

Databases and Storage

TASK 1: step-by-step guide to store JSON data on an S3 bucket named 30119304-box-stream-bucket.

1. Go to the AWS (Amazon Web Services) Management Console and sign in to your AWS account.

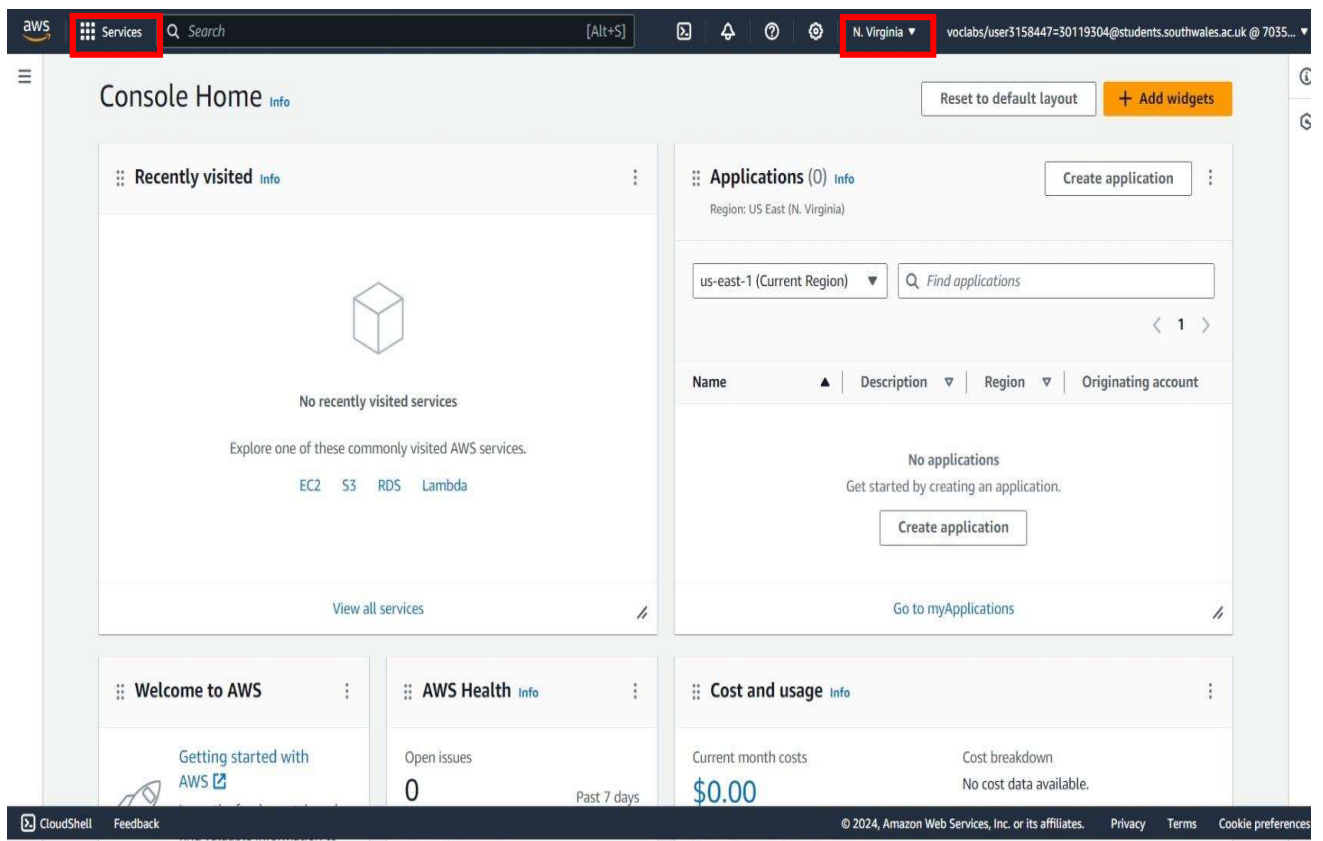


Fig 1: AWS (Amazon Web services) home page

2. In the search box to the right of **Services**, then select **"S3"** under the Storage section.
3. Begin creating an S3 Bucket.
 - Check that the **N. Virginia (us-east-1)** region's resources are currently being managed by your EC2 console. Checking the drop-down option to the left of your username at the top of the screen will allow you to confirm this. Before moving on to the following stage, select the N. Virginia region from the region selection if it is not already shown.
 - Choose the **Buckets** which is towards the top left of the console

- Next choose **Create bucket** button.

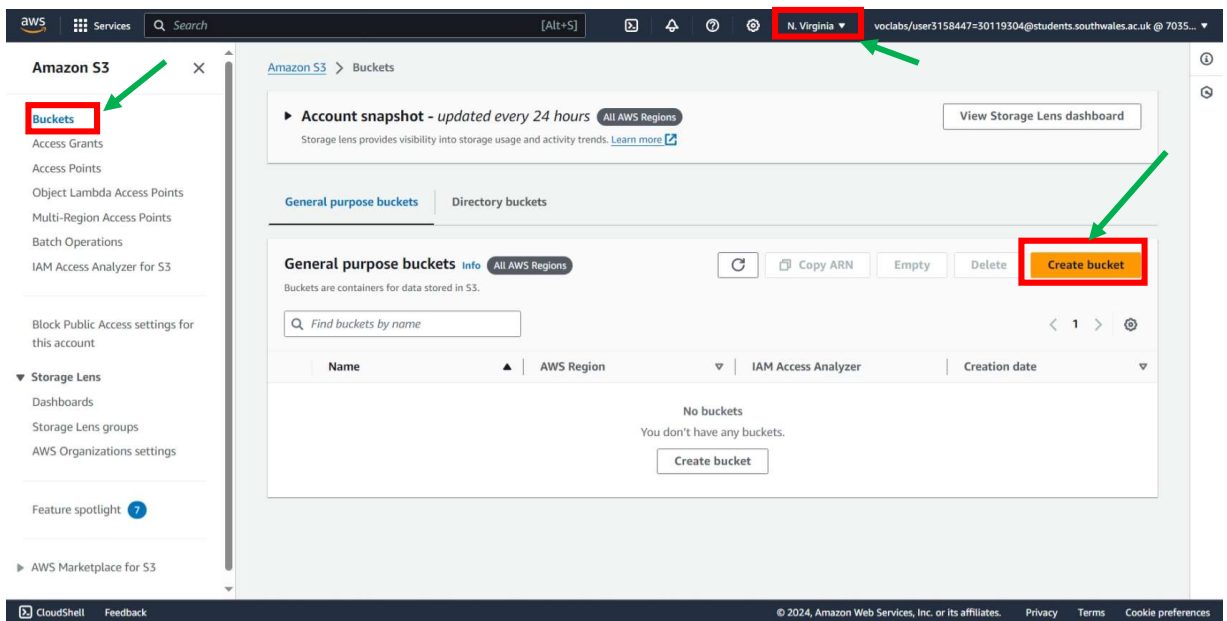


Fig 2: S3 Page

4. Configure the Bucket details in the "Create bucket" wizard, you will need to configure several settings:

- **Bucket name: 30119304-box-stream-bucket**

Note: Within a partition, bucket names must be unique for every AWS account in every AWS Region.

- Leave other settings as default and click on the **Create bucket** button.

Note: If you would like to maintain more than one version of an object in your bucket, enable versioning. For the backup and recovery of data, this can be helpful.

Create bucket [info](#)

Buckets are containers for data stored in S3.

General configuration

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

Bucket type [info](#)

☒ **General purpose**
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

☐ **Directory - New**
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name [info](#)
30119304-box-stream-bucket

Copy settings from existing bucket - optional
Only the bucket settings in the following configuration are copied.

Format: s3://bucket/prefix

Object Ownership [info](#)
Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership

Fig 3: Create bucket page

Object Ownership [info](#)
Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership

☒ **ACLs disabled (recommended)**
All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

☐ **ACLs enabled**
Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership
Bucket owner enforced

Block Public Access settings for this bucket
Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

☒ **Block all public access**
Turning this setting on is the same as turning on all four settings below. Each of the following settings is independent of one another.

- ☒ **Block public access to buckets and objects granted through new access control lists (ACLs)**
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
- ☒ **Block public access to buckets and objects granted through any access control lists (ACLs)**
S3 will ignore all ACLs that grant public access to buckets and objects.
- ☒ **Block public access to buckets and objects granted through new public bucket or access point policies**
S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.
- ☒ **Block public and cross-account access to buckets and objects through any public bucket or access point policies**
S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

Bucket Versioning
Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Bucket Versioning
☒ **Disable**
☐ **Enable**

Fig 4: Create bucket page

Tags - optional (0)
You can use bucket tags to track storage costs and organize buckets. [Learn more](#)

No tags associated with this bucket.

[Add tag](#)

Default encryption [info](#)
Server-side encryption is automatically applied to new objects stored in this bucket.

Encryption type [info](#)

- ☒ Server-side encryption with Amazon S3 managed keys (SSE-S3)
- ☐ Server-side encryption with AWS Key Management Service keys (SSE-KMS)
- ☐ Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)
Secure your objects with two separate layers of encryption. For details on pricing, see [DSSE-KMS pricing](#) on the Storage tab of the [Amazon S3 pricing page](#).

Bucket Key
Using an S3 Bucket Key for SSE-KMS reduces encryption costs by lowering calls to AWS KMS. S3 Bucket Keys aren't supported for DSSE-KMS. [Learn more](#)

- ☐ Disable
- ☒ Enable

Advanced settings

After creating the bucket, you can upload files and folders to the bucket, and configure additional bucket settings.

[Cancel](#) [Create bucket](#)

Fig 5: Create bucket page

5. Once the bucket is created, you will see it listed in the S3 dashboard.

Successfully created bucket "30119304-box-stream-bucket"
To upload files and folders, or to configure additional bucket settings, choose [View details](#).

Amazon S3 > Buckets

Account snapshot - updated every 24 hours [All AWS Regions](#) [View Storage Lens dashboard](#)

General purpose buckets | Directory buckets

General purpose buckets (1) [info](#) [All AWS Regions](#)

Buckets are containers for data stored in S3.

[Find buckets by name](#)

Name	AWS Region	IAM Access Analyzer	Creation date
30119304-box-stream-bucket	US East (N. Virginia) us-east-1	View analyzer for us-east-1	May 18, 2024, 12:28:19 (UTC-07:00)

Fig 6: S3 page

6. Now start to upload your JSON data
- Click on your bucket named 30119304-box-stream-bucket to open it.
 - Then it is showing inside bucket it does not have any object
 - Then click on the **"Upload button"**

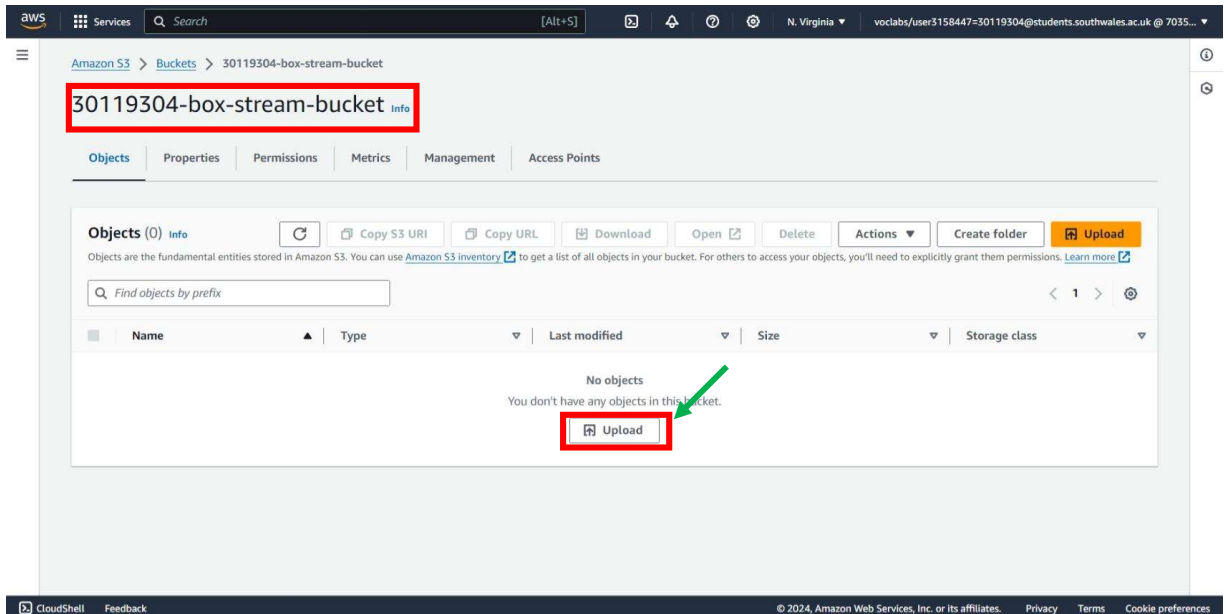


Fig 7: 30119304-box-stream-bucket page

- In the upload dialog, click on the **"Add files"** button and select the JSON file(s) named as **coursework_data** to upload from your system.

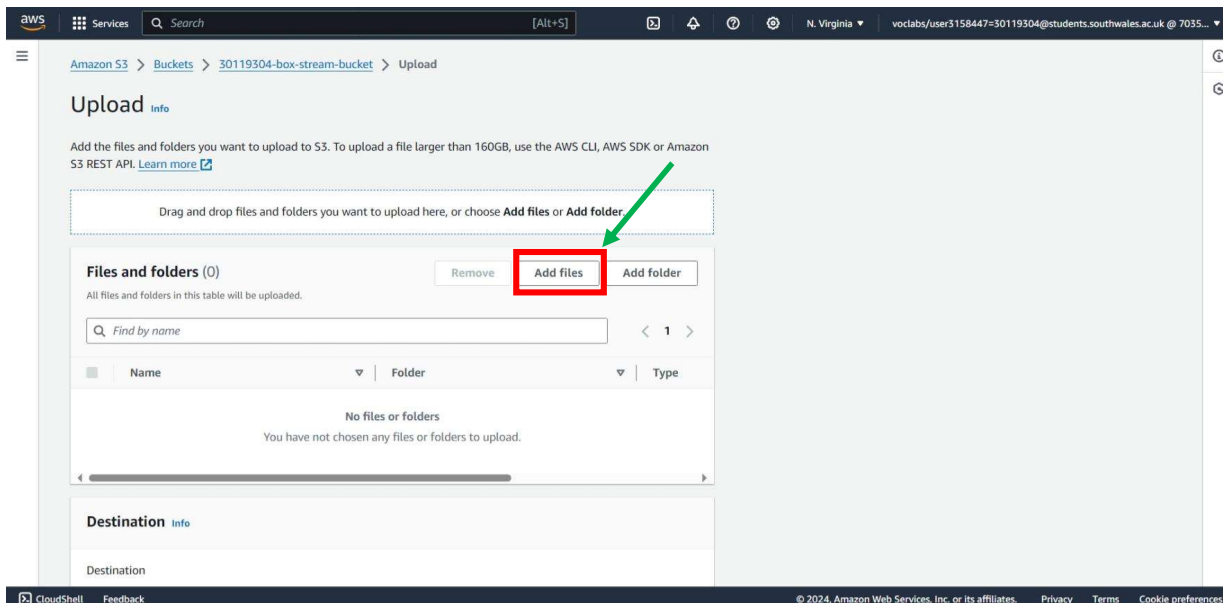


Fig 8: 30119304-box-stream-bucket page

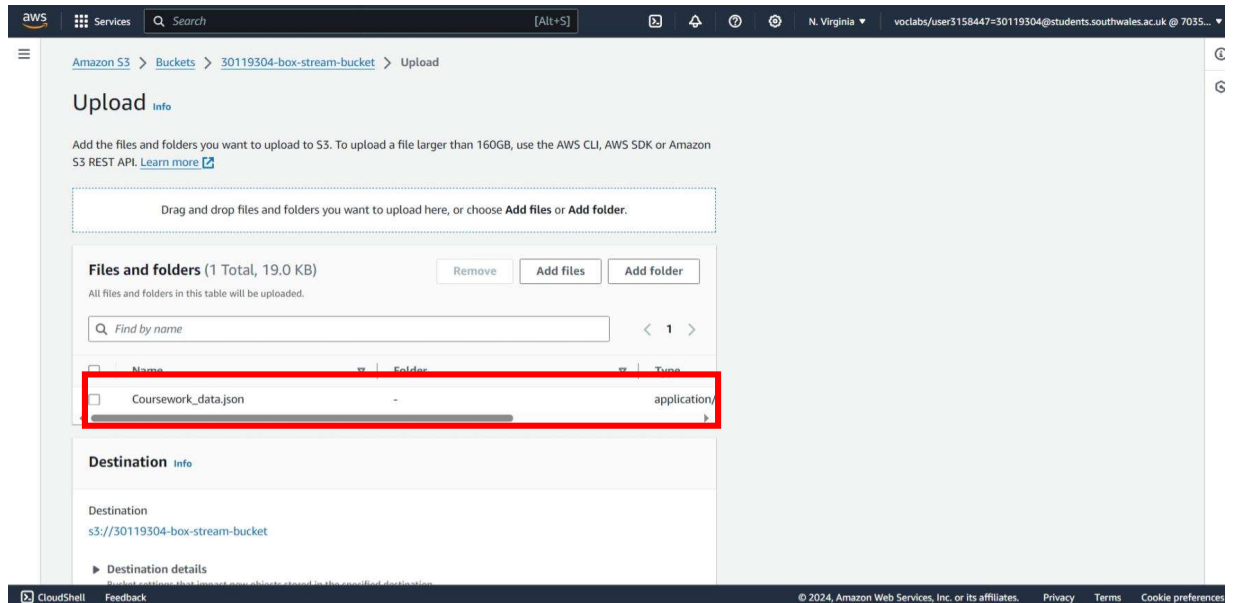


Fig 9: 30119304-box-stream-bucket page

- Make sure that you selected the right file and then click on the **"Upload"** button to start uploading your JSON file to the S3 bucket.

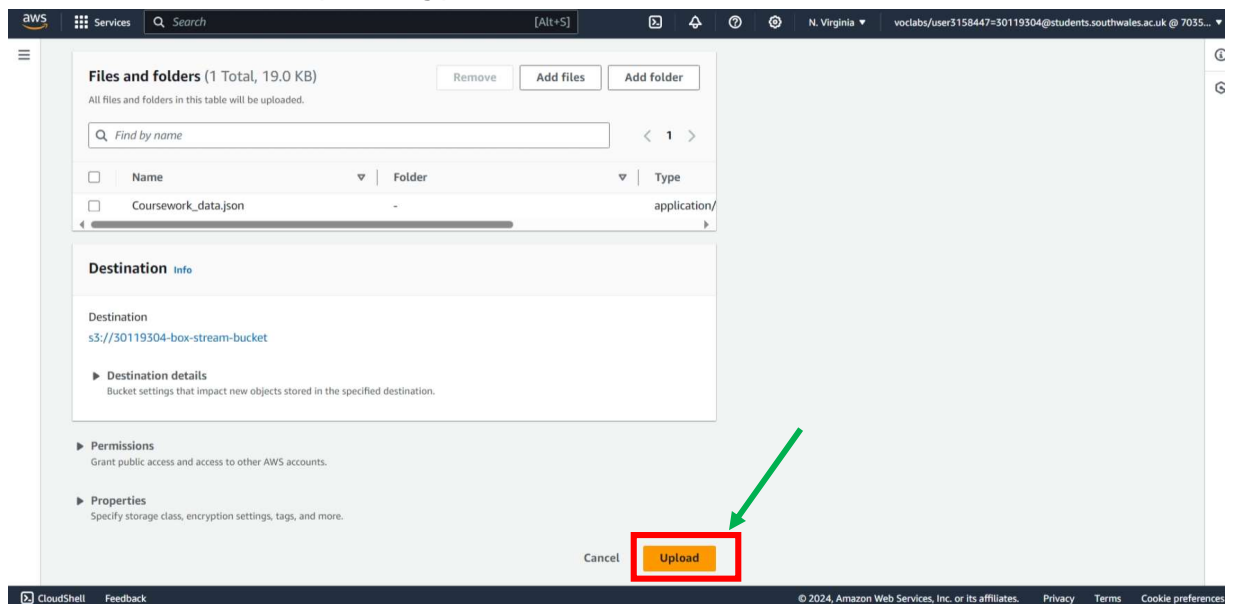


Fig 10: 30119304-box-stream-bucket page

- Once the Upload is done you can see the uploaded successful notification on your screen and close.

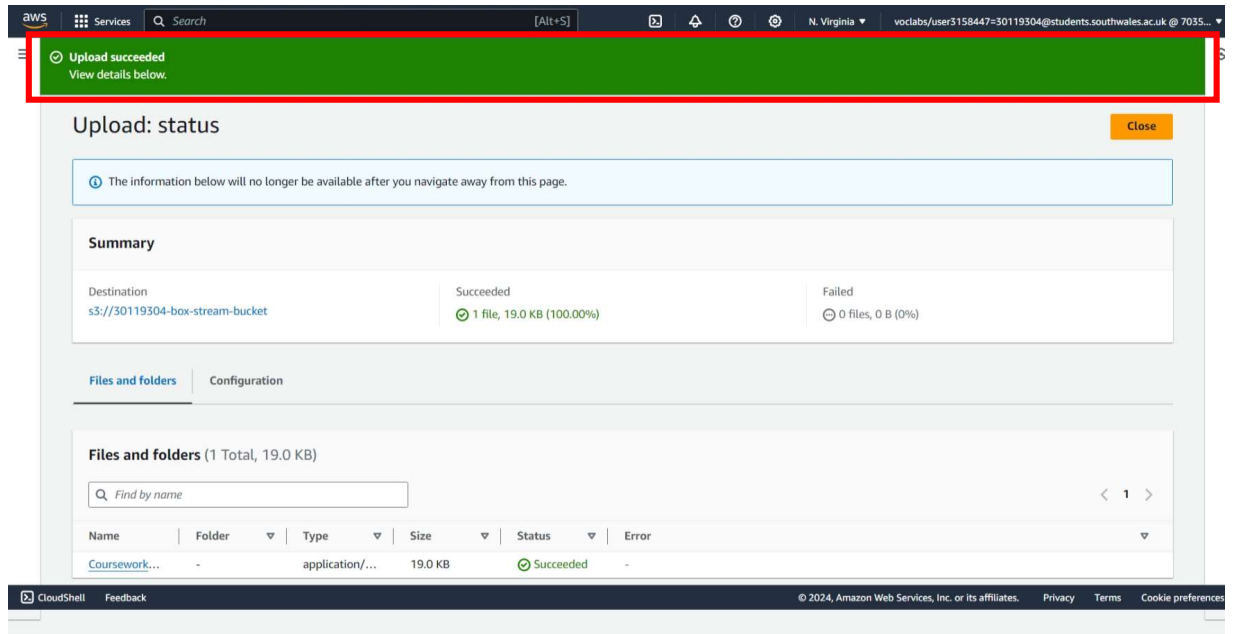


Fig 11: 30119304-box-stream-bucket page

- Now you can open your **30119304-box-stream-bucket** and now you can see the data file in your bucket before it shows no object.

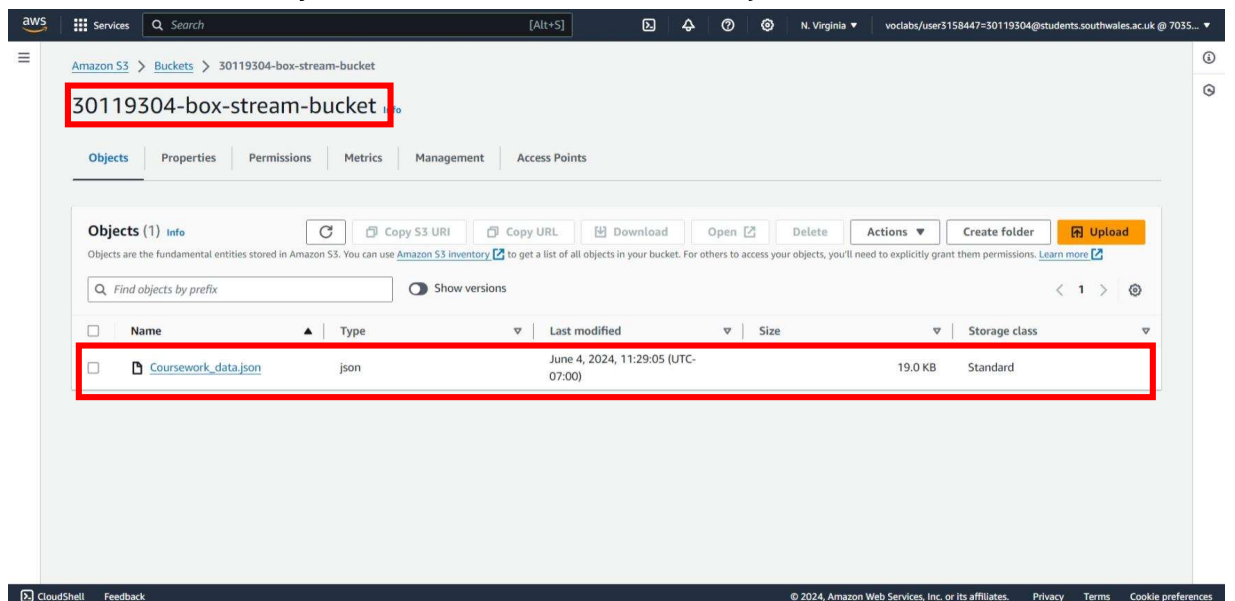


Fig 12: 30119304-box-stream-bucket page

MS4S21	Student ID: 30119304
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Congratulations! You have successfully stored JSON data on an S3 bucket named 30119304-box-stream-bucket.
