Amazon Simple Storage Service (Version 2006-03-01)
Quick Reference Card

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Service Operations

GET Service
Returns a list of all buckets owned by the authenticated request sender.
```
GET / HTTP/1.1
Host: s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
```

Bucket Operations

PUT Bucket
Creates a new bucket belonging to the account of the authenticated request sender. Optionally, you can specify a EU (Ireland) or US-West (N. California) location constraint.
```
PUT / HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
Content-Length: {0 | length}
[<CreateBucketConfiguration>
  <LocationConstraint>EU</LocationConstraint>
</CreateBucketConfiguration>]
```

GET Bucket
Lists information about the objects in a bucket for a user that has read access to the bucket.
```
GET ?prefix=prefix&marker=marker&max-keys=max-keys&delimiter=delimiter HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
```

GET Bucket location
Lists the location constraint of the bucket for the bucket owner.
```
GET /?location HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
```

DELETE Bucket
Deletes the specified bucket. All objects in the bucket must be deleted before the bucket itself can be deleted.
```
DELETE / HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
```

POST Object
For more information about POST, refer to the *Amazon Simple Storage Service Developer Guide*.

Object Operations

GET Object
Gets an object for a user that has read access to the object.
```
GET /destinationObject HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
[Range:bytes=byte_range]
[x-amz-metadata-directive: metadata_directive]
[x-amz-if-match: etag]
[x-amz-if-none-match: etag]
[x-amz-if-unmodified-since: time_stamp]
[x-amz-if-modified-since: time_stamp]
```

PUT Object
Adds an object to a bucket for a user that has write access to the bucket. A success response indicates the object was successfully stored; if the object already exists, it will be overwritten.
```
PUT /destinationObject HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
Content-Length: length
Content-MD5:  md5_digest
Content-Type:   type
Content-Disposition:  object_information
Content-Encoding:  encoding
Cache-Control:   caching
Expires:  expiration
<request metadata>
```

COPY Object
Copies an object for a user that has write access to the bucket and read access to the object. All headers prefixed with x-amz- must be signed, including x-amz-copy-source.
```
PUT /destinationObject HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
x-amz-copy-source: /source_bucket/sourceObject
[x-amz-metadata-directive: metadata_directive]
[x-amz-copy-source-if-match: etag]
[x-amz-copy-source-if-none-match: etag]
[x-amz-copy-source-if-unmodified-since:
time_stamp]
[x-amz-copy-source-if-modified-since: time_stamp]
<request metadata>
```

HEAD Object
Retrieves information about an object for a user with read access without fetching the object.
```
HEAD /destinationObject HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
```

DELETE Object
Deletes the specified object. Once deleted, there is no method to restore or undelete an object.
```
DELETE / HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
Date: date
Authorization: AWS AWSAccessKeyId:signature
```

POST Object
Adds an object to a bucket using forms.
```
POST / HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
User-Agent: browser_data
Accept: file_types
Accept-Language: locales
Accept-Encoding: encoding
Accept-Charset: character_set
Keep-Alive: 300
Connection: keep-alive
Content-Type: multipart/form-data; boundary=----------ID
Content-Length: length
<multiform_data>
```

Note: For more information about the multiform data, refer to the *Amazon Simple Storage Service Developer Guide*.

Miscellaneous

Bucket Name Restrictions
Amazon S3 bucket names must:
- Only contain lowercase letters, numbers, periods (.), and dashes (-)
- Start with a number or letter
- Be between 3 and 63 characters long
- Not be in an IP address style (e.g., "192.168.5.4")
- Not end with a dash
- Not contain dashes next to periods
  (e.g., "my-.bucket.com" and "my.-bucket" are invalid)

Note: Although legacy bucket names can be up to 255 characters, include underscores, and end with a dash, they are not recommended.

REST Request Signature
Construct a signature by making an RFC2104 HMAC-SHA1 of the following and converting it to Base64.

```
Item                          Example
HTTP-Verb + "\n" +            GET\n
[Content-MD5] + "\n" +        4gJE4saaMU4BqNR0kLY+lw==\n or \n
[Content-Type] + "\n" +       image/jpeg\n or \n
Date + "\n" +                 Tue, 6 Mar 2007 19:42:41 +0000\n
[CanonicalizedAmzHeaders +/n] x-amz-acl:public-read\n
                              x-amz-meta-checksum:crc32\n
[CanonicalizedResource]       /mybucket/photos/lolcatz.jpg
```

The content cannot contain whitespaces and \n represents Unicode code point U+000A.

Versioning

GET Bucket Object versions
Lists metadata about all of the versions of objects in a bucket.
GET /?versions HTTP/1.1
Host: BucketName.s3.amazonaws.com

GET Bucket versioning
Returns the versioning state of a bucket.
GET /?versioning HTTP/1.1
Host: myBucket.s3.amazonaws.com

PUT Bucket versioning
Sets the versioning state of an existing bucket.
PUT /?versioning HTTP/1.1
Host: bucket.s3.amazonaws.com
<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
* <Status>Enabled</Status>*
</VersioningConfiguration>

DELETE Object versionId
Removes a specific object version.
DELETE /my-third-image.jpg?
Host: bucket.s3.amazonaws.com
versionId=<versionID>

GET Object versionId
Returns a specific object version.
*GET /myObject?**versionId**=<versionID>*
Host: bucket.s3.amazonaws.com

HEAD Object versionId
Returns metadata of a specific object version.
*HEAD /myObject?**versionId**=<versionID>*
Host: bucket.s3.amazonaws.com

PUT Object copy versionId
Copies a specific object version.
PUT /my-second-image.jpg HTTP/1.1
Host: bucket.s3.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
*x-amz-copy-source: /bucket/my-image.jpg?**versionId**=<versionID>*