

**Qualcomm Car-to-Cloud Platform**

**BASE STORAGE IMPLEMENTATION**

**Version No.3.0**

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|  | **Prepared By / Last Updated By** | **Reviewed By** | **Approved By** |
| **Name** | Soumya Dasgupta | Sudheer | Sudheer |
| **Role** | PAT | SM | SM |
| **Signature** |  |  |  |
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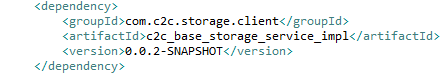
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# BASE STORAGE IMPLEMENTATION

To use the AWS S3 implementation, find the below steps to implement AWS S3 functions.

## The Dependencies

Create the jar of the implementation project. Add the jar to the pom.xml file of the caller project. The required dependencies that need to be added are:

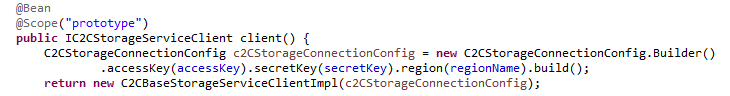


## The IC2CStorageServiceClient Bean Creation

Create an object of **C2CStorageConnectionConfig** with the required parameters access key, secret key and region name.

Create a bean of the **IC2CStorageServiceClient** with the bean scope as **prototype** where the C2CStorageConnectionConfig object is injected as a dependency to it**.**

The access key, secret key and region name will be taken from external properties file.



## The Upload Method

Using the **IC2CStorageServiceClient** object, call the upload method to upload an object to the storage. We pass the bucket name, file path and an object of InputStream as a parameter for the upload method. The value for **Single Upload Limit** is set as 10 MB. The **Minimum Upload Part Size** is set according to the size of the upload data. The default value is 5 bytes.

***Exceptions:***

**StorageOperationException** is thrown with appropriate message and error code when an AmazonS3 Exception occurs.

**StorageOperationException** is also thrown when the input stream is empty or null.

## The Delete Method

Using the **IC2CStorageServiceClient** object, call the delete method to delete an object from storage. We pass the bucket name and file path as a parameter for the delete method.

***Exceptions:***

**StorageOperationException** is thrown with appropriate message and error code when an AmazonS3 Exception occurs.

## The Copy Method

Using the **IC2CStorageServiceClient** object, call the copy method to copy an object in the storage. We pass the source bucket name, file path in source bucket, destination bucket name, file path in destination bucket as a parameter for the copy method.

***Exceptions:***

**StorageOperationException** is thrown with appropriate message and error code when an AmazonS3 Exception occurs.

## The Move Method

Using the **IC2CStorageServiceClient** object, call the move method to move an object in the storage. We pass the source bucket name, file path in source bucket, destination bucket name, file path in destination bucket as a parameter for the move method.

***Exceptions:***

**StorageOperationException** is thrown with appropriate message and error code when an AmazonS3 Exception occurs.

**StorageApplicationException** is thrown when an Interrupted Exception occurs.

## The Download Method

Using the **IC2CStorageServiceClient** object, call the download method to download the object from storage. We pass the bucket name and file path as a parameter for the download method. It returns an object of the BufferedInputStream class.

***Exceptions:***

**StorageOperationException** is thrown with appropriate message and error code when an AmazonS3 Exception occurs.

**StorageApplicationException** is thrown when a Null pointer or Illegal Argument Exception occurs.

## The Delete Method (Delete Multiple Objects)

Using the **IC2CStorageServiceClient** object, call the delete method to delete multiple objects from the storage. We pass the bucket name and a list of file paths as parameter for the delete method. The number of file paths cannot be more than 1000.

***Exceptions:***

**StorageOperationException** is thrown with appropriate message and error code when an AmazonS3 Exception occurs.

**StorageOperationException** is also thrown when the number of file paths to be deleted is more than 1000.

## The List Method

Using the **IC2CStorageServiceClient** object, call the list method to list all the objects in the storage. We pass the bucket name as a parameter for the list method.

It returns a List<Object> that contains list of path to all the Objects in the storage.

***Exceptions:***

**StorageOperationException** is thrown with appropriate message and error code when an AmazonS3 Exception occurs.

**StorageOperationException** is also thrown when the list of object result is empty or null.

## The Upload Method (Upload Multiple Objects)

Using the **IC2CStorageServiceClient** object, call the upload method to upload multiple objects to the storage. We pass the bucket name and a map containing the File Path as Key and InputStream object as value as parameter for the upload method. The value for **Single Upload Limit** is set as 10 MB. The **Minimum Upload Part Size** is set according to the size of the upload data. The default value is 5 bytes.

***Exceptions:***

**StorageOperationException** is thrown with appropriate message and error code when an AmazonS3 Exception occurs.

**StorageOperationException** is also thrown when the input stream map is empty or null.

**StorageApplicationException** is thrown when an Interrupted Exception occurs.

## The Reconnect Method

Using the **IC2CStorageServiceClient** object, call the reconnect method to reconnect the client for connection establishment.

***Exceptions:***

**StorageApplicationException** is thrown when an IllegalArgumentException or SdkClientException occurs.

## The List Method (List Objects in a Folder)

Using the **IC2CStorageServiceClient** object, call the list method to list all the objects in the storage. We pass the bucket name, file path of the folder with delimiter and a Boolean variable ListSubfolders as parameter for the list method. If the Boolean value is true, it will list all the objects in the folder including the sub folders. If it is false, it will only list the objects in the folder excluding the sub folders.

It returns a List<Object> that contains list of path to all the Objects in the storage.

***Exceptions:***

**StorageOperationException** is thrown with appropriate message and error code when an AmazonS3 Exception occurs.

**StorageOperationException** is also thrown when the list of object result is empty or null.