
AWS
re:Invent
NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

STG331

Remove the challenge of managing tape infrastructure with AWS Tape Gateway

Mark Cree
General Manager
AWS

Ed Laura
Solutions Architect
AWS

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

At the end of this session, you will:

- ✓ Understand the value proposition of Tape Gateway
- ✓ Understand how Tape Gateway works
- ✓ Understand how you can use AWS Snowball Edge with Tape Gateway for petabyte-scale tape migrations

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



AWS Storage Gateway provides hybrid cloud storage capabilities that enable customers to use AWS compute, storage, analytics, and ML/AI services for their hybrid workloads continuing to reside on premises

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

AWS Storage Gateway

Today's focus



Amazon S3 File Gateway

Native file access, SMB or NFS, to Amazon S3 for backups, archives, and ingest for data lakes



Amazon FSx File Gateway

Replace on-premises Windows file shares with efficient, low-latency Amazon FSx for Windows based group file shares and home directories



Tape Gateway

Replace physical tape infrastructure leveraging Amazon S3 archive tiers for long-term retention

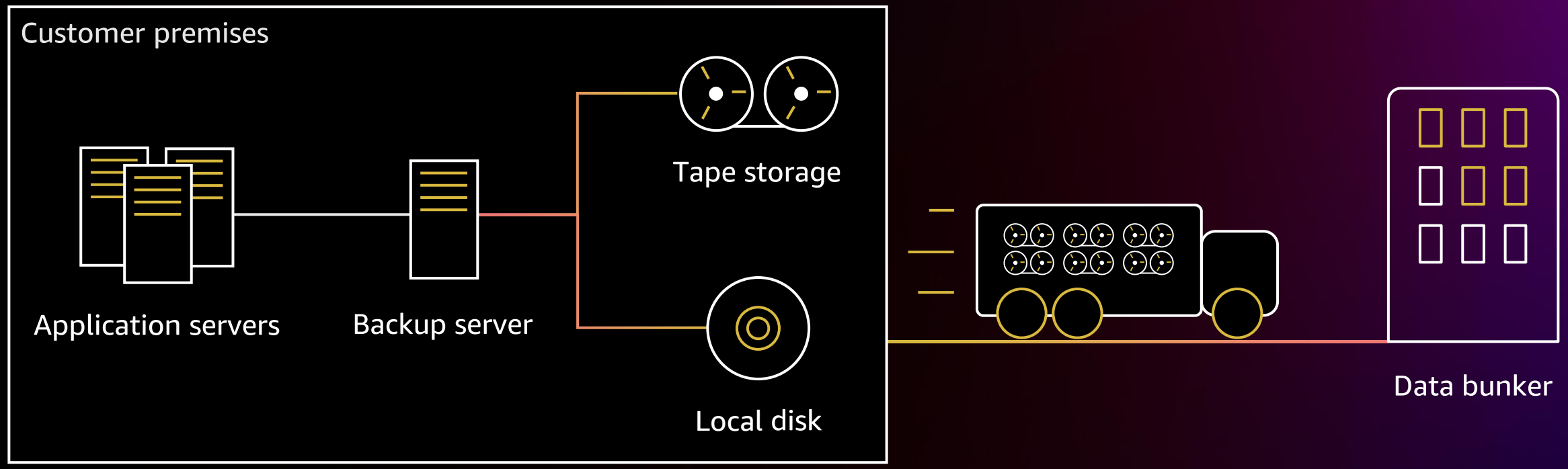


Volume Gateway

Block storage volumes with snapshots, AWS Backup integration, and cloud recovery

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Backup and archive before the cloud



aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Stop managing physical tape data: Start eliminating infrastructure costs



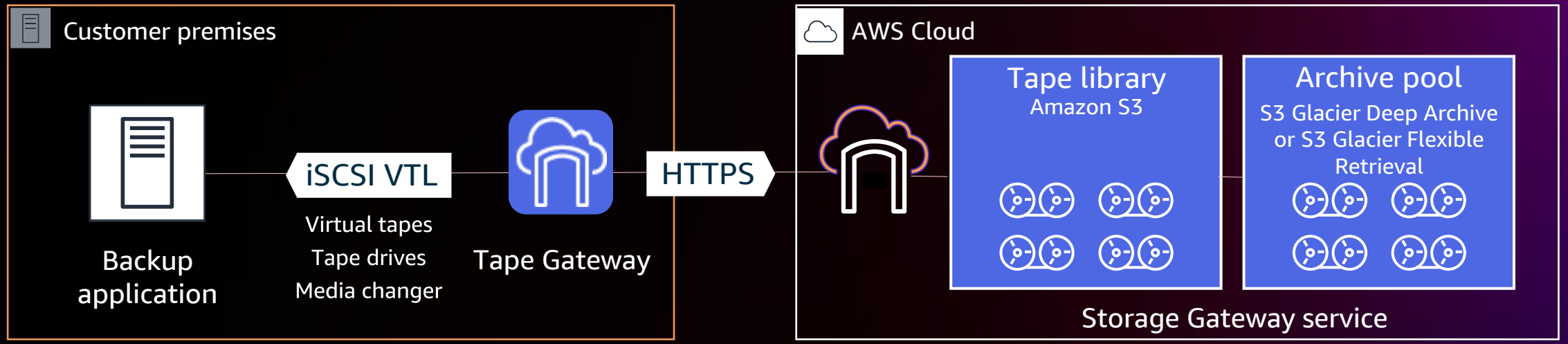




© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Tape Gateway overview

PRESENT CLOUD-BACKED VIRTUAL TAPES TO ON-PREMISES BACKUP APPLICATIONS

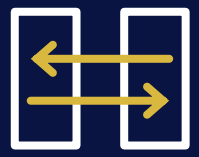


Use cases

1. Backup to cloud
2. Archive to cloud

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Tape Gateway benefits



Replaces physical tapes



Simplifies management



Provides security and compliance

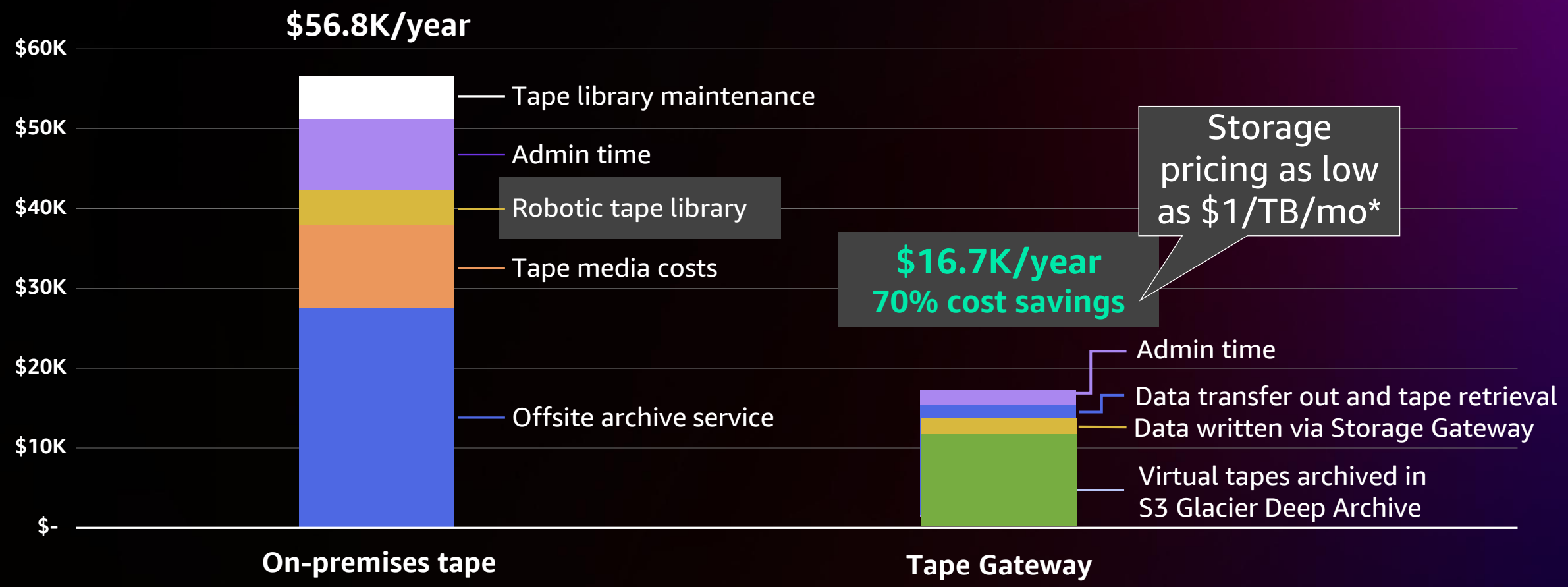


Optimizes performance

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Tape Gateway costs less than physical tapes

CUSTOMER EXAMPLE: EVERY MONTH, 100 TB WRITTEN AND 1 TAPE RETRIEVAL; 1-YEAR RETENTION



*based on US (N. Virginia) region

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Tape Gateway use case



"The reason we moved to AWS was the unreliability of physical tape. It's about 65% cheaper now storing the data up in AWS. All I do now literally is go into the [AWS] console, add in tapes, and eject tapes and I'm done. It made my job a lot easier."

Paul Walsh
Senior Systems Engineer

Problem

- Physical tape infrastructure and offsite archives
- Costly and time consuming waiting for tapes to arrive
- Experienced regular failures when recovering from tap

Solution

- Switched to cost-effective virtual tapes using Tape Gateway
- Create tapes as needed; store them in Amazon S3 Glacier and Amazon S3 Glacier Deep Archive for long-term storage

Outcome

- Easily switched to virtual tapes in less than one month
- Eliminated the need to pay upfront warehousing costs

aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Tape Gateway supported backup software







Micro Focus





Bacula Systems

Quest

NovaStor

Microsoft System Center Data Protection Manager



This is not a complete list. To view all AWS Partners for this category, visit AWS Partner Solutions Finder. This list of partners is current as of October 27, 2022.

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

What’s new

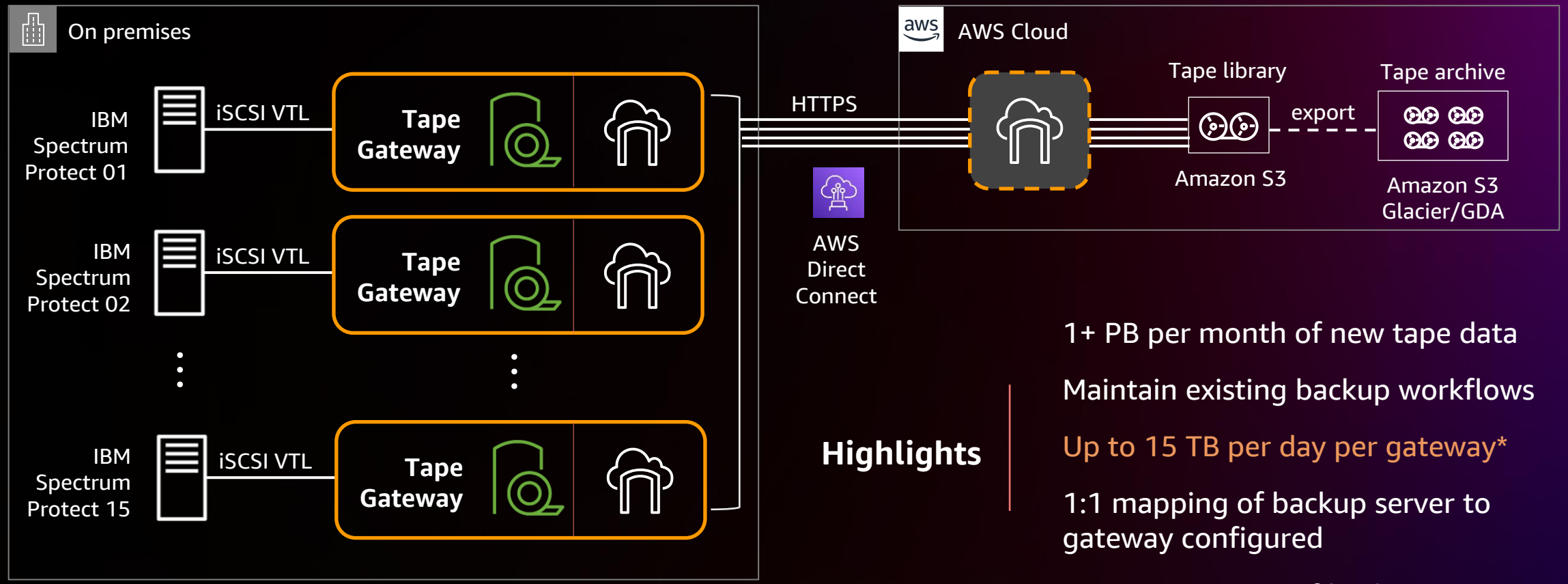
- Up to 2x upload and download performance improvements
- Increased max tape capacity to 15 TiB per virtual tape (up to LTO7)
- Support for 6-character tape barcode length

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Resurgence of tape

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Multi-PB Tape Gateway use case



Highlights

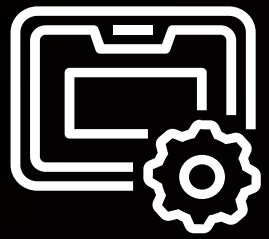
- 1+ PB per month of new tape data
- Maintain existing backup workflows
- Up to 15 TB per day per gateway*
- 1:1 mapping of backup server to gateway configured
- 1:many mapping of backup server to multiple gateways is supported

*Note: This was before the recent 2x upload improvement

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

AWS Snowball with Tape Gateway

A FIRST-OF-ITS-KIND CAPABILITY TO MIGRATE PHYSICAL TAPE ARCHIVES TO AWS OFFLINE



AWS Snowball

+



Tape Gateway

Offline data migration

Secure data migration to AWS

Same device ordering and shipping experience

AWS Storage Gateway's virtual tape library

Works with popular backup applications

Clone physical tape data to virtual tape

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Why choose Snowball with Tape Gateway

THE BENEFITS



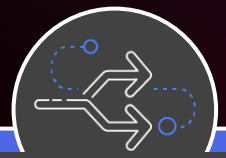
Offline migration

Import petabytes of tape data to secure AWS Snowball Edge for offline tape data migration to Amazon S3 Glacier Flexible Retrieval and S3 Glacier Deep Archive storage classes



Reduced costs

Physical tape data infrastructure costs can be reallocated to top-line business priorities and resources



Maintain workflows

Keep your existing tape-based workflows and tape data formats that keep your systems running



Online access

Easy access through Tape Gateway running on a virtual machine, a hardware appliance, or an Amazon EC2 instance

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

How it works: Whiteboard

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Example of AWS partners who can help with tape migration







This is not a complete list. To view all AWS Partners for this category, visit AWS Partner Solutions Finder. This list of partners is current as of October 27, 2022.

aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Use case guidance for online and offline tape migrations

Time to transfer online

	1 Gbps	2 Gbps	5 Gbps	10 Gbps
500 TB	49 days	25 days	10 days	5 days
5 PB	1.3 years	243 days	98 days	49 days
10 PB	2.7 years	2.7 years	195 days	98 days

Use AWS Snowball with Tape Gateway

- For **offline** tape migrations
- Network bandwidth limitations

Use Tape Gateway (VTL)

- For **online** tape migrations
- Available bandwidth

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Key takeaways

1

Migrate tape-based workflows and data to AWS

2

Reduce your costs by up to 70%

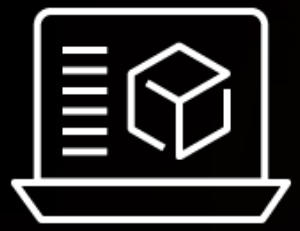
3

Get online access to your long-term retention data

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Continue your AWS storage learning

Build a learning plan



Set your AWS storage learning plans via **AWS Skill Builder**

Increase your knowledge



Use our **ramp-up guides** to build your storage knowledge

Earn AWS storage badges



Demonstrate your knowledge by achieving **digital badges**

aws.training/storage

aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Thank you!

Ed Laura

Mark Cree

LinkedIn: ed-laura



Please complete the session survey in the **mobile app**

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.