapp.com. #DataDriven

Table 1) AFF technical specifications.

	AFF A800	AFF A700	AFF A400	AFF A220
Maximum scale-out	2–24 nodes (12 HA pairs)	2–24 nodes (12 HA pairs)	2–24 nodes (12 HA pairs)	2–24 nodes (12 HA pairs)
Maximum SSDs	2,880	5,760	5,760	1,728
Maximum effective capacity[1]	316.3PB	702.7PB	702.7PB	193.3PB
Per-System Specifications (Active-Active Dual Controller)				
	AFF A800	AFF A700	AFF A400	AFF A220
Controller form factor	4U with 48 SSD slots	8U	4U	2U with 24 SSD slots
PCIe expansion slots	8	20	10	n/a
FC target ports (32Gb autoranging)	32	64	24	n/a
FC target ports (16Gb autoranging)	32	64	32 (with FC mezzanine card)	8
FCoE target ports, UTA2	n/a	64	n/a	8
100GbE ports (40GbE autoranging)	20	n/a	16	n/a
40GbE ports (10GbE autoranging)	n/a	32	n/a	n/a
25GbE ports	16	n/a	16	n/a
10GbE ports	32	64	32	12
10Gbase-T (1GbE autoranging)	n/a	64	16	n/a
12Gb/6Gb SAS ports	n/a	64	32	4
Storage networking supported	NVMe/FC, FC, iSCSI, NFS, pNFS, CIFS/SMB	NVMe/FC, FC, FCoE, iSCSI, NFS, pNFS, SMB	NVMe/FC, FC, iSCSI, NFS, pNFS, CIFS/SMB	FC, FCoE, iSCSI, NFS, pNFS, SMB
OS version	ONTAP 9.4 RC1 or later	ONTAP 9.1 RC1 or later	ONTAP 9.7RC1 or later	ONTAP 9.4 RC1 or later
Shelves and media	NVMe drive packs DS224C (2U; 24 drives, 2.5" SFF); DS2246 (2U; 24 drives, 2.5" SFF)	DS224C (2U; 24 drives, 2.5" SFF); DS2246 (2U; 24 drives, 2.5" SFF)	NS224 (2U; 24 drives, 2.5" SFF NVMe); DS224C (2U; 24 drives, 2.5" SFF), DS2246 (2U; 24 drives, 2.5" SFF)	DS224C (2U; 24 drives, 2.5" SFF); DS2246 (2U; 24 drives, 2.5" SFF)
Host/client OS supported	Microsoft Windows 2000, Windows Server 2003, Windows Server 2008, Windows Server 2012, Windows Server 2016, Linux, Oracle Solaris, AIX, HP-UX, Mac OS, VMware, ESX			

1. Effective capacity is based on 5:1 storage efficiency ratios with the maximum number of SSDs installed. The actual ratio can be higher depending on workloads and use cases.

Table 2) AFF A Series Software

Data access protocols	• FC, iSCSI, NVMe/FC, FCoE, NFS, SMB
High availability	• Active-active and symmetric active-active (SAN-only) host connectivity • Nondisruptive maintenance, upgrade, and scale-out clustering • Multisite resiliency for continuous data access
Storage efficiency	• Inline data compression, deduplication, and compaction • Space-efficient LUN, file, and volume cloning • Automatic data tiering
Data management	• Intuitive onboard GUI, REST APIs, and automation integration • AI-informed predictive analytics and corrective action • Quality of service (QoS) workload control • Easily provision and manage data from market-leading host operating systems, hypervisors, and application software
Scalable NAS	• Large-scale single namespace management with local and remote caching
Data protection	• Application-consistent Snapshot copies and restore • Integrated remote backup and disaster recovery • Synchronous zero data loss replication
Security and compliance	• Multifactor admin access • Secure multitenant shared storage • In-flight and data-at-rest encryption • Regulatory-compliant data retention
Cloud integration	• Seamlessly tier, back up, replicate, and cache data to private and public clouds • Move data between major public cloud services

Basic Terms

Customer Name:	West Virginia Environmental Protection Office of Administration	("Customer")
Date of Agreement:	4/23/2020	("Effective Date")
Start Date of Initial Term:	TBD	("Start Date")
Term Renewal Date:	Annual for up to 4 years	("Renewal Date")
Covered Equipment:	**Located in Schedule A Equipment List**	(All equipment listed on the Covered Equipment List is referred to collectively as the "Equipment.")
Reliant Service Plans:	LEVEL 1	Schedule B - Service Plans
Annual Fee to be paid to Reliant	Outlined in quote # 04JN2120V1_	("Fee")
Fee payment terms	Net 45	("Payment Terms")
Address where Equipment located (if all Equipment not located at same address, please specify address for all Equipment on Schedule A):	**Located in Schedule A Equipment List**	("Site")

Agreement

This Maintenance Service Agreement (this "Agreement") is executed as of the Effective Date by and between Reliant Technology, LLC ("Reliant") and the Customer, who agree as follows:

1. **Incorporated terms.** The Basic Terms stated above and all Schedules and attachments to this Agreement are incorporated in this Agreement by reference.

2. **Term and Renewal.** The term of this Agreement (the “Term”) will begin on the Start Date and extend until this Agreement is terminated pursuant to its terms. Unless Reliant or Customer elects not to renew the Agreement by delivering written notice to the other party at least 60 days prior to the Renewal Date (a “Termination Notice”), the Term will renew automatically as of the Renewal Date for a period equal to the time between the Start Date and the Renewal Date. Such renewal will continue automatically until Customer delivers a Termination Notice at least 60 days prior to the end of the then-current Term period. Any renewal of the Term will be on the same terms and conditions as the immediately preceding Term period. If Reliant or Customer delivers a timely Termination Notice, the Term will end on the next Renewal Date.1

3. **Termination.** Either Party may terminate this Agreement (a) on sixty days' prior written notice or (b) on written notice upon the failure of the other Party to comply with its obligations under this agreement. If Customer attempts to terminate under section 3(a), Reliant will be entitled to all the remaining fee otherwise owed under this Agreement. Unless terminated by a Party, this Agreement commences on the Start Date appearing above and continues for an initial Term of one (1) year.

4. **Service to be Provided.** All service to be provided by Reliant under this Agreement is referred to collectively as the "Service." During the Term, Reliant will provide the Service Plan indicated for each component of the Equipment as specified on the Covered Equipment List (Attachment A). As part of the Service, Reliant will: (a) maintain the Equipment in good operating condition by performing such adjustments or repairs as are required by normal operation of the Equipment; and, (b) furnish remedial maintenance services including replacement of maintenance parts for the Equipment deemed necessary by Reliant, consistent with the requirements of the Service Plan Level selected by Customer. Reliant does not warrant or guarantee continuous operation of the Equipment. The Service will not include any performance obligation on the part of Reliant that is not expressly stated in this Agreement.

5. **Payment of Fee.** Customer will pay Reliant the Fee by no later than the deadline stated in the Payment Terms. If no deadline is stated in the Payment Terms, Customer will pay Reliant the entire Fee by no later than the first day that Reliant provides Service to the Customer. If any period of the Term is for less than one year, the annual Fee will be prorated for a partial year.

6. **Modifications to the Equipment.** Customer will not modify any component of the Equipment or move it from the Site between the Effective Date and the end of the Term unless it provides written notice to Reliant at least 60 days prior to such modification or move. If any proposed Customer modifications to or movement of the Equipment materially change the requirements necessary for Reliant to provide the Service, then Reliant will have the option to either terminate this Agreement upon written notice to Customer or to propose an adjustment to the Fee and the other terms and conditions of this Agreement to account for the changes to the Service requirements, which modification will be subject to Customer's review and approval.

7. **Customer Responsibilities.** From the Effective Date until the end of the Term, as a condition to Reliant's performance obligations under this Agreement, Customer will: (a) provide a suitable operating environment for the Equipment that complies with all manufacturer requirements and recommendations; (b) timely update all software systems used on any of the Equipment consistent with manufacturer recommendations; (c) provide the Equipment in good operating condition; (d) prior to the commencement of any Services, perform and verify a complete back-up of all data stored on any of the Equipment; (e) provide all such access, space and resources at the Site requested by Reliant that are reasonably necessary to perform the Service;2 (f) maintain, update and back up all operating systems and other applicable programs and software relating to the Equipment, including but not limited to installing necessary hardware and software at the supported release levels; refrain from conducting any maintenance or repairs on the Equipment that are not consistent with manufacturer recommendations and best practices; and (g) adhere with all manufacturer recalls and replacements. Reliant will not be responsible for any damages resulting from modification of the hardware configuration of any of the Equipment without Reliant's consent.

8. **Exclusions.** Reliant will not be required to perform any of the following as part of the Service: (a) general electrical work; (b) work related to modems, telephone lines, or other telecommunications or data delivery systems; (c) software updates; (d) repair or maintenance due to any cause other than Services adversely affecting the operation of the Equipment, including but not limited to damage or destruction of the equipment caused by fire or other casualty losses; (e) repair caused by Customer's failure to provide a suitable operating environment for the Equipment, or by improper use of the Equipment, or use of the Equipment for purposes other than for which it is designed; (f) maintenance or repairs attributable to unauthorized attempts by Customer or any third-party to repair or maintain the Equipment, or changes, modifications or alterations in or to the Equipment or any associated devices. Upon detecting impairment of any Equipment, Customer will promptly contact Reliant for authorization prior to attempting repair or maintenance of such Equipment; (g) as to Equipment not maintained by Reliant immediately prior to the Effective Date, any work required to ensure good operating condition or to bring the Equipment in compliance with the terms of this Agreement; (h) repair of failures identified on systems logs that occurred prior to the Effective Date; or (i) any other maintenance, repair, or service not expressly required under the terms of this Agreement.

9. **On-Site Spares Kit; Parts.** Reliant may maintain certain spare parts and equipment at the Site (collectively, the "Spares Kit"). Customer will provide secure and suitable storage at the Site for the Spares Kit, and will indemnify Reliant and hold it harmless for all loss or damage to the Spares Kit that is not caused by Reliant's negligence or wrongful acts. Reliant will provide Customer with an itemized list of items in the Spares Kit. Upon the expiration of the Term or earlier termination of this Agreement consistent with its terms, Customer will immediately return the entire Spares Kit to Reliant. Maintenance parts, either new or reconditioned as determined by Reliant, will be furnished on an exchange basis. All removed parts will become the property of Reliant. As a condition of providing a Spares Kit, Reliant reserves the right to request standard charges from Customer for the Spares Kit provided.

10. **Indemnification.** Customer will promptly defend (with counsel of Reliant's choosing), indemnify, and hold harmless Reliant, and its parents, subsidiaries, and affiliates, and its and each of their respective owners, members, officers, directors, employees, agents and contractors (collectively the "Indemnified Parties") from and against any claim, damage, loss, or expense incurred by Reliant, including, without limitation, reasonable attorneys' fees, costs, litigation expenses, and settlement costs, arising out of this Agreement or its performance that do not result from an Indemnified Party's negligence, intentional wrongful acts, or actions or omissions taken in breach of this Agreement (collectively, a "Claim"). Upon the assertion or commencement of any Claim that may give rise to liability covered by Customer's indemnity, Customer may settle the Claim at its own expense with Reliant's consent. Reliant will at all times have the right to participate fully in such defense, and will not be obligated to authorize any settlement which it reasonably believes would have a material adverse effect on its business. The parties will promptly provide each other with such assistance as may reasonably be requested in order to ensure a proper and adequate defense. The provisions of this paragraph survive any termination or expiration of this Agreement.

11. **Exclusivity.** During the Term, Reliant will be the sole provider to Customer of all services similar to the Services and all upgrades, repairs, replacement, or maintenance of the Equipment. If Reliant cannot, or

elects not to, provide such services, Customer may engage an alternative provider upon Reliant's prior approval.

a. **Notices.** Notices addressed as shown below the signatures in this Agreement are considered delivered (a) when received in person or by email (with delivery confirmed), (b) three days after deposit into the U.S. mail, postage paid, via registered/certified mail, return receipt requested, or (c) one day after deposit with a nationally recognized overnight courier, postage paid.

b. **Entire Agreement.** This Agreement constitutes the entire agreement between the parties with respect to its subject matter, and may only be modified or amended in writing signed by the parties. Waiver of any breach of this Agreement by either party will only be effective if in writing and signed by the party against whom waiver is sought. No waiver by either party of the breach of any term or condition of this Agreement will constitute a waiver of, or consent to, any subsequent breach of the same or any other term or condition of this Agreement.

c. **Severability.** Whenever possible, each provision of this Agreement will be interpreted in such a manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision will be deemed restated to reflect the original intentions of the parties as nearly as possible in accordance with applicable law.

d. **Force Majeure.** Reliant's obligation to provide the Service will be suspended, and Reliant will not be in default of its obligations under this Agreement, during any period when its performance is materially inhibited or made impossible by reason of natural disaster, strikes, insurrection or war, fire, or other casualty, unavailability of necessary labor or materials, or other events and circumstances beyond Reliant's reasonable control (collectively, "Force Majeure Events"). In the event of a Force Majeure Event, upon written notice to Customer, Reliant may either terminate this Agreement or elect to extend the Term of this Agreement by a period equal to the period during which the Force Majeure Event is in effect.

e. **Integration.** There are no verbal or unwritten agreements between Reliant and Customer relating in any way to the subject matter of this Agreement. Customer is not relying on any representation or warranty of Reliant that is not stated in this Agreement as an inducement to enter into it, and Reliant expressly disclaims any such representation or warranty. Reliant makes no representation or warranty to Customer that is not stated in this Agreement.

f. **Reliant's Discretion.** To the extent Reliant has any discretion as to the performance of this Agreement, its discretion will be sole and absolute unless specified otherwise by the terms of this Agreement.

g. **Assignment; Subcontractors.** Reliant may assign or subcontract all or any part of its obligations under this agreement to one or more third-parties.

12. **Limitation on Liability.** IN NO EVENT WILL RELIANT, OR ITS PARENTS, SUBSIDIARIES, AFFILIATED COMPANIES, DIRECTORS, OFFICERS, EMPLOYEES, MEMBERS, OWNERS, LICENSEES, OR AGENTS (COLLECTIVELY, THE "RELIANT PARTIES") BE LIABLE TO CUSTOMER FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING IN ANY MANNER FROM THE ACTIVITIES CONTEMPLATED BY THIS AGREEMENT, WHETHER UNDER CONTRACT, TORT, OR OTHER CAUSE OF ACTION, EVEN IF RELIANT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. RELIANT MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THE PRODUCTS OR SERVICES TO BE PROVIDED UNDER THIS AGREEMENT OR THE EQUIPMENT WILL BE ERROR FREE OR OPERATE WITHOUT INTERRUPTION, AND THE WARRANTIES OF TITLE, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALONG WITH ALL OTHER WARRANTIES NOT EXPRESSLY STATED IN THIS AGREEMENT, ARE EXCLUDED AND DISCLAIMED. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT TO THE CONTRARY, RELIANT'S TOTAL, AGGREGATE LIABILITY FOR ALL CLAIMS ARISING IN CONNECTION WITH THIS AGREEMENT (ARISING IN CONTRACT OR TORT) WILL NOT EXCEED THE TOTAL PAYMENTS RECEIVED AND RETAINED BY RELIANT UNDER THIS AGREEMENT, AND RELIANT'S TOTAL LIABILITY FOR ANY SPECIFIC CLAIM WILL NOT EXCEED THE PAYMENTS RECEIVED AND RETAINED BY RELIANT AS ITS FEE FOR THE SERVICES WITH RESPECT TO WHICH THE CLAIM IS MADE. NOTWITHSTANDING ANY PERIOD OF LIMITATIONS UNDER AN APPLICABLE LAW TO THE CONTRARY, CLAIMS FOR DAMAGES UNDER THIS AGREEMENT OR ARISING FROM THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT MUST BE MADE BY CUSTOMER WITHIN ONE (1) YEAR OF THE INCIDENT TO WHICH THE CLAIM IS MADE OR SUCH CLAIM WILL BE FOREVER BARRED. Without limiting the foregoing, in no event will the Reliant Parties be liable to Customer for any costs, claims, demands or liabilities of Customer or any other party arising from any loss of Customer's data contained on the Equipment that is not the result of Reliant's gross negligence or intentional wrongful acts.

RELIANT TECHNOLOGY, LLC By: _____ Name: Chris A. Vollo Title: Director of Support Services Date: _____	**CUSTOMER:** By: _____ Name: _____ Title: _____ Date: _____
Notices to: Reliant Technology, LLC, 1371 Southland Cir NW, Atlanta, GA 30318 Attention: Maintenance Renewals maintenance@reliant-technology.com	**Notices to:** _____ _____ _____ _____ Attention:_____

Schedule A - Equipment List

Location	Description	Qty	Serial #	Service Level
Production Site: 601 57th Street SE Charleston, WV 25304				
DR Site: 1101 George Kostas Dr. Logan, WV 25801				
Charleston WV	Netapp AFF A220A All Flash dual controller single chassis (2U) w/24x 3.8TB 12gbps X356A-R5 SSD. Onboard 4x UTA2 ports per ctrl (16/8gb fc/10gbe sfp+/10gbe fcoe) Includes DS224C (2U) w/ 24 x 3.8TB 12gbps X356A-R5 SSD. CDOT clustermode (9.4-9.7) license keys TPM, VE (NVE), Snapvault, Snaprestore, Snapmirror, Snapmanager Suite, Flexcone, NFS, CIFS, ISCSI, FCP Full configuration (4U) Est. 100TB useable	1	TBD	Level 1 24x7x365; 4hr onsite
Logan WV	NetApp FAS8200A Dual controller single chassis (3U) All Flash Optimized. Includes 2TB NVMe Flashcache. Onboard 4x UTA2 ports per ctrl (16/8gb fc/10gbe sfp+/10gbe fcoe). CDOT clustermode (9.4-9.7) license keys TPM, VE (NVE), Snapvault, Snaprestore, Snapmirror, Snapmanager Suite, Flexcone, NFS, CIFS, ISCSI, FCP. Includes 2 x DS224C (2U) w/ 24 x 3.8TB 12gbps X356A-R5 SSD. Full configuration (7U) Est. 100TB useable	1	TBD	Level 1 24x7x365; 4hr onsite
TBD	CISCO Nexus 3524-XL 24port 10Gb SFP+ Switches	2	TBD	Level 1 24x7x365; 4hr onsite
TBD	QLogic 57810S 10GB SFP+ DP Network Card Adapter	16	TBD	Level 1 24x7x365; 4hr onsite
TBD	CISCO 10Gbase-SR SFP+ (SFP-10G-SR)	24	TBD	Level 1 24x7x365; 4hr onsite

Schedule B - Service Plans

Service Plan	Description of Service
Level 1	• Phone Support 24x7x365 • On-site service within four (4) hours if an issue cannot be resolved by Reliant's support team over the phone. • Parts required for maintenance will be delivered by the Field Engineer, unless they are unavailable from an optional On-Site Spares Kit (if applicable).