Datasheet

NetApp AltaVault Cloud-Integrated Storage

Deploy as a physical, virtual, or cloud-based appliance

Key Features

Efficient
Uses inline deduplication and compression for up to 30:1 data-reduction ratios.

Open
Integrates with the backup software that you already use and with all leading public and private cloud storage providers.

Secure
Keeps data encrypted at all times, reducing risks to both security and compliance in the cloud.

Simple
Enables you to go from zero to cloud protected in less than 30 minutes.

The Challenge

Traditional backup and recovery solutions fall short because they are:

- **Too slow.** Users expect instant recovery and minimal data loss, but legacy backup and recovery strategies can't keep pace. As a result, many organizations fail to meet backup and recovery windows.
- **Too expensive.** As storage grows, companies struggle with the rising cost of protecting that data on the premises. Also, bandwidth costs and constraints become more acute with larger datasets.
- **Too risky.** Many organizations still rely on tape, which increases risk exposure because of the potential for media lost in transport, increased downtime and data loss, and limited testing ability.
- **Too complex.** With an ever-increasing number of critical applications to protect, along with complex backup architectures, multiple backup apps, and error-prone legacy technologies, backup is incredibly complex.

The Solution

Back up and archive data to the public or private cloud
NetApp® AltaVault™ cloud-integrated storage enables customers to securely back up data to any cloud at up to 90% lower cost compared with on-premises solutions. AltaVault gives customers the power to tap into cloud economics while preserving investments in existing backup infrastructure and meeting backup and recovery SLAs.

AltaVault physical appliances
AltaVault physical appliances are among the industry's most scalable cloud-integrated storage appliances, with capacities ranging from 32TB up to 384TB of usable local cache. Enterprises often deploy AltaVault physical appliances in their data centers to protect large volumes of data. These datasets typically require the highest levels of performance and scalability available. AltaVault physical appliances are built on a scalable and efficient hardware platform that is optimized to reduce data footprints and rapidly stream data to the cloud.

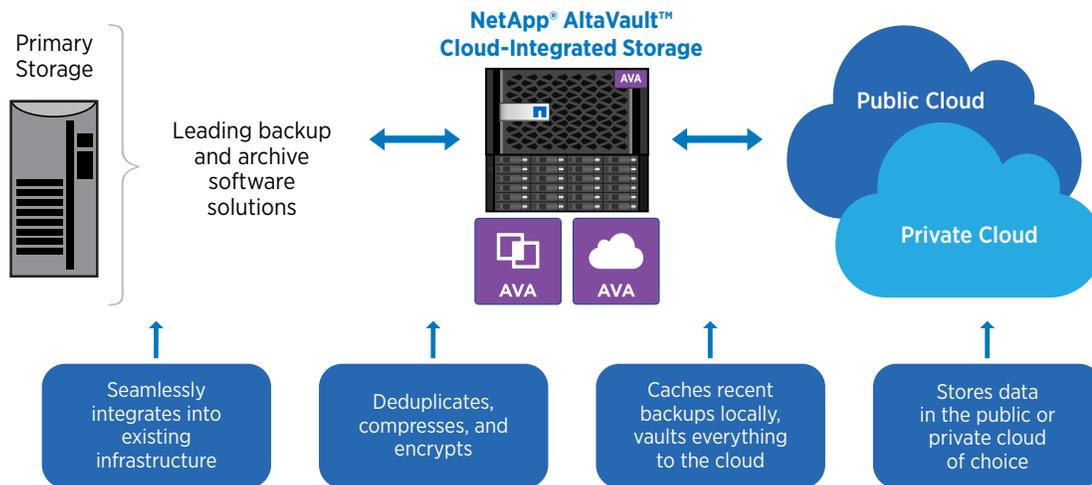## ■ NetApp®

How AltaVault Appliances Work

Figure 1) AltaVault integrates with backup software solutions and cloud storage providers.

AVA400 and AVA800 Model Specifications

CATEGORY	ATTRIBUTES[1]	PHYSICAL APPLIANCES		
		Backup Mode		Cold Storage Mode
		AVA400	AVA800	AVA400
Performance	Backup throughput (maximum)[2]	9.8TB/hr	14.1TB/hr	350GB/hr
Cloud	Cloud storage providers supported	Multiple; visit the solution connection[4] for more details		
	Cloud capacity supported[3]	160TB–960TB	240TB–1.92PB	10PB
	Logical cloud capacity[4]	480TB–28PB	720TB–57PB	10PB
Local disk storage	Usable local capacity	32TB–192TB	48TB–384TB	32TB
	Raw local capacity	48TB–288TB	72TB–576TB	48TB
	Number of disk drives	12–72	12–96	12
	Disk drives' capacity and type	4TB at 7.2K RPM, NL-SAS	6TB at 7.2K RPM, NL-SAS	4TB at 7.2K RPM, NL-SAS
	Disk Shelves Supported	AVA10S (4U; 24 drives, 3.5" LFF)	AVA120S (4U; 24 drives, 3.5" LFF)	AVA10S (4U; 24 drives, 3.5" LFF)
	RAID protection	RAID 6		
Network	Onboard I/O: 10GbE	4		
	Onboard I/O: GbE	4		
	Storage networking supported	CIFS/SMB, NFS, OST, SnapMirror® (as of version 4.3)		
Software	Software version	AltaVault OS 4.0 or higher		
Third-party application	Backup/archive software supported	Multiple; visit the solution connection[4] for more details		

1. For details about technical specifications, contact your nearest NetApp or channel sales associate.
2. Backup throughput for physical appliances based on OST protocol.
3. 5x of appliance usable local capacity; for example, a maximum of 160TB of cloud capacity can be supported by 32TB of usable local capacity.
4. Backup mode: calculated using 30x deduplication.
5. http://solutionconnection.netapp.com/altavault

Table 1) Specifications for AVA400 and AVA800.

System Environmental Specifications

AVA400 AND AVA800 CONTROLLER	
Thermal rating (at 200V)	2,880 BTU (typical, per enclosure) 3,252 BTU (worst case, per enclosure)
Weight (heaviest)	115.08 lb
Height	6U
Width	19″ IEC rack-compliant (17.6″, 44.7cm)
Depth	24.3″ (28.9″ with cable management)
Operating temperature, altitude, and relative humidity	10°C–40°C (50°F–104°F); at <= 3,000m (at <= 10,000′) elevation; 20%–80% relative humidity, noncondensing (28°C wet bulb temperature)
Nonoperating temperature, altitude, and relative humidity	–40°C–70°C (–40°F–158°F); 5%–95% relative humidity, –1,000–40,000 ft, noncondensing, in original container
Operating acoustic noise	Declared sound power (LwAd) per ISO 9296: 7.5 Bel @at normal operating conditions (at 23°C and at sea level)
Compliance	RoHS-compliant (PDF)
Safety/emissions/ immunity	Safety: EN 60950, CE, CSA 60950, UL 60950, CB IEC60950-1 (all national deviations), EN60825-1, IRAM, CU, BIS, BSMI, SONCAP, NRCS LOA (South Africa); emissions/immunity: FCC Part 15 Class A, ICES-03, CE, KCC, VCCI, AS/ NZS CISPR 22, EN55022, EN55024, EN61000-3-2, EN61000-3-3, SABS COC (South Africa), BSMI

Table 2) System Environmental Specifications.

SPECIFICATION	AVA10S DISK SHELF	AVA20S DISK SHELF
High-capacity disk drives	4TB at 7.2K RPM	6TB at 7.2K RPM
Controller support	AVA400	AVA800
Rack units	4U	
Drives per enclosure	24	
Drives per rack unit	6	
Drive form factor	3.5″ large form factor	
Drive carrier	Single drive	
Power supply/cooling fans	Redundant, hot-pluggable, integrated power supply/fan assemblies; dual supplies required for high-capacity disk drives	
AC input power voltage (autoranging, VRMS)	100–120V or 200–240V	
AC input power frequency	50–60Hz	
Weight (fully loaded)	110 lbs (49.9kg)	
Dimensions	Height: 7″ (17.8cm) Width: 19″ (48.3cm) Depth: 24″ (61cm)	
Clearance dimensions	Front: cooling: 6″ (15.3cm) Front: maintenance: 12″ (30.5cm) Rear: cooling and maintenance: 25″ (55.9cm)	
Operating acoustic noise	7.0 bels LwAd (4 PCMs)	
Temperature	Operating: 50°F–104°F (10°C–40°C) Nonoperating: –40°F–158°F (–40°C–70°C)	
Relative humidity	Operating: 20%–80% noncondensing Nonoperating: 10%–95% noncondensing	
Altitude	Operating: 0–10,000 ft (0–3,045m) Nonoperating: –1,000–40,000 ft (–305–12,192m)	

AltaVault Virtual Appliances

AltaVault virtual appliances are an ideal solution for medium-sized businesses that want to get started with cloud backup. They're also ideal for enterprises that want to protect branch offices and remote offices with the same level of protection they enjoy in the data center. AltaVault virtual appliances provide the flexibility of deploying onto heterogeneous hardware while still providing all of the features and functionality of hardware-based appliances. AltaVault virtual appliances can be deployed onto kernel-based virtual machines (KVM), Microsoft Hyper-V, and VMware vSphere, enabling customers to choose the hypervisor that works best for them.

AltaVault Virtual Appliance Model Specifications

CATEGORY	ATTRIBUTES[1]	VIRTUAL APPLIANCES							
		Backup Mode				Cold Storage Mode			
		AVA-v2	AVA-v8	AVA-v16	AVA-v32	AVA-v2	AVA-v8	AVA-v16	AVA-v32
Performance	Backup throughput (maximum)	500GB/hr	1TB/hr	2TB/hr	3TB/hr	350GB/hr	350GB/hr	350GB/hr	350GB/hr
Cloud	Cloud storage providers supported	Multiple; visit the solution connection[4] for more details							
	Cloud capacity supported[2]	10TB	40TB	80TB	160TB	N/A	N/A	N/A	N/A
	Logical cloud capacity[3]	300TB	1.2PB	2.4PB	4.8PB	625TB	2.5PB	5PB	10PB
Local disk storage	Usable local capacity (maximum)	2TB	8TB	16TB	32TB	2TB	8TB	16TB	32TB
	RAID Protection	RAID 6 recommended for datastore storage							
Network	Storage networking supported	CIFS/SMB, NFS, OST, SnapMirror (as of version 4.3)							
Server	Supported hypervisors	KVM, Hyper-V, and vSphere ESXi							
Third-party application	Backup/archive software supported	Multiple; visit the solution connection[4] for more details							

1. For details about technical specifications, contact your nearest NetApp or channel sales associate.
2. 5x of appliance usable local capacity; for example, a maximum of 160TB of cloud capacity can be supported by 32TB of usable local capacity.
3. Backup mode: calculated using 30x deduplication. Cold storage mode: assumes 50% compression and 100MB file size.
4. http://solutionconnection.netapp.com/altavault

Table 3) Virtual Appliance Model Specifications.

Altavault Cloud-Based Appliances

For organizations without a secondary disaster recovery location or for companies looking for extra protection with a low-cost tertiary site, cloud-based AltaVault appliances on Amazon Web Services (AWS) and Microsoft Azure are the key to enabling cloud-based recovery. Using on-premises AltaVault physical or virtual appliances, data is seamlessly and securely backed up to the cloud. If the primary site is unavailable, you can quickly spin up a cloud-based AltaVault appliance on AWS or Azure and recover data in the cloud. Pay only for what you use when you use it, with usage-based pay-as-you-go pricing.

If you already have production workloads running in the public cloud, you know that protecting those workloads in the cloud is just as critical as if they were running on the premises. Cloud-based AltaVault appliances offer an efficient and secure approach to backing up cloud-based workloads. Using your existing backup software, AltaVault cloud-based appliances deduplicate, encrypt, and rapidly migrate data to long-term, low-cost cloud storage.

AltaVault Cloud-Based Appliance Model Specifications

CATEGORY	ATTRIBUTES[1]	CLOUD APPLIANCES[4]					
		Backup Mode			Cold Storage Mode		
		AVA-c4	AVA-c8	AVA-c16	AVA-c4	AVA-c8	AVA-c16
Performance	Backup throughput (maximum)	345GB/hr	400GB/hr	3TB/hr	175GB/hr	225GB/hr	350GB/hr
Cloud	Cloud storage providers supported	Multiple; visit the solution connection[5] for more details					
	Cloud capacity supported[2]	20TB	40TB	80TB	N/A	N/A	N/A
	Logical cloud capacity (maximum)[3]	600TB	1.2PB	2.4PB	1.6PB	3.2PB	6.4PB
Local disk storage	Usable local capacity (maximum)	4TB	8TB	16TB	4TB	8TB	16TB
	RAID protection	RAID 6 recommended for datastore storage					
Network	Storage networking supported	CIFS/SMB, NFS, OST (as of version 4.2)					
Server	Supported hypervisors	Not applicable					
Third-party application	Backup/archive software supported	Multiple; visit the solution connection[5] for more details					

1. For details about technical specifications, contact your nearest NetApp or channel sales associate.
2. 5x of appliance usable local capacity; for example, a maximum of 160TB of cloud capacity can be supported by 32TB of usable local capacity.
3. Backup mode: calculated using 30x deduplication. Cold storage mode: assumes 50% compression and 100MB file size.
4. All AltaVault cloud appliances are available on the Amazon Marketplace as AMIs. Only AVA-c4 is available on Microsoft Azure as AVM.
5. http://solutionconnection.netapp.com/altavault

Table 4) Cloud-based Appliance Model Specifications.

Get to a Cloud-Connected Ready State with Services

Quickly meet the technical and business requirements for your new AltaVault solution with installation and implementation services from NetApp and our certified services partners. Using best practices, our services team configures your new solution into your existing environment and brings your device to a cloud-connected ready state. Get the outcomes you expect while lowering your deployment risks and costs with our proven implementation methodology. 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