

Lab3. Cloud Object Storage 다루기

1. 목적

- 이번 Lab에서는 Tencent Cloud에서 제공하는 Storage Service 중 Cloud Object Storage를 다룬다. COS에 File과 Folder를 Upload하고 웹 브라우저를 통해 접속하는 실습, Image Processing하는 실습 그리고 정적 웹페이지를 통한 웹사이트 Hosting을 다룬다.

2. 사전 준비물

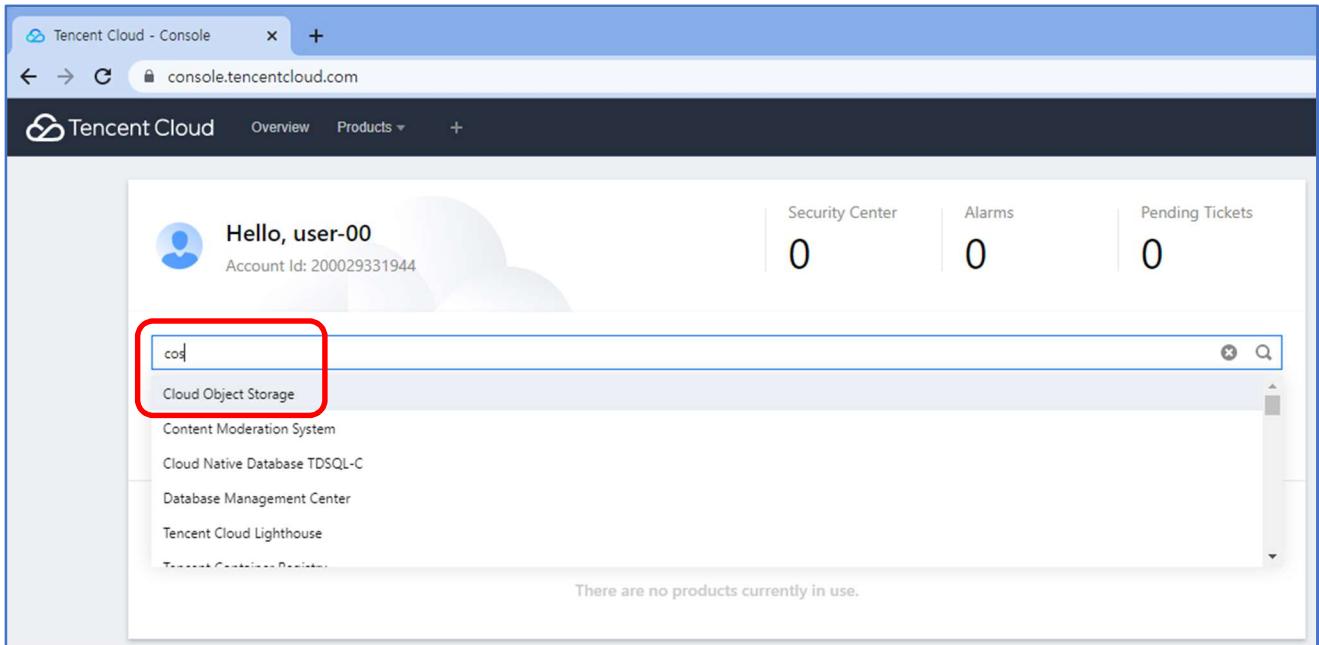
- Tencent Cloud Account

3. 목차

- Task1. Buckets Managing
- Task2. Objects Managing
- Task3. Image Processing
- Task4. Website Hosting

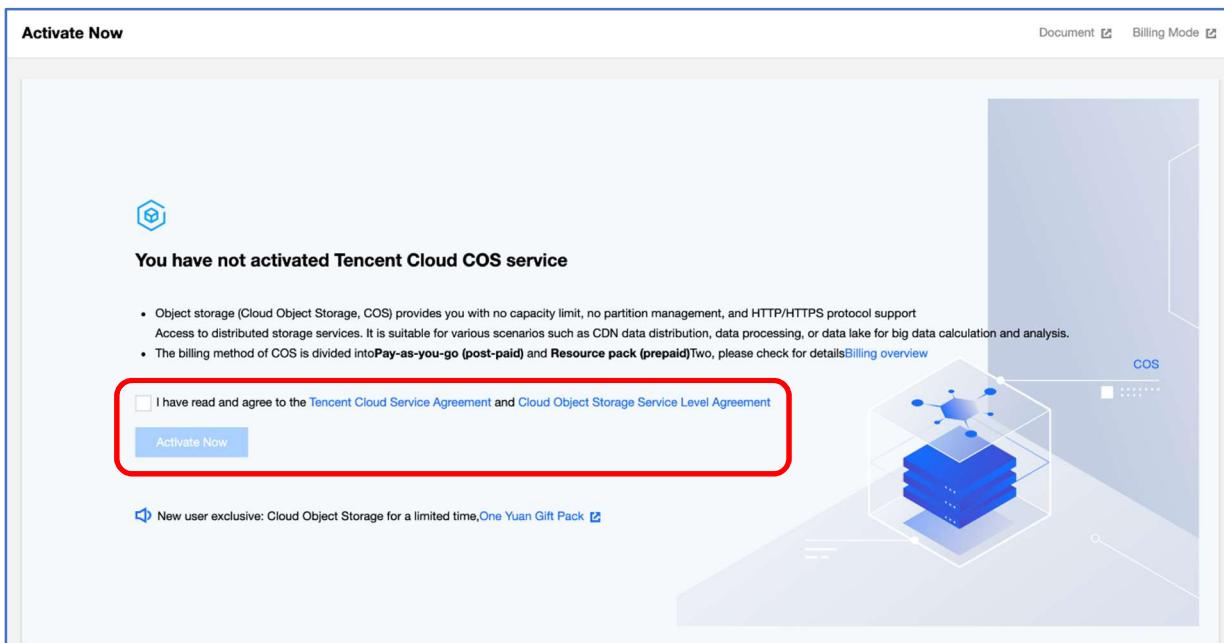
Task1. Buckets Managing

- 로그인 후, **Console** 페이지로 이동한다. 검색창에서 **COS**라고 검색하거나 **[Products] > [Basic Storage Service] > [Cloud Object Storage]** 링크를 클릭한다.



The screenshot shows the Tencent Cloud Console homepage. At the top, there is a search bar with the text "cos" typed in. Below the search bar, a list of products is displayed, with "Cloud Object Storage" being the first item and highlighted with a red box. Other listed products include Content Moderation System, Cloud Native Database TDSQL-C, Database Management Center, and Tencent Cloud Lighthouse. The main content area below the products says "There are no products currently in use."

- 먼저 **COS** 서비스를 사용하려면 **COS** 활성화를 해야 한다. 다음과 같은 창이 나타나면 **[I have read...]**를 체크하고 **[Activate Now]** 파란색 버튼을 클릭한다.

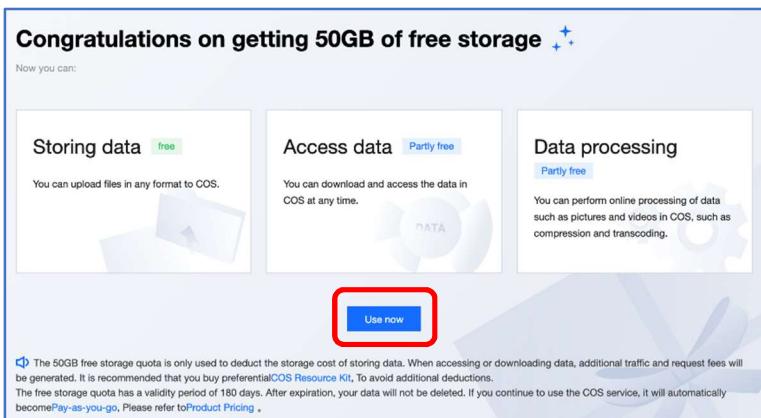


The screenshot shows the "Activate Now" dialog box for activating the Tencent Cloud COS service. It includes a summary icon, the text "You have not activated Tencent Cloud COS service", a list of service features, and a checkbox for accepting terms and conditions. The "Activate Now" button is highlighted with a red box. To the right of the dialog, there is a 3D diagram of a server stack labeled "COS".

I have read and agree to the [Tencent Cloud Service Agreement](#) and [Cloud Object Storage Service Level Agreement](#)

Activate Now

3. 다음과 같은 창이 나타나면 [Use now] 파란색 버튼을 클릭하여 COS 서비스를 시작한다.



4. [Cloud Object Storage] 페이지에 들어왔다. [Overview] 페이지에 맞춰져 있다.

This screenshot shows the Cloud Object Storage Overview page. The left sidebar has 'Bucket List' selected. The main area displays usage statistics: Storage (0), Month-to-Date Total Traffic (0B), and Total Requests for This Month (0 time(s)). It also features sections for Data Processing (Image Processing and File Preview) and Help Documentation. On the right, there is an Alarm Configuration section showing 0 current alarms and 0 configured alarm policies.

5. 먼저 Bucket을 생성하기 위해 페이지 좌측 메뉴에서 [Bucket List]를 클릭한다. [Bucket List] 페이지가 나오면 Bucket 생성을 위해 [Create Bucket] 파란색 버튼을 클릭한다.

This screenshot shows the Bucket List page. The left sidebar has 'Bucket List' selected. A prominent 'Create Bucket' button is highlighted with a red box. The main area shows a table with columns for Bucket Name, Access, Region, Creation Time, and Operation. A note at the top says 'If a sub-account does not have permission to query the bucket list, it can go to Access Path List to add authorized bucket access paths.'

6. 첫번째 단계에서, 다음의 각 값을 설정한 후, [Next] 파란색 버튼을 클릭한다.

- ① [Region] : Asia-Pacific > Seoul
- ② [Name] : lab4-bucketXX(여기서 XX는 계정번호를 의미)
- ③ [Access Permissions] : Private Read/Write

Create Bucket

1 Information > 2 Advanced optional configuration > 3 Confirm

Region: Asia-Pacific > Seoul

Name*: lab4-bucket00 -1305615433

Access Permission: Private Read/Write

Endpoint: lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com

Request endpoint:

Cancel Next

7. 두번째 단계에서는 기본값 그대로 사용하기로 한다. [Next] 클릭한다.

Create Bucket

1 Information > 2 Advanced optional configuration > 3 Confirm

Versioning: Enabled

MAZ configuration: Disabled

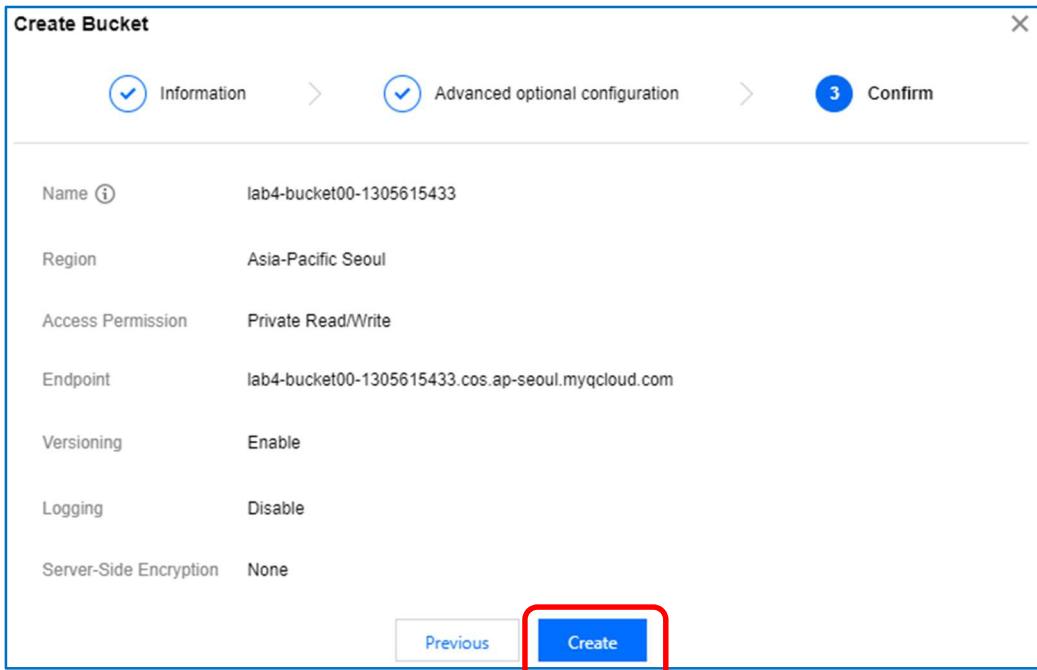
Logging: Enabled

Bucket Tag: Enter a tag key, Enter a tag value, +

Server-Side Encryption: None

Previous Next

8. 세번째 단계에서 내용 확인 한 후, [Create] 버튼을 클릭하여 Bucket을 생성한다.



9. Bucket 생성 후, [Bucket List] 페이지에 가보면 방금 생성한 Bucket을 확인할 수 있다.

The screenshot shows the 'Bucket List' page in the Cloud Object Storage interface. The left sidebar has several options: Overview (highlighted with a red box), Bucket List (highlighted with a red box), Access Path List, Statistic, Storage+, Data Processing Workflow, and Batch Operation. The main area is titled 'Bucket List' and has tabs for 'Information' and 'Statistical Data'. It contains a message from the user and a note about sub-account permissions. Below that are 'Create Bucket' and 'Manage Permissions' buttons. The table lists buckets with columns: Bucket Name, Access, and Region. The first row, 'lab4-bucket00-1305615433', is highlighted with a red box.

Bucket Name	Access	Region
lab4-bucket00-1305615433	Specified user	Seoul (Asia-Pacific) (ap-seoul)

10. 방금 생성한 Bucket의 링크를 클릭해서 상세 페이지를 확인해 보자.

The screenshot shows the Tencent Cloud Storage console interface. On the left, there is a sidebar with various navigation options: Overview, File List (which is currently selected and highlighted in blue), Basic Configurations, Security Management, Permission Management, Domains and Transfer, and Fault Tolerance and Disaster Recovery. The main content area is titled "lab4-bucket00-1305615433 /". It features a toolbar with "Upload Files", "Create Folder", "Incomplete Multipart Upload", "Clear Buckets", and "More Actions". Below the toolbar is a search bar with "Prefix search" and a note "Only objects in the current virtual directory are searched". A table header includes "Object Name", "Size", and "Storage Class". The message "No data yet" is displayed at the bottom of the table.

11. [Overview]를 클릭하면 방금 생성한 Bucket의 상세 페이지를 확인할 수 있다. 좌측 메뉴에서 [File List]를 클릭한다.

This screenshot is similar to the previous one, but the "File List" option in the sidebar is highlighted with a red box. The main content area displays usage statistics under the "Usage Overview" tab. It includes sections for "Number of Objects" (0 individual), "Storage" (0 B), "Month-to-Date Total Traffic" (0 B), and "Total Requests for This Month" (0 time(s)). Below this, there are two tabs: "Information" and "Domain Information". The "Information" tab shows details like Bucket Name (lab4-bucket00-1305615433), Region (Seoul (Asia-Pacific) (ap-seoul)), Creation Time (2023-01-31 08:25:09), and Access Permission (Private Read/Write). The "Domain Information" tab shows Endpoint (https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com), Custom CDN Acceleration (0 permanent), Custom Endpoint (0 per), Global Acceleration End (Disabled), and Static Website Endpoint (Disabled). A note at the bottom states that COS domains use smart DNS and provides instructions for intra-region access.

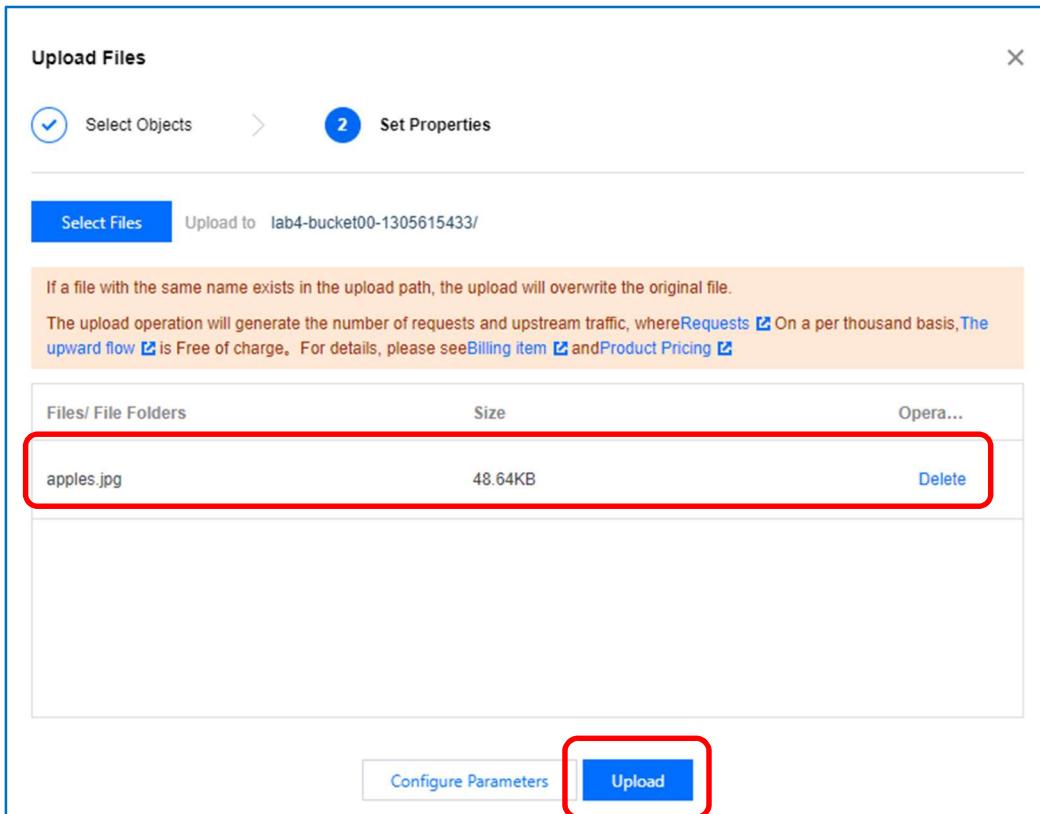
12. [File List] 페이지이다. 파일을 Upload하기 위해 [Upload Files] 파란색 버튼을 클릭한다.

The screenshot shows the AWS S3 console. On the left, there's a navigation sidebar with various tabs like Overview, File List, Basic Configurations, Security Management, Permission Management, Domains and Transfer, Fault Tolerance and Disaster Recovery, and Logging. The 'File List' tab is selected. In the main area, there's a search bar at the top with a 'Search menu nam' input field and a magnifying glass icon. Below the search bar are several buttons: 'Upload Files' (highlighted with a red box), 'Create Folder', 'Incomplete Multipart Upload', 'Clear Buckets', and 'More Actions'. There's also an 'Online editor' link. Underneath these buttons is a search bar with 'Prefix search' dropdown and a note 'Only objects in the current virtual directory are searched'. To the right of the search bar are 'Refresh' and '100 objects per page' buttons. A table below lists objects with columns for 'Object Name', 'Size', 'Storage Class', 'Modification Time', and 'Operation'. The table displays the message 'No data yet'.

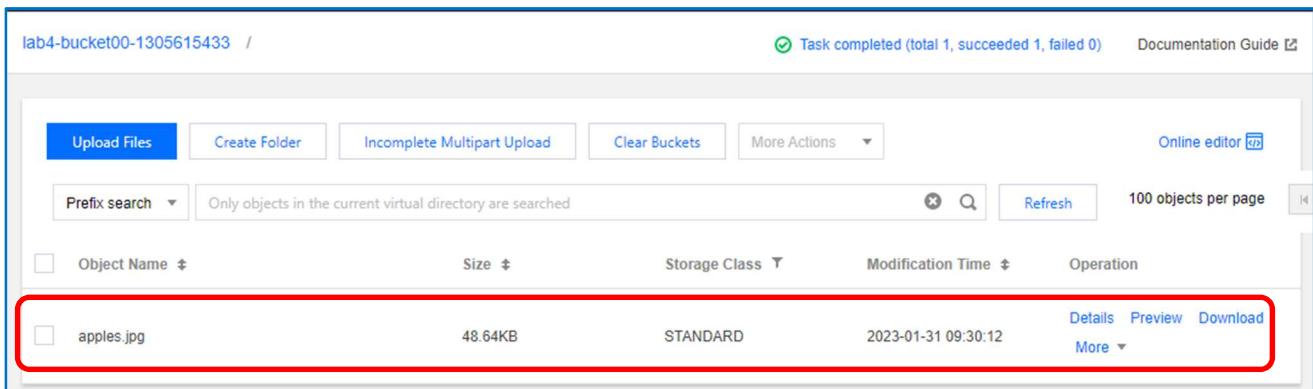
13. Upload할 파일은 [Select Files] 파란색 버튼 아래 박스안에 Drag & Drop 하면 된다. 동시에 여러 개의 파일들을 Upload할 수 있으며, 파일 크기가 최대 512 GB까지 가능하다.

The screenshot shows the 'Upload Files' dialog box. At the top, there are two tabs: 'Select Objects' (with a checkmark) and 'Set Properties' (with a number 2). Below the tabs, there's a 'Select Files' button and an 'Upload to' field containing 'lab4-bucket00-1305615433/'. A warning message follows: 'If a file with the same name exists in the upload path, the upload will overwrite the original file.' Another message states: 'The upload operation will generate the number of requests and upstream traffic, where Requests is On a per thousand basis, The upward flow is Free of charge. For details, please see Billing item and Product Pricing.' A large red box highlights the central area where files can be dragged and dropped. This area contains the text 'No files/folders selected' and instructions: 'Drag and drop files/folders for Chrome and Firefox. You can select multiple files/folders. Single file must be less than 512 GB'. At the bottom are 'Configure Parameters' and 'Upload' buttons.

14. Upload할 파일을 Drag & Drop한 후, [Upload] 파란색 버튼을 클릭한다.



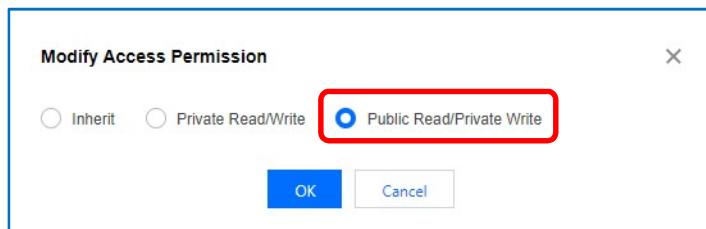
15. Image 파일 한 개가 Upload 되었다.



16. 방금 Upload한 파일의 **Permission** 변경을 위해 파일의 제일 오른쪽 메뉴인 [Operation] > [More] > [Modify Access Permission] 메뉴를 클릭한다.

The screenshot shows a file list interface. A file named "apples.jpg" is selected. A context menu is open next to it, with the "Modify Access Permi..." option highlighted by a red box. Other options visible in the menu include "Custom Header", "Delete", "Modify Storage Class", and "Add Tags".

17. [Modify Access Permission]창에서 [Public Read/Private Write]를 선택하고 [OK] 버튼을 클릭한다.



18. 방금 Upload한 파일의 제일 오른쪽 메뉴 [Operation] > [Details] 를 클릭하여 상세 페이지로 이동한다.

The screenshot shows the same file list interface as before. The "apples.jpg" file has a context menu open. The "Details" link in the menu is highlighted with a red box. Other links visible are "Preview", "Download", and "More".

19. Upload한 파일의 상세 페이지이다. [Preview] 링크를 클릭하면 Upload한 이미지의 미리 보기 확인할 수 있다.

lab4-bucket00-1305615433 / apples.jpg

Task completed (total 1, succeeded 1, failed 0) Documentation Guide

Details

Information

Object Name: apples.jpg
Object Size: 48.64KB
Modification Time: 2023-01-31 09:30:12
ETag: "ca3d1ba4a9349729cd39685fc6b56e8d"
Specified Domain: Default Endpoint
Object Address: https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com/apples.jpg

How do I preview files directly in the browser instead of downloading them? You need to configure the correct Content-Type for the file, please refer to [itQA-Upload and Download](#).

After the object address is accessed, there will be request and traffic charges. Please check the details of the charges [Billing Description](#).

Temporary Link: Copy Temporary Link | Download Objects | Refresh

The temporary link carries the signature parameter, and the temporary link can be used to access the object during the validity period of the signature, and the signature is valid for 1 hour (2023-01-31 10:31:37). Be sure to avoid leaking the temporary link, otherwise your objects may be accessed by other users.

Preview

lab4-bucket00-1305615433 / apples.jpg

Task completed (total 1, succeeded 1, failed 0) Documentation Guide

Details

Information

Object Name: apples.jpg
Object Size: 48.64KB
Modification Time: 2023-01-31 09:30:12
ETag: "ca3d1ba4a9349729cd39685fc6b56e8d"
Specified Domain: Default Endpoint
Object Address: https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com/apples.jpg

How do I preview files directly in the browser instead of downloading them? You need to configure the correct Content-Type for the file, please refer to [itQA-Upload and Download](#).

After the object address is accessed, there will be request and traffic charges. Please check the details of the charges [Billing Description](#).

Temporary Link: Copy Temporary Link | Download Objects | Refresh

The temporary link carries the signature parameter, and the temporary link can be used to access the object during the validity period of the signature, and the signature is valid for 1 hour (2023-01-31 10:31:37). Be sure to avoid leaking the temporary link, otherwise your objects may be accessed by other users.

20. 이 파일의 [Public Permissions]는 방금 설정한 것처럼 [Public Read/Private Write]임을 확인할 수 있다.

Object Size: 48.64KB
Modification Time: 2023-01-31 09:30:12
ETag: "ca3d1ba4a9349729cd39685fc6b56e8d"
Specified Domain: Default Endpoint
Object Address: https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com/apples.jpg

How do I preview files directly in the browser instead of downloading them? You need to configure the correct Content-Type for the file, please refer to [itQA-Upload and Download](#).

After the object address is accessed, there will be request and traffic charges. Please check the details of the charges [Billing Description](#).

Temporary Link: Copy Temporary Link | Download Objects | Refresh

The temporary link carries the signature parameter, and the temporary link can be used to access the object during the validity period of the signature, and the signature is valid for 1 hour (2023-01-31 10:31:37). Be sure to avoid leaking the temporary link, otherwise your objects may be accessed by other users.

Object ACL(Access Control List)

Public Permission: Inherit Private Read/Write Public Read/Private Write

Any anonymous user can access the file, but only authenticated users can modify it.

21. Upload한 파일을 웹 브라우저로 확인해 보자. 상세 페이지에서 [Object Address]의 주소를 복사한 후, 웹 브라우저에 붙여넣고 **Image**를 확인해 보자.

← lab4-bucket00-1305615433 / apples.jpg

Details

Information

Object Name	apples.jpg
Object Size	48.64KB
Modification Time	2023-01-31 09:30:12
ETag	"ca3d1ba4a9349729cd39685fc6b56e8d"
Specified Domain①	Default Endpoint

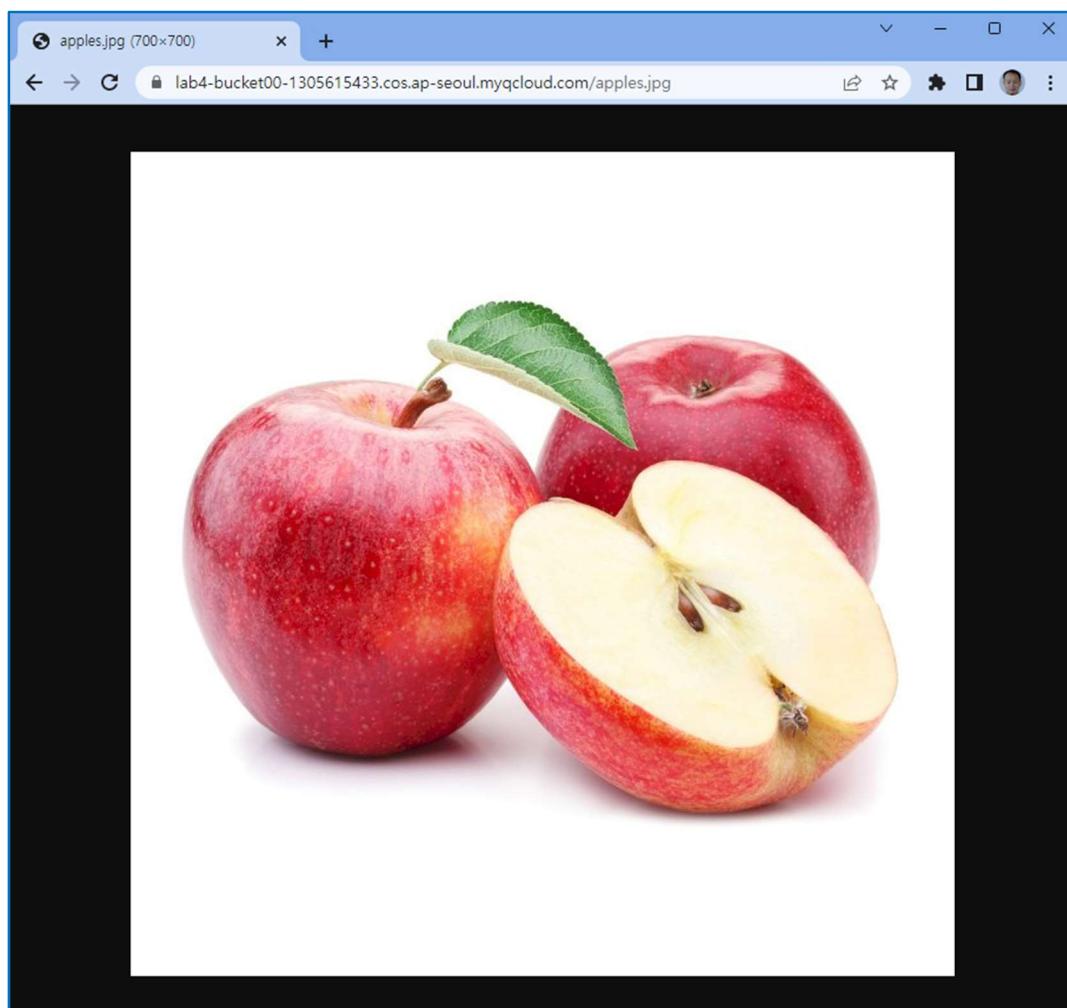
Object Address① <https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com/apples.jpg>

How do I preview files directly in the browser instead of downloading them? You need to configure the correct Content-Type for the file, please refer to [itQA-Upload and Download](#).

After the object address is accessed, there will be request and traffic charges. Please check the details of the charges [Billing Description](#).

Temporary Link① Copy Temporary Link Download Objects Refresh

The temporary link carries the signature parameter, and the temporary link can be used to access the object during the validity period of the signature, and the signature is valid for 1 hour (2023-01-31 10:31:37). Be sure to avoid leaking the temporary link, otherwise your objects may be accessed by other users.



22. 다시 Bucket의 상세 페이지로 이동한다. ACL을 변경하기 위해 좌측 메뉴 중 [Permission Management] > [Bucket ACL(Access Control List)] 메뉴를 클릭한다.

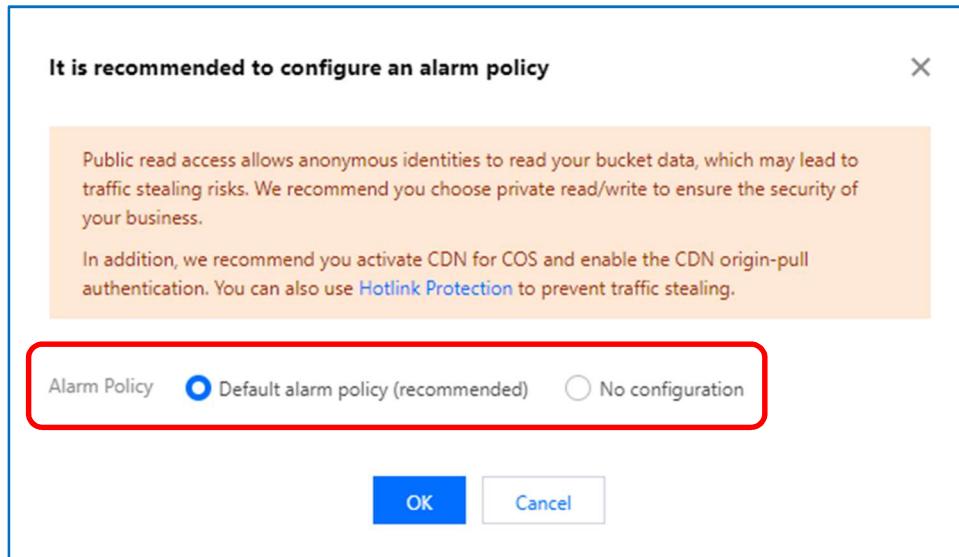
The screenshot shows the 'lab4-bucket00-1305615433 /' bucket's details page. The left sidebar has a 'Permission Management' section with three items: 'Bucket ACL(Access Control List)' (which is selected and highlighted with a red box), 'Permission Policy Settings', and 'Associated CAM Policies'. The main content area shows a file list with one item: 'apples.jpg' (48.64KB, STANDARD storage class, modified on 2023-01-31 09:30:12). At the top, there are buttons for 'Upload Files', 'Create Folder', 'Incomplete Multipart Upload', 'Clear Buckets', and 'More Actions'. A status bar at the top right indicates 'Task completed (total 1, succeeded 1, failed 0)'. The top right also has a 'Documentation Guide' link.

23. [Public Permissions]가 현재 Private Read/Write이다. [Public Read/Private Write]를 선택한다.

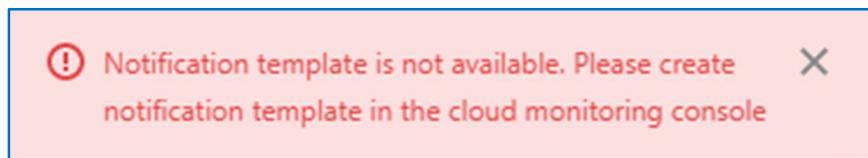
The screenshot shows the 'Bucket ACL(Access Control List)' configuration page. At the top, there are three radio buttons for 'Public Permission': 'Private Read/Write' (selected and highlighted with a red box), 'Public Read/Private Write', and 'Public Read/Write'. Below this is a table titled 'User ACL' with one entry: 'Root account' with 'Account ID' 200018656283 and 'Permission' 'Full control'. At the bottom are 'Save' and 'Cancel' buttons.

User Type	Account ID	Permission
Root account	200018656283	Full control

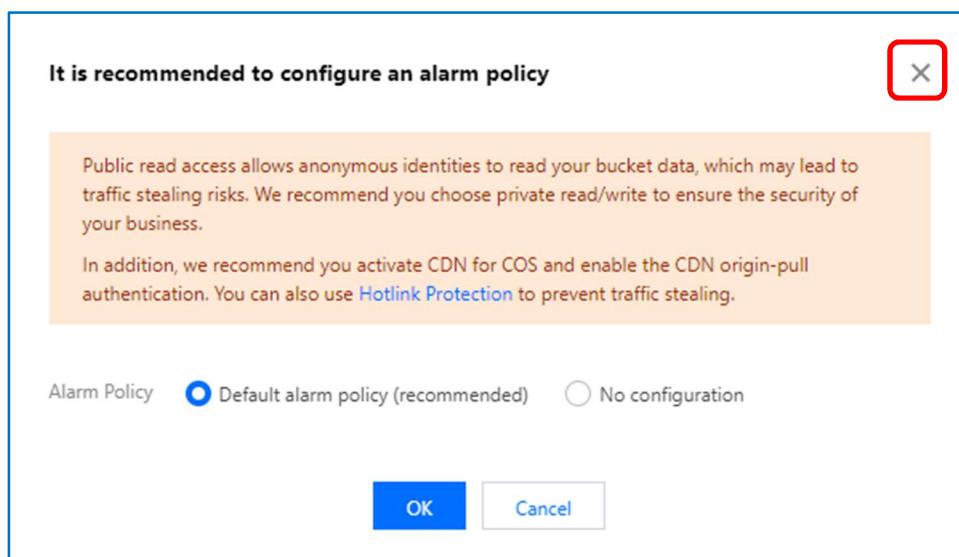
24. [It is recommended to configure an alarm policy] 창이 나타난다. [Alarm Policy]는 기본값 그대로 놓고 [OK] 파란색 버튼을 클릭한다.



25. [Notification template is not available.] 즉 현재 Notification template을 사용할 수 없다는 경고창이다.



26. [It is recommended to configure an alarm policy] 창에서 좌상단의 X 버튼을 클릭하여 창을 닫는다.



27. [User ACL] 아래의 [Save] 파란색 버튼을 클릭하여 적용한다.

Bucket ACL(Access Control List)①

Public Permission Private Read/Write① Public Read/Private Write Public Read/Write

User ACL

User Type	Account ID ①	Permission	Operation
Root account	200018656283	Full control	--

Add User

Save Cancel

28. 만일 인증창이 나타나면 인증코드를 핸드폰으로 받아서 인증한다.

Identity Verification Alternative Verification Method ×

For the security of your account, please complete the identity verification before conducting sensitive operations.

Verification Method: Mobile Verification

Verification Mobile Number: +82 102***1340

SMS Verification Code Send Verification Code

OK Cancel

29. [Bucket ACL(Access Control List)]가 Public Read/Write로 변경되었다.

Bucket ACL(Access Control List)①

Public Permission Private Read/Write① Public Read/Private Write Public Read/Write

User ACL

User Type	Account ID ①	Permission	Operation
Root account	200018656283	Full control	--

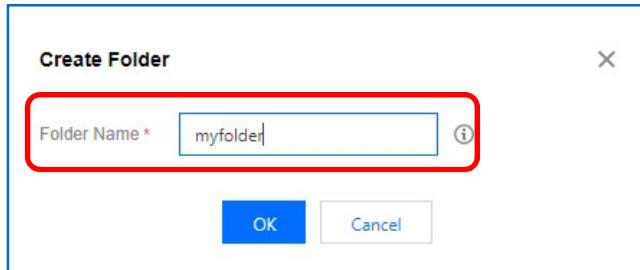
Add User

Task2. Objects Managing

- 위 Task1에서 생성한 **Bucket** 페이지로 이동한다. 이번에는 **Folder**를 생성하기 위해 **[Create Folder]** 버튼을 클릭한다.

The screenshot shows the AWS S3 console interface. At the top, it says "lab4-bucket00-1305615433 /". Below the header, there are several buttons: "Upload Files" (blue), "Create Folder" (highlighted with a red box), "Incomplete Multipart Upload", "Clear Buckets", and "More Actions". To the right of these buttons are links for "Task completed (total 1, succeeded 1, failed 0)" and "Documentation Guide". A search bar with "Prefix search" dropdown and a "Refresh" button are also present. The main area displays a table of objects. One object, "apples.jpg", is listed with details: Size 48.64KB, Storage Class STANDARD, Modification Time 2023-01-31 09:30:12. There are "Details", "Preview", "Download", and "More" buttons for each object. The table has columns for Object Name, Size, Storage Class, Modification Time, and Operation.

- [Create Folder] 창에서 [Folder Name]에 myfolder 라고 입력하고 [OK] 파란색 버튼을 클릭한다.



- Folder가 잘 생성되었다. Folder 이름을 클릭하여 Folder 상세 페이지로 이동한다.

The screenshot shows the AWS S3 console interface again. The "Create Folder" dialog is no longer visible. The main area displays a table of objects. A new entry, "myfolder/", is listed under the "Object Name" column. It has a small folder icon before the name. The table includes columns for Object Name, Size, Storage Class, Modification Time, and Operation. There are "Details", "Preview", "Download", and "More" buttons for each object. The table has columns for Object Name, Size, Storage Class, Modification Time, and Operation.

4. Folder 상세 페이지에서 File을 Upload하기 위해 [Upload Files] 파란색 버튼을 클릭한다.

The screenshot shows the AWS S3 console interface. At the top, it displays the bucket name "lab4-bucket00-1305615433" and the folder path "/ myfolder". In the top right corner, there is a green checkmark icon followed by the text "Task completed (total 1, succeeded 1, failed 0)" and a "Documentation Guide" link. Below the header, there is a navigation bar with buttons for "Upload Files" (highlighted with a red box), "Create Folder", and "More Actions". A search bar with the placeholder "Only objects in the current virtual directory are searched" is also present. On the right side of the search bar are "Refresh" and "100 objects per page" buttons, along with navigation arrows and a page number "1". Below the search bar, there are filters for "Object Name", "Size", "Storage Class", "Modification Time", and "Operation". A message "No data yet" is centered at the bottom of the list area.

5. [Upload Files] 창에서 Upload할 파일을 Drag & Drop한다. 그리고 [Upload] 버튼을 클릭한다.

The screenshot shows the "Upload Files" modal window. It has two steps: "Select Objects" (marked with a checkmark) and "Set Properties" (marked with a number 2). The "Select Objects" step is active. At the top, there is a "Select Files" button and an "Upload to" field set to "lab4-bucket00-1305615433/myfolder/". Below this, a note states: "If a file with the same name exists in the upload path, the upload will overwrite the original file." Another note below it says: "The upload operation will generate the number of requests and upstream traffic, where Requests [On a per thousand basis](#), The upward flow [is Free of charge](#). For details, please see [Billing item](#) and [Product Pricing](#)". The main list area shows a single file "lemons.jpg" with a size of "54.70KB" and a "Delete" link. At the bottom of the modal, there are "Configure Parameters" and "Upload" buttons, with the "Upload" button highlighted with a red box.

6. myfolder아래로 Image 한 개가 Upload 되었다. 파일 제일 오른쪽 메뉴인 [Operation] > [Details]를 클릭하여 상세 페이지로 이동한다.

lab4-bucket00-1305615433 / myfolder

Task completed (total 2, succeeded 2, failed 0) Documentation Guide

Upload Files Create Folder More Actions ▾ Online editor

Prefix search Only objects in the current virtual directory are searched Refresh 100 objects per page 1

Object Name	Size	Storage Class	Modification Time	Operation
lemons.jpg	54.70KB	STANDARD	2023-01-31 09:56:38	Details Preview Download More

7. 해당 파일의 상세 페이지에서 [Preview]를 클릭하여 이미지를 미리 보기 할 수 있다.

← lab4-bucket00-1305615433 / myfolder / lemons.jpg

Task completed (total 2, succeeded 2, failed 0) Documentation Guide

Details

Information

Object Name	lemons.jpg
Object Size	54.70KB
Modification Time	2023-01-31 09:56:38
ETag	"12ea2d8afcba6e34766c5cf5fbf3387a"

Specified Domain① Default Endpoint

Object Address① <https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com/myfolder/lemons.jpg>

How do I preview files directly in the browser instead of downloading them? You need to configure the correct Content-Type for the file, please refer to [itQA-Upload and Download](#).

After the object address is accessed, there will be request and traffic charges. Please check the details of the charges [Billing Description](#).

Temporary Link① Copy Temporary Link Download Objects Refresh

The temporary link carries the signature parameter, and the temporary link can be used to access the object during the validity period of the signature, and the signature is valid for 1 hour (2023-01-31 11:52:30). Be sure to avoid leaking the temporary link, otherwise your objects may be accessed by other users.

Preview

← lab4-bucket00-1305615433 / myfolder / lemons.jpg

Task completed (total 2, succeeded 2, failed 0) Documentation Guide

Details

Information

Object Name	lemons.jpg
Object Size	54.70KB
Modification Time	2023-01-31 09:56:38
ETag	"12ea2d8afcba6e34766c5cf5fbf3387a"

Specified Domain① Default Endpoint

Object Address① <https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com/myfolder/lemons.jpg>

How do I preview files directly in the browser instead of downloading them? You need to configure the correct Content-Type for the file, please refer to [itQA-Upload and Download](#).

After the object address is accessed, there will be request and traffic charges. Please check the details of the charges [Billing Description](#).

Temporary Link① Copy Temporary Link Download Objects Refresh

The temporary link carries the signature parameter, and the temporary link can be used to access the object during the validity period of the signature, and the signature is valid for 1 hour (2023-01-31 11:52:30). Be sure to avoid leaking the temporary link, otherwise your objects may be accessed by other users.

8. [Object Address]의 파일 링크를 복사한다.

lab4-bucket00-1305615433 / myfolder / lemons.jpg

Task completed (total 2, succeeded 2, failed 0) Documentation Guide

Information

Object Name: lemons.jpg
Object Size: 54.70KB
Modification Time: 2023-01-31 09:56:38
ETag: "12ea2d8afcba6e34766c5cf5bf3387a"

Specified Domain: Default Endpoint

Object Address: https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com/myfolder/lemons.jpg

How do I preview files directly in the browser instead of downloading them? You need to configure the correct Content-Type for the file, please refer to [itQA-Upload and Download](#).

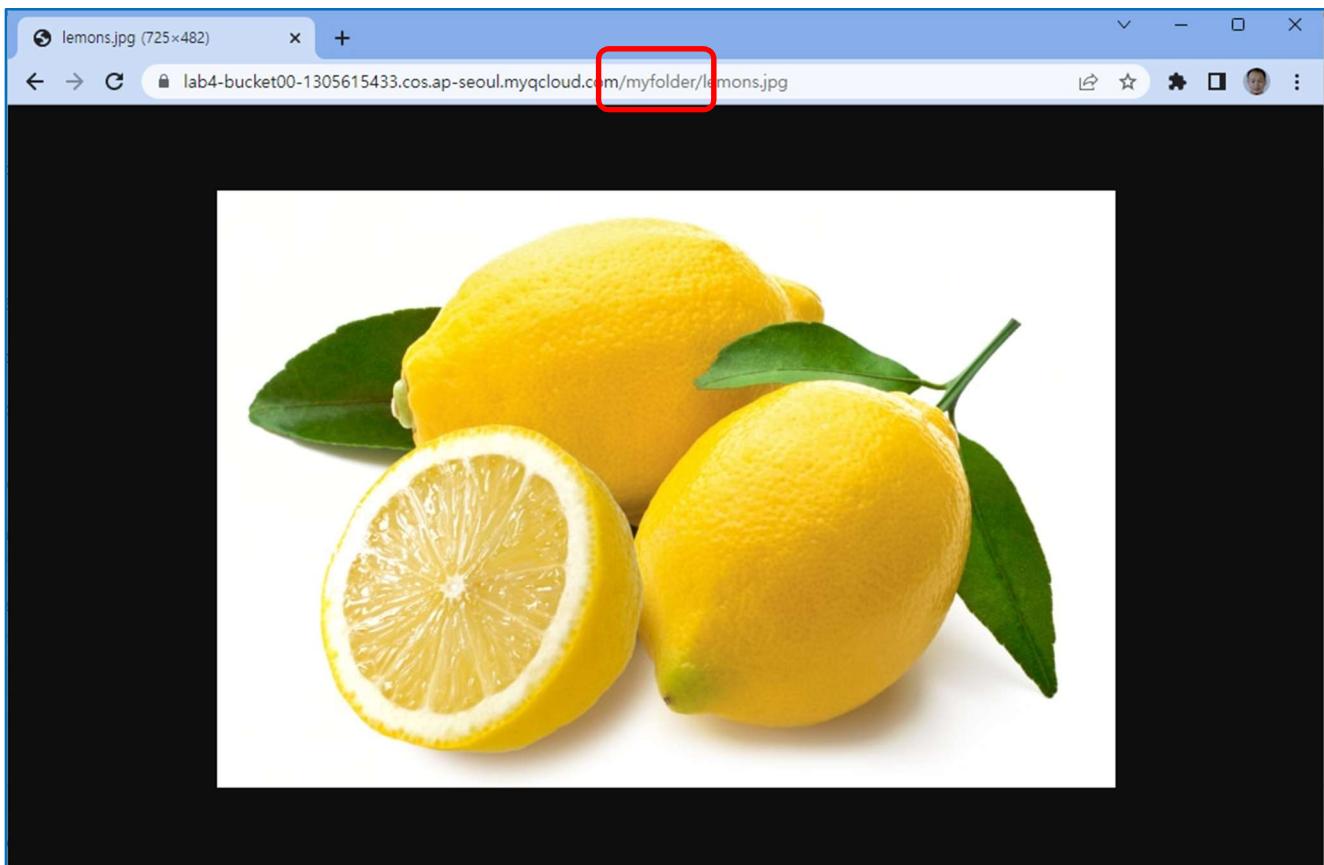
After the object address is accessed, there will be request and traffic charges. Please check the details of the charges [Billing Description](#).

Temporary Link: Copy Temporary Link, Download Objects, Refresh

The temporary link carries the signature parameter, and the temporary link can be used to access the object during the validity period of the signature, and the signature is valid for 1 hour (2023-01-31 11:52:30). Be sure to avoid leaking the temporary link, otherwise your objects may be accessed by other users.



9. 웹 브라우저를 열고 해당 Image의 URL을 붙여넣기 하여 해당 Image를 웹 브라우저에서 확인한다. 경로를 보면 myfoder 하위에 해당 Image인 것을 확인할 수 있다.



Task3. Image Processing

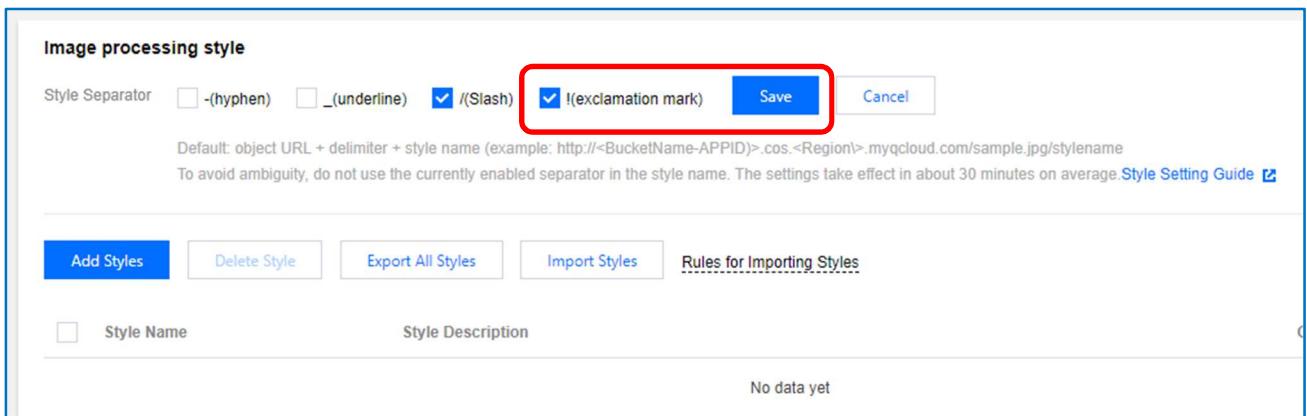
1. **Image Processing**을 위해 **Bucket** 상세 페이지에서 좌측 메뉴 중 **[Data Processing] > [Image Processing]**을 클릭한다. 해당 서비스를 이용하기 위해서는 활성화를 해야하는데, 활성화를 위해 **[I have read and agree to the ...]**를 체크하고 **[Use Now]** 파란색 버튼을 클릭한다.

The screenshot shows the Tencent Cloud Bucket Data Processing page. The left sidebar has a tree view with 'Data Processing' expanded, showing 'Image Processing' and 'Media Processing'. A red box highlights 'Image Processing'. The main content area has a heading 'Data processing supports image processing, media processing, AI recognition, and document preview, which provides a one-stop data processing solution to fit your business needs.' Below it, a diagram shows a stack of three blue rectangular boxes labeled 'COS' and 'Cloud Storage' with arrows pointing to them. Step 3 'Bind this bucket' is shown with a red box around its checkbox: ' I have read and agree to the Tencent Cloud Service Agreement and CI Billing Overview'. A large blue 'Use Now' button is at the bottom.

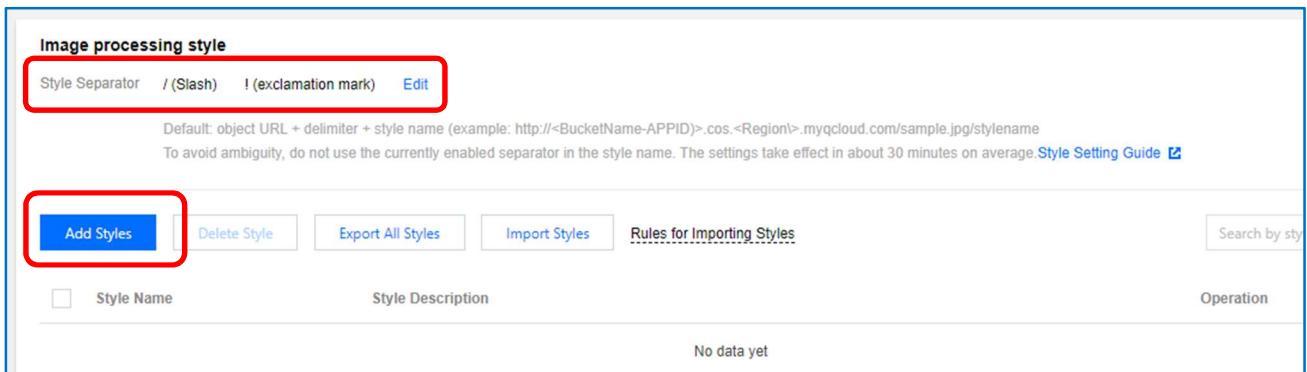
2. 활성화 후, **[Image Processing]** 페이지에서, **[Image processing style]** 섹션을 보면 현재 **Separator**는 **/(Slash)**이다. **Separator**를 추가하기 위해 **[Edit]** 링크를 클릭한다.

The screenshot shows the 'Image Advanced Compression' section of the Image Processing page. The 'Style Separator' field is set to '/ (Slash)' and highlighted with a red box. Below it, the 'Edit' link is also highlighted with a red box. A note below says 'Default: object URL + delimiter + style name (example: http://<BucketName-APPID>.cos.<Region>.myqcloud.com/sample.jpg/stylename)'. At the bottom, there are buttons for 'Add Styles', 'Delete Style', 'Export All Styles', 'Import Styles', 'Rules for Importing Styles', and a search bar 'Search by style'. There is also a table with columns for 'Style Name', 'Style Description', and 'Operation'.

3. 기존의 **/(Slash)**에 추가적으로 **!(exclamation mark)**를 사용하기 위해 체크하고 **[Save]**를 클릭한다.



4. 기존의 **/(Slash)**와 **!(exclamation mark)**를 추가하였다. 이번에는 **Style**을 추가하기 위해 **[Style Management]** 섹션에서 **[Add Styles]** 파란색 버튼을 클릭한다.



5. **[Add Styles]** 설정 섹션이다. 다음의 각 값을 설정해 보자.

① **[Style Name]** : mystyle

② **[Editing Mode]** : Basic

6. 계속해서 [Select features required] 섹션에서 다음의 값만 체크한다.

Scale

Select features required

- Scale
- Crop
- Format Conversion
- Quality Conversion
- Rotate
- Image Enhancement ⓘ
- Gaussian Blurring
- Grayscale Image
- Image Watermark
- Text Watermark
- Removing Metadata

7. [Scale] 섹션에서 다음의 각각의 값을 설정한다. 우측 [Preview] 섹션의 [Preview] 버튼을 클릭하여 미리보기를 보면서 설정할 수 있다.

① [Scaling Mode] : Proportional scaling | Fixed width. Scale height proportionally

② [Size] : Width | 500 PX

Select features required

- Scale
- Crop
- Format Conversion
- Quality Conversion
- Rotate
- Image Enhancement ⓘ
- Gaussian Blurring
- Grayscale Image
- Image Watermark
- Text Watermark
- Removing Metadata

Scale

Scaling Mode Fixed height and width Proportional scaling

Fixed width. Scale height proportionally

Size * Width PX

Save Cancel

Preview

Original (Size: 447.78kb, Resolution: 1200px*800px)



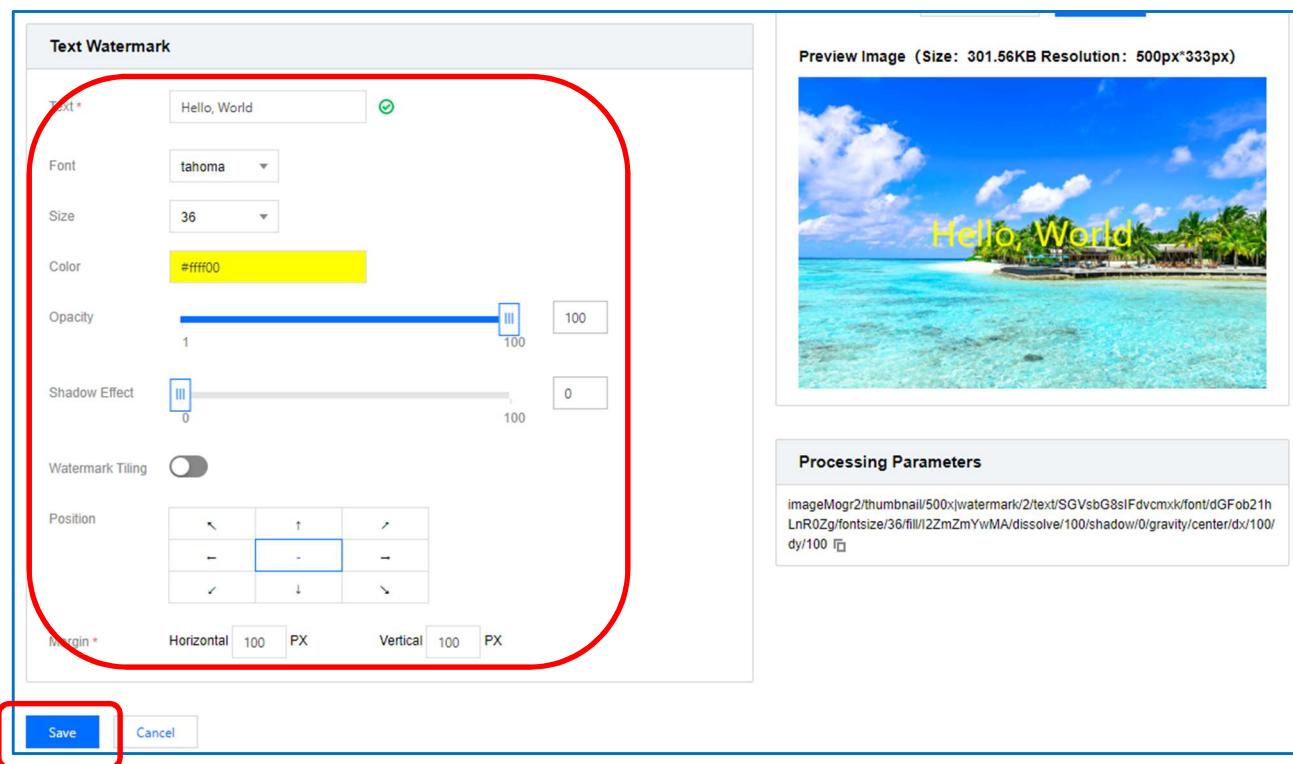
Select Image Preview

Preview Image (Size: 270.02KB Resolution: 500px*333px)



8. Image에 Watermark도 넣어보자. [Text Watermark]를 체크하고 다음의 각 값을 설정한다. 역시 [Preview] 섹션의 [Preview] 파란색 버튼을 클릭해서 미리보기를 하면서 각각의 값을 조금씩 변경할 수 있다. 모든 설정을 마치면 [Save] 파란색 버튼을 클릭하여 지금까지의 값들을 저장한다.

- ① [Text] : Hello, World
- ② [Font] : tahoma
- ③ [Size] : 36
- ④ [Color] : 검은색 상자를 클릭해서 노란색에 맞춘다. | #ffff00
- ⑤ [Opacity] : 100
- ⑥ [Watermark Position] : 가운데
- ⑦ [Margin] : Vertical | 100 PX, Horizontal | 100PX



9. mystyle 스타일이 잘 저장되었다.

The screenshot shows the 'Image processing style' management interface. It includes tabs for 'Add Styles', 'Delete Style', 'Export All Styles', 'Import Styles', and 'Rules for Importing Styles'. A search bar is also present. The main list displays a single entry: 'mystyle' with a detailed description of its configuration: 'imageMogr2/thumbnail/500x/watermark/2/text/SGVsbG8sIFdvcmxk/font/dGFob21hLnR0Zg/fontsize/36/fill/I2ZmZmYwMA/dissolve/100/shadow/0/gravity/center/dx/100/dy/100'. A red box highlights this entry.

10. Bucket 상세 페이지의 좌측 메뉴 중 [File List]를 클릭한다. 목록에서 특정 Image의 우측 메뉴 [Operation] > [Details] 링크를 클릭한다.

lab4-bucket00-1305615433 / myfolder

Task completed (total 2, succeeded 2, failed 0) Documentation Guide

Upload Files Create Folder More Actions ▾ Online editor

Prefix search Only objects in the current virtual directory are searched Refresh 100 objects per page 1

Object Name	Size	Storage Class	Modification Time	Operation
lemons.jpg	54.70KB	STANDARD	2023-01-31 09:56:38	Details Preview Download More

11. 해당 Image의 [Object Address]를 복사한다.

lab4-bucket00-1305615433 / apples.jpg Documentation Guide

Details

Information

Object Name	apples.jpg
Object Size	48.64KB
Modification Time	2023-01-31 09:30:12
ETag	"ca3d1ba4a9349729cd39685fc6b56e8d"

Specified Domain ⓘ Default Endpoint

Object Address ⓘ <https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com/apples.jpg>

How do I preview files directly in the browser instead of downloading them? You need to configure the correct Content-Type for the file, please refer to [FAQ-Upload and Download](#).

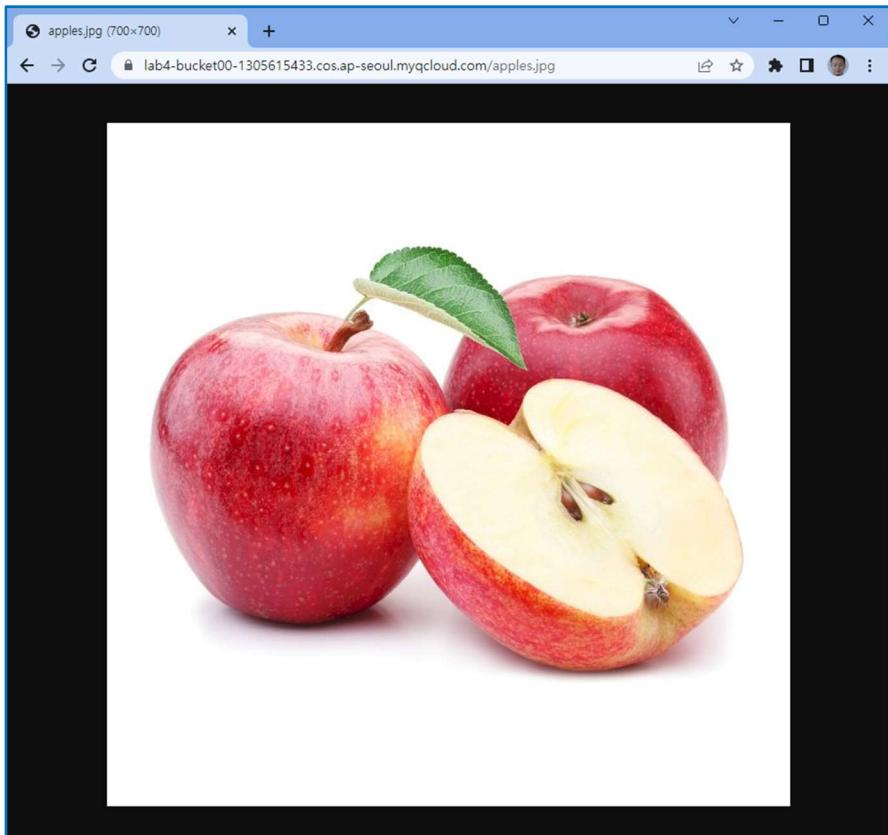
After the object address is accessed, there will be request and traffic charges. Please check the details of the charges [Billing Description](#).

Temporary Link ⓘ Copy Temporary Link Download Objects Refresh

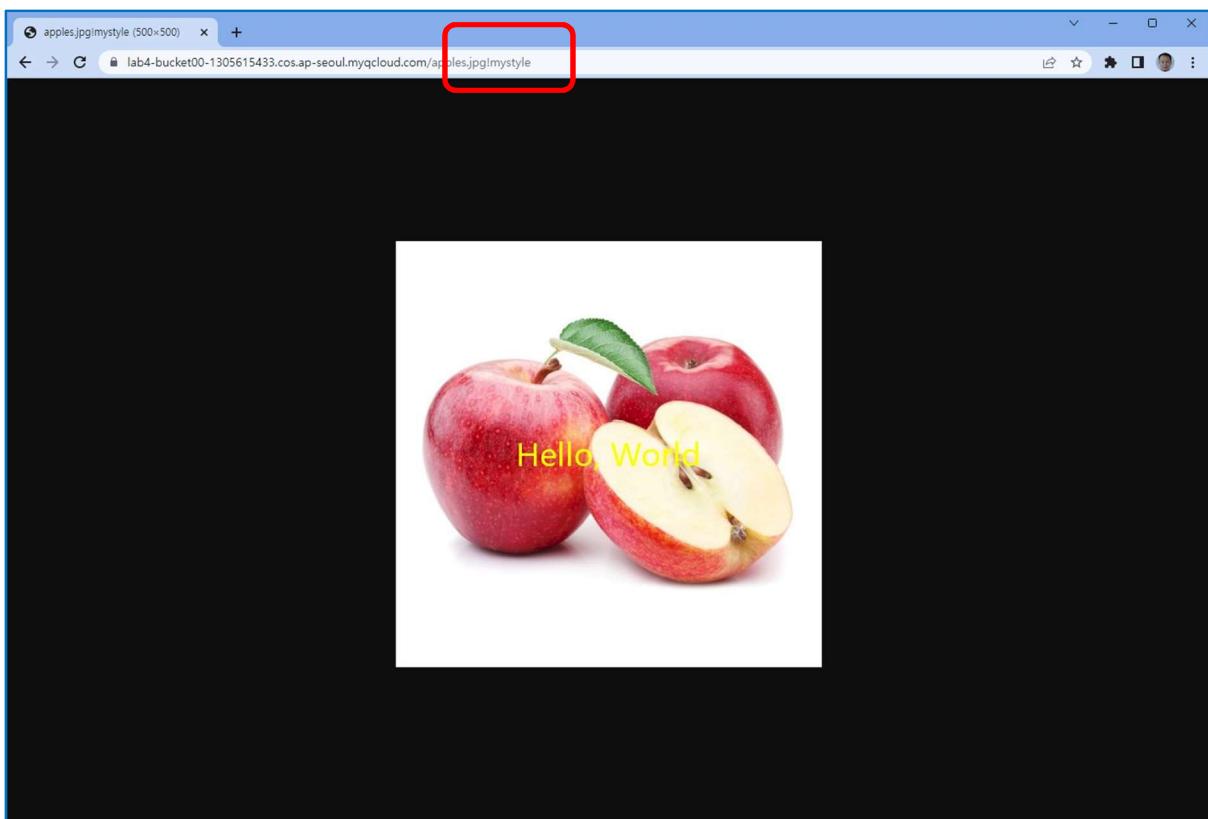
The temporary link carries the signature parameter, and the temporary link can be used to access the object during the validity period of the signature, and the signature is valid for 1 hour (2023-01-31 12:16:13).

Be sure to avoid leaking the temporary link, otherwise your objects may be accessed by other users.

12. 웹 브라우저를 열고 방금 복사한 **Object Address**를 붙여 넣는다. 이미 위 Task1에서 확인했던 것처럼 해당 **Image**가 보이는 것을 확인할 수 있다.



13. 이번에는 해당 **Object Address** 뒤에 **Style** 이름을 ! ! 다음에 붙여놓는다(예: <https://lab3-bucket-1305615433.cos.ap-seoul.myqcloud.com/apples.jpg!mystyle>) **mystyle**에 설정했던 **STYLE**이 적용되는 것을 알 수 있다.



Task4. Website Hosting

1. 이번에는 정적 페이지를 Hosting 해보자. Bucket의 상세 페이지에서 좌측 메뉴 중 [File List]메뉴를 클릭한다. 그리고 File을 Upload하기 위해 [Upload Files] 파란색 버튼을 클릭한다.

The screenshot shows the AWS S3 console. On the left, there's a sidebar with navigation links like 'Back to Bucket List', 'Search menu name', 'Overview', 'File List', 'Basic Configurations', 'Security Management', 'Permission Management', 'Domains and Transfer', and 'Fault Tolerance and'. The main area is titled 'lab4-bucket00-1305615433 /'. At the top, there are several buttons: 'Upload Files' (highlighted with a red box), 'Create Folder', 'Incomplete Multipart Upload', 'Clear Buckets', and 'More Actions'. Below these are search and refresh controls, and a message stating 'Only objects in the current virtual directory are searched'. The main table lists objects: 'myfolder/' and 'apples.jpg'. The 'apples.jpg' row includes columns for 'Object Name', 'Size', 'Storage Class', 'Modification Time', and 'Operation'. On the right, there are 'Permission', 'Statistics', and 'More' buttons. The bottom right corner shows '100 objects per page' and navigation arrows.

2. [Upload Files] 창에서 index.html 파일을 [Select Files] 상자안으로 Drag & Drop한 뒤, [Upload] 파란색 버튼을 클릭하여 File을 Upload한다.

The screenshot shows the 'Upload Files' dialog box. It has two tabs: 'Select Objects' (selected) and 'Set Properties' (disabled). Below the tabs, there are 'Select Files' and 'Upload to' buttons. A note below states: 'If a file with the same name exists in the upload path, the upload will overwrite the original file.' and 'The upload operation will generate the number of requests and upstream traffic, where Requests are free of charge. For details, please see Billing item and Product Pricing.' The main area shows a table with columns 'Files/ File Folders', 'Size', and 'Operate...'. A single file, 'index.html' (405.00B), is listed and highlighted with a red box. At the bottom, there are 'Configure Parameters' and 'Upload' buttons, with the 'Upload' button also highlighted with a red box.

3. **index.html** 파일의 상세 페이지로 이동하기 위해 제일 오른쪽 메뉴인 [Operation] > [Details] 링크를 클릭한다.

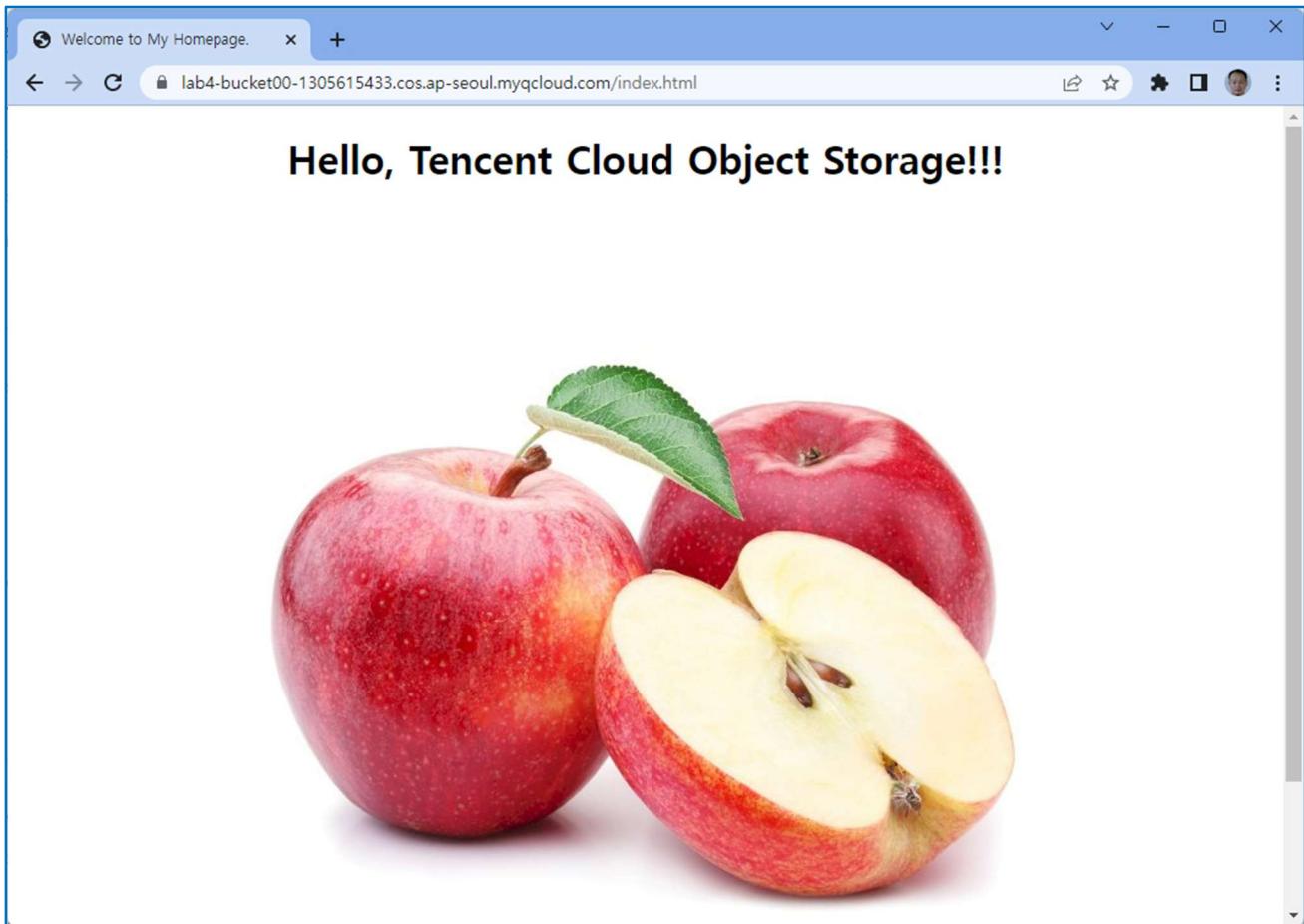
The screenshot shows the Object List page for the bucket 'lab4-bucket00-1305615433'. The 'index.html' file is selected, and its details are shown in the bottom right corner of the list table. A red box highlights the 'Details' link next to the file.

Object Name	Size	Storage Class	Modification Time	Operation
myfolder/	-	-	-	Permission Statistics More
apples.jpg	48.64KB	STANDARD	2023-01-31 09:30:12	Details Preview Download More
index.html	405.00B	STANDARD	2023-01-31 11:21:36	Details (highlighted) Preview Download More

4. [Object Address]의 경로를 복사한다.

The screenshot shows the Object Details page for the 'index.html' file. The 'Information' section displays basic details: Object Name (index.html), Object Size (405.00B), Modification Time (2023-01-31 11:21:36), and ETag ("7587c198b00046fa33027bc561a64cb7"). The 'Object Address' field is highlighted with a red box and contains the URL <https://lab4-bucket00-1305615433.cos.ap-seoul.myqcloud.com/index.html>. A note below it states: "How do I preview files directly in the browser instead of downloading them? You need to configure the correct Content-Type for the file, please refer to QA-Upload and Download." A warning message in an orange box says: "After the object address is accessed, there will be request and traffic charges. Please check the details of the charges Billing Description." The 'Temporary Link' section at the bottom includes links for Copy Temporary Link, Download Objects, and Refresh.

5. 새로운 웹 브라우저를 열고 해당 링크를 붙여 넣고 웹 페이지를 확인한다.



6. 참고로 실습에서 사용한 **index.html**의 코드는 아래와 같다.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta http-equiv="X-UA-Compatible" content="IE=edge">
6      <meta name="viewport" content="width=device-width, initial-scale=1.0">
7      <title>Welcome to My Homepage.</title>
8  </head>
9  <body>
10     <center>
11         <h1>Hello, Tencent Cloud Object Storage!!!</h1>
12         <img src='./apples.jpg' />
13     </center>
14  </body>
15  </html>
```

7. 페이지에서 좌측 메뉴 중 [Basic Configurations] > [Static Website] 메뉴를 클릭한다.

The screenshot shows the QCloud Bucket List interface. On the left, there is a sidebar with a tree view of bucket configurations. The 'Basic Configurations' node is expanded, and its child 'Static Website' node is highlighted with a red box. The main area displays a list of objects in the bucket 'lab4-bucket00-1305615433'. The objects listed are 'myfolder/' (size -), 'apples.jpg' (48.64KB, STANDARD, 2023-01-31 09:30:12), and 'index.html' (405.00B, STANDARD, 2023-01-31 11:21:36). At the top, there are buttons for 'Upload Files', 'Create Folder', 'Incomplete Multipart Upload', 'Clear Buckets', and 'More Actions'. The status bar at the top right indicates 'Task completed (total 1, succeeded 1, failed 0)' and 'Documentation Guide'.

8. [Static Website] 섹션을 보면 현재 Static Website가 Disable 상태이다. [Edit] 링크를 클릭한다.

The screenshot shows the 'Static Website' status page for the bucket 'lab4-bucket00-1305615433'. It displays the current status as 'Disable'. A red box highlights the 'Edit' link below the status. Below the status, there is a 'Learn more' link.

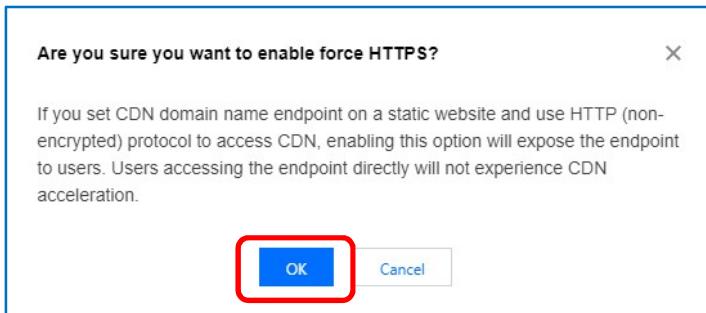
9. [Status]를 우측으로 Drag 한다.

The screenshot shows the 'Static Website' edit dialog. It features a 'Status' section with a toggle switch. A red box highlights the toggle switch. Below it are 'Save' and 'Cancel' buttons, and a 'Learn more' link at the bottom.

10. [Force HTTPS]을 우측으로 Drag 해보자.

The screenshot shows the 'Static Website' configuration dialog. It includes a note about case-sensitive access nodes. The 'Status' section has a toggle switch that is currently turned on (blue). The 'Endpoint' field shows the URL 'https://lab3-bucket-1305615433.cos-website.ap-seoul.myqcloud.com'. The 'Force HTTPS' section has a toggle switch that is currently turned off (grey). A red box highlights the 'Force HTTPS' toggle switch.

11. [Are you sure you want to enable force HTTPS]창이 나타나면 [OK]를 클릭한다.



12. 나머지 각각의 값을 설정하고 [Save] 파란색 버튼을 클릭한다.

① [Ignore .html Extension] : Enable

② [Index document] : index.html

The image shows a configuration page for static website settings. It includes the following sections:

- Ignore .html Extension**: A toggle switch is turned on, and the explanatory text below it says: "If the path is "index", the "index.html" object is matched and returned."
- Index document ***: A text input field containing "index.html".
- Error document**: A text input field containing "such as pages/error.html". Below it, a note says: "An error document will be returned if an access error occurs and no redirect rule is matched." and provides a link to "Static Website Q&A".
- Redirect rules**: A table with columns: Type, Description, Force HTTPS, Rule, Replace content, Operation. It displays the message: "The current list is empty" and has a "Add Rule" button.
- Note**: "Once a redirect rule is set, COS will first check whether the request matches this rule. If an error code or prefix is matched, COS will directly return 302 and replace the Location with a corresponding path."
- Buttons**: "Save" and "Cancel", with the "Save" button being highlighted by a red rectangular border.

13. [Static Website] 페이지에서 [Endpoint]의 경로를 복사한다.

Static Website [Edit](#)

Status	Enable
Endpoint	https://lab4-bucket00-1305615433.cos-website.ap-seoul.myqcloud.com ⓘ
Force HTTPS	Enable
Ignore .html Extension	Enable
Index document	index.html
Error document	Empty

Redirect rules

Type	Description	Force HTTPS	Rule	Path
The current list is empty				

Once a redirect rule is set, COS will first check whether the request matches this rule. If an error code or prefix is matched, COS will directly return 302 and replace the Location with a corresponding path.

14. 새 웹 브라우저를 열고 복사한 경로를 붙여 넣는다.

