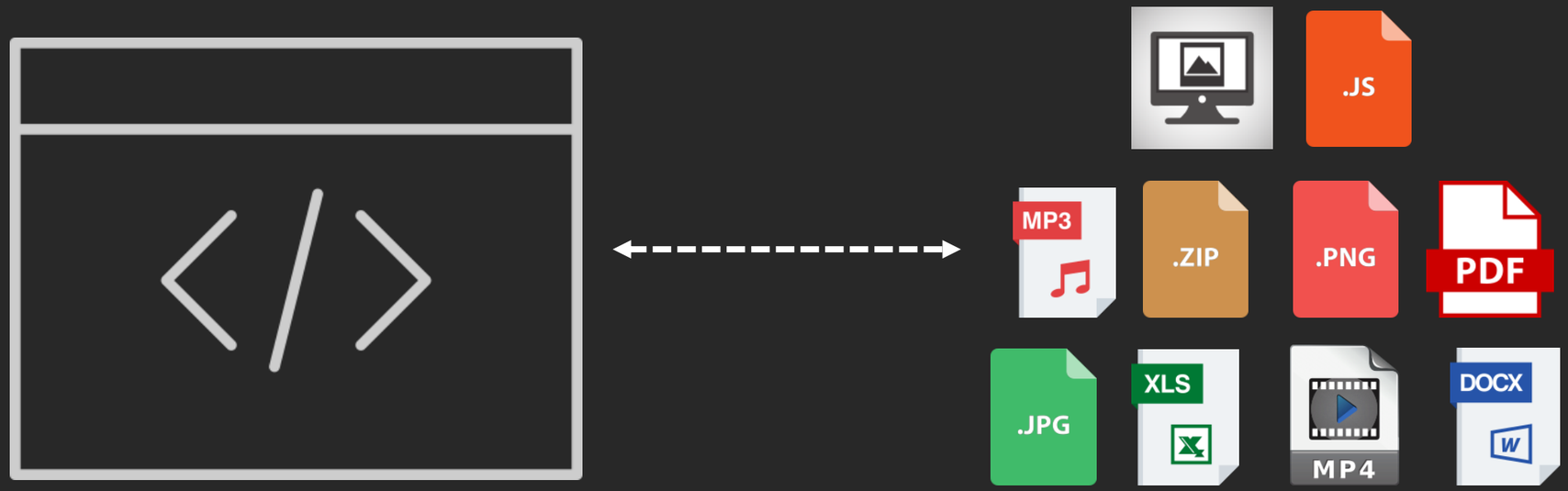
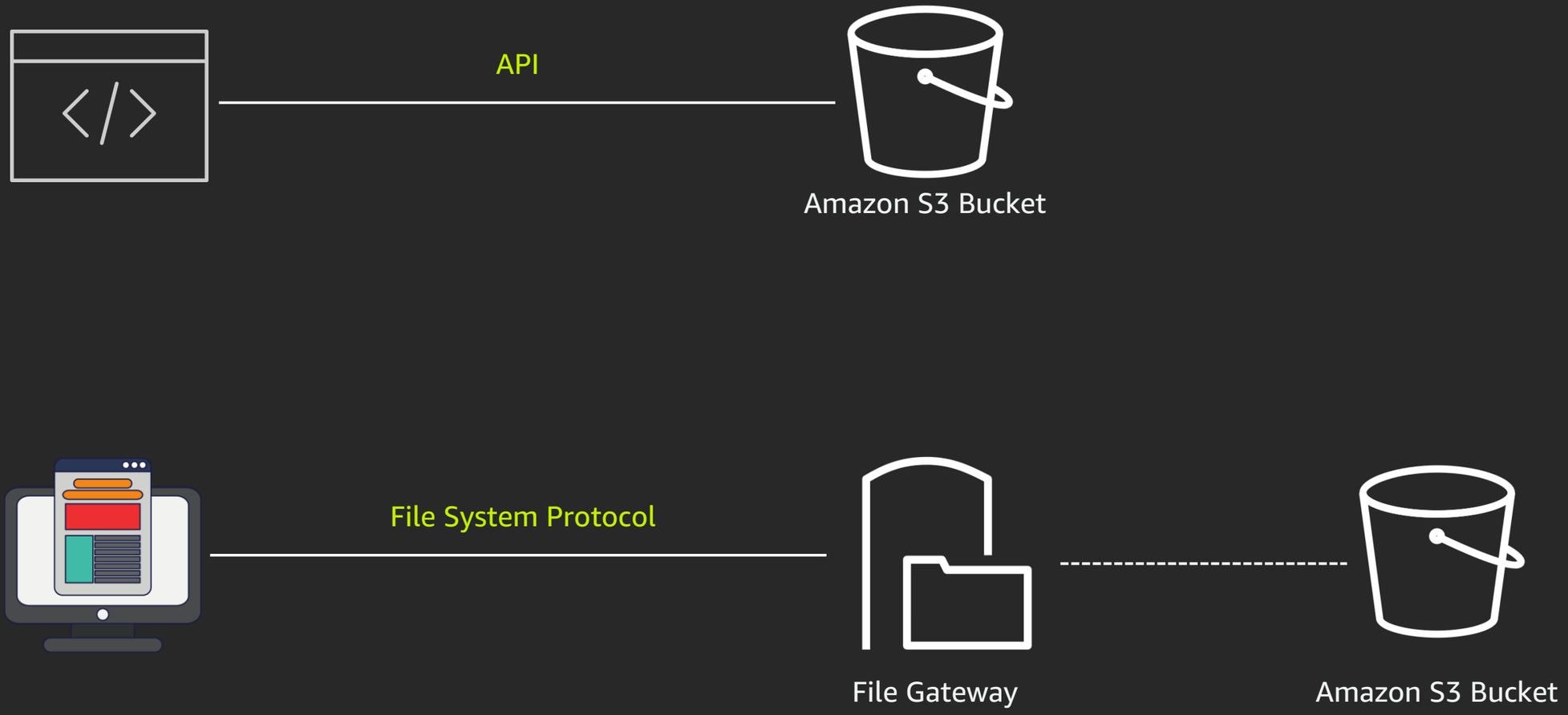
Where and how do I store data?



Storing via API or file system protocols



aws

Builders Online Series

Give unlimited scale storage to your application with Amazon S3 and File Gateway

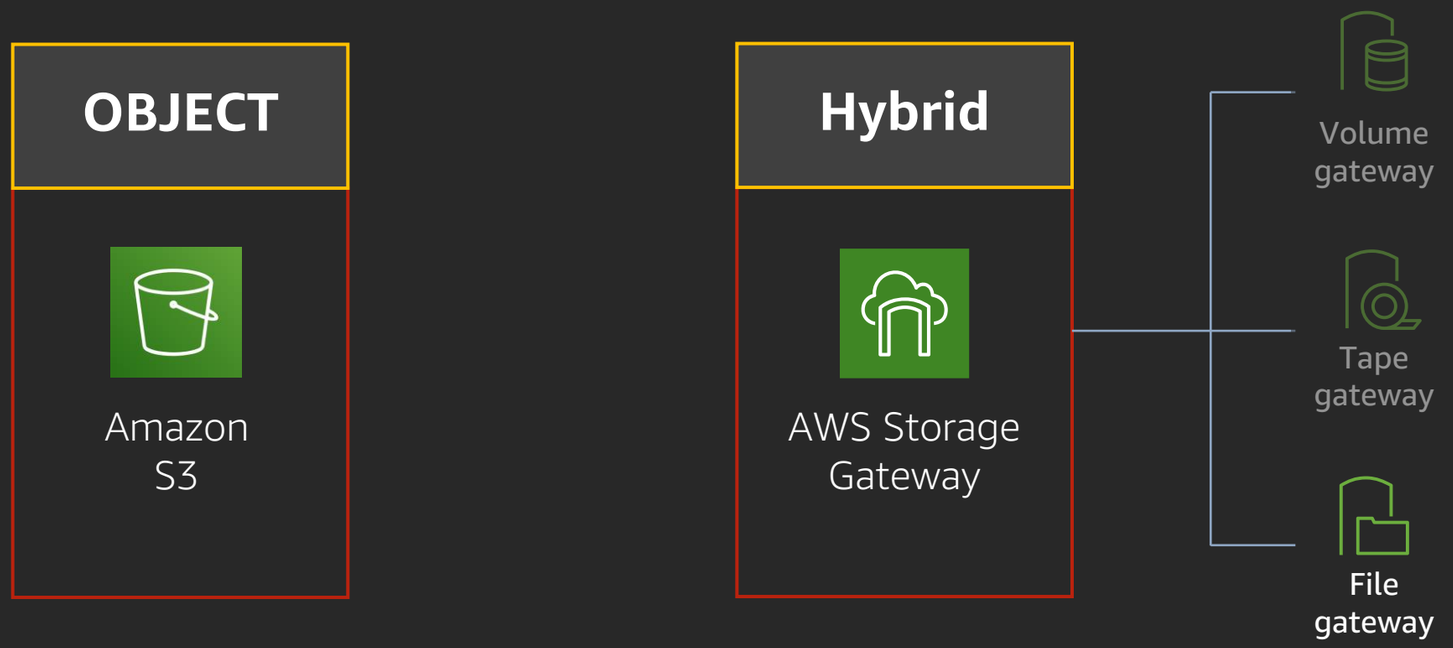
Kumar Nachiketa

Storage Specialty Solutions Architect,
Amazon Web Services

Agenda

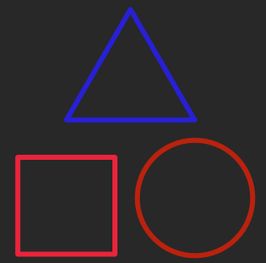
- React application with Amazon S3 and AWS Amplify
- Ingest data to Amazon S3 via File Gateway and query with Amazon Athena
- Demo

AWS Storage components for focus today



"Amazon Simple Storage Service (S3) is storage for the Internet. It is designed to make web-scale computing easier for developers."

Bucket



Objects

Object (Data + Metadata)

/photos/city.jpg

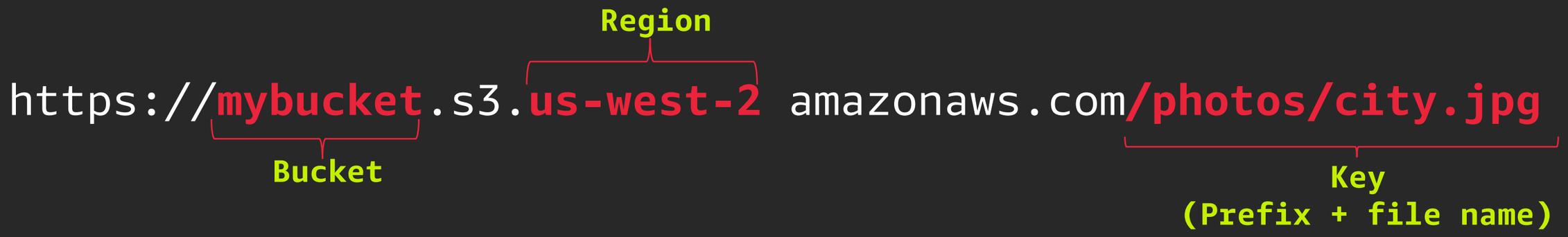
Metadata example

Last-Modified
Content-MD5
x-amz-server-side-encryption
x-amz-version-id
.
.

Tags example (Key: Value)

Category: Places
Camera: Canon-80D
Resolution: 1920x1020
.
.

Key terms of Amazon S3



Amazon S3 storage classes

S3 Standard

- Active, frequently accessed data
- Milliseconds access
- ≥ 3 AZ
- **$25.6/TB**

S3 Intelligent-Tiering

- Data with changing access patterns
- Milliseconds access
- ≥ 3 AZ
- **$20.48 to $25.6/TB**
- Monitoring fee per object
- Min storage duration

S3 Standard-IA

- Infrequently accessed data
- Milliseconds access
- ≥ 3 AZ
- **$20.48/TB**
- Retrieval fee per GB
- Min storage duration
- Min object size

S3 One Zone-IA

- Re-creatable, less accessed data
- Milliseconds access
- 1 AZ
- $**16.38 / TB**
- Retrieval fee per GB
- Min storage duration
- Min object size

S3 Glacier

- Archive data
- Select minutes or hours
- ≥ 3 AZ
- **$5.12/ TB**
- Retrieval fee per GB
- Min storage duration
- Min object size

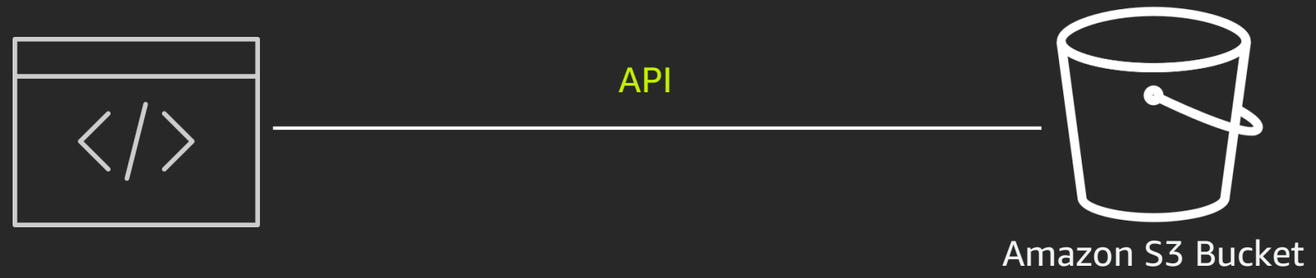
S3 Glacier Deep Archive

- Long-term archive data
- Select hours
- ≥ 3 AZ
- **$2.05/TB**
- Retrieval fee per GB
- Min storage duration
- Min object size

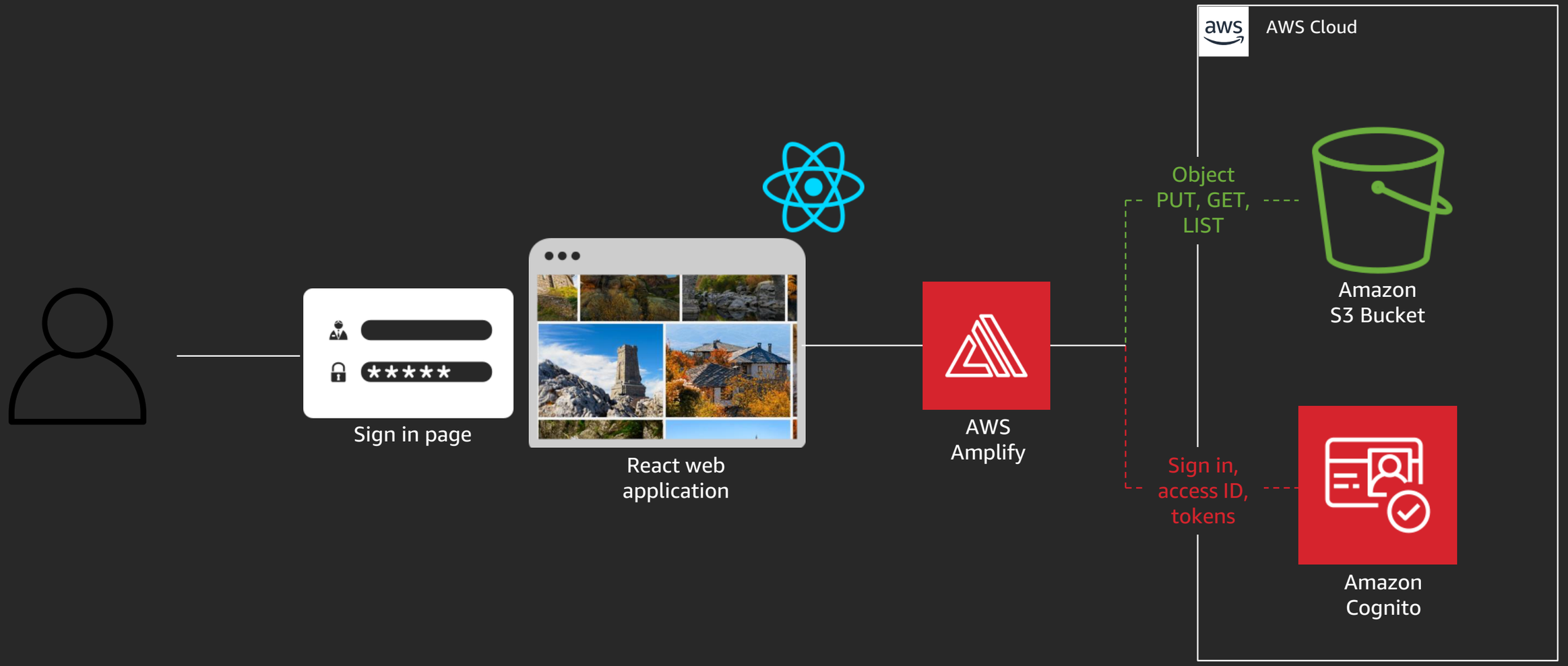
Frequent ***Access frequency*** ***Archive***

***Based on Singapore region price**

Pattern 1: Develop modern app using Amazon S3 API



React application: Photo album



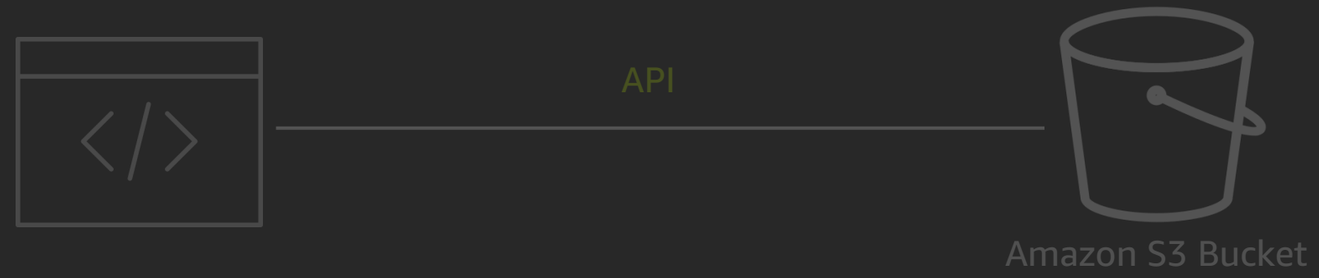
React application: Photo album

Demo steps:

1. Build a react app
2. Initialize local app
3. Add authentication service
4. Add storage

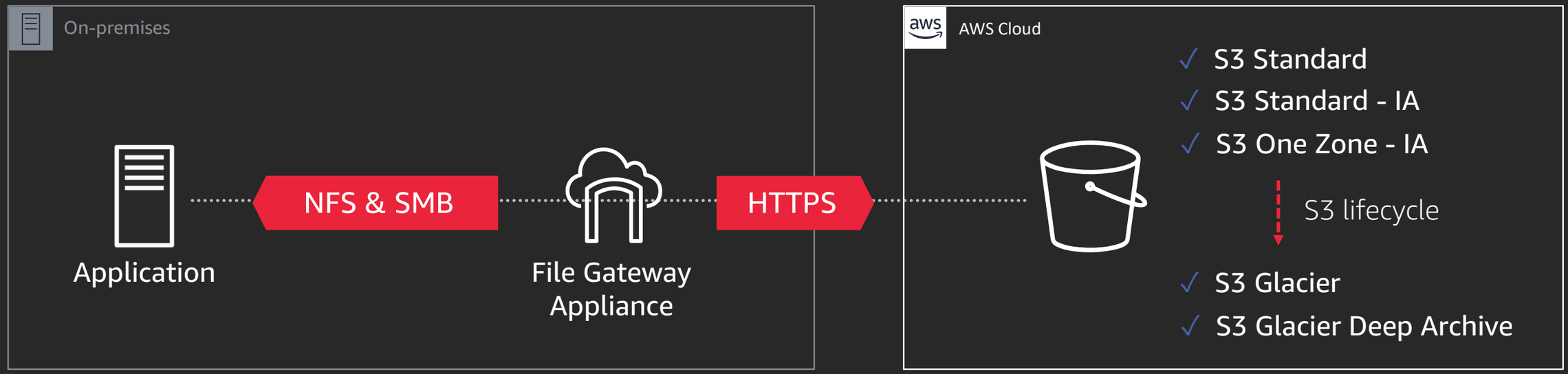
Demo – React application with Amazon S3

Pattern 2: Access S3 via File Gateway



File Gateway

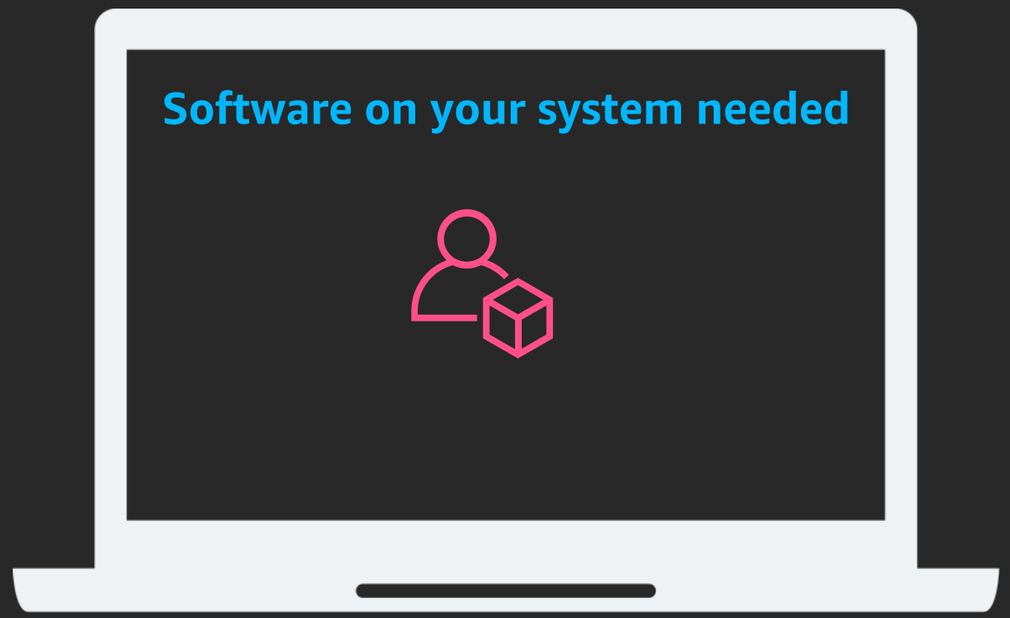
Store and access objects in Amazon S3 from file-based applications with local caching



- Supports SMB and NFS protocols – no application changes
- Fully managed cache provides low latency access to data
- Active Directory and Windows ACL support provides access controls

Demo: Ingest data from a Linux server, ad-hoc query using Amazon Athena

File Gateway demo requirements and steps



Demo Steps

1. Create and activate File Gateway
2. Create share and mount on Linux EC2 instance
3. Ingest CSV file
4. Query with Amazon Athena

Demo – Ingest data via File Gateway

Next steps and takeaways

1. Amazon S3 for the modern application
2. File Gateway for the applications need file-system level access
3. Use data in Amazon S3 for analytics and machine learning
4. Start today ☺

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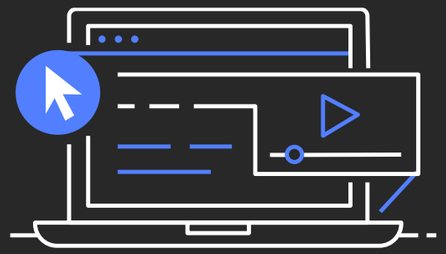

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- Getting Started with Amazon Simple Storage Service (Amazon S3)
  The course provides you with the knowledge to determine when to use Amazon S3 by reviewing typical use cases and understanding how the service provides object storage for your applications.

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Thank you

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