



# Move to Managed File Storage: Amazon EFS and FSx

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# Agenda

- Introduction to Managed File Services
- Elastic File System (EFS)
- EFS Demo
- FSx for Windows File Server (FSx)
- FSx Demo
- Q&A

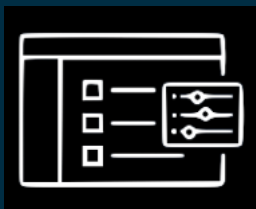
# Are you faced with these on-premises storage challenges?



**Growing infrastructure costs**



**Storage and compute capacity limits**



**Ongoing management overhead**

# Fully managed means you no longer need to:



## Manage hardware

Plan capacity

Procure and purchase hardware

Set up storage servers and volumes

Detect and address hardware failures

Invest CapEx



## Manage software

Install and configure server software

Set up and configure file systems

Apply updates

Manage software licenses

Manage backups

Monitor security

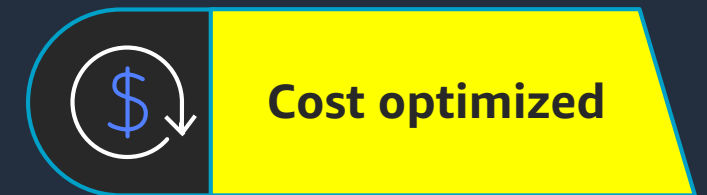
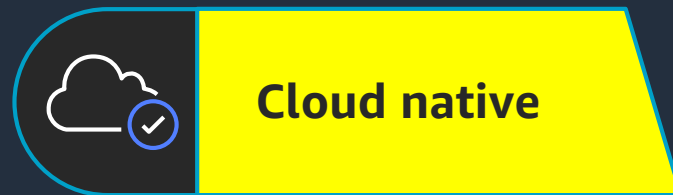
# Amazon Elastic File System (EFS)



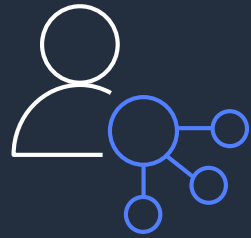
# Amazon Elastic File System (Amazon EFS)



Amazon EFS  
is a fully managed file system that is...

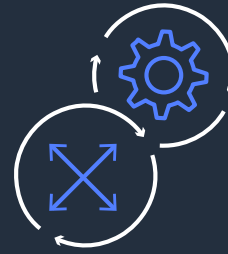


# Cloud native | Amazon EFS



## Elastic

- Grow & shrink on demand
- No need to provision and manage infrastructure & capacity
- Pay as you go, pay only for what you use
- Simple to use, create a file system in seconds



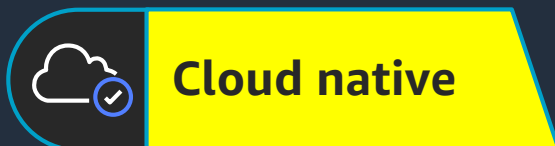
## Scalable

- Grow up to petabytes
- Performance modes for low latencies and maximum I/O
- Throughput that scales with storage
- Provisioned throughput available



## Integrated

- Shared access from on-premises, inter region, and cloud-native applications
- Integrated with various AWS computing models
- Access concurrently from thousands of Amazon EC2 instances
- Attach to containers launched by both Amazon ECS and EKS



# Highly reliable | Amazon EFS



## Highly available, durable

- Stores data across three availability zones for high availability and durability
- Access your file system from multiple AZs
- Strong consistency for concurrent access



## Secure

- Control network traffic
- Control file and directory access
- Control administrative (API) access with AWS IAM
- Encrypt data at rest and in transit



## Global Footprint

- Available in all AWS commercial regions
- Feature parity in every region

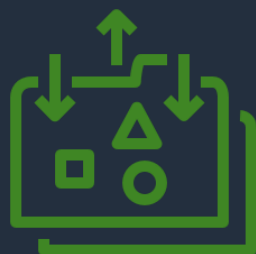




# EFS Storage classes

Choose between highest durability and availability, and cost savings of 47%

## Standard Storage Classes offering multi-AZ resilience



### EFS Standard

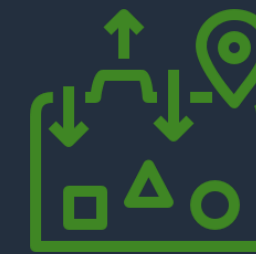
Frequently accessed data requiring highest durability and availability



### EFS Standard-Infrequent Access

Long-lived, infrequently accessed data

## One Zone Storage Classes offering choice of 47% savings



### EFS One Zone

Frequently accessed data that doesn't require highest levels of durability and availability (ex. easily Reproducible data)



### EFS One Zone-Infrequent Access

Long-lived, infrequently accessed data that doesn't require highest levels of durability and availability



# BBC Uses Shared File Storage to Migrate Red Button Application to the AWS Cloud

## About/Challenge

Red Button is an application that provides interactive television service to its users.

It was maintained across a heterogeneous set of software solutions with many different types of programming languages and systems.

## Solutions

Moving Red Button to AWS allowed developers to define infrastructure as code.

Amazon EFS allowed them to maintain a POSIX-compliant file-sharing architecture.

## Benefits

- The ability to reproduce environments in minutes and iteratively improve software components in a cost-effective way.
- Simplifying the transition of Red Button to the cloud and helping the team meet project deadlines.



Industry: Mass Media

Country: England

Employees: 22,500

Website: [www.bbc.co.uk](http://www.bbc.co.uk)

## About the BBC

The BBC is the world's leading public service broadcaster.

We're impartial and independent, and every day we create distinctive, world-class programmes and content which inform, educate and entertain millions of people in the UK and around the world.

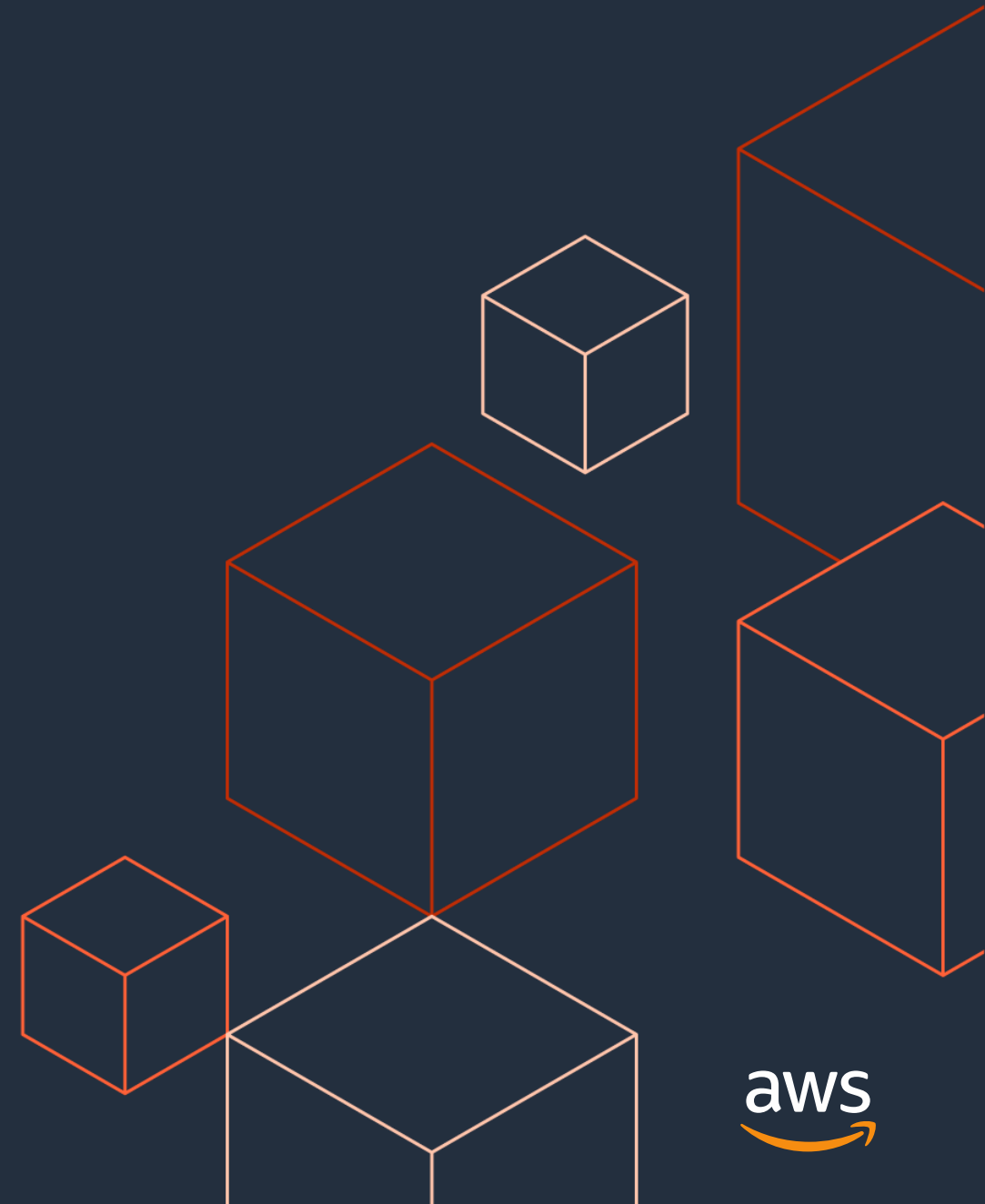
“

One of the key benefits we found is the ability to define infrastructure as code. It **enables our engineers to duplicate production environments in minutes**, and at a lower cost.

Andrew Walsh – Principal Software Engineer

”

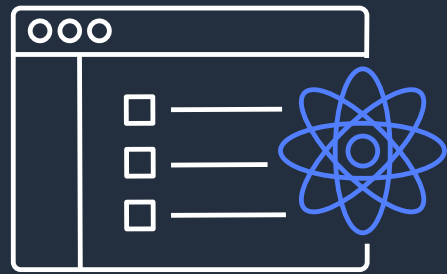
# Demo: EFS



# FSx for Windows File Server



# What is Amazon FSx for Windows File Server?



Fully managed native  
Windows file systems



Deeply integrated  
with AWS

# Designed for a wide spectrum of use cases:

## NAS lift-and-shift



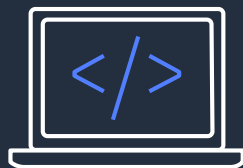
Home  
directories



Line-of-business  
applications



Web serving and  
content management



Software  
development  
environments



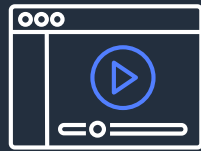
Backup and  
disaster recovery



HA SQL Server  
databases

# Designed for a wide spectrum of use cases:

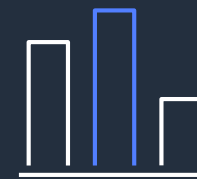
## Cloud-native workloads



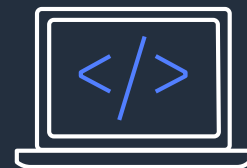
Media  
workflows



Analytics



HPC

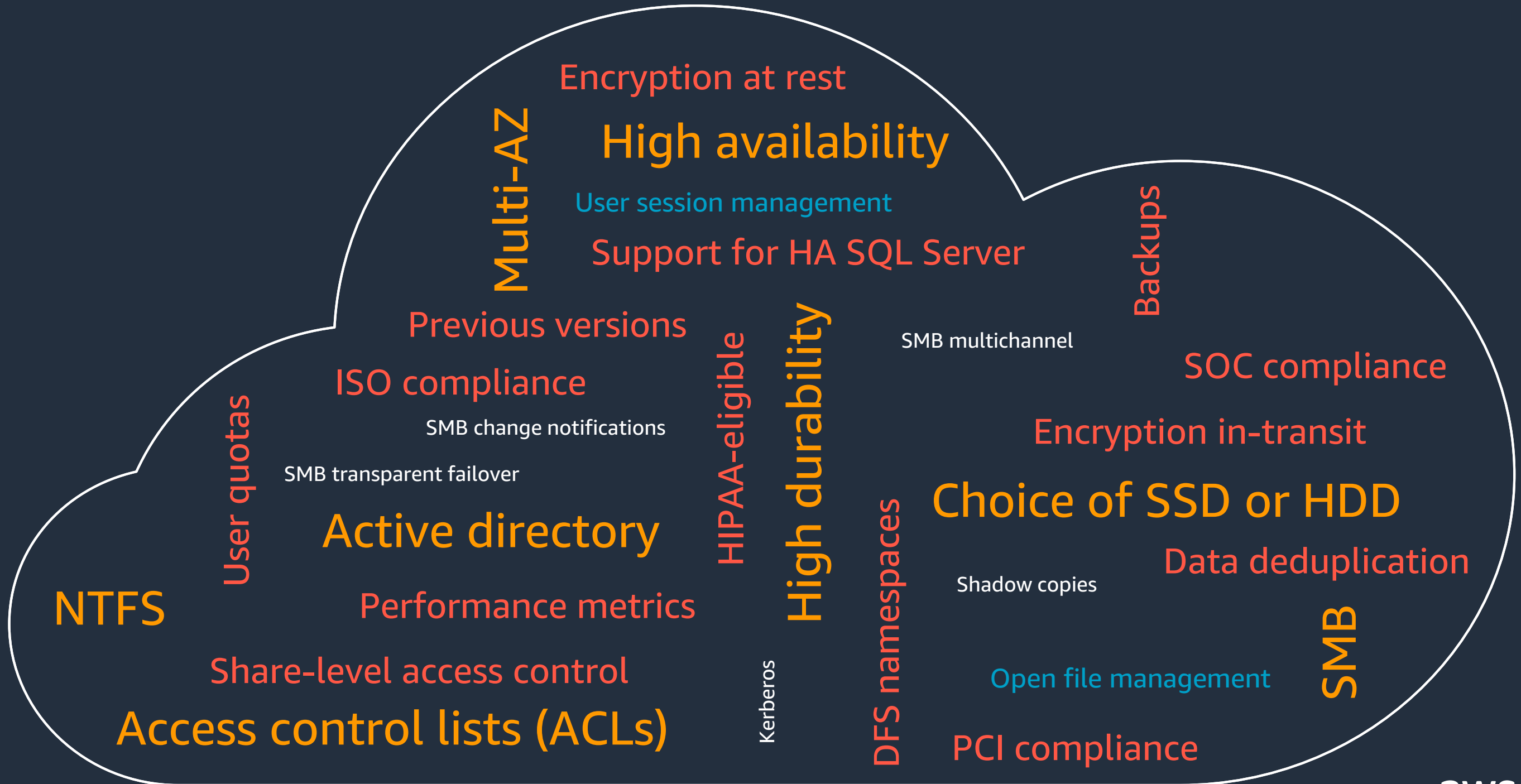


Dev and Test  
environments



SaaS applications

# Fully featured and compatible





# Data protection for your business-critical applications



## Snapshots with file-level restore (shadow copies)

- In-line snapshots stored on the file system
- End users can restore files without administrator help



## Automatic, durable backups to S3

- Supports data retention and compliance needs

# Effective storage cost with data deduplication

(per GB-month)



SSD

SSD-based storage

Single-AZ

Multi-AZ

6.5 cents

11.5 cents



HDD

HDD-based storage

0.65 cents

1.25 cents

Typical savings from deduplication for general file shares is 50-60%

# What fully-managed, fully-featured, and compatible means for customers



*"With Amazon FSx we have a **managed solution** that eliminates the need for us to manage the tasks associated with operating file storage, including performing backups and applying software patches."* - Greg Bell, Senior Systems Administrator



*"We were able move our Windows file-based application to AWS quickly and solved a critical performance issue. Based on our successful lift-and-shift experience, we're looking to move more of our legacy applications requiring Windows native compatibility, to Amazon FSx."* - Hemanth Jayaraman, Director, Cloud Center of Excellence



*"We no longer need to worry about maintenance of the file system environment or patching of the underlying servers. This is allowing the team to **focus on more business-critical parts of our application structure.**"* - John Waller, Senior Engineer, DocXellent

# Demo: FSx for Windows



# Learn more: Survey, Questions, and Tutorials

1. Personalized technical tutorial for your organization on this topic
2. An hour-long session
3. Groups from within your organization welcome
4. Please indicate your interest in the survey that follows this presentation

# Q&A





# Thank you

