

← Introduction to Amazon Simple Storage Service (S3)

Start Lab 01:30:00

Introduction to Amazon Simple Storage Service (S3)

1 hour 30 minutes Free ★★★★☆ SPL-TF-100-STESS3 - Version 2.4.9

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Task 1: Create a bucket

1. Click on start lab

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← Introduction to Amazon Simple Storage Service (S3)

End Lab 01:29:53

Task 1: Create a bucket

You are new to Amazon S3 and want to test the features and security of S3 as you configure the environment to hold the EC2 report data. You know that every object in Amazon S3 is stored in a bucket so creating a new bucket to hold the reports is the first thing on your task list.

In this task, you create a bucket to hold your EC2 report data and then examine the different bucket configuration options.

3. At the top-left of the AWS Management Console, on the **Services** menu choose S3.

4. You can also search for S3 at the top of the services menu.

4. Choose **Create bucket**

Note: Bucket names must be between 3 and 63 characters long and consist of only lowercase letters, numbers, or hyphens. The bucket name must be globally unique across all of Amazon S3, regardless of account or region, and cannot be changed after the bucket is created. As you enter a bucket name, a help box displays showing any violations of the naming rules. Refer to the Amazon S3 bucket naming rules in the *Additional resources* section at the end of the lab for more information.

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2. Click on S3 services OR Go to the Services and select the S3 Service OR Search by the Search box

The screenshot shows the AWS Console Home page. At the top, there's a search bar and a navigation bar with various services like IAM, AWS Organizations, Route 53, EC2, Lambda, CloudFormation, S3, Elastic Container Service, CloudWatch, VPC, CloudTrail, and Database Migration Service. Below the navigation bar, there's a "Recently visited" section with links to IAM, S3 (which is highlighted with a red box), Systems Manager, EC2, VPC, Key Management Service, and CloudTrail. To the right, there's a "Welcome to AWS" section with links to "Getting started with AWS", "Training and certification", and "What's new with AWS". At the bottom of the page, there's a footer with links to Unified Settings, Privacy, Terms, and Cookie preferences.

3. Click on Create bucket

The screenshot shows the Amazon S3 Buckets page. On the left, there's a sidebar with options like Buckets, Access Points, Object Lambda Access Points, Multi-Region Access Points, Batch Operations, Access analyzer for S3, Block Public Access settings, Storage Lens, Dashboards, AWS Organizations settings, Feature spotlight, and AWS Marketplace for S3. The main area shows an "Account snapshot" with total storage of 123.9 KB, object count of 59, and avg. object size of 2.1 KB. Below this is a table titled "Buckets (2) Info" showing two existing buckets: "ql-cf-templates-1656124721-610e4de4a70162cd-us-west-2" and "qltrail-lab-4849-1656124725". A red box highlights the "Create bucket" button at the top right of the table. The footer includes links to Unified Settings, Privacy, Terms, and Cookie preferences.

4. Enter bucket name is unique include like lowercase or number or hyphen e.g. as - reportbucket(NUMBER) change (NUMBER) with any random number. In our case we write admin-kabir-bucket.

The screenshot shows the "Create bucket" configuration page. It has two main sections: "General configuration" and "Object Ownership". In the "General configuration" section, the "Bucket name" field is filled with "admin-kabir-bucket". Below it, there's a note about unique bucket names and a link to "See rules for bucket naming". The "AWS Region" dropdown is set to "US West (Oregon) us-west-2". There's also a "Copy settings from existing bucket - optional" section with a "Choose bucket" button. The "Object Ownership" section includes a note about control ownership and access control lists (ACLs). The footer includes links to Unified Settings, Privacy, Terms, and Cookie preferences.

5. Select ACLs enabled under object ownership and select object writer.

The screenshot shows the 'Object Ownership' section of the AWS S3 bucket creation interface. It includes two radio button options: 'ACLs disabled (recommended)' and 'ACLs enabled'. The 'ACLs enabled' option is selected and highlighted with a red box. Below this, there are three more radio button options under 'Object Ownership': 'Bucket owner preferred', 'Object writer preferred', and 'Object writer'. The 'Object writer' option is selected and highlighted with a red box. A note below it states: 'The object writer remains the object owner.' At the bottom of the section, there is a checkbox for 'Block all public access' which is checked. The status bar at the bottom right shows the date as 25-06-2022 and the time as 08:20.

6. Click on create bucket

The screenshot shows the final step of creating a new S3 bucket. The 'Create bucket' button is located at the bottom right of the form, highlighted with a red box. The status bar at the bottom right shows the date as 25-06-2022 and the time as 08:20.

7. Check if bucket created successfully.

The screenshot shows the AWS S3 console interface. At the top, a green banner displays the message "Successfully created bucket 'admin-kabir-bucket'". Below this, there's a promotional message about storage costs and data protection. The main area shows an "Account snapshot" with statistics: Total storage 123.9 KB, Object count 59, and Avg. object size 2.1 KB. A note says you can enable advanced metrics in the "default-account-dashboard" configuration. Below this is a table titled "Buckets (3) Info" showing three buckets: "admin-kabir-bucket" (selected), "al-cf-templates-1656124721-", and "al-cf-templates-1656124721-". The "admin-kabir-bucket" row shows it was created on June 25, 2022, at 08:22:23 (UTC+05:30). The table has columns for Name, AWS Region, Access, and Creation date. The left sidebar includes sections for Buckets, Storage Lens, and Feature spotlight. The bottom of the screen shows the Windows taskbar with various pinned icons and system status information.

Task 2: Upload an object to the bucket

Basic features of S3 bucket -

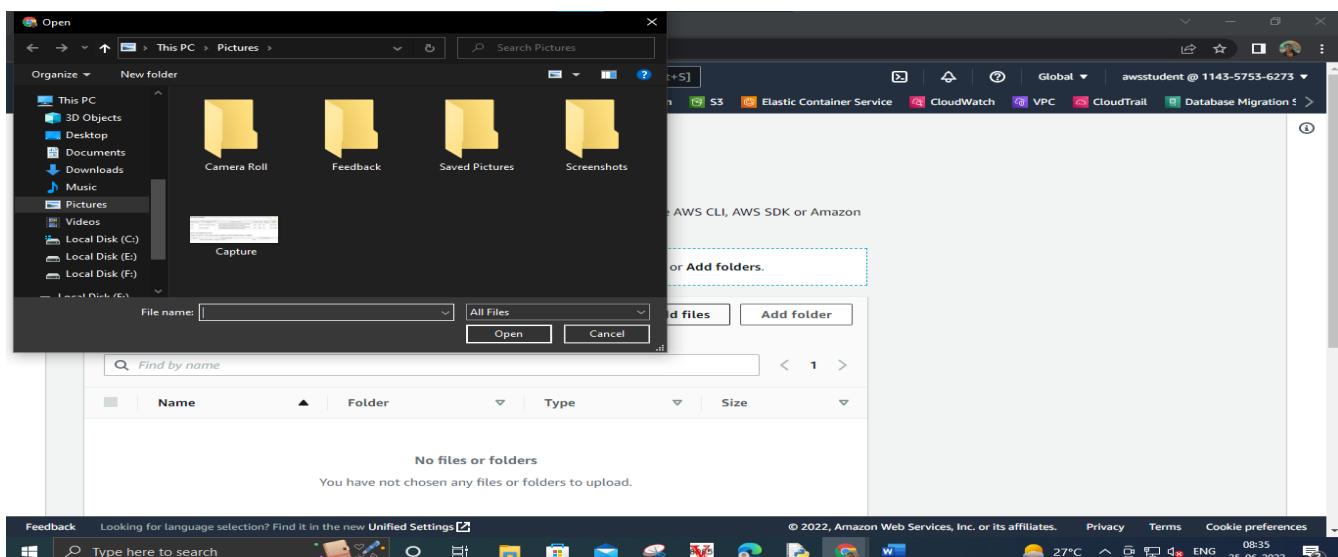
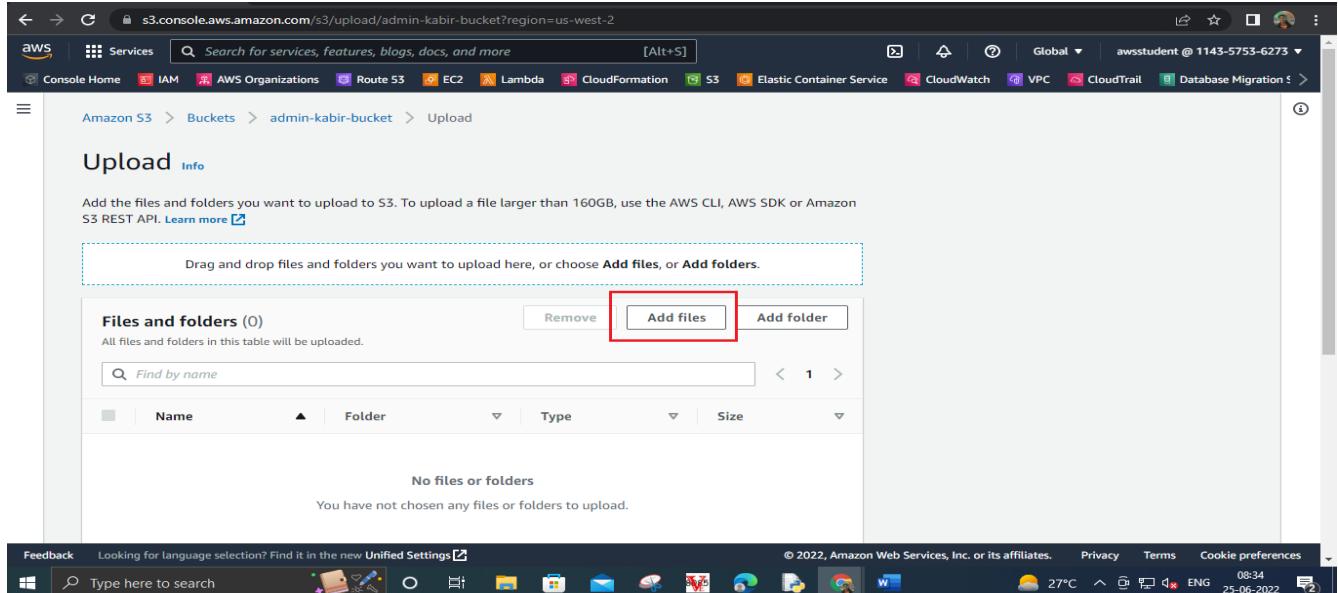
- You can upload a maximum of a single file to S3 bucket
- You can upload any amount of data to S3 bucket
- By default all the S3 buckets are private until you make them public manually
- Then you can host the static website using the S3 storage and server less architecture
- S3 buckets are region specific
- S3 bucket names are globally unique across the AWS account.

The screenshot shows the AWS S3 Management Console. A green banner at the top indicates that the bucket 'admin-kabir-bucket' has been successfully created. Below this, a blue bar asks if the user wants to reduce storage costs and enhance data protection. The main area displays the 'Buckets (3) Info' section, listing three buckets: 'admin-kabir-bucket' (selected and highlighted with a red box), 'ql-cf-templates-1656124721-610e4de4a70162cd-us-west-2', and 'qltrail-lab-4849-1656124725'. Each entry includes columns for Name, AWS Region, Access, and Creation date. The 'admin-kabir-bucket' was created on June 25, 2022, at 08:22:23 UTC+05:30, with 'Bucket and objects not public' access.

The screenshot shows the 'Objects' tab for the 'admin-kabir-bucket'. The 'Objects (0)' section is visible, along with a message stating there are no objects in the bucket. At the bottom of this section is a large orange 'Upload' button, which is also highlighted with a red box. The rest of the interface includes tabs for Objects, Properties, Permissions, Metrics, Management, and Access Points, along with various navigation and search tools.

8. Click on created bucket and select upload. In our case we click on the **admin-kabir-bucket**

9. Click on Add Files.



10. Choose the file to upload.

11. Wait for file to be uploaded

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files**, or **Add folders**.

Files and folders (1 Total, 45.5 KB)

Name	Type	Size
Capture.JPG	image/jpeg	45.5 KB

Destination

Destination: s3://admin-kabir-bucket

Upload

12. Click on the Upload button.

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Destination

s3://admin-kabir-bucket

Permissions

Grant public access and access to other AWS accounts.

Properties

Specify storage class, encryption settings, tags, and more.

Upload

Feedback Looking for language selection? Find it in the new [Unified Settings](#)

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Uploading

Total remaining: 1 file: 45.5 KB(100.00%)
Estimated time remaining: calculating...
Transfer rate: 0 B/s

Upload: status

The information below will no longer be available after you navigate away from this page.

Summary		
Destination s3://admin-kabir-bucket	Succeeded 0 files, 0 B (0%)	Failed 0 files, 0 B (0%)

Files and folders Configuration

Feedback Looking for language selection? Find it in the new [Unified Settings](#)

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13. Wait for it to upload successfully and click on close.

Destination	Succeeded	Failed
s3://admin-kabir-bucket	1 file, 45.5 KB (100.00%)	0 files, 0 B (0%)

Name	Type	Size	Status
Capture.JPG	image/jpeg	45.5 KB	Succeeded

14. Check if it's visible in bucket.

Name	Type	Last modified	Size	Storage class
Capture.JPG	JPG	June 25, 2022, 08:36:38 (UTC+05:30)	45.5 KB	Standard

Task 3: Make an object public

15. Open bucket

The screenshot shows the AWS S3 console with the 'admin-kabir-bucket' selected. The 'Objects' tab is active, displaying one item: 'Capture.JPG' (Type: JPG, Last modified: June 25, 2022, 08:36:38 (UTC+05:30), Size: 45.5 KB, Storage class: Standard). Below the table are buttons for Copy S3 URI, Copy URL, Download, Open, Delete, Create folder, and Upload.

<https://admin-kabir-bucket.s3.us-west-2.amazonaws.com/Capture.JPG>

16. Go to object overview

The screenshot shows the AWS S3 console with the 'Capture.JPG' object selected. The 'Properties' tab is active. In the 'Object overview' section, the 'Object URL' field contains the value 'https://admin-kabir-bucket.s3.us-west-2.amazonaws.com/Capture.JPG', which is highlighted with a red box.

17. Click on object URL and open in new tab. We don't have permission to view object currently.

The screenshot shows a web browser window with the URL 'https://admin-kabir-bucket.s3.us-west-2.amazonaws.com/Capture.JPG'. The page displays an 'AccessDenied' error message: 'This XML file does not appear to have any style information associated with it. The document tree is shown below.' Below the message is the XML error response:

```
<Error>
<Code>AccessDenied</Code>
<Message>Access Denied</Message>
<RequestId>55R2G0P12J3MVXVK</RequestId>
<HostId>xpDQURP/m=0tVNC5veh513Yu33HC7NogughWMR0l0lr605Bb1+XXFS/bQBLn0fut8MLIUUsma0=</HostId>
</Error>
```

18. Go to bucket and select object and select action and click on Make Public using ACL.

The screenshot shows the AWS S3 console interface. On the left, there's a sidebar with various AWS services like IAM, Route 53, EC2, Lambda, CloudFormation, S3, and others. The main area shows a bucket named 'admin-kabir-bucket' containing an object named 'Capture.JPG'. The 'Properties' tab is selected. At the top right, there's a 'Object actions' button (labeled 1) which has been expanded to show a list of options. One of these options, 'Make public using ACL' (labeled 2), is highlighted with a red box.

19. Wait for make public page to load.

This screenshot shows the 'Make public' configuration page. It displays a table of specified objects, with 'Capture.JPG' listed. Below the table is a large orange 'Make public' button, which is also highlighted with a red box.

20. You will get error failed to upload click on close.

This screenshot shows the 'Failed to edit public access' error page. It lists an object named 'Capture.JPG' under the 'Failed to edit public access' section. The 'Error' column for this object shows a red 'Error' icon. Below this, there's a 'Configuration' tab and another table showing the same information.

21. Two ways to give the permission

- Click on the file i.e. Capture.png. Go to the **Permission** tab and click on the **Edit** button

The screenshot shows the AWS S3 console with the URL <https://s3.console.aws.amazon.com/s3/object/admin-kabir-bucket?region=us-west-2&prefix=Capture.JPG&tab=permissions>. The 'Capture.JPG' file is selected. The 'Permissions' tab is active, and the 'Edit' button in the top right corner of the Access Control List (ACL) table is highlighted with a red box.

The screenshot shows the AWS S3 console with the URL https://s3.console.aws.amazon.com/s3/buckets/admin-kabir-bucket/object/edit_acl?region=us-west-2&prefix=Capture.JPG. The 'Edit access control list' button is highlighted with a red box.

- Click on the **Block Public Access settings for this bucket**

The screenshot shows the AWS S3 console with the URL https://s3.console.aws.amazon.com/s3/buckets/admin-kabir-bucket/object/edit_public_read_access?region=us-west-2&showversions=false. The 'Block Public Access settings for this bucket' link is highlighted with a red box.

22. Click on permission in bucket overview. Under block public access click on edit.

The screenshot shows the AWS S3 Bucket Overview page for 'admin-kabir-bucket'. The 'Permissions' tab is selected. In the 'Block public access (bucket settings)' section, there is a note about granting access through various methods like ACLs, bucket policies, or access point policies. Below this, there is a checkbox labeled 'Block all public access' with the value 'On'. A red box highlights the 'Edit' button next to the checkbox.

23. Deselect are the options.

The screenshot shows the 'Edit Block public access (bucket settings)' dialog box. The 'Block all public access' checkbox is unchecked. There are four other checkboxes listed under it: 'Block public access to buckets and objects granted through new access control lists (ACLs)', 'Block public access to buckets and objects granted through any access control lists (ACLs)', 'Block public access to buckets and objects granted through new public bucket or access point policies', and 'Block public and cross-account access to buckets and objects through any public bucket or access point policies'. A red box highlights the 'Save changes' button at the bottom right of the dialog.

24. Write the “confirm” and click on the Confirm button

The screenshot shows the 'Edit Block public access (bucket settings)' dialog box again. It displays a warning message: 'Updating the Block Public Access settings for this bucket will affect this bucket and all objects within. This may result in some objects becoming public.' Below this, there is a text input field containing the word 'confirm'. A red box highlights the 'Confirm' button at the bottom right of the dialog.

25. Wait for setting to be successfully save.

The screenshot shows the AWS S3 console with the URL <https://s3.console.aws.amazon.com/s3/buckets/admin-kabir-bucket?region=us-west-2&tab=permissions>. A green success message at the top says "Successfully edited Block Public Access settings for this bucket." Below it, a blue bar prompts "Are you missing easy ways to reduce storage costs and enhance data protection?" with a "Find out with S3 Storage Lens" button. The main page displays the "admin-kabir-bucket" with tabs for Objects, Properties, Permissions (selected), Metrics, Management, and Access Points. Under the "Permissions overview" section, it shows "Access" and "Objects can be public". In the "Block public access (bucket settings)" section, there is a note about public access being granted through ACLs, bucket policies, or access point policies. An "Edit" button is present. The bottom of the screen shows a Windows taskbar with various icons and system status.

26. Open bucket overview and Click on the file i.e. Capture.png.

The screenshot shows the AWS S3 console with the URL <https://s3.console.aws.amazon.com/s3/buckets/admin-kabir-bucket?region=us-west-2&tab=objects>. A blue bar at the top asks "Are you missing easy ways to reduce storage costs and enhance data protection?" with a "Find out with S3 Storage Lens" button. The left sidebar shows "Buckets" and "Storage Lens" sections. The main area shows the "admin-kabir-bucket" with tabs for Objects (selected), Properties, Permissions, Metrics, Management, and Access Points. Under the "Objects (1)" section, there is a table with one item: "Capture.JPG" (Type: JPG, Last modified: June 25, 2022, 08:36:38 (UTC+05:30), Size: 45.5 KB, Storage class: Standard). Action buttons include Copy S3 URI, Copy URL, Download, Open, Delete, and Actions. The bottom of the screen shows a Windows taskbar with various icons and system status.

27. Click on object action and select Make Public using ACL.

The screenshot shows the AWS S3 console with the URL <https://s3.console.aws.amazon.com/s3/object/admin-kabir-bucket?region=us-west-2&prefix=Capture.JPG>. The top navigation bar shows the URL again. The main area shows the "admin-kabir-bucket" with the "Capture.JPG" object selected. A modal window titled "Make public" is open, explaining that it enables public read access in the object access control list (ACL) settings. It contains a warning message: "When public read access is enabled and not blocked by Block Public Access settings, anyone in the world can access the specified objects." Below this is a "Specified objects" table with one item: "Capture.JPG" (Type: JPG, Last modified: June 25, 2022, 08:36:38 (UTC+05:30), Size: 45.5 KB). At the bottom of the modal are "Cancel" and "Make public" buttons. The bottom of the screen shows a Windows taskbar with various icons and system status.

28. Click on make public.

29. Wait for it to successfully save edited setting.

The screenshot shows the AWS S3 console interface. At the top, there's a green banner stating "Successfully edited public access". Below this, a message says "The information below will no longer be available after you navigate away from this page." Under the "Summary" section, there are three boxes: "Source s3://admin-kabir-bucket" (highlighted in blue), "Successfully edited public access 1 object, 45.5 KB", and "Failed to edit public access 0 objects". Below the summary, there are two tabs: "Failed to edit public access" (which is selected) and "Configuration". Under "Failed to edit public access (0)", there's a search bar and a table with columns: Name, Folder, Type, Last modified, Size, and Error. The table displays the message "No objects failed to edit". At the bottom of the page, there's a feedback link and a copyright notice: "© 2022, Amazon Web Services, Inc. or its affiliates." followed by links for Privacy, Terms, and Cookie preferences. The status bar at the bottom shows the date and time: 25-06-2022, 08:52, and the system temperature: 27°C.

30. Click on png tab and refresh we can now see object.

The screenshot shows a browser window displaying a CSV file titled "Capture.JPG". The file contains two tables. The first table is titled "Educational Details" and has columns: Qualification, College/Institute/Study Center, Board/University, Marks, Out of, Result Status, and Passing Date. It shows two rows: one for 10th grade from N.M.W.S HIGH SCHOOL with marks 378/500 in March 2016, and another for 12th grade from M.D COLLEGE with marks 321/650 in May 2018. The second table is titled "List of Last Qualifying Exams" and has columns: Sr.No., Course Admitted, and Last Qualification. It shows one row: Sr.No. 1, Course Admitted B.Sc.(with Credits) - Regular - Rev16, and Last Qualification 12th. The browser's address bar shows the URL "admin-kabir-bucket.s3.us-west-2.amazonaws.com/Capture.JPG". The status bar at the bottom shows the date and time: 25-06-2022, 08:53, and the system temperature: 27°C.

Task 4: Test connectivity from the EC2 instance

31. On the Services menu, Choose EC2

The screenshot shows the AWS Management Console with the Services menu open. The 'Recently visited' section includes S3, Console Home, and EC2 (Virtual Servers In the Cloud), which is highlighted with a red box. The main content area displays the EC2 dashboard with sections for Resources, Account attributes, and Explore AWS.

Resources

Instances (running)	1	Dedicated Hosts	0
Elastic IPs	0	Instances	1
Key pairs	1	Load balancers	0
Placement groups	0	Security groups	3
Snapshots	0	Volumes	1

Account attributes

- Supported platforms
 - VPC
- Default VPC vpc-7fd80c07
- Settings
- EBS encryption
- Zones
- EC2 Serial Console
- Default credit specification
- Console experiments

Explore AWS

10 Things You Can Do Today to Reduce AWS Costs

32. On the EC2 Dashboard, under the Resources section, choose Instances (Running)

The screenshot shows the EC2 Dashboard with the 'Instances (Running)' section selected. A red box highlights the 'Connect' button in the top right corner of the instance card for the Bastion Host. The instance details show it is running, t3.micro, and has passed 2/2 checks.

Instances (1/1) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
Bastion Host	i-097777c901b19	Running	t3.micro	2/2 checks passed	No alarms	us-west-2a

Instance: i-097777c901b19

Details

- Instance ID: i-097777c901b19
- IPv6 address: -

Security

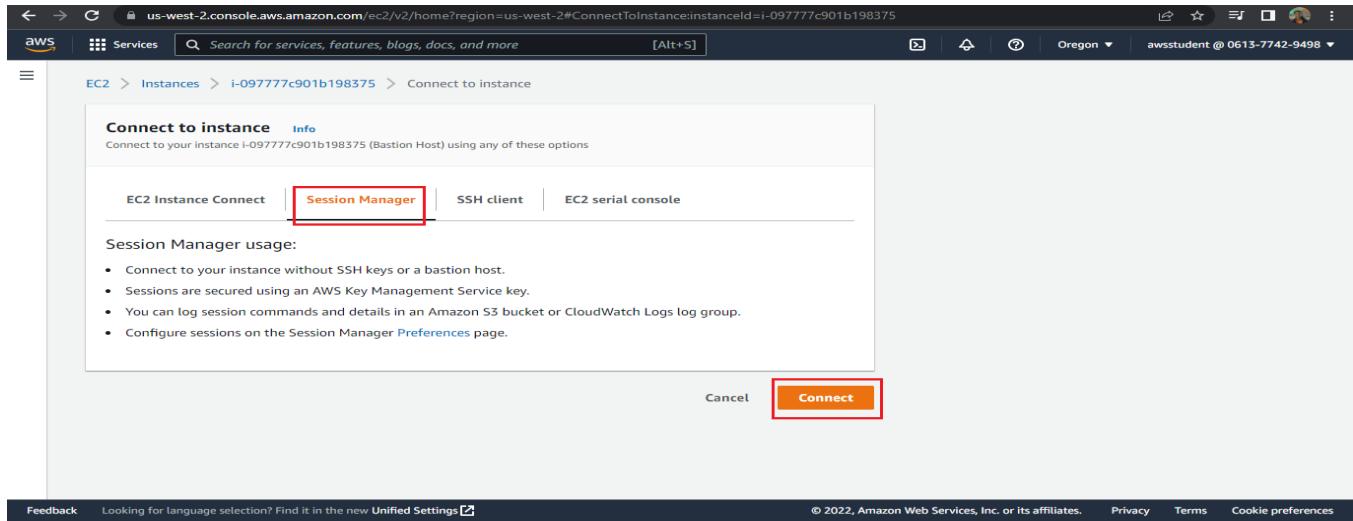
- Public IPv4 address: 52.42.166.111 | open address
- Private IPv4 addresses: 10.10.1.196
- Public IPv4 DNS: ec2-52-42-166-111.us-west-2.compute.amazonaws.com | open address

Actions

Launch Instances

Selection **Bastion Host** and choose Connect

33. In the Connect to instance window. For Connection method, select Session Manager and Choose Connect.

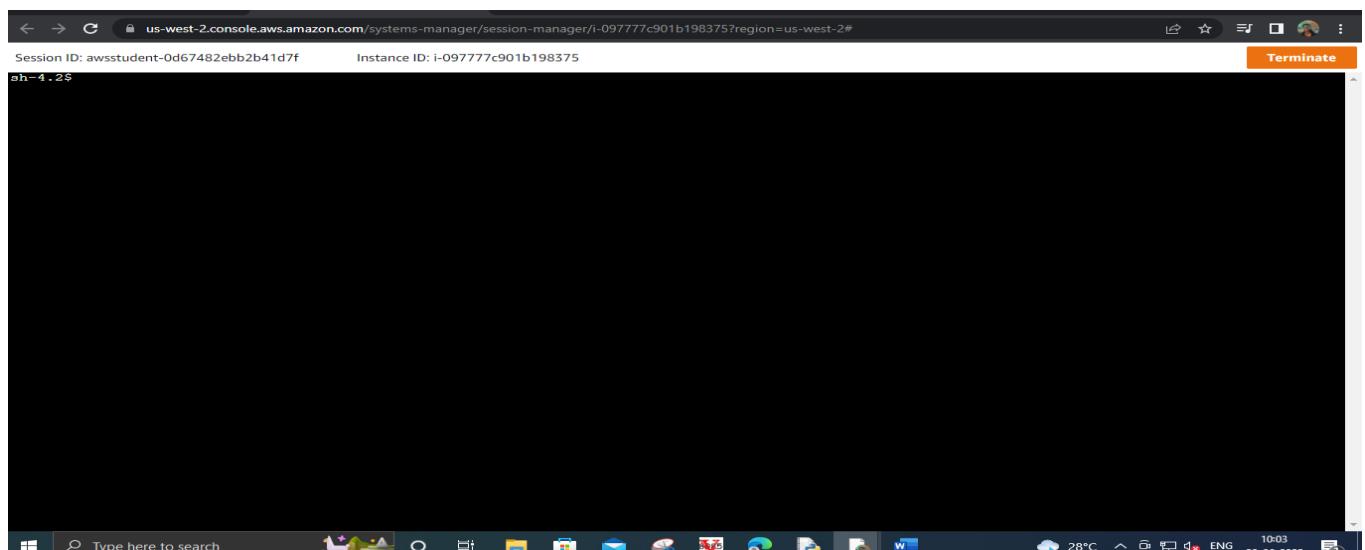


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28°C ENG 10:02 28-06-2022

You are now connected to the EC2 instance that holds the reporting application. Because Session Manager uses https port 443, it does not require you to open SSH port 22 to the outside world, you



are satisfied with this security feature. Now you want to see how EC2 interacts with your S3 bucket.

34. In the bastion host session, enter the following command to change to home directory

(/home/ssm-user/):

`cd ~`



35. Enter the following command to verify you are in the home directory:

`pwd`

The output should be:



You are now in the ssm-user's home directory where you will run all of the commands in this lab.

36. Enter the following command to list all of your S3 buckets.

```
aws s3 ls
```

The output should look similar to this:

```
Session ID: awsstudent-0d67482ebb2b41d7f Instance ID: i-097777c901b198375
sh-4.2$ cd ~
sh-4.2$ pwd
/home/ssm-user
sh-4.2$ aws s3 ls
2022-06-28 04:21:51 admin-kabir-bucket
2022-06-28 04:16:25 ql-cf-templates-1656389783-3f97a6cff4a70276-us-west-2
2022-06-28 04:16:29 qltrail-lab-4849-1656389787
sh-4.2$
```

37. Enter the following command to list all objects in your **admin-kabir-bucket**. Remember to change the number at the end of the **admin-kabir-bucket** name, to match the name of the bucket you created.

```
aws s3 ls s3://admin-kabir-bucket
```

The output should look like this:

```
Session ID: awsstudent-0d67482ebb2b41d7f Instance ID: i-097777c901b198375
sh-4.2$ cd ~
sh-4.2$ pwd
/home/ssm-user
sh-4.2$ aws s3 ls
2022-06-28 04:21:51 admin-kabir-bucket
2022-06-28 04:16:25 ql-cf-templates-1656389783-3f97a6cff4a70276-us-west-2
2022-06-28 04:16:29 qltrail-lab-4849-1656389787
sh-4.2$ aws s3 ls s3://admin-kabir-bucket
2022-06-28 04:22:13        46576 Capture.JPG
sh-4.2$
```

38. Type the following to change directories into the reports directory.

```
Session ID: awsstudent-0d67482ebb2b41d7f Instance ID: i-097777c901b198375
sh-4.2$ cd ~
sh-4.2$ pwd
/home/ssm-user
sh-4.2$ aws s3 ls
2022-06-28 04:21:51 admin-kabir-bucket
2022-06-28 04:16:25 ql-cf-templates-1656389783-3f97a6cff4a70276-us-west-2
2022-06-28 04:16:29 qltrail-lab-4849-1656389787
sh-4.2$ aws s3 ls s3://admin-kabir-bucket
2022-06-28 04:22:13        46576 Capture.JPG
sh-4.2$ ls
reports
sh-4.2$ cd reports/
sh-4.2$
```



```
cd reports
```

39. Type the following to list the contents of the directory.

```
Session ID: awsstudent-0d67482ebb2b41d7f Instance ID: i-097777c901b198375
sh-4.2$ cd ~
sh-4.2$ pwd
/home/ssm-user
sh-4.2$ aws s3 ls
2022-06-28 04:21:51 admin-kabir-bucket
2022-06-28 04:16:25 ql-cf-templates-1656389783-3f97a6cff4a70276-us-west-2
2022-06-28 04:16:29 qltrail-lab-4849-1656389787
sh-4.2$ aws s3 ls s3://admin-kabir-bucket
2022-06-28 04:22:13        46576 Capture.JPG
sh-4.2$ ls
reports
sh-4.2$ cd reports/
sh-4.2$ ls
dolphins.jpg  files.zip  report-test1.txt  report-test2.txt  report-test3.txt  whale.jpg
sh-4.2$
```

40. Type the following to see if you can copy a file to the S3 bucket.

The screenshot shows a terminal window within the AWS Systems Manager Session Manager interface. The terminal session ID is i-097777c901b198375 and the instance ID is i-097777c901b198375. The user has run several AWS CLI commands:

```
sh-4.2$ cd ~  
sh-4.2$ pwd  
/home/ssm-user  
sh-4.2$ aws s3 ls  
2022-06-28 04:21:51 admin-kabir-bucket  
2022-06-28 04:16:25 ql-cf-templates-1656389783-3f97a6cff4a70276-us-west-2  
2022-06-28 04:16:29 qltrail-lab-4849-1656389787  
sh-4.2$ aws s3 ls s3://admin-kabir-bucket  
2022-06-28 04:22:13        46576 Capture.JPG  
sh-4.2$ ls  
reports  
sh-4.2$ cd reports/  
sh-4.2$ ls  
dolphins.jpg  files.zip  report-test1.txt  report-test2.txt  report-test3.txt  whale.jpg  
sh-4.2$ aws s3 cp report-test1.txt s3://admin-kabir-bucket  
upload failed: ./report-test1.txt to s3://admin-kabir-bucket/report-test1.txt An error occurred (AccessDenied) when calling the PutObject operation:  
Access Denied
```

A screenshot of a Windows desktop taskbar. A command prompt window is open, showing the command `aws s3 cp report-test1.txt s3://admin-kabir-bucket`.

The output indicates an error **upload failed**. This is because we have read-only rights to the bucket and do not have the permissions to perform the PutObject operation.

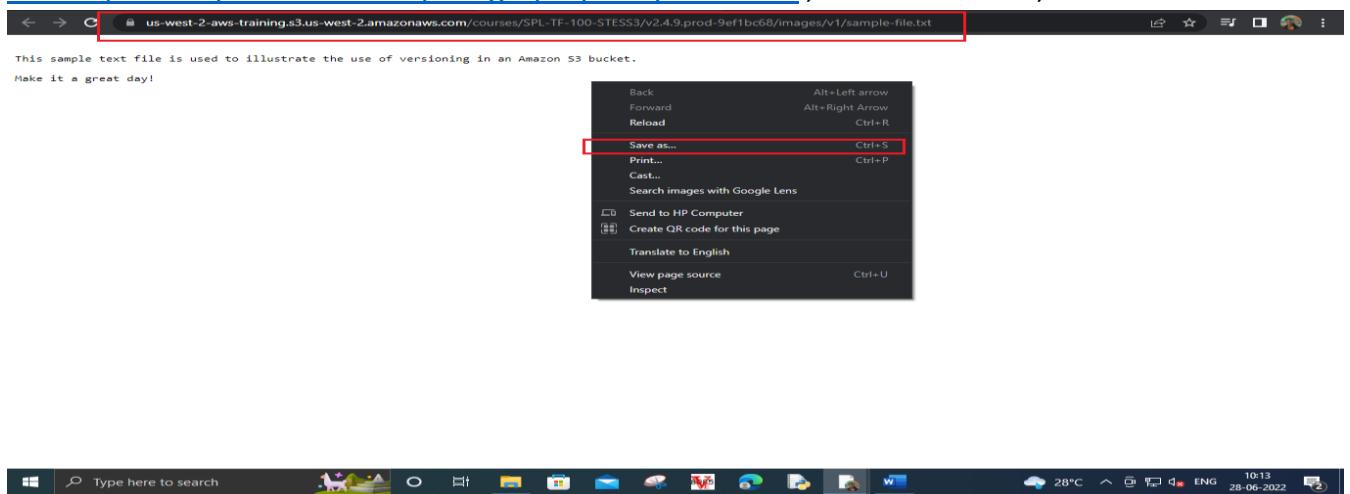
41. Leave this window open and go back to the AWS Console tab.

In the next task you create a bucket policy to add the PutOperation.

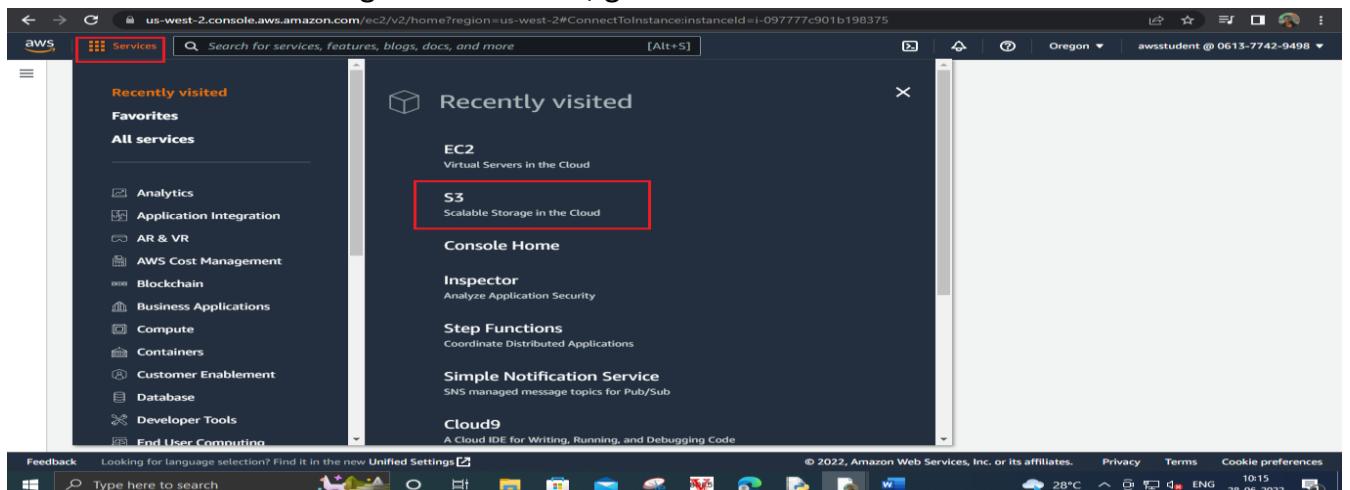
Task 5: Create a bucket policy

42. Right-click this link

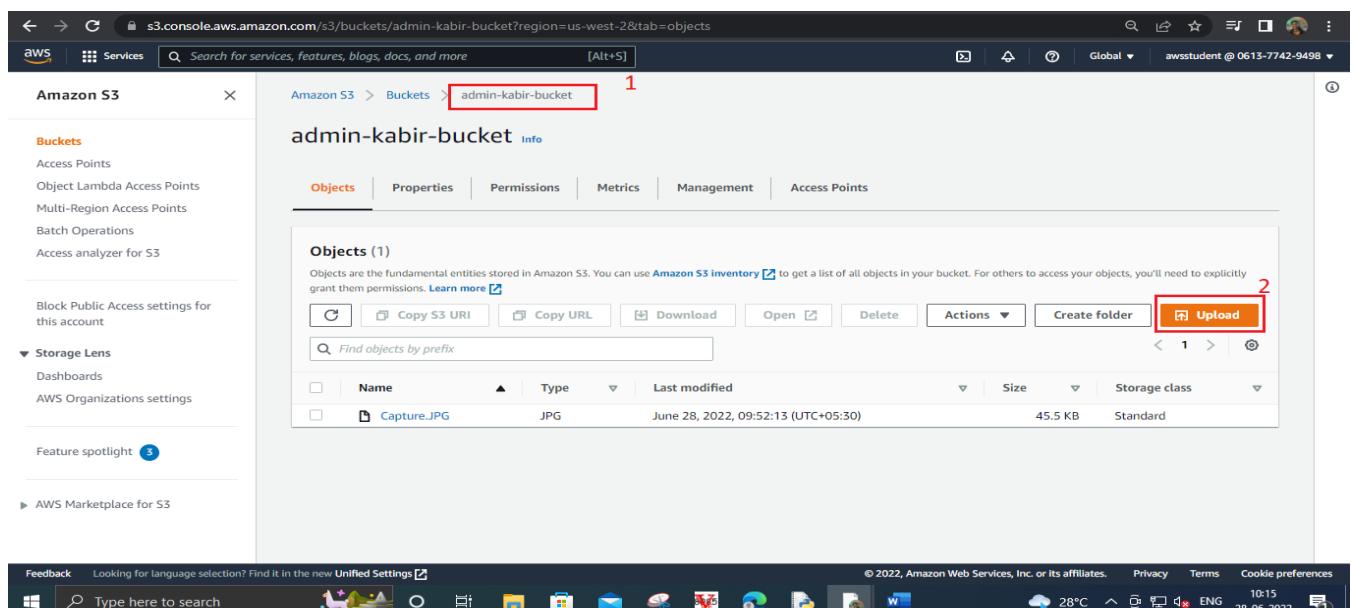
<https://us-west-2-aws-training.s3.us-west-2.amazonaws.com/courses/SPL-TF-100-STESS3/v2.4.9.prod-9ef1bc68/images/v1/sample-file.txt>, choose **Save as**, and save the file locally.



43. Return to the AWS Management Console, go to the **Services** menu and select **S3**.



44. In the **S3 Management Console** tab, select the name of your bucket i.e. admin-kabir-bucket.



Choose **Upload** and and use the same upload process as in the previous task to upload the **sample-file.txt**.

45. Click on the Add files button and choose the sample-file.txt file name.

The screenshot shows the AWS S3 'Upload' interface. At the top, there's a message about uploading files larger than 160GB. Below it is a 'Files and folders' table with one item: 'sample-file (0)' which is 113.0 B and has a 'text/plain' type. There are 'Add files' and 'Add folder' buttons. A search bar and a 'Destination' section are also present. In the foreground, a Windows 'Open' file dialog is displayed, listing various files on the desktop. The 'sample-file' icon is highlighted with a red box (labeled 2). The 'Open' button in the dialog is also highlighted with a red box (labeled 3).

46. Click on the Upload button.

The screenshot shows the AWS S3 'Upload' interface again. The 'sample-file.txt' has been successfully uploaded, indicated by the 'Succeeded' status in the summary table. The 'Upload' button at the bottom right is highlighted with a red box. The status bar at the bottom shows 'Uploading' with a progress bar at 0%.

This screenshot shows the 'Upload: status' page. It displays the upload progress: 'Total remaining: 1 file, 113.0 B (0.00%)' and 'Estimated time remaining: calculating...'. The 'Upload' button is highlighted with a red box.

This screenshot shows the 'Upload: status' page again, with the same progress information. The 'Upload' button is highlighted with a red box.

47. Successfully uploaded then click on the uploaded file i.e. sample-file.txt

The screenshot shows the AWS S3 console at the URL s3.console.aws.amazon.com/s3/upload/admin-kabir-bucket?region=us-west-2. A green banner at the top indicates 'Upload succeeded'. Below it, a summary table shows one file uploaded ('Succeeded') and zero files failed ('Failed'). Under the 'Files and folders' tab, a table lists 'sample-file.txt' with its details: Name (sample-file.txt), Type (text/plain), Size (113.0 B), Status (Succeeded), and Error (None). The 'sample-file.txt' row is highlighted with a red border.

48. Under the Object overview section, locate and copy the Object URL link.

The screenshot shows the AWS S3 console at the URL s3.console.aws.amazon.com/s3/object/admin-kabir-bucket?region=us-west-2&prefix=sample-file.txt. On the left, a sidebar menu is open under 'Amazon S3 > Buckets > admin-kabir-bucket > sample-file.txt'. In the main area, the 'Properties' tab is selected. Under the 'Object overview' section, there is a table of properties. The 'Object URL' row contains the value <https://admin-kabir-bucket.s3.us-west-2.amazonaws.com/sample-file.txt>, which is highlighted with a red border.

49. In a new browser tab, paste the link into the address field, and then press **Enter**.

Once again, **Access Denied** will be displayed. You need to configure a bucket policy to grant access to *all* objects in the bucket without having to specify permissions on each object individually.

The screenshot shows a browser window with the URL admin-kabir-buckets.s3.us-west-2.amazonaws.com/sample-file.txt. The page displays an XML error response:

```
<Error>
<Code>AccessDenied</Code>
<Message>Access Denied</Message>
<RequestId>3DSKD0J0B6AKVER6</RequestId>
<HostId>VK5qqJIMHQqElwnk0b4cXZLUvsoao3MxTuJAwztsdw4IwaQKPTR9Y9ZMCNd+y1Gif8/vPaciJ3+U=</HostId>
</Error>
```

50. Keep this browser tab open, but return to the tab with the S3 Management Console.

The screenshot shows the AWS S3 Management Console. On the left, the navigation pane includes 'Buckets', 'Storage Lens', and 'Feature spotlight'. The main area displays an 'Account snapshot' with metrics like Total storage (257.1 KB), Object count (176), and Avg. object size (1.5 KB). Below this is a 'Buckets (3) Info' table:

Name	AWS Region	Access	Creation date
admin-kabir-bucket	US West (Oregon) us-west-2	Objects can be public	June 28, 2022, 09:51:51 (UTC+05:30)
ql-cf-templates-1656389783-3f97a6cff4a70276-us-west-2	US West (Oregon) us-west-2	Objects can be public	June 28, 2022, 09:46:25 (UTC+05:30)
qltrail-lab-4849-1656389787	US East (N. Virginia) us-east-1	Objects can be public	June 28, 2022, 09:46:29 (UTC+05:30)

51. Go to Services > IAM > Roles

The screenshot shows the AWS IAM Management Console. The search bar at the top has 'IA' typed into it. Below the search bar, the 'Services' section highlights 'IAM' (which is also highlighted with a red box).

IAM dashboard:

- Identity and Access Management (IAM):** Shows 1 User group, 2 Users, 22 Roles, 2 Policies, and 0 Identity providers.
- Security recommendations:** A warning to add MFA for root user.
- IAM resources:** A table showing 1 User group, 2 Users, 22 Roles, 2 Policies, and 0 Identity providers.
- What's new:** Lists recent changes:
 - Right-size permissions for more roles in your account using IAM Access Analyzer to generate 50 fine-grained IAM policies per role.
 - Amazon S3 Object Ownership can now disable access control lists to simplify access management for data in S3.
 - Amazon Redshift simplifies the use of other AWS services by introducing the default IAM role.
 - IAM Access Analyzer helps you generate fine-grained policies that specify the required actions for more than 50 services.

52. In the Search field type EC2InstanceProfileRole. This is the Role that the EC2 instance uses to connect to S3.

The screenshot shows the AWS IAM Management Console. The search bar at the top has 'EC2' typed into it. Below the search bar, the 'Roles (22) Info' table highlights the 'EC2InstanceProfileRole' (which is also highlighted with a red box).

Role name	Trusted entities	Last acti...
EC2InstanceProfileRole	AWS Service: ec2	20 minutes ago

53. It should look similar to this:

`arn:aws:iam::435833238133:role/EC2InstanceProfileRole`

The screenshot shows the AWS IAM console with the 'EC2InstanceProfileRole' selected. In the 'Summary' section, the ARN of the role, `arn:aws:iam::435833238133:role/EC2InstanceProfileRole`, is displayed and highlighted with a red box. Other details shown include creation date (July 06, 2022), last activity (None), and maximum session duration (1 hour). Below the summary, there are tabs for 'Permissions', 'Trust relationships', 'Tags (2)', 'Access Advisor', and 'Revoke sessions'. The 'Permissions' tab is active, showing 'Permissions policies (2)'.

54. Choose Services, S3 and return to the S3 Management Console.

The screenshot shows the AWS Services menu. The 'S3' icon, which stands for Scalable Storage in the Cloud, is highlighted with a red box. Other services listed include Analytics, Application Integration, AR & VR, AWS Cost Management, Blockchain, Business Applications, Compute, Containers, Customer Enablement, Database, Developer Tools, End User Computing, Front-end Web & Mobile, and Game Development.

55. Choose the bucket i.e. admin-kabir-bucket.

The screenshot shows the Amazon S3 Management Console. On the left, the navigation pane includes 'Buckets', 'Storage Lens', and 'Feature spotlight'. The main area displays an 'Account snapshot' with total storage (257.1 KB), object count (176), and average object size (1.5 KB). Below this is a 'Buckets (3) Info' section. A table lists three buckets: 'admin-kabir-bucket' (highlighted with a red box), 'ql-cf-templates-1656389783-3f97a6cff4a70276-us-west-2', and 'US East (N. Virginia)'. The 'admin-kabir-bucket' row shows it was created on June 28, 2022, at 09:51:51 (UTC+05:30), and objects can be public.

56. Choose the **Permissions** tab. In the **Permissions** tab, scroll to the Bucket Policy section, choose **Edit** button.

The screenshot shows the AWS S3 console for the 'admin-kabir-bucket'. The 'Permissions' tab is selected (highlighted by a red box). Under 'Block public access (bucket settings)', there is an 'Edit' button. Under 'Bucket policy', there is also an 'Edit' button (highlighted by a red box with the number 2).

57. Copy the below json text format and Paste on the **Policy** then change required content and click on the **Save changes** button

Note: AWS & Resource change

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "AdminKabir",
      "Effect": "Allow",
      "Principal": {
        "AWS": "arn:aws:iam::435833238133:role/EC2InstanceProfileRole"
      },
      "Action": [
        "s3:PutObject",
        "s3:GetObject"
      ],
      "Resource": "arn:aws:s3:::admin-kabir-bucket/*"
    }
  ]
}
```

The screenshot shows the AWS S3 console with the 'admin-kabir-bucket' selected. In the center, the 'Policy' editor is open, displaying a JSON policy document. The policy grants full access to the 'AdminKabir' user for all actions on all objects in the bucket. At the bottom right of the editor, the 'Save changes' button is highlighted with a red box.

```

1 = [
2   "Version": "2012-10-17",
3   "Statement": [
4     {
5       "Sid": "AdminKabir",
6       "Effect": "Allow",
7       "Principal": {
8         "AWS": "arn:aws:iam::435833238133:role/EC2InstanceProfileRole"
9       },
10      "Action": [
11        "s3:PutObject",
12        "s3:GetObject"
13      ],
14      "Resource": "arn:aws:s3:::admin-kabir-bucket/*"
15    }
16  ]
17 ]

```

58. Successfully saved the Policy

The screenshot shows the AWS S3 console with the 'admin-kabir-bucket' selected. A green success message box is displayed, stating 'Successfully edited bucket policy.' Below it, the 'Permissions' tab is active in the bucket overview. The 'Save changes' button is highlighted with a red box at the bottom right.

59. Return to the AWS Systems Manager (SSM) window. If your session has timed out, reconnect to the SSM using the steps from earlier in the lab.

60. Type the following to verify you are in the /home/ssm-user/reports directory.

The screenshot shows an AWS Systems Manager session terminal window. The user is in the '/home/ssm-user/reports' directory. The terminal prompt shows the user has run 'pwd' to check the current working directory.

```

Pwd
Session ID: awsstudent-0b290f275516619f6
Instance ID: i-0212521e8450b61c3
sh-4.2$ cd ~
sh-4.2$ pwd
/home/ssm-user
sh-4.2$ cd reports
sh-4.2$ pwd
/home/ssm-user/reports

```

61. Enter the following command to list all objects in bucket i.e. admin-kabir-bucket.

```
aws s3 ls s3://admin-kabir-bucket
```

62. Type the following to list the contents of the reports directory.

```
ls
```

63. Type the following to try coping the report-test1.txt file to the s3 bucket.

```
aws s3 cp report-test1.txt s3://admin-kabir-bucket)
```

```
Session ID: awsstudent-0b290f275516619f6 Instance ID: i-0212521e8450b61c3
sh-4.2$ cd ~
sh-4.2$ pwd
/home/ssm-user
sh-4.2$ cd reports
sh-4.2$ pwd
/home/ssm-user/reports
sh-4.2$ ls
dolphins.jpg files.zip report-test1.txt report-test2.txt report-test3.txt whale.jpg
sh-4.2$ aws s3 cp report-test1.txt s3://admin-kabir-bucket
upload: ./report-test1.txt to s3://admin-kabir-bucket/report-test1.txt
sh-4.2$
```

64. Type the following to see if the file successfully uploaded to S3.

```
aws s3 ls s3://admin-kabir-bucket
```

65. Now type the following command to retrieve (GetObject) a file from S3 to the EC2 Instance.

```
aws s3 cp s3://admin-kabir-bucket/sample-file.txt sample-file.txt
```

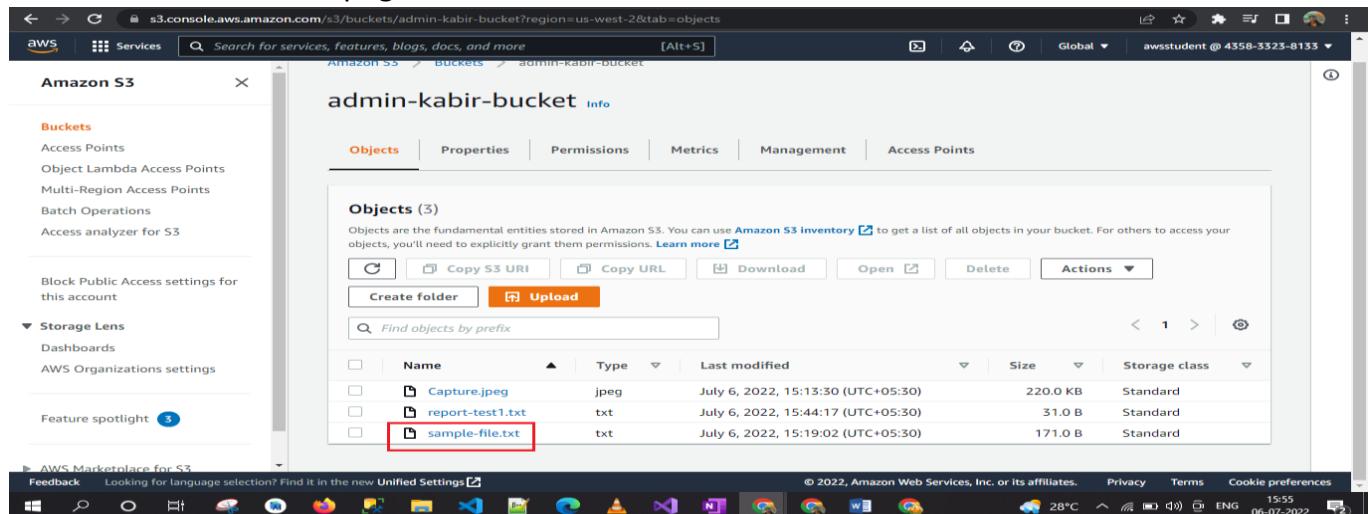
```
sh-4.2$ aws s3 cp s3://admin-kabir-bucket/sample-file.txt sample-file.txt
download: s3://admin-kabir-bucket/sample-file.txt to ./sample-file.txt
sh-4.2$
```

66. Type the following to see if the file is now in the /reports directory.

```
ls
sh-4.2$ ls
dolphins.jpg files.zip report-test1.txt report-test2.txt report-test3.txt reports sample-file.txt whale.jpg
sh-4.2$
```

You now see the sample-file.txt in your file list. Congratulations! You have successfully uploaded and retrieved a file from EC2 to the S3 bucket.

67. Go to bucket i.e. admin-kabir-bucket and open the **sample-file.txt** file then copy the URL. Open new tab and paste that URL & click Enter button that displayed the **Access Denied** for the **sample-file.txt** and Refresh the page



68. If you see the file then go to the **Object actions > Make public using ACL** like below image

The screenshot shows the AWS S3 console interface. On the left, there's a sidebar with options like Buckets, Access Points, Object Lambda Access Points, Multi-Region Access Points, Batch Operations, and Access analyzer for S3. Below that are sections for Block Public Access settings and Storage Lens. A Feature spotlight is also present.

In the main area, the path is Amazon S3 > Buckets > admin-kabir-bucket > sample-file.txt. The file 'sample-file.txt' is selected, and its properties are shown: Owner (aws032966), AWS Region (US West (Oregon) us-west-2), Last modified (July 6, 2022, 15:19:02 (UTC+05:30)), Size (171.0 B), and Type (txt). The 'Properties' tab is active.

A context menu is open over the file, specifically the 'Object actions' section. The 'Make public using ACL' option is highlighted. Other options in the menu include Download as, Share with a presigned URL, Calculate total size, Copy, Move, Initiate restore, Query with S3 Select, Edit actions, Rename object, Edit storage class, Edit server-side encryption, Edit metadata, Edit tags, and Make public using ACL.

The browser window below displays the contents of the file:

```
This sample text file is used to illustrate the use of versioning in an Amazon S3 bucket.  
This file has been modified.  
This is version 2 of the file.  
Have a lovely day!
```

Task 6: Explore versioning

69. Go to the bucket i.e. admin-kabir-bucket

The screenshot shows the AWS S3 console with the 'Buckets' list. The 'admin-kabir-bucket' is selected. Key details shown for the bucket:

Name	AWS Region	Access	Creation date
admin-kabir-bucket	US West (Oregon) us-west-2	Objects can be public	July 6, 2022, 15:12:49 (UTC+05:30)
ql-cf-templates-1657100304-f6c65d182952d16e-us-west-2	US West (Oregon) us-west-2	Objects can be public	July 6, 2022, 15:08:26 (UTC+05:30)
	US East (N. Virginia)	Objects can be	July 6, 2022, 15:08:29

70. On the admin-kabir-bucket overview page, choose the Properties tab. Under the Bucket Versioning section, choose Edit button

The screenshot shows the 'Properties' tab for the 'admin-kabir-bucket'. The 'Bucket Versioning' section contains an 'Edit' button, which is highlighted with a red box.

71. Select Enable and then choose Save changes button

The screenshot shows the 'Edit Bucket Versioning' dialog. The 'Enable' radio button is selected and highlighted with a red box. The 'Save changes' button is also highlighted with a red box.

72. Successfully edited

Versioning is enabled for an entire bucket and all objects within the bucket. It cannot be enabled for individual objects.

The screenshot shows the AWS S3 Management Console. In the top navigation bar, the URL is s3.console.aws.amazon.com/s3/buckets/admin-kabir-bucket?region=us-west-2&tab=properties. The main content area has a green header bar stating "Successfully edited Bucket Versioning". Below it, a message says "To transition, archive, or delete older object versions, configure lifecycle rules for this bucket." The breadcrumb navigation shows "Amazon S3 > Buckets > admin-kabir-bucket". The "Properties" tab is selected in the navigation bar. The "Bucket overview" section displays the AWS Region as "US West (Oregon) us-west-2", the Amazon Resource Name (ARN) as "arn:aws:s3:::admin-kabir-bucket", and the Creation date as "July 6, 2022, 15:12:49 (UTC+05:30)". The "Bucket Versioning" section contains a note about versioning and a link to learn more. The task bar at the bottom includes links for Feedback, Unified Settings, Privacy, Terms, and Cookie preferences.

73. Right-click this link and save the text file to your computer using the same name as the text file in the previous task sample-file.txt.

The screenshot shows a Qwiklabs lab titled "Introduction to Amazon Simple Storage Service (S3)". The current step is 86, which says "On the reportbucket overview page, choose the Properties tab.". Step 87 says "Under the Bucket Versioning section, choose Edit". Step 88 says "Select Enable and then choose Save changes". Step 89 is highlighted with a red box and says "Right-click this link and save the text file to your computer using the same name as the text file in the previous task sample-file.txt". Step 90 says "In the S3 Management Console, on the reportbucket, choose the Objects tab. Under the Objects section look for Show versions.". Step 91 says "Choose Upload and use the same upload process in the previous task to upload the new sample-file.txt file." The task bar at the bottom includes links for End Lab, Open Console, Download PEM, and Download PPK.

The screenshot shows a web browser window displaying the contents of a file named "sample-file.txt". The file contains the following text:
 This sample text file is used to illustrate the use of versioning in an Amazon S3 bucket.
 This file has been modified.
 This is version 2 of the file.
 Have a lovely day!
 Have a lovely day!
 This is version 2 of the file.
 The browser's address bar shows the URL https://us-west-2-aws-training.s3.amazonaws.com/sample-file.txt. The task bar at the bottom includes links for Introduction to Amazon Simple, File, and C:/Users/Admin_07/Desktop/sample-file.txt.

74. In the S3 Management Console, on the admin-kabir-bucket, choose the **Objects** tab.

Under the Objects section look for **off Show versions**.

Choose **Upload** button and use the same upload process in the previous task to upload the new sample-file.txt file.

The screenshot shows the Amazon S3 Management Console with the URL <https://s3.console.aws.amazon.com/s3/buckets/admin-kabir-bucket?region=us-west-2&tab=objects>. The left sidebar shows 'Buckets' and 'Storage Lens'. The main area is titled 'admin-kabir-bucket' with tabs for 'Objects' (highlighted), 'Properties', 'Permissions', 'Metrics', 'Management', and 'Access Points'. Under 'Objects (3)', there is a table with columns: Name, Type, Last modified, Size, and Storage class. The table contains three rows: 'Capture.jpeg' (jpeg, July 6, 2022, 15:13:30, 220.0 KB, Standard), 'report-test1.txt' (txt, July 6, 2022, 15:44:17, 31.0 B, Standard), and 'sample-file.txt' (txt, July 6, 2022, 15:19:02, 171.0 B, Standard). A search bar and an 'Actions' dropdown are at the top of the table. The status bar at the bottom shows the URL and the date: 06-07-2022.

The screenshot shows the 'Upload' page for the admin-kabir-bucket. It has sections for 'Files and folders' (containing 'sample-file.txt'), 'Destination' (set to 's3://admin-kabir-bucket'), and 'Permissions' and 'Properties'. The 'Upload' button is highlighted with a red box. The status bar at the bottom shows the URL and the date: 06-07-2022.

The screenshot shows the 'Upload: status' page. It displays a summary table with 'Destination' (s3://admin-kabir-bucket) and 'Succeeded' (1 file, 223.0 B (100.00%)). Below this, there are tabs for 'Files and folders' (selected) and 'Configuration'. The 'Files and folders' table shows 'sample-file.txt' (223.0 B). The status bar at the bottom shows the URL and the date: 06-07-2022.

75. Select the file and click on the Open button

The screenshot shows the AWS S3 console interface. At the top, there's a navigation bar with 'Amazon S3 > Buckets > admin-kabir-bucket'. Below it is a toolbar with various actions like 'Copy S3 URI', 'Download', 'Open', 'Delete', 'Actions', 'Create folder', and 'Upload'. A search bar says 'Find objects by prefix'. The main area is titled 'Objects (3)' and lists three files: 'Capture.jpeg', 'report-test1.txt', and 'sample-file.txt'. The 'sample-file.txt' row is highlighted with a red box. The 'Open' button in the toolbar is also highlighted with a red box.

The screenshot shows a web browser window with the URL 'https://s3.console.aws.amazon.com/s3/object/admin-kabir-bucket/sample-file.txt?versionId=g4gGy2Pr4AddqWZDqgEEcDfa8.UtNjP&response-content-disposition=inline&X-Amz-Content-Sha256='. The page content displays the text from the 'sample-file.txt' object, which includes a note about versioning, a modification notice, and two identical lines of text ('Have a lovely day!').

76. Go to the file and copy the Object URL

The screenshot shows the AWS S3 console with the 'Properties' tab selected for the 'sample-file.txt' object. In the 'Object overview' section, it shows the owner (aws032966), AWS Region (US West (Oregon) us-west-2), last modified (July 6, 2022, 16:10:51 (UTC+05:30)), size (223.0 B), type (txt), and the S3 URI (s3://admin-kabir-bucket/sample-file.txt). The 'Object URL' field contains the full URL: 'https://admin-kabir-bucket.s3.us-west-2.amazonaws.com/sample-file.txt'.

77. Paste on the New tab and this time showing Access Denied showing

The screenshot shows a web browser with the URL 'admin-kabir-bucket.s3.us-west-2.amazonaws.com/sample-file.txt'. The page displays an 'Access Denied' error message: 'This XML file does not appear to have any style information associated with it. The document tree is shown below.' Below this, there is an XML error response:

```

<Error>
  <Code>AccessDenied</Code>
  <Message>Access Denied</Message>
  <RequestId>3RBQ25G4H63PKQ0</RequestId>
  <HostId>hcaLyrd1HCJ2MIVlg8V8ME3SS1val7K3p0MpAmJUq/Zg8S8ft5VPEvr6G1CoDwrt+stpR4+H</HostId>
</Error>

```

However, if you try to access the older version of the sample-file.txt file using the object URL link, you will receive an access denied message. This is expected because the bucket policy you created in the previous task only allows permission to access the latest version of the object. In order to access a previous version of the object, you need to update your bucket policy to include the "**s3:GetObjectVersion**" permission.

Below is an example bucket policy with the additional "**s3:GetObjectVersion**" action added that allows you to access the older version using the link. You do not need to update your bucket policy with this example to complete this lab. You can try to do this on your own after you complete the task.

78. Go to **Versions** tab after that select the latest version and click on the **Open** button

Version ID	Type	Last modified	Size	Storage class
<input checked="" type="checkbox"/> g4gGy2Pr4Addq.WZDqgEEcDFa8.UtNjP (Current version)	txt	July 6, 2022, 16:10:51 (UTC+05:30)	223.0 B	Standard
<input type="checkbox"/> null	txt	July 6, 2022, 15:19:02 (UTC+05:30)	171.0 B	Standard


```

This sample text file is used to illustrate the use of versioning in an Amazon S3 bucket.
This file has been modified.
This is version 2 of the file.
Have a lovely day!
Have a lovely day!
This is version 2 of the file.

```

79. Return to the **AWS Management Console** tab and choose the link for the bucket name at the top-left to return to the bucket **Objects** tab. Locate the **Show versions** option and toggle the button to on to show the versions.

Name	Type	Version ID	Last modified	Size	Storage class
Capture.jpeg	jpeg	null	July 6, 2022, 15:13:30 (UTC+05:30)	220.0 KB	Standard
report-test1.txt	txt	null	July 6, 2022, 15:44:17 (UTC+05:30)	31.0 B	Standard
sample-file.txt	txt	g4gGy2Pr4Addq.WZDqgEEcDFa8.UtNjP	July 6, 2022, 16:10:51 (UTC+05:30)	223.0 B	Standard
sample-file.txt	txt	null	July 6, 2022, 15:19:02 (UTC+05:30)	171.0 B	Standard

Now you can view the available versions of each object and identify which version is the latest. Notice the sample-file.txt object only has one version and the version ID is null. This is because the object was uploaded before versioning was enabled on this bucket. Also notice that you can now choose the version name link to navigate directly to that version of the object in the console.

80. Click on the sample-file.txt where Version ID null like below image

The screenshot shows the AWS S3 console with the path `s3.console.aws.amazon.com/s3/buckets/admin-kabir-bucket?region=us-west-2&tab=objects&showversions=true`. The 'Objects' tab is selected. There are four objects listed:

Name	Type	Version ID	Last modified	Size	Storage class
Capture.jpeg	jpeg	null	July 6, 2022, 15:13:30 (UTC+05:30)	220.0 KB	Standard
report-test1.txt	txt	null	July 6, 2022, 15:44:17 (UTC+05:30)	31.0 B	Standard
sample-file.txt	txt	g4gGy2Pr4Addq,WZDqgEEcDFa8.UtNjP	July 6, 2022, 16:10:51 (UTC+05:30)	223.0 B	Standard
sample-file.txt	txt	null	July 6, 2022, 15:19:02 (UTC+05:30)	171.0 B	Standard

The last row, 'sample-file.txt' with Version ID null, is highlighted with a red box.

81. Copy the Object URL

The screenshot shows the AWS S3 object details page for `sample-file.txt` in the `admin-kabir-bucket`. The 'Properties' tab is selected. The 'Object overview' section displays the following information:

- Owner: aws032966
- AWS Region: US West (Oregon) us-west-2
- Last modified: July 6, 2022, 15:19:02 (UTC+05:30)
- Size: 171.0 B
- Type: txt
- Key:

On the right side, there are several fields with their corresponding URLs:

- S3 URI: `s3://admin-kabir-bucket/sample-file.txt`
- Amazon Resource Name (ARN): `arn:s3:::admin-kabir-bucket/sample-file.txt`
- Entity tag (Etag): `32d17db8e4e888af4e0965bd55afec4e`
- Object URL: `https://admin-kabir-bucket.s3.us-west-2.amazonaws.com/sample-file.txt?versionId=null`

The 'Object URL' field is highlighted with a red box.

82. Paste on the new tab showing older content

The screenshot shows a browser tab with the URL `admin-kabir-bucket.s3.us-west-2.amazonaws.com/sample-file.txt?versionId=null`. The page content is:

```

This sample text file is used to illustrate the use of versioning in an Amazon S3 bucket.
This file has been modified.
This is version 2 of the file.
Have a lovely day!

```

83. Next to Show versions toggle the button to off to return to the default object view.

Amazon S3 > Buckets > admin-kabir-bucket

Objects (3)

Name	Type	Last modified	Size	Storage class
Capture.jpeg	jpeg	July 6, 2022, 15:13:30 (UTC+05:30)	220.0 KB	Standard
report-test1.txt	txt	July 6, 2022, 15:44:17 (UTC+05:30)	31.0 B	Standard
sample-file.txt	txt	July 6, 2022, 16:10:51 (UTC+05:30)	223.0 B	Standard

84. Select the checkbox to the left of the **sample-file.txt**. With the object selected, choose **Delete** button.

Amazon S3 > Buckets > admin-kabir-bucket

Objects (3)

Name	Type	Last modified	Size	Storage class
Capture.jpeg	jpeg	July 6, 2022, 15:13:30 (UTC+05:30)	220.0 KB	Standard
report-test1.txt	txt	July 6, 2022, 15:44:17 (UTC+05:30)	31.0 B	Standard
<input checked="" type="checkbox"/> sample-file.txt	txt	July 6, 2022, 16:10:51 (UTC+05:30)	223.0 B	Standard

85. The **Delete objects** window appears. At the bottom, in the **Delete objects?** section you must type the word **delete** to confirm deletion of the object. Type **delete** and choose the **Delete objects** button

Amazon S3 > Buckets > admin-kabir-bucket > Delete objects

Delete objects

Specified objects

Name	Type	Last modified	Size
sample-file.txt	txt	July 6, 2022, 16:10:51 (UTC+05:30)	223.0 B

Delete objects?

To confirm deletion, type **delete** in the text input field.

delete **Delete objects**

86. Choose Close button to return to the bucket overview.

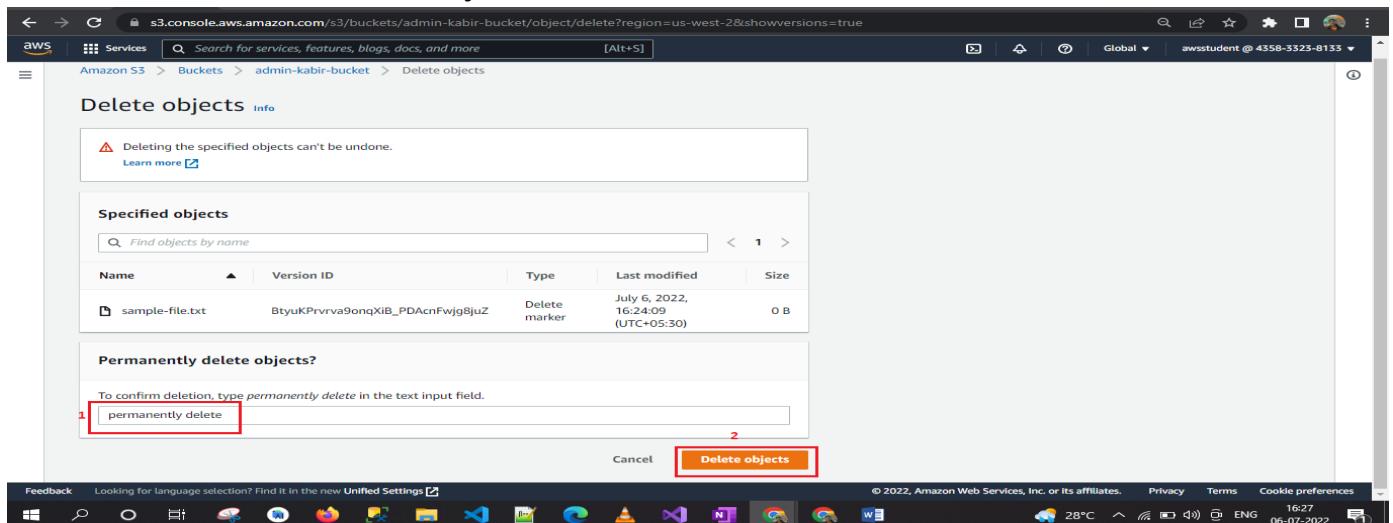
The sample-file.txt object is no longer displayed in the bucket. However, if the object is deleted by mistake, versioning can be used to recover it.

87. Locate the OFF Show versions option and toggle the button to ON to show the versions.

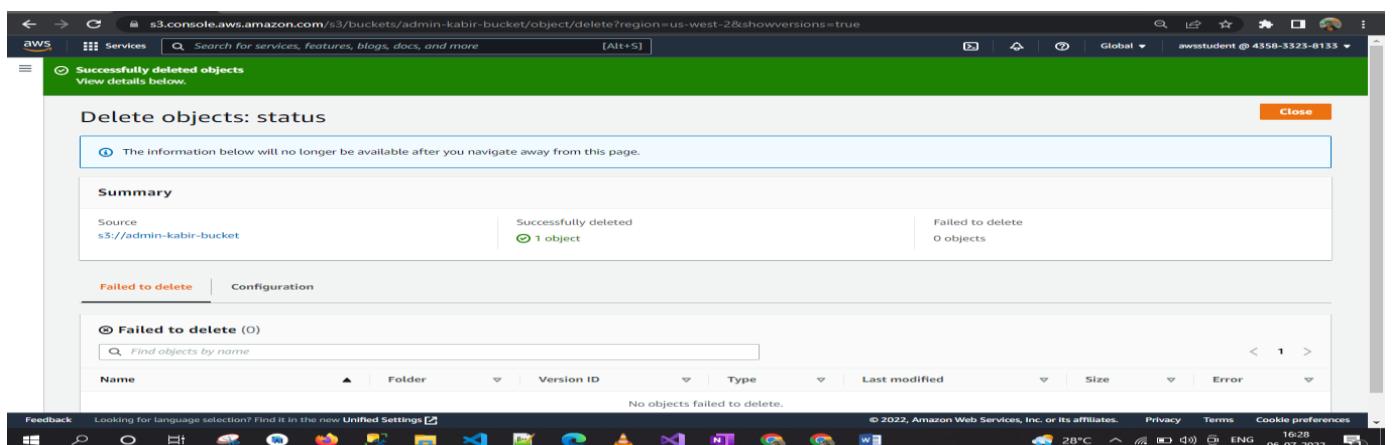
Notice that the sample-file.txt object is displayed again, but the most recent version is a **Delete marker**. The two previous versions are listed as well. If versioning has been enabled on the bucket, objects are not immediately deleted. Instead, Amazon S3 inserts a delete marker, which becomes the current object version. The previous versions of the object are not removed. Refer to the Additional Resources section at the end of the lab for links to more information about versioning.

88. Select the checkbox to the left of the version of the sample-file.txt object with the **Delete marker**. With the object selected, choose **Delete** button

89. The **Delete objects** window appears. At the bottom in the **Permanently delete objects?** section you must type the word permanently delete to confirm deletion of the object. Type *permanently delete* and choose the **Delete objects** button.



90. Choose **Close** button to return to the bucket overview.



91. Next to **Show versions** toggle the button to off to return to the default object view.

Notice that the sample-file.txt object has been restored to the bucket. Removing the delete marker has effectively restored the object to its previous state. Refer to the Additional Resources section at the end of the lab for links to more information about undeleting S3 objects.

Next, you delete a specific version of the object.

92. To delete a specific version of the object, locate the **Show versions** option and toggle the button to on to show the versions. You should see two versions of the **sample-file.txt** object.

You should see two versions of the sample-file.txt object.

93. Select the checkbox to the left of the latest version of the **sample-file.txt** object. With the object selected, choose **Delete** button

Objects (4)

Name	Type	Version ID	Last modified	Size	Storage class
Capture.jpeg	jpeg	null	July 6, 2022, 15:13:30 (UTC+05:30)	220.0 KB	Standard
report-test1.txt	txt	null	July 6, 2022, 15:44:17 (UTC+05:30)	31.0 B	Standard
<input checked="" type="checkbox"/> sample-file.txt	txt	g4gGy2Pr4Addq.WZDqgEEcDFa8.UtNjP	July 6, 2022, 16:10:51 (UTC+05:30)	223.0 B	Standard
sample-file.txt	txt	null	July 6, 2022, 15:19:02 (UTC+05:30)	171.0 B	Standard

94. The **Delete Object** window appears.

At the bottom in the Permanently delete objects? section type *permanently delete* and choose the **Delete objects** button

Specified objects

Name	Version ID	Type	Last modified	Size
sample-file.txt	g4gGy2Pr4Addq.WZDqgEEcDFa8.UtNjP	txt	July 6, 2022, 16:10:51 (UTC+05:30)	223.0 B

Permanently delete objects?

To confirm deletion, type *permanently delete* in the text input field.

Delete objects

95. Choose **Close** button to return to the bucket overview.

Successfully deleted objects

Delete objects: status

The information below will no longer be available after you navigate away from this page.

Source	Successfully deleted	Failed to delete
s3://admin-kabir-bucket	1 object, 223.0 B	0 objects

Configuration

Failed to delete (0)

Name	Folder	Version ID	Type	Last modified	Size	Error
No objects failed to delete.						

Notice that there is now only one version of the sample-file.txt file. When deleting a specific version of an object no delete marker is created. The object is permanently deleted. Refer to the

Additional Resources section at the end of the lab for links to more information about deleting object versions in Amazon S3.

96. Next to **Show versions** toggle the button to off to return to the default object view.

The screenshot shows the AWS S3 console interface. At the top, there's a navigation bar with 'Services' selected. Below it, the bucket 'admin-kabir-bucket' is selected. The main area is titled 'Objects (3)'. A table lists three objects: 'Capture.jpeg', 'report-test1.txt', and 'sample-file.txt'. The 'Actions' column contains icons for each object. A prominent red box highlights the 'Show versions' button, which is currently turned on. Below the table is a search bar labeled 'Find objects by prefix'.

97. Choose the **sample-file.txt** file name. The sample-file.txt overview page opens. Copy the **Object URL** link displayed at the bottom of the window.

This screenshot shows the AWS S3 object overview page for 'sample-file.txt'. The top navigation bar shows the path 'Amazon S3 > Buckets > admin-kabir-bucket > sample-file.txt'. The main section is titled 'Object overview' and displays various metadata: Owner (aws032966), AWS Region (US West (Oregon) us-west-2), Last modified (July 6, 2022, 15:19:02 (UTC+05:30)), Size (171.0 B), Type (txt), and Key (sample-file.txt). On the right side, there are fields for 'S3 URI' (s3://admin-kabir-bucket/sample-file.txt), 'Amazon Resource Name (ARN)' (arn:aws:s3:::admin-kabir-bucket/sample-file.txt), 'Entity tag (Etag)' (32d17db8e4e888af4e0965bd55afec4e), and 'Object URL'. The 'Object URL' field contains the full URL: https://admin-kabir-bucket.s3.us-west-2.amazonaws.com/sample-file.txt. This URL is highlighted with a red box.

98. In a new browser tab, paste the link into the address field, and then press **Enter**.

This screenshot shows a browser window displaying the contents of the 'sample-file.txt' file from the previous step. The address bar shows the URL: admin-kabir-bucket.s3.us-west-2.amazonaws.com/sample-file.txt. The page content is as follows:

```

This sample text file is used to illustrate the use of versioning in an Amazon S3 bucket.
This file has been modified.
This is version 2 of the file.
Have a lovely day!

```

The text is displayed in a monospaced font. The entire page content is highlighted with a red box.

99. The text of the original version of the sample-file.txt object is displayed.

Version ID	Type	Last modified	Size	Storage class
null (Current version)	txt	July 6, 2022, 15:19:02 (UTC+05:30)	171.0 B	Standard

<https://s3.console.aws.amazon.com/s3/#>

End Lab

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked.
[Learn more.](#)

Open Console

Download PEM

Download PPK

00:07:43

Notice that there is now only one version of the sample-file.txt file. When deleting a specific version of an object no delete marker is created. The object is permanently deleted. Refer to the Additional Resources section at the end of the lab for links to more information about deleting object versions in Amazon S3.

119. Next to **Show versions** toggle the button to off to return to the default object view.

120. Choose the **sample-file.txt** file name. The sample-file.txt overview page opens.

121. Copy the **Object URL** link displayed at the bottom of the window.

122. In a new browser tab, paste the link into the address field, and then press **Enter**.

The text of the original version of the sample-file.txt object is displayed.

- Start Lab
- Task 1: Create a bucket
- Task 2: Upload an object to the bucket
- Task 3: Make an object public
- Task 4: Test connectivity from the EC2 instance
- Task 5: Create a bucket policy
- Task 6: Explore versioning
- Summary:
- Conclusion
- End Lab
- Additional resources

Summary:

<https://s3.console.aws.amazon.com/s3/#>