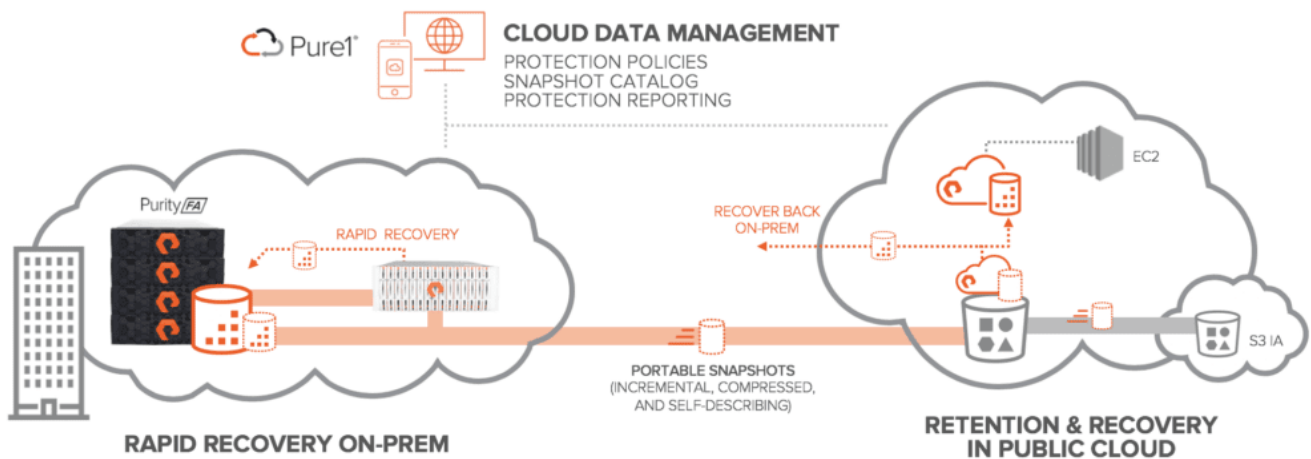


# CloudSnap for AWS: Effortless Cloud Data Protection

INTRODUCING



- ✓ Simple, built-in local and cloud protection
- ✓ Replace tape with highly-durable cloud protection
- ✓ Rapidly local recovery at the speed of flash
- ✓ Recover to the cloud for DR, migration, and more

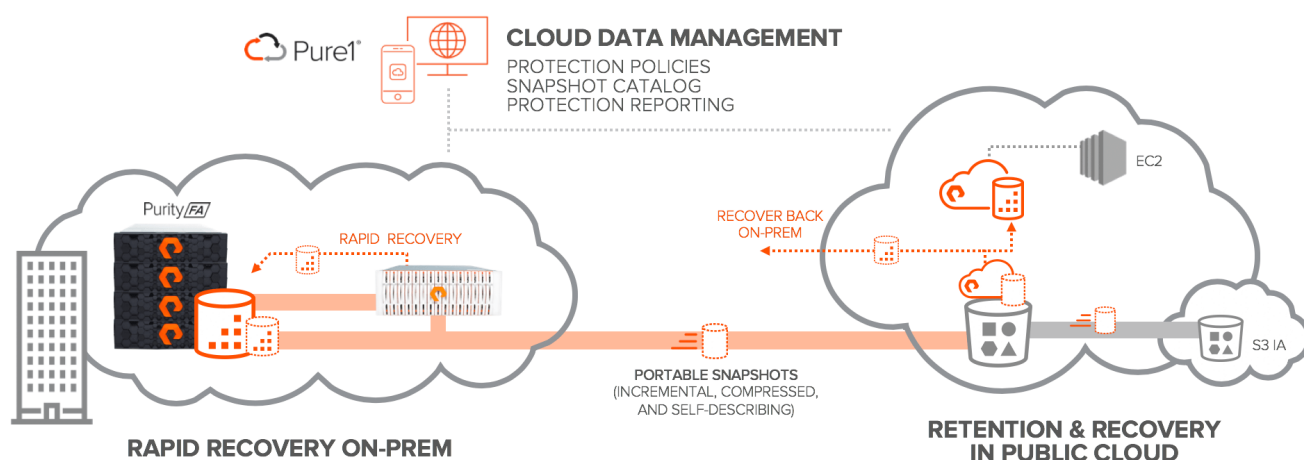
CloudSnap delivers a solution that maximizes the cloud's potential for backup storage by providing intelligent and efficient data transfer to and from the cloud. Additionally, CloudSnap offers rapid recovery on-premises to help customers meet demanding SLAs and compliance policies.

CloudSnap is a key component of Pure's cloud vision and is now available with Purity 5.2. With the first version of CloudSnap, Pure customers will be able to address an initial use case: cloud backup and on-premises recovery from Amazon Web Services.

Here are some of the details on how CloudSnap provides cloud protection value.

INTRODUCING

# CloudSnap FOR AWS



- ✓ Simple, built-in local and cloud protection
- ✓ Replace tape with highly-durable cloud protection
- ✓ Rapidly local recovery at the speed of flash
- ✓ Recover to the cloud for DR, migration, and more

## Cloud Data Protection Challenges

CIO/CFO directives seek to reduce costs within IT and leverage cloud services. Data protection is an area of focus to offload on-premises infrastructure, reduce complexity, and enable a pay-as-you-consumption model. However, cloud data protection initiatives are often met with challenges such as complexity, high costs, and inefficiency:

- **Complexity:** IT organizations need to evaluate, deploy, learn, and maintain third-party tools that provide cloud data protection capabilities.
- **Inefficiency:** Compliance regulations and SLAs require rapid restore of data on-premises (or in the cloud). However, performing restores is often a slow process resulting in missed SLAs and potentially, non-compliance.
- **High Costs:** Cloud data protection solutions typically require additional licenses and/or hardware such as media servers. More importantly, data transport costs (to and from the cloud) contribute to the tax that IT organizations have to pay with traditional cloud data protection solutions.

What IT organizations really want is the ability to leverage the cloud with their on-premises infrastructure but without incurring the associated tradeoffs of architecting a hybrid solution. We believe that CloudSnap can provide users with a better experience to maximize the cloud's potential for data protection.

## How CloudSnap Harmonizes Cloud Data Protection

As we looked at the cloud data protection challenges outlined above, we realized that true portability was the foundation of an effective cloud data protection solution. In Purity 5.1, we introduced portable

snapshots, a new snapshot innovation that provides the ability to move snapshots off Pure FlashArrays that are efficient and “smart” with data transfer. Portable snapshots encapsulate metadata, preserve compression, and only send delta changes between snaps, where versions of snaps might be flowing frequently.

With Purity 5.1, we gave our customers the ability to leverage portable snapshots with FlashBlade or third party NFS devices as a target. In Purity 5.2, we are extending the innovation of portable snapshots with Amazon S3 as a target for effortless, efficient, and affordable cloud data protection. This first release of CloudSnap will address the use case of cloud backup and on-premises recovery from the cloud.

Take a look at this demo from Syed Amin (Sr. Technical Marketing Engineer) that captures the simplicity and efficiency of this feature for cloud data protection.

## **Effortless: Built-in and no manuals needed**

CloudSnap is built into Purity, and doesn't require additional software, third party tools, and licensing. Pure customers don't have to worry about additional management overhead, all while getting cloud-data protection capabilities out of the box! Additionally, the Pure1 snapshot catalog gives users a global view of all their snapshots - including those in Amazon S3 .

Pure1 Snapshots

David Hamilton Admin

Volumes File Systems

Target Type Local, NFS, S3, Pure x

Last 7 Days 1-7 of 7

Last RPC	Volume	Total Size	Nov. 17	Nov. 18	Nov. 19	Nov. 20	Nov. 21	Nov. 22	Nov. 23
11m ago	DAL-PURE-01	DAL-Pure-01-DEN	4.11 T	2			8	8	8
12m ago	DAL-PURE-02	DAL-Pure-02-DEN	2.95 T	2			8	8	8
16m ago	DEN-PURE-01	DEN-Pure-01-DAL	2.61 T						8
27m ago	DEN-PURE-02	DEN-Pure-02-DAL	11.77 T						8
30m ago	SDL-PURE-01	SDL-Pure-02-SOW	21.83 T						8
34m ago	SDL-PURE-01	SOW-Pure-01-SDL	17.29 T						8
1hr ago	SOW-PURE-02	SOW-Pure-02-SDL	11.26 T						8

1-10 of 30

Snapshot	Size	Target	Target Type	Protection Group	Created On
DAL-Pure-01-DEN.4262.DAL-Pure-01-DEN	48798 M	DAL-PURE-01	Local	DAL-Pure-01-DEN	2018-10-11 11:20:30
DAL-PURE-01.DAL-Pure-01-DEN.4226.DAL-Pure-01-DEN	140.76 G	DEN-PURE-01	S3	DAL-Pure-01-DEN	2018-10-09 23:20:30
DAL-PURE-01.DAL-Pure-01-DEN.4225.DAL-Pure-01-DEN	140.79 G	DEN-PURE-01	S3	DAL-Pure-01-DEN	2018-10-09 22:20:30
DAL-PURE-01.DAL-Pure-01-DEN.4224.DAL-Pure-01-DEN	140.81 G	DEN-PURE-01	NFS	DAL-Pure-01-DEN	2018-10-09 21:20:30
DAL-PURE-01.DAL-Pure-01-DEN.4223.DAL-Pure-01-DEN	140.81 G	DEN-PURE-01	NFS	DAL-Pure-01-DEN	2018-10-09 21:20:30
DAL-PURE-01.DAL-Pure-01-DEN.4222.DAL-Pure-01-DEN	140.69 G	DEN-PURE-01	Pure	DAL-Pure-01-DEN	2018-10-09 19:20:30
DAL-PURE-01.DAL-Pure-01-DEN.4221.DAL-Pure-01-DEN	140.67 G	DEN-PURE-01	Pure	DAL-Pure-01-DEN	2018-10-09 18:20:30
DAL-PURE-01.DAL-Pure-01-DEN.4220.DAL-Pure-01-DEN	140.66 G	DEN-PURE-01	Pure	DAL-Pure-01-DEN	2018-10-09 15:20:30
DAL-PURE-01.DAL-Pure-01-DEN.4219.DAL-Pure-01-DEN	140.54 G	DEN-PURE-01	Pure	DAL-Pure-01-DEN	2018-10-09 09:20:30
DAL-PURE-01.DAL-Pure-01-DEN.4218.DAL-Pure-01-DEN	140.30 G	DEN-PURE-01	Pure	DAL-Pure-01-DEN	2018-10-09 03:20:30

Pure1 snapshot catalog showing a global view of snapshots, including those that reside in Amazon S3

With CloudSnap, backing up and restoring an entire array or individual volumes is effortless. Once a bucket has been created in Amazon S3, a user simply creates a snapshot schedule in the FlashArray GUI with an Amazon S3 bucket as the backup target. With just a few clicks, Amazon S3 is just another off-load target and can be added to protection groups.

Add Targets

Available Targets

1-1 of 1

PureBucket

Selected Targets

1 selected Clear all

PureBucket

Cancel Add

## Adding Amazon S3 as a target to a protection group

Policy-driven automation also allows users to set retention schedules as needed. In the example below, snapshots are taken and offloaded every 4 hours; they are retained on the Amazon S3 target for 24 hours; and additionally, one snapshot per day is retained on the Amazon S3 target for an additional 30 days.

### Edit Replication Schedule ✕

Enabled

Replicate a snapshot to targets every  hours  at

except between  and

Retain all snapshots on targets for  hours

then retain  snapshots per day for  more days

## Snapshot policies in the FlashArray GUI

For restoring, the process is also very simple. A user just selects the snapshot to recover and the target FlashArray to recover to. That's it. Simple as that. Additionally, users can perform VM-level backups and restores with [vSphere Virtual Volumes integration in FlashArray](#).

### Get Volume Snapshots ✕

Existing Snapshots

tmefa07:DemoPG.191.BackupVolume

tmefa07:DemoPG.191.Database4

Selected Snapshots

1 selected Clear all

tmefa07:DemoPG.191.Database4 ✕

Suffix

## Selecting and restoring a snapshot

CloudSnap can be managed natively on Pure FlashArrays via the GUI or the CLI. With the snapshot catalog in Pure1®, users also get a global view of all their snapshots and where they reside (Pure FlashArrays, NFS targets, or public cloud). In addition, there's a robust and open REST API which can be used by customers and third party data management software to move incremental snapshots from FlashArrays to the cloud.

### **Efficient: Rapid recovery from cloud to on-premises**

CloudSnap is smart about data transfer both for backup and recovery scenarios. For data transfer to the cloud, it will only send delta changes. Similarly, if recovery is needed, CloudSnap will only pull back the missing blocks from the cloud. This smart data transfer helps customers accelerate time to recovery and meet SLAs.

When the recovery source is FlashBlade, Pure customers also enjoy an added advantage as FlashBlade recovers even faster than it backs up (which is very fast by the way) – with up to about 250 TBs/hour for recovery!

### **Affordable: No additional licenses needed and optimized for data transfer**

CloudSnap uses efficient and portable snapshots and leverages Purity's data compression in-transit to Amazon S3 . This improves the ROI on low-cost cloud storage and minimizes network bandwidth costs. After off-loading the initial baseline snapshot of a volume to Amazon S3 , it only sends delta changes for subsequent snapshots of the same volume, minimizing ongoing network bandwidth usage and transfer costs.

Best of all, CloudSnap doesn't require additional software licenses and is included with Evergreen™ subscriptions. It's simply enabled with Purity 5.2 for Pure FlashArray.

### **Where we are headed: Our CloudSnap vision**

We are very excited to deliver CloudSnap in Purity 5.2 and allowing our customers to take advantage of built-in and simple cloud data protection. However, we will continue to innovate and our vision for CloudSnap includes giving our customers an easy on-ramp to the cloud with migration from on-premises and restore in Pure Cloud Block Store. Additionally, we envision giving our customers the ability to use other storage options for archival purposes and extending to other cloud service providers beyond AWS.

### **Additional Resources**

To learn more about CloudSnap and Pure's cloud vision, check out the resources below:

- [CloudSnap Lightboard](#)
- [CloudSnap Whitepaper](#)
- Pure Cloud Vision Blog
- Pure Cloud Announcement Blogs