
AWS
re:Invent
NOV. 29 – DEC. 3, 2021 | LAS VEGAS, NV

STG212

Migrating tape-based backup and archive data to the cloud

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AWS

Ed Laura
Solutions Architect
AWS

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Stop managing physical tape data – start eliminating infrastructure costs







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Agenda

Key customer challenges

A new solution

Benefits

How it works

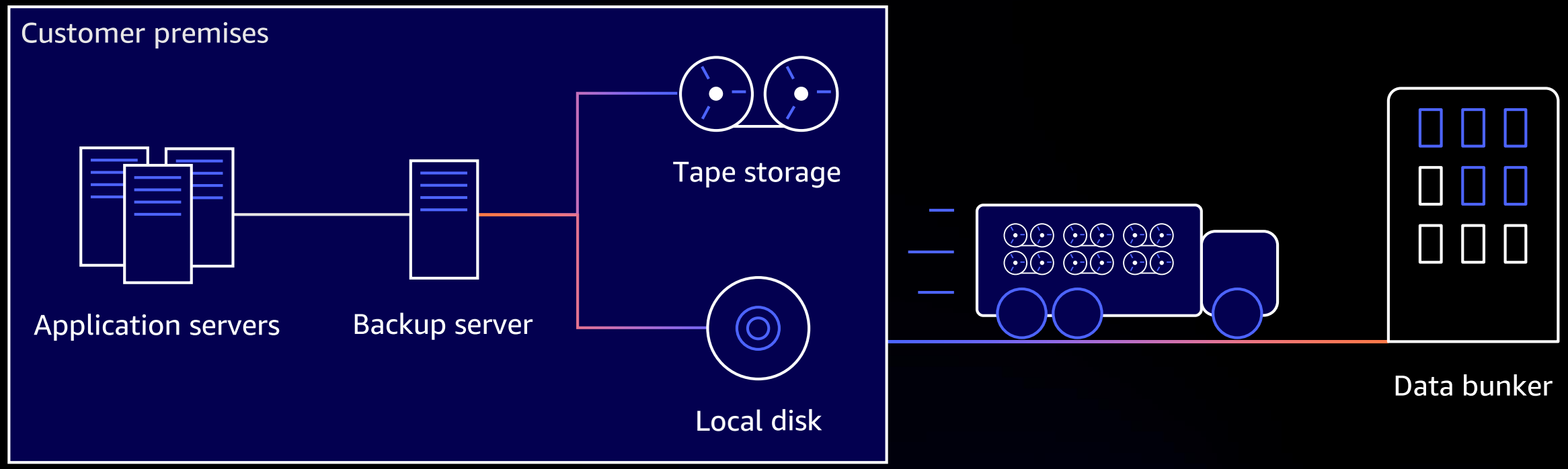
Details

Demo

Resources

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Backup and archive before the cloud



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Physical tape data storage challenges



Expensive

- Maintain physical tape libraries
- Purchase new tapes and clean old ones
- Store physical tapes in warehouses
- Update physical tapes to new generations



Inaccessible

- Limited to offline access
- Prone to CRC errors
- Delayed due to incorrect tapes

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Physical tape data migration options

Option . . .		. . . But . . .
Do nothing, let tapes expire		Not feasible, as you need to retain data for compliance
Move data to newer generation physical tapes		Will need to migrate again in a few years
Move data to the cloud		Lack sufficient network bandwidth

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What we heard from you

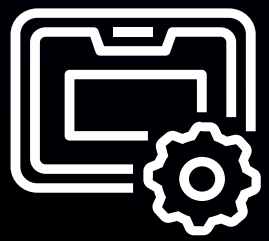
- Ability to maintain tape-based workflows
- Offline data migration to AWS
- Compatibility with your existing backup applications
- Access to your data online, when needed
- Cost-effective cloud storage
- Secure tape migration and storage
- Durable, reliable storage



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Launching AWS Snowball with Tape Gateway

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



AWS Snowball

Offline data migration

Secure data migration to AWS

Same device ordering and shipping experience

+



Tape Gateway

AWS Storage Gateway's Virtual Tape Library

Works with popular backup applications

Clone physical tape data to virtual tape

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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

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Tape Ark

“The offline tape data migration provided by AWS Snowball with Tape Gateway is a real game changer.”

Guy Holmes
CEO, Tape Ark

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transACT TECHNOLOGY SOLUTIONS

“ transACT Technology Solutions helps a range of customers with their journey to the cloud. Our clients love AWS Snow Family due to its offline ease-of-use and flexibility. Our customers are looking for a simple, cost-effective solution that provides durability and avoids the risk of data loss. We're looking forward to using AWS Snowball with Tape Gateway as an important tool in our business. ”

Gordon Scobie

Director of Technology Services, transACT Technology Solutions.

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IRON MOUNTAIN®

“AWS Snowball with Tape Gateway helps customers get data from tape to AWS, and combined with Iron Mountain Data Restoration and Migration Service, they can restore files to their native format whenever needed. Customers can retire their tape infrastructure and rely on Iron Mountain for restoration services and use AWS as their go-forward data storage.”

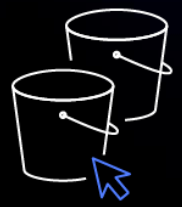
Tom Fetters

Vice President Global Digital Solutions, Iron Mountain

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How it works – migrate tape data to AWS



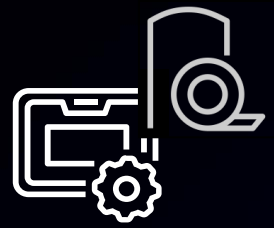
Create a new job to import virtual tapes in the AWS Snow Family management console



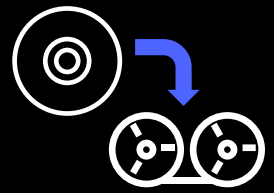
Device arrives in about 4–6 business days



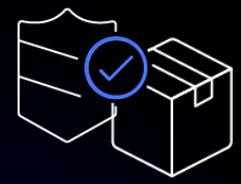
Turn device on, connect it to your network, unlock device, and start Tape Gateway using AWS OpsHub for AWS Snow Family



Activate Tape Gateway (VTL) and create virtual tapes from AWS Storage Gateway management console



Clone your data from physical tapes to virtual tapes on VTL using your backup application



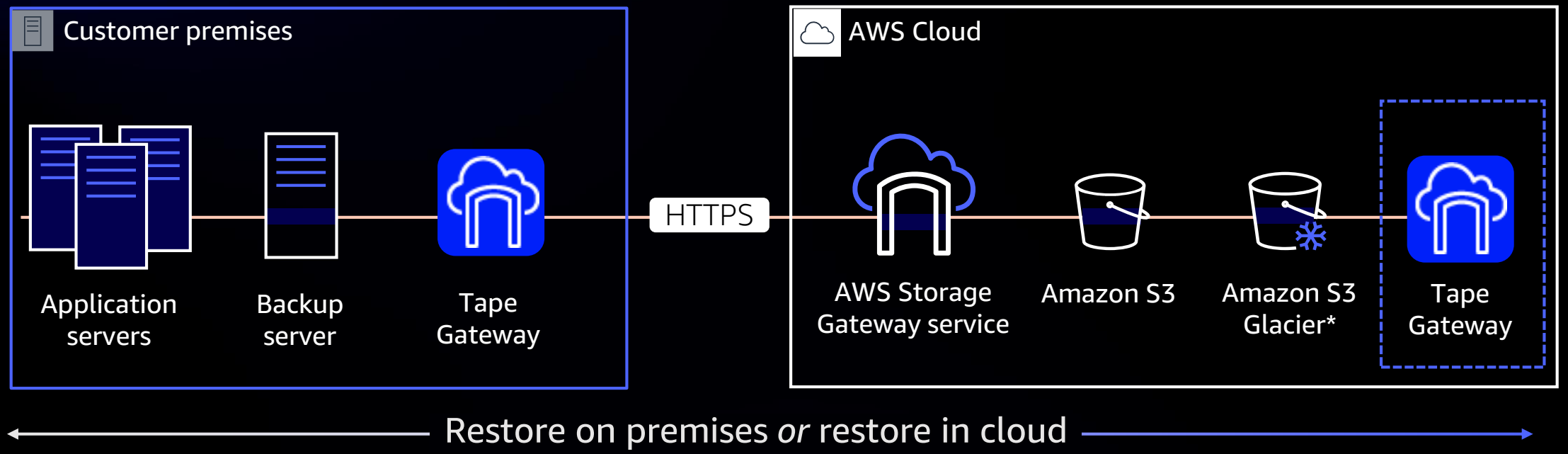
Ship the device back to AWS; the e-ink shipping label auto-updates for easy return



Data is transferred to Amazon S3 Glacier Flexible Retrieval and S3 Glacier Deep Archive storage classes as virtual tapes, and data is securely erased from Snowball

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How it works – access tape data on AWS



- Retrieve archived tapes from S3 Glacier or S3 Glacier Deep Archive to S3 using AWS console or API
- When tapes are in S3 (Status=Retrieved), you can present them to backup application
- Use existing gateway or create a new gateway on premises or in cloud for restore

*Amazon S3 Glacier storage classes supported include:
1. S3 Glacier Flexible Retrieval, 2. S3 Glacier Deep Archive

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Supported backup applications







Micro Focus





Bacula
Systems

Quest

Microsoft
System Center
Data Protection Manager

NovaStor

arcserve

aws

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What we delivered

- ✓ Ability to maintain tape-based workflows
- ✓ Offline data migration to AWS
- ✓ Compatibility with your existing backup applications
- ✓ Access to your data online, when needed
- ✓ Cost-effective cloud storage
- ✓ Secure tape migration and storage
- ✓ Durable, reliable storage



The details

80 TB

Max data storage per Snowball device

Job fee + Storage fee

Pricing

5 TB

Max virtual tape size

US : EU : AUS

Availability

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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

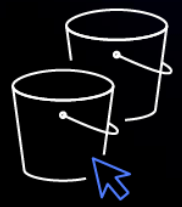
- For offline tape migrations
- Network bandwidth limitations

Use Tape Gateway (VTL)

- For online tape migrations
- Available bandwidth

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Step 1 – Snow Family Console → Create new job



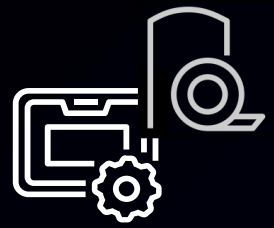
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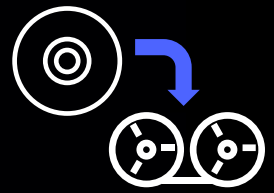
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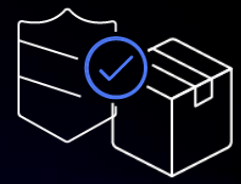
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Plan your job Info

Snow Family jobs

Choose a Snow job type

- ○ **Import into Amazon S3**
  AWS will ship an empty device to you for storage and compute workloads. You'll transfer your data onto it, and ship it back. After AWS gets it, your data will be moved.
- ○ **Export from Amazon S3**
  Choose what data you want to export from your S3 buckets for storage and compute workloads. AWS will load that data onto a device and ship it to you. When you're done ship the device back for erasing.
- ○ **Local compute and storage only**
  Perform local compute and storage workloads, without transferring data. You can order multiple devices in a cluster for increased durability and storage capacity.
- ◉ **Import virtual tapes into AWS Storage Gateway**
  AWS will ship an empty device to you that you can use as a Tape Gateway. You'll transfer data into it as virtual tapes, and ship it back. After AWS gets it, your data wil be ingested and shown as virtual tapes from AWS Storage Gateway console.

Cancel Next

Choose your job details Info

Name your job Info

Your job will be created in the US East (N. Virginia) region.

Job name

reInvent-2021

Choose your Snow device Info

Snowball Edge Storage Optimized

Storage (HDD)	Memory
80 TB	32 GB
Storage (SSD)	Compute
-	24 vCPUs

Cancel Previous Next

Choose your security preferences

Specify the permission and encryption settings for your job to help protect your data while in transit.

Encryption Info

Select the AWS KMS key to encrypt your data.

Enter a key ARN

	KMS key
○	aws/importexport (default)
◉	arn:aws:ec2:us-east-1:555555555555:instance/i-b188560f

Cancel Previous Next

reinvent2021-demo Info

Get AWS OpsHub | Actions

Job status Info

- Job created
- Preparing device
- Preparing shipment
- In transit to you
- Delivered to you
- In transit to AWS
- At sorting facility
- At AWS
- Importing
- Completed

Job created

Your job has been created, and AWS has queued your job request for processing. If there is a problem with your request, you can cancel your job now. Once AWS begins processing your job, you cannot cancel it. To cancel this job now, from **Actions** choose **Cancel job**.

We recommend that you download and familiarize yourself with the AWS OpsHub. It is the tool you'll use to transfer data from your on-premises source storage to the device through a computer workstation.

Get AWS OpsHub

Details Info

Job name
reinvent2021-demo

Job type
Import

Service
Import Virtual Tapes

Job id
JIDc3d40701-cc02-40e1-9df4-5d3508f6e3e7

Created date
November 23, 2021, 18:15 (UTC-05)

Shipping speed
Next day

Shipping address
Example Corp.
John Doe
100 Main Street
Seattle, WA 02169
US
500-555-0100

KMS key
arn:aws:kms:us-west-2:168426257306:key/88d71fea-0b69-4cb5-8cbb-00807a64606c

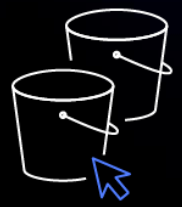
Device
Snowball Edge Storage Optimized

Device capacity
98 TB

Region
us-west-2

SNS topic name
arn:aws:sns:us-east-1:168426257306:AWS_tape_import

Step 2 – OpsHub → Start Tape Gateway Service



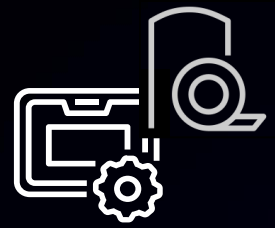
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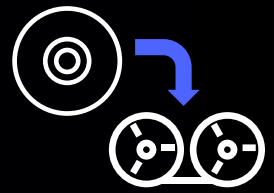
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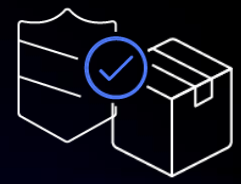
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AWS Snowball Edge – Storage Optimized



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Snowball Edge Client
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Videos
Blog Posts
Free Training

AWS OpsHub

AWS OpsHub is a graphical user interface you can use to manage AWS Snowball devices. AWS OpsHub makes it easy to setup and manage AWS Snowball devices enabling you to rapidly deploy edge computing workloads and simplify data migration to the cloud. With just a few clicks in AWS OpsHub, you have the full functionality of the Snow Family of devices at your fingertips; you can unlock and configure devices, drag-and-drop data to devices, launch applications, and monitor device metrics.

- AWS OpsHub documentation

	AWS OpsHub
Windows 7 or higher	Download
Mac OS X 10.10 or higher	Download
Linux (Ubuntu version 14 or higher, and Fedora version 24 or higher)	Download (Signature)



aws



AWS OpsHub for Snow Family

Manage your Snow Family devices and local services.



Get started with OpsHub

- (•) Sign into local devices
  You'll need an unlock code and manifest file
- ( ) Sign into remote devices
  You'll need an access key & secret key

Sign in



AWS OpsHub for Snow Family

Manage your Snow Family devices and local services.



Sign into local devices

Select a local device to sign into

- ○ **Snowcone**
  You'll need the device IP address, an unlock code, and the manifest file
- ◉ **Snowball Edge**
  You'll need the device IP address, an unlock code, and the manifest file
- ○ **Snowball Edge Cluster**
  You'll need the devices' IP addresses, an unlock code, and the manifest file
- ○ **Existing device profile**
  You'll need a device profile for a device you've used before

Back | Sign in



AWS OpsHub for Snow Family

Manage your Snow Family devices and local services.



Sign into your Snowball Edge

Sign in with an unlock code and manifest file

Device IP address

10.0.3.128

Unlock code

a1fb0

Manifest file

Choose file

JID5a5bbcfa-0950-4bbc-bb57-eae4abc3ab9b_manifest.bin

Back | Sign in

aws



AWS OpsHub for Snow Family

Manage your Snow Family devices and local services.



Your device is unlocked

To distinguish this device from others in OpsHub, enter a profile name (visible only to you). You can always change this later.

Profile name - *optional*

You can change this later.

reinvent2021-demo

Skip | Save profile name

Local devices

Devices (0)

Unlock | Reboot

Filter devices by device id

1

Device id	IP address	Unlock status	Network status	Services
JID5a5bbcfa-0950-4bbc-bb57-eae4abc3ab9b	10.0.3.128	Unlocked	-	7

Device ID
JID5a5bbcfa-0950-4bbc-bb57-eae4abc3ab9b

Device type
Snowball Edge

Total HDD storage
84.33 TB

State
Unlocked

Network IP addresses
10.0.3.128

Total SSD storage
1.27 TB

Transfer tape data

Get started

Upload tape data to the device so it can be moved to the AWS cloud and stored as virtual tapes in AWS Storage Gateway when the device is returned. Learn more

Manage storage

Get started

Upload files and objects to the device so that they can be accessed locally, physically moved to another location, or imported back to the AWS Cloud when the device is returned.

Start computing

Get started

Run pre-installed software on virtual servers (instances) locally on the device.

Launch tasks

Get started

Create tasks to streamline reoccurring actions taken on device resources, like restarting virtual servers, called instances.

Transfer tape data

Deactivated

Open Storage Gateway console

File & object storage

99%

File space available

Compute

0 of 0

Instances running

Tasks

-

Tasks running

Tasks

-

Failed tasks
in the last 24 hours

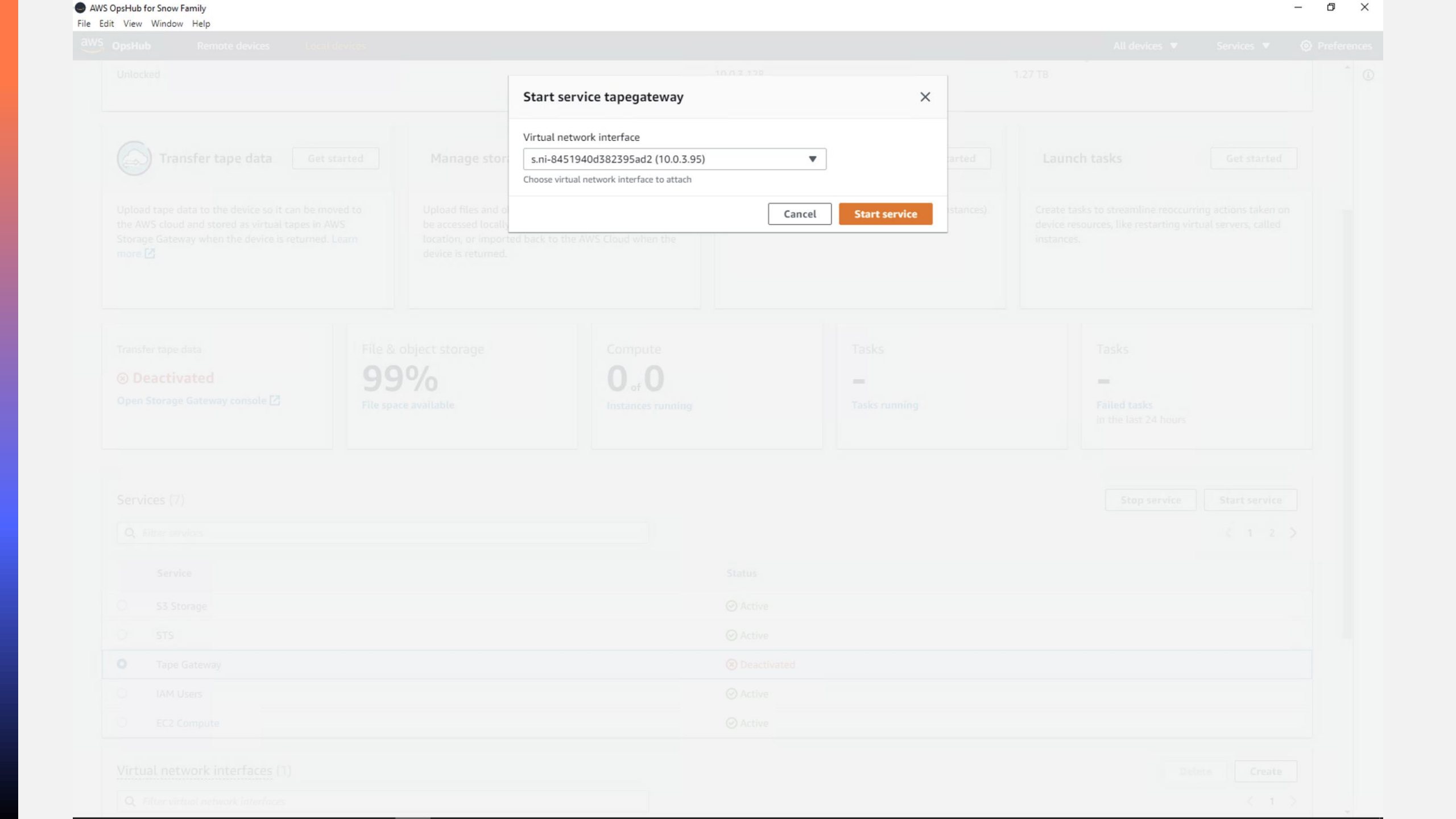
Services (7)

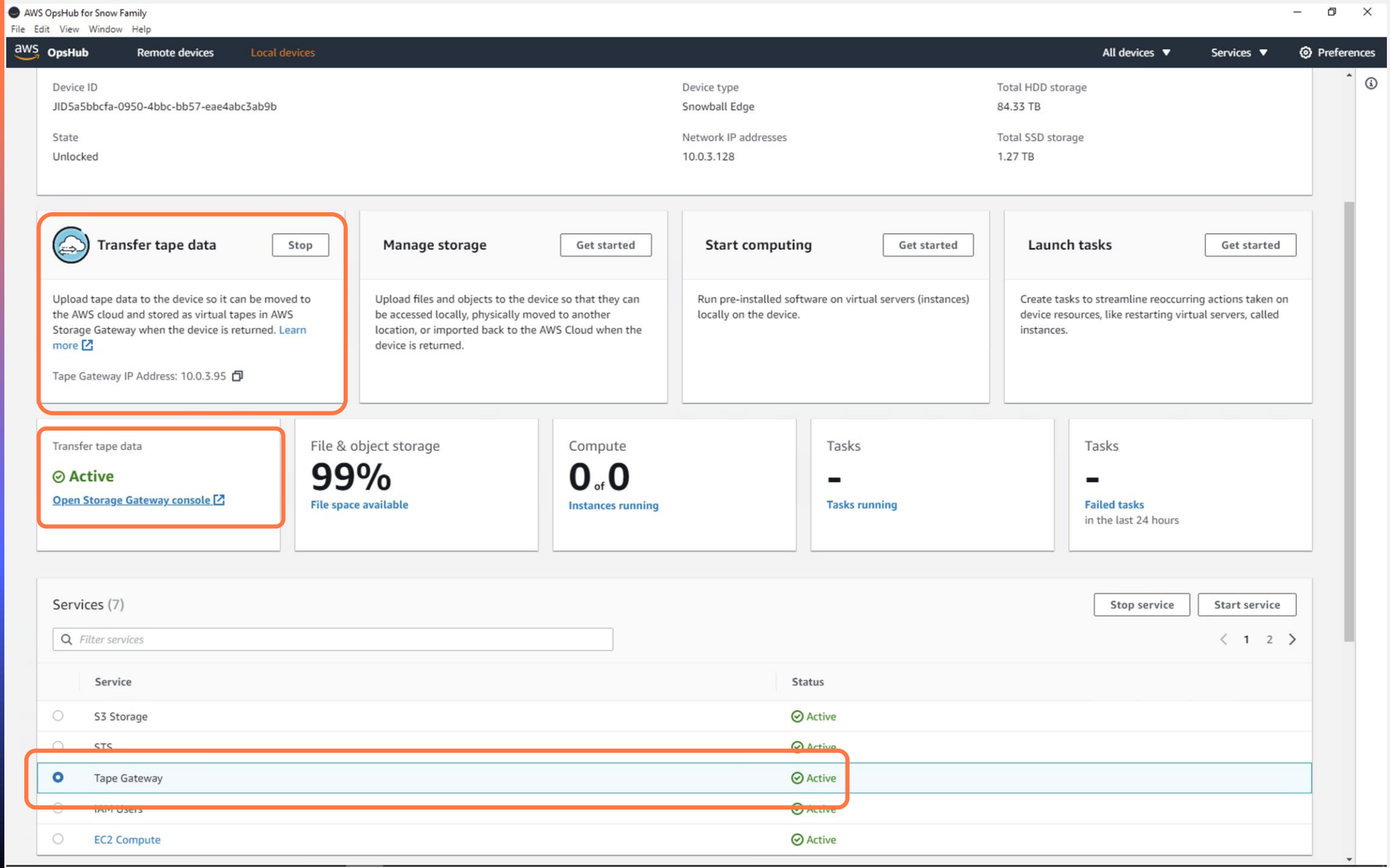
Stop service | Start service

Filter services

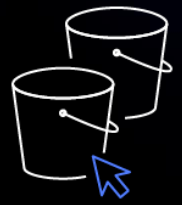
1 2

Service	Status
S3 Storage	Active
STS	Active
Tape Gateway	Deactivated
IAM Users	Active


AWS OpsHub for Snow Family
File Edit View Window Help
OpsHub
Remote devices
Local devices
All devices
Services
Preferences
Start service tapegateway
Virtual network interface
s.ni-8451940d382395ad2 (10.0.3.95)
Choose virtual network interface to attach
Cancel
Start service
Transfer tape data
Get started
Launch tasks
Get started
Create tasks to streamline reoccurring actions taken on device resources, like restarting virtual servers, called instances.
Transfer tape data
Deactivated
Open Storage Gateway console
File & object storage
99%
File space available
Compute
0 of 0
Instances running
Tasks
-
Tasks running
Tasks
-
Failed tasks
in the last 24 hours
Services (7)
Stop service
Start service
Service
Status
S3 Storage
Active
STS
Active
Tape Gateway
Deactivated
IAM Users
Active
EC2 Compute
Active
Virtual network interfaces (1)
Delete
Create


AWS OpsHub for Snow Family
File Edit View Window Help
aws OpsHub
Remote devices
Local devices
All devices
Services
Preferences
Device ID
JID5a5bbcfa-0950-4bbc-bb57-eae4abc3ab9b
Device type
Snowball Edge
Total HDD storage
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State
Unlocked
Network IP addresses
10.0.3.128
Total SSD storage
1.27 TB
Transfer tape data
Stop
Upload tape data to the device so it can be moved to the AWS cloud and stored as virtual tapes in AWS Storage Gateway when the device is returned. Learn more
Tape Gateway IP Address: 10.0.3.95
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Stop service
Start service
Filter services
1 2
Service
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Active
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Active

Step 3 – Storage Gateway Console → Activate Tape Gateway



Create a new job to import virtual tapes in the AWS Snow Family management console

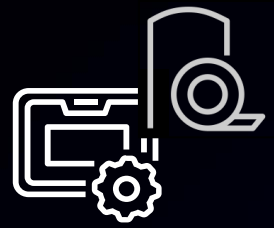


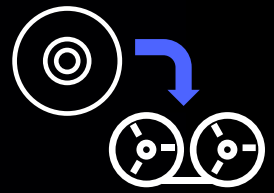
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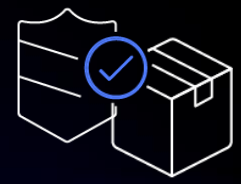
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Step 1
Select gateway type

Step 2
Select host platform

Step 3
Select service endpoint

Step 4
Connect to gateway

Step 5
Activate gateway

Step 6 - *optional*
Configure logging

Step 7
Review and finish

Select host platform Info

Platform options

Choose host platform

- ○ VMware ESXi
- ○ Microsoft Hyper-V 2012R2/2016
- ○ Linux KVM
- ○ Amazon EC2
- ○ Hardware appliance
- ◉ Snowball Edge

Set up instructions for Snowball Edge

Order Snowball Edge
You must have a Snowball Edge device available before activation. To order one, choose 'Order Snowball Edge'.

Order Snowball Edge

1. Connect the Snowball Edge device that you received from AWS to your local and external network.
2. Download AWS OpsHub for Snow Family or the Snowball client and run it with your credentials to connect to the Snowball Edge device.
3. Start Tape Gateway on your Snowball Edge device using AWS OpsHub for Snow Family or the Snowball client.
4. To activate and use the Tape Gateway, enter the IP address of your Tape Gateway in the AWS Storage Gateway Management Console.

For more information about setting your Snowball Edge device, see the AWS Snowball Edge Developer Guide. For more information about deploying and managing Tape Gateway, see the AWS Storage Gateway User Guide.

Cancel Previous Next

Step 1
Select gateway type

Step 2
Select host platform

Step 3
Select service endpoint

Step 4
Connect to gateway

Step 5
Activate gateway

Step 6 - *optional*
Configure logging

Step 7
Review and finish

Select service endpoint Info

Service endpoint

Choose service endpoint

- (•) **Public**
  Publicly accessible endpoint.
- ( ) **FIPS**
  Publicly accessible endpoint that complies with Federal Information Processing Standards (FIPS).
- ( ) **VPC**
  Accessible within your VPC only. If you are deploying your file gateway on-premises, you will also need to set up a proxy in EC2.

Cancel | Previous | Next

Step 1
Select gateway type

Step 2
Select host platform

Step 3
Select service endpoint

Step 4
Connect to gateway

Step 5
Activate gateway

Step 6 - *optional*
Configure logging

Step 7
Review and finish

Connect to gateway Info

Connect to gateway

Choose how you connect to the gateway

- (●) **IP address**
  Type the IP address of your gateway VM. Your web browser must be able to connect to this IP address, which should be public or accessible from your current network.
- ( ) **Activation key**
  Type the activation key of your gateway VM.

IP address
To get the IP address, log in to your gateway's local console and get the IP address from the top of the console page.

10.0.3.95

Cancel | Previous | Next

Step 1
Select gateway type

Step 2
Select host platform

Step 3
Select service endpoint

Step 4
Connect to gateway

Step 5
Activate gateway

Step 6 - *optional*
Configure logging

Step 7
Review and finish

Activate gateway Info

Gateway settings

Activation securely associates your gateway with your AWS account.
Storage and data transfer pricing applies when you start using your gateway.

Gateway type
Tape gateway (Snow)

Endpoint type
Public

AWS Region
US East (N. Virginia) us-east-1

Gateway time zone
GMT -8:00 Pacific Time (US & Canada)

Gateway name
reinvent2021-demo
Between 2 and 255 characters in length.

Backup application
Veeam Backup & Replication

Tape drive type
IBM-ULT3580-TD5

Tags - *optional*

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = DatabaseBackups.

No tags associated with the resource.

Add new tag
You can add 50 more tags.

Step 4
Connect to gateway

Step 5
Activate gateway

Step 6 - *optional*
Configure logging

Step 7
Review and finish

Gateway type
Tape gateway (Snow)

Endpoint type
Public

AWS Region
US East (N. Virginia) us-east-1

Gateway time zone
GMT -8:00 Pacific Time (US & Canada)

Gateway name
reinvent2021-demo
Between 2 and 255 characters in length.

Backup application
Veeam Backup & Replication

Tape drive type
IBM-ULT3580-TD5

Tags - *optional*

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = DatabaseBackups.

No tags associated with the resource.

Add new tag
You can add 50 more tags.

You are activating your gateway
Once your gateway is activated, you cannot modify the gateway type, host platform, service endpoint, and connection details for this gateway.

Cancel | Previous | Activate gateway

Step 1
Select gateway type

Step 2
Select host platform

Step 3
Select service endpoint

Step 4
Connect to gateway

Step 5
Activate gateway

Step 6 - *optional*
Configure logging

Step 7
Review and finish

Configure logging - *optional* Info

Gateway health log group

You can monitor your gateway using Amazon CloudWatch log groups.

Choose log group

- (•) Disable logging
  No CloudWatch log group will be created.
- ( ) Create a new log group
  A new CloudWatch log group will be created.
- ( ) Use an existing log group
  Choose an existing CloudWatch log group.

Cancel | Previous | Save and continue

Step 1
Select gateway type

Step 2
Select host platform

Step 3
Select service endpoint

Step 4
Connect to gateway

Step 5
Activate gateway

Step 6 - *optional*
Configure logging

Step 7
Review and finish

Review and finish Info

Step 1 to 5: Gateway activation

Gateway details

Gateway type Tape gateway (Snow)	Host platform type Snowball Edge
Endpoint type Public	Gateway name reinvent2021-demo
IP address 10.0.3.95	AWS Region US East (N. Virginia) us-east-1
Gateway time zone GMT -8:00 Pacific Time (US & Canada)	

Tags

This resource currently has no tags.

Cancel Previous Finish

Storage Gateway > Gateways

Gateways (111) Info

Actions | Create tapes | Create volume | Create file share | Attach FSx file system | Create gateway

sgw-E55FB38C — 1 match — 1

Name	Gateway ID	Status	Alarm state	Gateway type	Storage resources
reinvent2021-demo	sgw-E55FB38C	Running	None	Tape (Snow)	0 tapes

reinvent2021-demo

Actions

General configuration Info

Name	Gateway ID	Status	Alarm state
reinvent2021-demo (sgw-E55FB38C)	sgw-E55FB38C	Running	None

Type	Storage resources
Tape (Snow)	0 tapes

Details | Tags | Monitoring | VTL devices

VTL devices (11) Info

Configure CHAP authentication | Change media changer type

1 2

Tape device ID	VTL device	VTL device type	Target name	Network IP	Port	CHAP authentication
AMZN_SGW-E55FB38C_MC_01	Medium changer	AWS - Gateway-VTL	iqn.1997-05.com.amazon:sgw-e55fb38c-mediachanger	*	3260	No
E55FB38C01	Tape drive	IBM - ULT3580-TD5	iqn.1997-05.com.amazon:sgw-e55fb38c-tapedrive-01	*	3260	No
E55FB38C02	Tape drive	IBM - ULT3580-TD5	iqn.1997-05.com.amazon:sgw-e55fb38c-tapedrive-02	*	3260	No
E55FB38C03	Tape drive	IBM - ULT3580-TD5	iqn.1997-05.com.amazon:sgw-e55fb38c-tapedrive-03	*	3260	No
E55FB38C04	Tape drive	IBM - ULT3580-TD5	iqn.1997-05.com.amazon:sgw-e55fb38c-tapedrive-04	*	3260	No
E55FB38C05	Tape drive	IBM - ULT3580-TD5	iqn.1997-05.com.amazon:sgw-e55fb38c-tapedrive-05	*	3260	No
E55FB38C06	Tape drive	IBM - ULT3580-TD5	iqn.1997-05.com.amazon:sgw-e55fb38c-tapedrive-06	*	3260	No
E55FB38C07	Tape drive	IBM - ULT3580-TD5	iqn.1997-05.com.amazon:sgw-e55fb38c-tapedrive-07	*	3260	No
E55FB38C08	Tape drive	IBM - ULT3580-TD5	iqn.1997-05.com.amazon:sgw-e55fb38c-tapedrive-08	*	3260	No

Create tapes

Select gateway

Gateway

reinvent2021-demo (sgw-E55FB38C)

To create a tape, choose a running tape gateway.

Tape configuration

Tape type

Standard

Number of tapes

1

Capacity

5 TiB

Tape capacity must be between 100 GiB and 5 TiB.

Barcode prefix

ARCH

1 to 4 characters from A-Z.

Pool

Deep Archive Pool

Tags - *optional*

No tags associated with the resource.

Add new tag

Tapes (57) Info

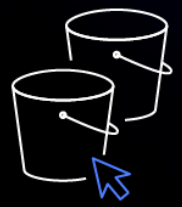
Tape gateway stores tapes in Amazon S3, S3 Glacier, and S3 Glacier Deep Archive.
To find tapes, select a filter from the dropdown list and then run your search.

Actions | Create tapes

Barcode | ARCH | 1 match | Scanned 57 tapes... | 1

Barcode	Status	Used	Size	Created	Archived	Gateway	Pool
ARCHDC226C	Available	0%	5 TiB	11/27/2021, 8:44:55 PM	-	reinvent2021-demo	Deep Archive Pool

Step 4 – Backup application → Clone your tapes



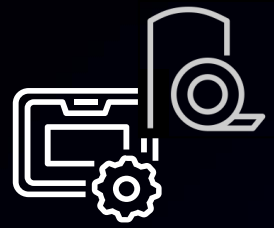
Create a new job to import virtual tapes in the AWS Snow Family management console



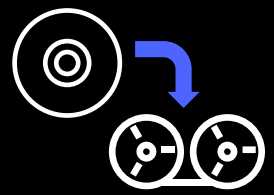
Device arrives in about 4-6 business days



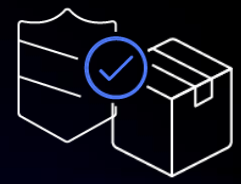
Power device on, connect it to your network, unlock device, and start Tape Gateway using AWS OpsHub for Snow Family



Activate Tape Gateway (VTL) and create virtual tapes from AWS Storage Gateway management console



Clone your data from physical tapes to virtual tapes on VTL using your Backup Application



Ship the device back to AWS. The e-ink shipping label auto-updates for easy return



Data is transferred to Amazon S3 Glacier Flexible Retrieval and S3 Glacier Deep Archive storage classes as virtual tapes, and data is securely erased from Snowball

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Supported backup applications







Micro Focus





Bacula
Systems

Quest

Microsoft
System Center
Data Protection Manager

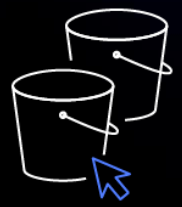
NovaStor

arcserve

aws

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Step 5 – Ship the Snow device back to AWS



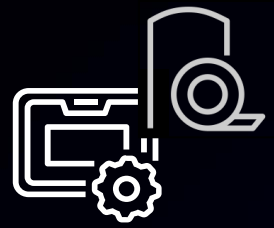
Create a new job to import virtual tapes in the AWS Snow Family management console



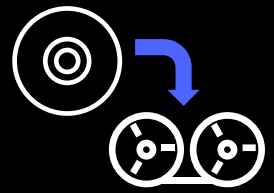
Device arrives in about 4-6 business days



Power device on, connect it to your network, unlock device, and start Tape Gateway using AWS OpsHub for Snow Family

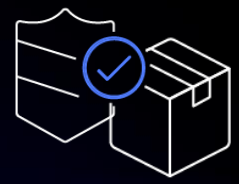


Activate Tape Gateway (VTL) and create virtual tapes from AWS Storage Gateway management console



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Storage Gateway > Tapes

Tapes (114) Info

Tape gateway stores tapes in Amazon S3, S3 Glacier, and S3 Glacier Deep Archive.
To find tapes, select a filter from the dropdown list and then run your search.

Actions | Create tapes

Barcode | ARCH | 1 match | 1

Barcode	Status	Used	Size	Created	Archived	Gateway	Pool
ARCHDC226C	In transit to VTS	0%	5 TiB	11/27/2021, 8:44:55 PM	-	reinvent2021-demo	Deep Archive Pool

AWS OpsHub for Snow Family

File Edit View Window Help

aws OpsHub | Remote devices | Local devices | All devices | Services | Pre

Tape Gateway IP Address: 10.0.3.95

Transfer tape data

Active

Open Storage Gateway console

File & object storage

99%

File space available

Compute

0 of 0

Instances running

Tasks

-

Tasks running

Tasks

-

Failed tasks
in the last 24 hours

Services (7)

Stop service | Start service

Filter services

1 2

Service	Status
S3 Storage	Active
STS	Active
Tape Gateway	Active
IAM Users	Active
EC2 Compute	Active

Virtual network interfaces (1)

Delete | Create

Filter virtual network interfaces

1

Virtual network interface	Physical interface ID	IP address	Assignment
s.ni-8451940d382395ad2	s.ni-883c8288f06a58d15	10.0.3.95	DHCP

Time sources (0)

Update time servers

Filter time sources

1

IP address	Type	Stratum	State

AWS OpsHub for Snow Family

File Edit View Window Help

aws OpsHub | Remote devices | Local devices | All devices | Services | Preferences

Device ID	Device type	Total HDD storage
JID5a5bbcfa-0950-4bbc-bb57-eae4abc3ab9b	Snowball Edge	84.33 TB
State	**Network IP addresses**	**Total SSD storage**
Unlocked	10.0.3.128	1.27 TB

Transfer tape data — Get started

Upload tape data to the device so it can be moved to the AWS cloud and stored as virtual tapes in AWS Storage Gateway when the device is returned. Learn more

Manage storage — Get started

Upload files and objects to the device so that they can be accessed locally, physically moved to another location, or imported back to the AWS Cloud when the device is returned.

Start computing — Get started

Run pre-installed software on virtual servers (instances) locally on the device.

Launch tasks — Get started

Create tasks to streamline reoccurring actions taken on device resources, like restarting virtual servers, called instances.

Transfer tape data
Deactivated
Open Storage Gateway console

File & object storage
99%
File space available

Compute
0 of 0
Instances running

Tasks
-
Tasks running

Tasks
-
Failed tasks
in the last 24 hours

Services (7)

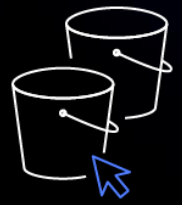
Stop service | Start service

Filter services

1 2

Service	Status
S3 Storage	Active
STS	Active
Tape Gateway	Deactivated
IAM Users	Active
EC2 Compute	Active

Step 6 – Tape Gateway Console → virtual tapes available in archive



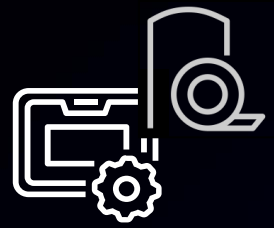
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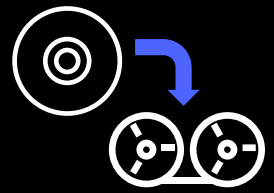
Device arrives in about 4-6 business days



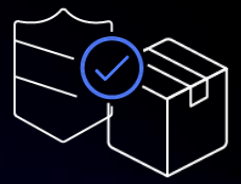
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DONE!

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Key takeaways

1

Offline tape-based data migration to the cloud

2

Better **durability, security,** and **restore**

3

Reduce your **infrastructure costs**

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How to get started?



Learn

aws.training

- Free training classes
  aws.amazon.com/snowball
- Product information
- Product documentation
- Pricing
- Cost calculator



Implement

aws.amazon.com/console

- Create AWS account
- PoC AWS Snowball Edge with Tape Gateway



Get help

forums.aws.amazon.com

- Community help
- Your AWS account team
- AWS Professional Services
- AWS support

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Thank you!

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