Optimize your cloud data storage

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Agenda

Moving your data to the cloud: TCO vs. On-Prem

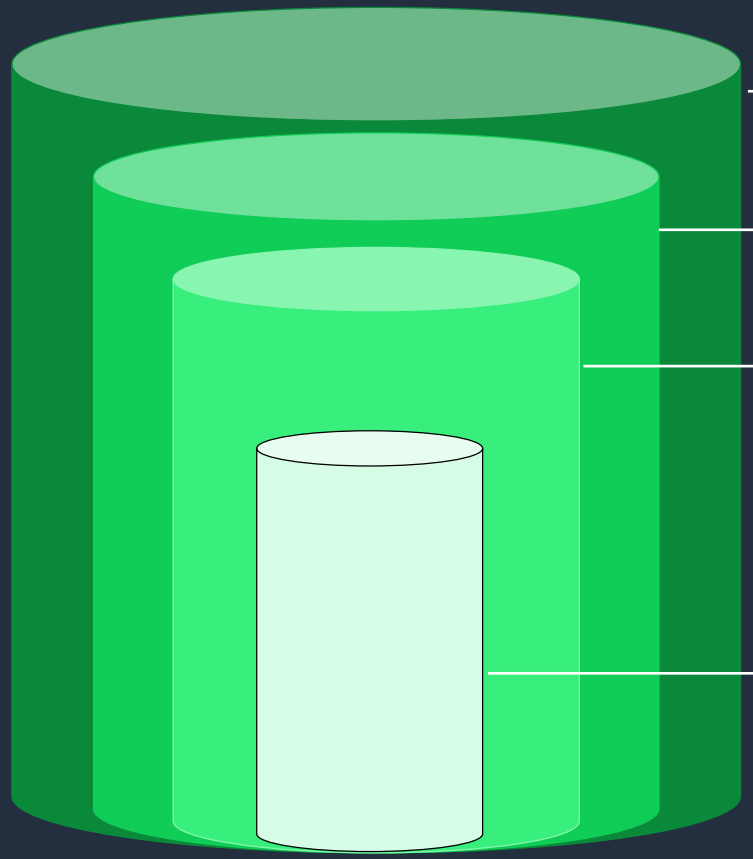
Optimizing your File and Block Workloads

Cost Optimization Strategies for Amazon S3

Ongoing management and data cost optimization

Cloud Storage Economic Fundamentals

Enterprise storage



1 PB raw storage

800 TB usable storage

600 TB allocated storage

400 TB application data

Cloud Storage

400 TB
application data

You need the right storage for any data

#1

OBJECT

Amazon S3

#1

BLOCK

Amazon EBS

#1

FILE

Amazon EFS

Amazon FSx for Lustre

Amazon FSx for NetApp ONTAP

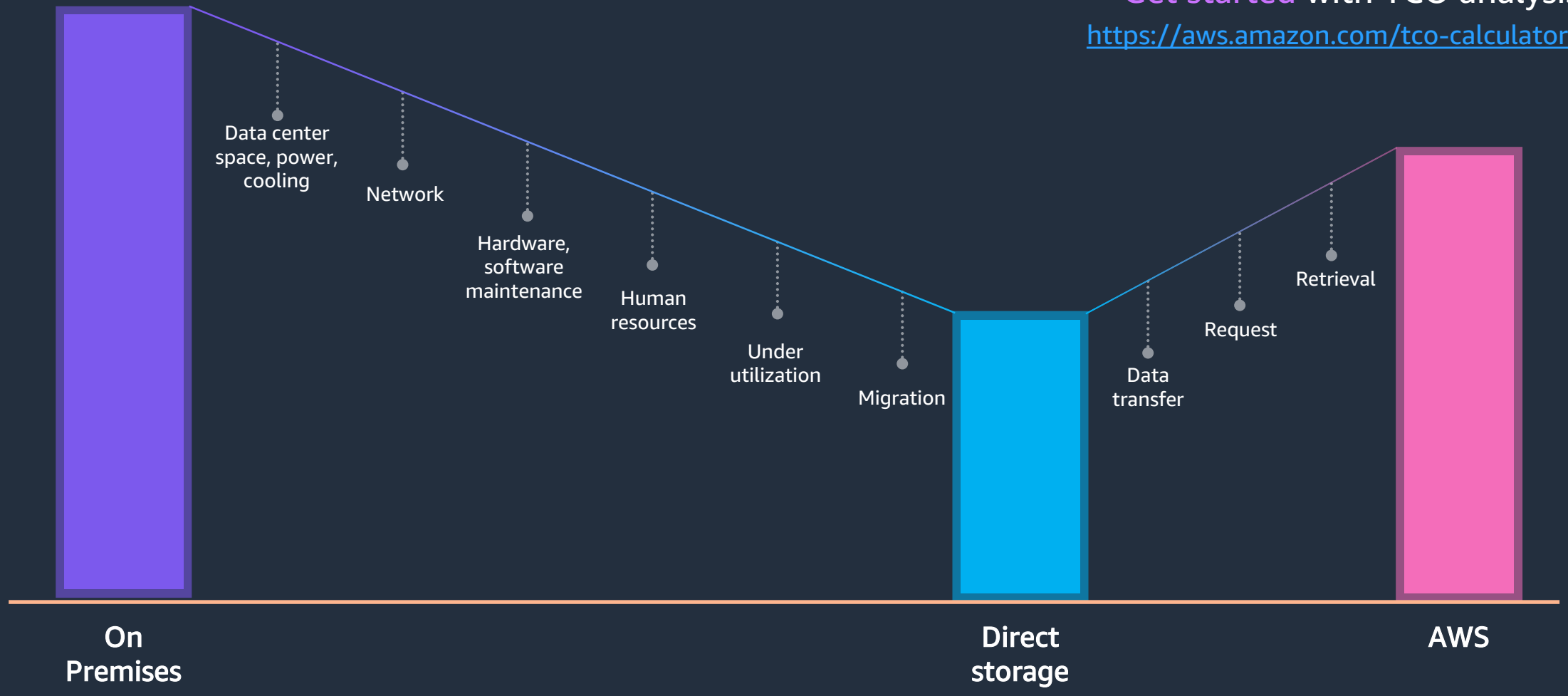
Amazon FSx for OpenZFS

Amazon FSx for Windows File Server

Most complete cloud storage portfolio

Understand your true TCO

Get started with TCO analysis
https://aws.amazon.com/tco-calculator/

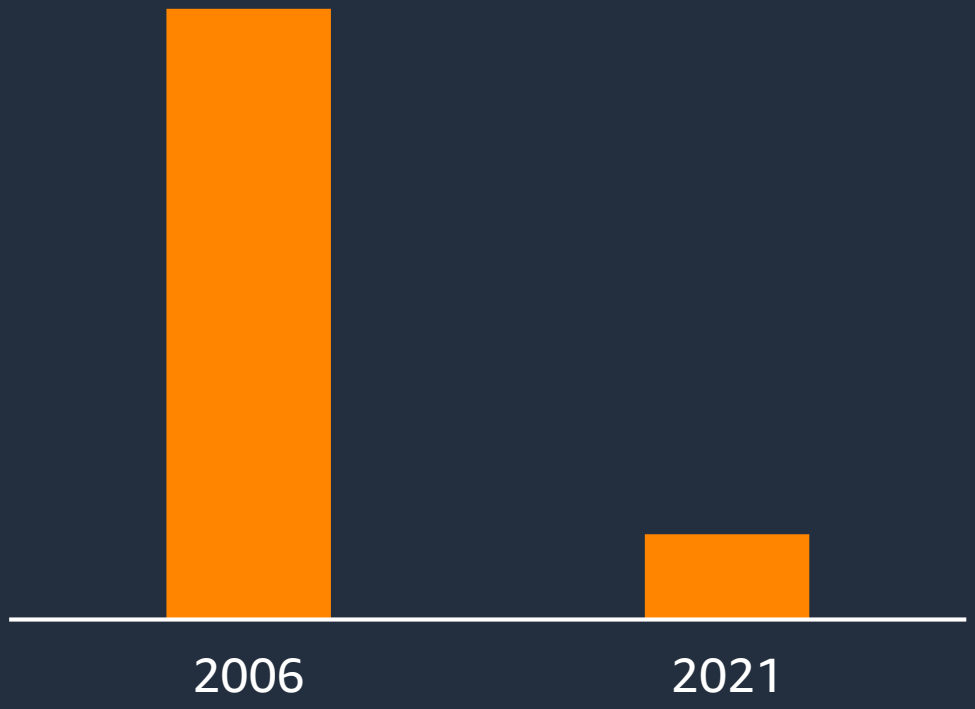


Optimizing your data in AWS

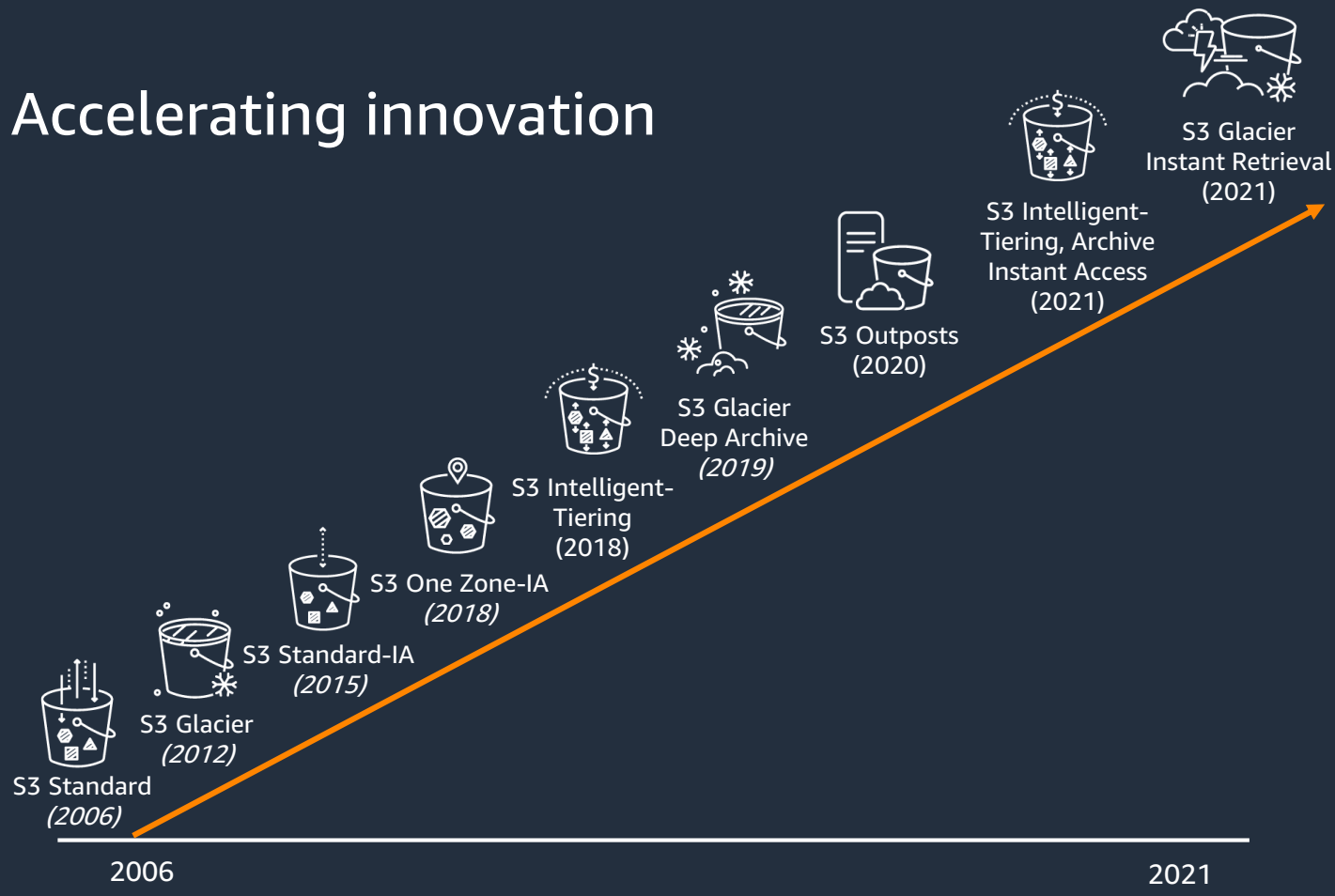
Amazon S3 storage classes

OPTIMIZE YOUR STORAGE COSTS BY UTILIZING ALL AMAZON S3 STORAGE CLASSES

Decreasing storage prices



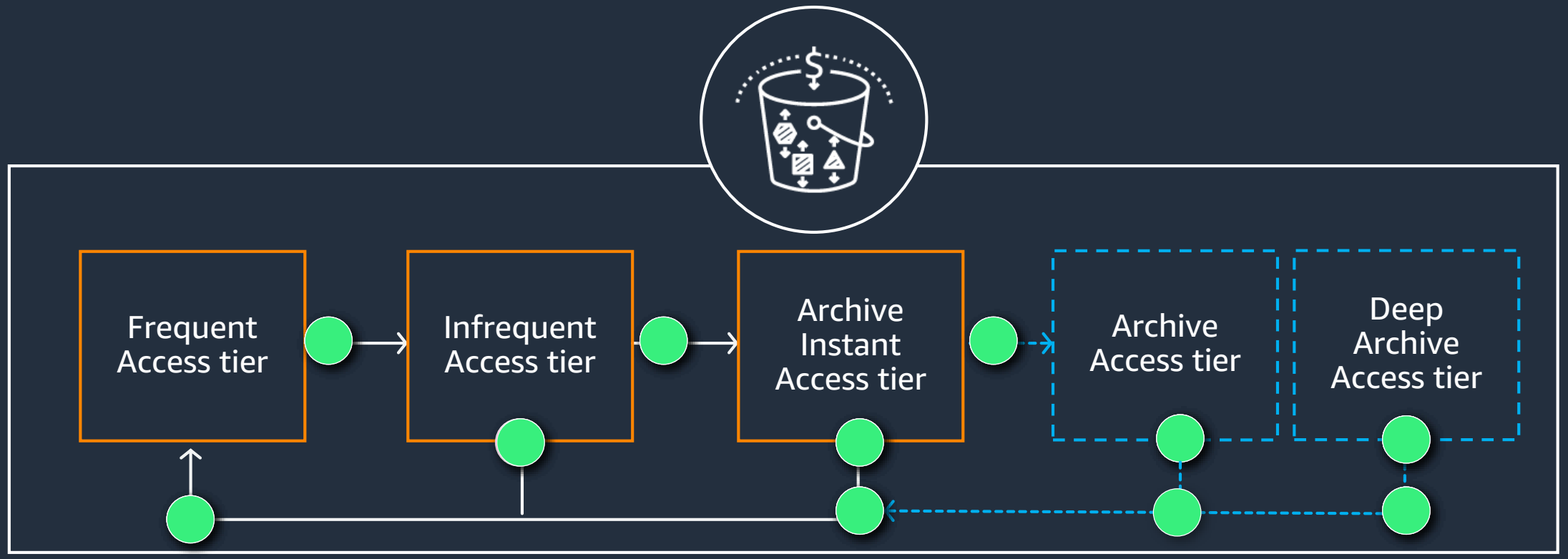
Accelerating innovation



S3 Lifecycle data with predictable access patterns

Use S3 Intelligent-Tiering for data

WITH UNKNOWN OR CHANGING ACCESS PATTERNS



Milliseconds access (automatic)

Minutes to hours (optional)

S3 Storage Lens overview

- Interactive dashboard experience in the S3 console – free to all customers
- Organization-wide visibility
- Drill down by Region, storage class, bucket, and prefix
- Granular usage and activity metrics
- Callouts for cost efficiency and data protection best practices
- Publish metrics to Amazon CloudWatch

Data lifecycle tiering

Economic snapshot retention

Lifecycle and capacity management

EBS is Cost Effective

SECURE FOR MISSION-CRITICAL WORKLOADS

Broadest range of volume types in cloud block storage

Choose from a variety of volume types, each offering different price and performance characteristics

Pay-as-you-go storage

Pay for only the storage you use, without requiring long-term contracts or complex licensing

Balanced price and performance

sc1 HDD based volumes $0.015/GB-month for highly cost-effective block storage

General purpose (gp3) SSD based volumes starting at 3,000 IOPS standard at any volume size, for $0.08/GB-month

Amazon EBS Snapshots Archive

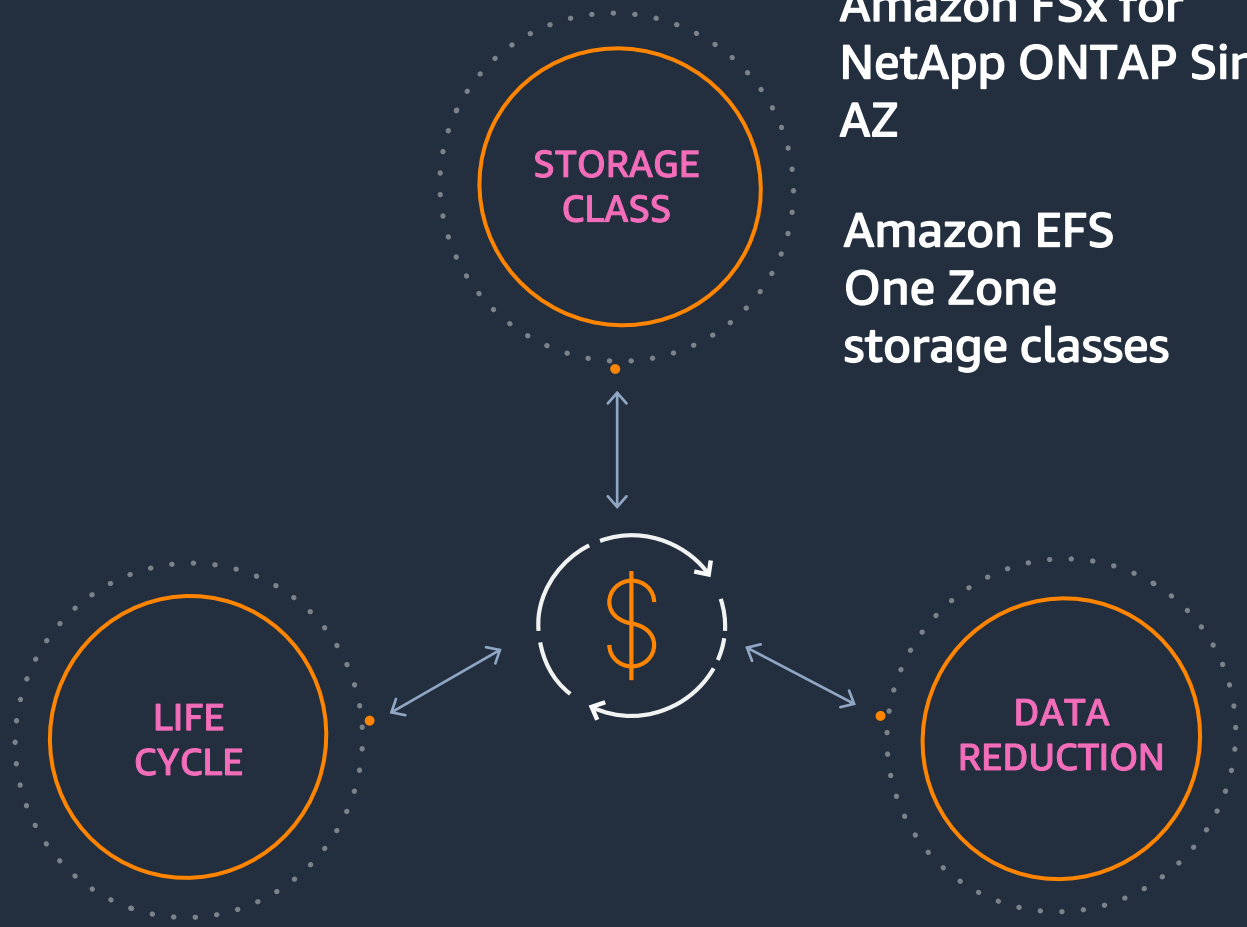
Low storage cost for long-term retention of rarely accessed EBS Snapshots

75% lower costs (1.25c/GB-mo)
- 3c/GB additional retrieval charges

Long-term snapshot retention
- 90-day minimum retention period
- Full, point-in-time backups

Easy to use
- Archive snapshots with a single API call
- Retrieve snapshot before use

File storage cost optimization



Amazon FSx for NetApp ONTAP Single AZ

NEW 2022

Amazon EFS One Zone storage classes

47%

Amazon EFS Intelligent-Tiering

92%

Amazon FSx for NetApp ONTAP Automatic Tiering

Compression and deduplication on Amazon FSx Family

50–65%

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FSx for NetApp ONTAP: Intelligent Tiering

AUTOMATIC PERFORMANCE AND COST OPTIMIZATION

$0.042/GB-month*
Effective Multi-AZ storage cost

Primary tier

SSD optimized
for performance

~20%

Capacity pool tier

Elastic virtually unlimited capacity
(PB+ file systems)

Cost-optimized for
less-accessed files

~80%

Automated tiering policies

- Snapshot only
- None
- Auto
- All

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*Pricing in the US East (N. Virginia) Region. Assumes 80% of the files are infrequently accessed and 50% dedupe/compression

EFS: Cost-Optimize with Intelligent Tiering

EFFECTIVE COST USING AMAZON EFS STORAGE CLASSES AND EFS INTELLIGENT-TIERING

$0.043/GB-month*
Effective storage cost

$0.08/GB-month*
Effective storage cost

EFS One Zone
$0.16/GB-month*

EFS Standard
$0.30/GB-month*

EFS One Zone-IA
Cost-optimized for less-accessed files
$0.01333/GB-month* for storage
$0.01/GB* for data transition between storage classes

EFS Standard-IA
Cost-optimized for less-accessed files
$0.025/GB-month* for storage
$0.01/GB* for data transition between storage classes

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*Pricing in the US East (N. Virginia) Region. Assumes 80% of the files are infrequently accessed.

Key takeaways

- Move your data to the cloud to **pay only for what you need**
- AWS File Services (EFS, FSx) for **fast migration** of existing workloads; **use tiering, deduplication, compression to optimize**
- Leverage EBS Snapshots Archive for up to **75% savings**
- Use S3 Intelligent-Tiering by default for datasets that have **unknown or changing access patterns**
- Use S3 Storage Lens to continuously monitor and optimize **performance, security, and costs**

Thank you!

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