aws storage

Moving, Storing, and Edge Processing Data

Frank Paterra
AWS

Options for accelerated data transfer

AWS
Direct Connect

Amazon
Kinesis
Firehose

Amazon
Kinesis
Data Streams

Amazon Kinesis
Video Streams

Amazon S3
Transfer
Acceleration

AWS
Storage
Gateway

AWS
Snowball

AWS
Snowball Edge

AWS
Snowmobile

AWS
DataSync

AWS
Transfer
for SFTP

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What is Snowball, and why did we build it?

- Moving large volumes of data over limited network can take decades – **we ship secure physical devices to pick up your data from where it's at and ship it back to the cloud**

- The cloud is not accessible from remote locations with sparse connectivity – **deploy ruggedized devices with local cloud capabilities at the edge to process data even without network**

- Traditional shipping labels are error prone – **our E-Ink shipping label is automatic and error-proof**

AWS Snowball

AWS Snowball Edge

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AWS Snowmobile

- 45-foot long shipping container
- Moves up to 100PB in one load
- Networking up to 500Gb/s
- Direct import into S3
- Secure
  - All data encrypted with keys from your account
  - Dedicated security personnel
  - GPS tracking and video surveillance
  - Remote monitoring and alarming

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AWS Snow Family – Data transfer and edge compute

AWS Snowball

Data Transfer Only

- 50 or 80TB storage capacity
- 10GE networking
- Data encryption end-to-end
- Chain of Custody, Tamper Detection
- Rugged 8.5 G impact case
- Rain and dust resistant
- S3 Data Import
- Small file Batching

AWS Snowball Edge

Data Transfer & Edge Compute

- 42/100TB storage capacity (s3)
- 10/25/40GE networking
- Data encryption end-to-end
- Rugged 8.5 G impact case
- Chain of Custody, Tamper Detection
- Rain and dust resistant
- S3 Data import
- NFSv4 Server
- Clustering
- AWS Greengrass & Lambda
- EC2/AMI support for edge computing
- GPU options

Secure & Ruggedized

Compute can be used for Edge data processing

AWS Snowmobile

20+ PB Data Transfer

- Exabyte-scale storage in a 45ft container (90PB s3/Glacier/EBS)
- Up to 500Gb/s networking
- Data encryption end-to-end
- S3 Data import
- Dedicated security personnel
- GPS tracking, alarm monitoring, 24/7 surveillance, and optional additional security

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AWS Outposts

AWS Outposts

- AWS designed and fully managed infrastructure

- Deploy on-premises in datacenters or edge locations

- Run key AWS services locally

- Designed for connected deployments

- Native access to full AWS services platform

- One consistent management plane across on-premises and cloud

- Choice of AWS or VMware control plane

- Ideal for low-latency and local data processing

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AWS Outposts

Fully featured EC2 services delivered by regional control plane, requires connectivity to AWS region

Wide range of EC2 instances and storage options (e.g. M5/M5a, C5, R5/R5a, I3), with local NVMe and EBS storage

Ideal for wide variety of general purpose applications

Local EBS, RDS, ECS, EKS, EMR, Sagemaker, Rekognition, and ALB. No local S3, IAM, DynamoDB, etc

AWS Snowball Edge

Local EC2, IAM, S3 services with local control plane for connected and disconnected environments

Variety of EC2 instance sizes, from 1 to 48 vCPUs and 2 to 192 GiB memory, with optional GPU

42 TB object storage and 7.6TB of NVMe SSD for fast block and file storage

Cost-effective data transfer to move data in and out of S3; can be clustered for larger on premises storage and compute

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AWS has been helping enterprises for 13 years

Increase agility

Accelerate innovation

Strengthen security

Reduce cost

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Storage choices designed for applications and archives

Block storage volume types

General Purpose SSD
Provisioned IOPS SSD
Throughput-Optimized HDD
Cold HDD
Elastic Volumes

File storage classes

EFS Standard
EFS Infrequent Access **NEW!**
Amazon FSx for Windows File Server **NEW!**
Amazon FSx for Lustre **NEW!**

Object storage classes

S3 Standard
S3 Standard-IA
S3 One Zone-IA
S3 Glacier
S3 Intelligent-Tiering **NEW!**
S3 Glacier Deep Archive **NEW!**

Backup

AWS Backup **NEW!**

Edge Cache

AWS Storage Gateway Family

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