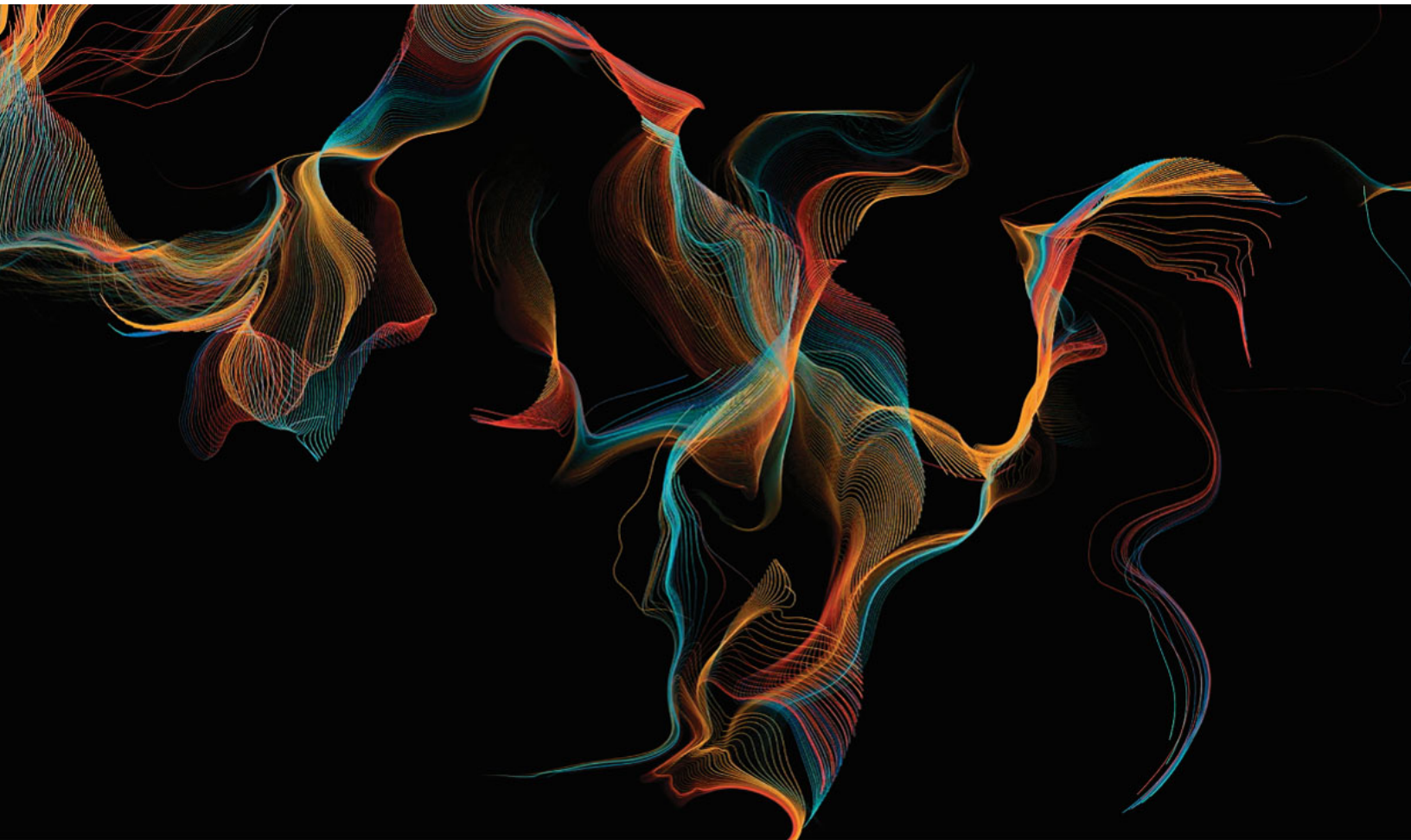




ActiveScale™ OS S3 API Reference

June 2019

Publication 1ET0418 5.5-D-3.1



Western Digital®

Storing the World's Data™ | www.wdc.com

Copyright

Publication Information

One MB is equal to one million bytes, one GB is equal to one billion bytes, one TB equals 1,000GB (one trillion bytes) and one PB equals 1,000TB when referring to storage capacity. Usable capacity will vary from the raw capacity due to object storage methodologies and other factors.

The following paragraph does not apply to any jurisdiction where such provisions are inconsistent with local law: THIS PUBLICATION IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This publication could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. There may be improvements or changes in any products or programs described in this publication at any time. It is possible that this publication may contain reference to, or information about, Western Digital products (machines and programs), programming, or services that are not announced in your country. Such references or information must not be construed to mean that Western Digital Corporation intends to announce such Western Digital products, programming, or services in your country. Technical information about this product is available by contacting your local Western Digital product representative or on the Internet at <https://portal.wdc.com/Support/s/login/>.

Western Digital Corporation may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents.

© 2016-2019 Western Digital Corporation or its affiliates.

Long Live Data, EasiScale, ActiveScale OS, and the Western Digital logo are registered trademarks or trademarks of Western Digital Corporation or its affiliates in the U.S. and/or other countries. Amazon S3, Amazon Simple Storage Services, and Amazon AWS S3 are trademarks of Amazon.com, Inc. or its affiliates in the United States and/or other countries. Other trademarks are the property of their respective owners. References in this publication to Western Digital-branded products, programs, or services do not imply that they will be made available in all countries. Product specifications provided are sample specifications and do not constitute a warranty. Actual specifications for unique part numbers may vary. Please visit the Support section of our website <https://portal.wdc.com/Support/s/login/> for additional information on product specifications. Photographs may show design models. References in this publication to Western Digital-branded products, programs or services do not imply that they are to be available in all countries in which Western Digital operates.

Contents

List of tables	7
About this document	10
What's new in this release	10
Common request headers	10
Common response headers	10
Special request/response headers	10
Authentication	10
AWS S3 API compatibility	10
Supported hardware	11
Revision history	12
Document conventions	12
Document set	14
1 S3 operations	15
1.1 About parameter and element tables	16
1.1.1 Request parameters tables	16
1.1.2 Request headers tables	16
1.1.3 Response elements tables	16
1.1.4 Response headers tables	16
1.2 About authentication	17
1.3 About bucket and object owners	17
1.4 Client Timeouts and Retries	17
1.5 DELETE Bucket operations	17
1.5.1 DELETE Bucket	17
1.5.2 DELETE Bucket analytics	18
1.5.3 DELETE Bucket cors	19
1.5.4 DELETE Bucket inventory	21
1.5.5 DELETE Bucket lifecycle	21
1.5.6 DELETE Bucket metrics	22
1.5.7 DELETE Bucket policy	22
1.5.8 DELETE Bucket replication	23
1.5.9 DELETE Bucket tagging	25
1.5.10 DELETE Bucket website	26
1.6 GET Bucket operations	27
1.6.1 GET Bucket accelerate	27
1.6.2 GET Bucket acl	27
1.6.3 GET Bucket analytics	29
1.6.4 GET Bucket cors	29
1.6.5 GET Bucket inventory	31

1.6.6 GET Bucket lifecycle	31
1.6.7 GET Bucket location	33
1.6.8 GET Bucket logging	34
1.6.9 GET Bucket (list objects) v1	36
1.6.10 GET Bucket (list objects) v2	39
1.6.11 GET Bucket metrics	41
1.6.12 GET Bucket notification	42
1.6.13 GET Bucket object versions	44
1.6.14 GET Bucket policy	47
1.6.15 GET Bucket replication	48
1.6.16 GET Bucket requestPayment	50
1.6.17 GET Bucket tagging	52
1.6.18 GET Bucket versioning	53
1.6.19 GET Bucket website	55
1.7 HEAD Bucket operations	56
1.7.1 HEAD Bucket	56
1.8 List Bucket operations	57
1.8.1 List Bucket Analytics Configurations	57
1.8.2 List Bucket Inventory Configurations	57
1.8.3 List Bucket Metrics Configurations	58
1.9 PUT Bucket operations	58
1.9.1 PUT Bucket	58
1.9.2 PUT Bucket accelerate	60
1.9.3 PUT Bucket acl	60
1.9.4 PUT Bucket analytics	63
1.9.5 PUT Bucket cors	63
1.9.6 PUT Bucket inventory	63
1.9.7 PUT Bucket lifecycle	63
1.9.8 PUT Bucket logging	65
1.9.9 PUT Bucket metrics	65
1.9.10 PUT Bucket policy	66
1.9.11 PUT Bucket notification	66
1.9.12 PUT Bucket replication	67
1.9.13 PUT Bucket requestPayment	69
1.9.14 PUT Bucket tagging	69
1.9.15 PUT Bucket versioning	69
1.9.16 PUT Bucket website	71
1.10 DELETE Object operations	71
1.10.1 Delete Multiple Objects	71
1.10.2 DELETE Object	73

1.10.3 DELETE Object tagging	75
1.11 GET Object operations	75
1.11.1 GET Object	75
1.11.2 GET Object acl	79
1.11.3 GET Object tagging	81
1.11.4 GET Object torrent	81
1.12 HEAD Object operations	82
1.12.1 HEAD Object	82
1.13 OPTIONS Object operations	85
1.13.1 OPTIONS Object	85
1.14 POST Object operations	85
1.14.1 POST Object	85
1.14.2 POST Object restore	85
1.15 PUT Object operations	86
1.15.1 PUT Object	86
1.15.2 PUT Object acl	89
1.15.3 PUT Object-Copy	89
1.15.4 PUT Object tagging	93
1.16 Part operations	94
1.16.1 Abort Multipart Upload	94
1.16.2 Complete Multipart Upload	95
1.16.3 Initiate Multipart Upload	98
1.16.4 List Multipart Uploads	101
1.16.5 List Parts	108
1.16.6 Upload Part	111
1.16.7 Upload Part-Copy	113
1.17 Service operations	115
1.17.1 GET Service	115
1.18 Java functions	117
1.18.1 getPartCount	117
2 Differences between ActiveScale S3 API releases	119
2.1 Common request headers	119
2.2 Common response headers	120
2.3 PUT Bucket request/response headers	120
2.4 PUT Object request/response parameters and headers	121
2.5 GET Object request/response parameters and headers	122
2.6 Authentication with AWS signature v4	123
2.7 Authentication with AWS signature v2	124
2.8 AWS S3 API	125
2.9 AWS S3 Error Codes	128

3 Differences between AWS and this release	131
3.1 Date limitations	131
3.2 Differences between Amazon S3 API and ActiveScale S3 API	131
3.2.1 Differences in bucket operations	131
3.2.2 Differences in object operations	133
3.2.3 Differences in service operations	134
3.2.4 Differences in requests	134
3.3 Headers	136
3.3.1 Common request headers	136
3.3.2 Common response headers	136
3.3.3 Headers that are not implemented	137
3.4 Identity and access management	137
3.4.1 System node identity model	137
3.4.2 Groups	137
3.4.3 Comparing ActiveScale and AWS IAMs	137
3.5 Naming restrictions	138
3.5.1 Bucket names	138
3.6 Object ACLs	138
3.7 Object versioning	138
3.8 Preconfigured ACLs	138
3.9 Query parameters	139
3.10 Regions	139
3.11 S3 Request styles	139
3.11.1 Path requests	139
3.11.2 Virtual host requests	140
3.12 S3 whitelisting	140
3.13 Server-side encryption	140
3.14 Storage classes	140
3.15 User defined metadata	141
A ActiveScale S3 error codes	142
B ActiveScale S3 HTTP status codes	162
Points of contact	163

List of tables

Table 1-1. GET Bucket acl response elements	28
Table 1-2. GET Bucket lifecycle response elements	31
Table 1-3. GET Bucket lifecycle special errors	33
Table 1-4. GET Bucket location response elements	34
Table 1-5. GET Bucket logging response elements	35
Table 1-6. GET Bucket (list objects) v1 request parameters	37
Table 1-7. GET Bucket (list objects) v1 response elements	37
Table 1-8. GET Bucket (list objects) v1 special errors	39
Table 1-9. GET Bucket (list objects) v2 request parameters	39
Table 1-10. GET Bucket (list objects) v2 response elements	40
Table 1-11. GET Bucket (list objects) v2 special errors	41
Table 1-12. GET Bucket Object versions request parameters	44
Table 1-13. GET Object versions response elements	45
Table 1-14. GET Bucket Object versions special errors	47
Table 1-15. GET Bucket policy special errors	48
Table 1-16. GET Bucket replication response elements	49
Table 1-17. GET Bucket replication special errors	50
Table 1-18. GET Bucket requestPayment response elements	51
Table 1-19. GET Bucket versioning response elements	54
Table 1-20. PUT Bucket request headers	58
Table 1-21. PUT Bucket request elements	59
Table 1-22. PUT Bucket acl request headers	61
Table 1-23. PUT Bucket acl request elements	62
Table 1-24. PUT Bucket lifecycle request headers	64
Table 1-25. PUT Bucket lifecycle request elements	64
Table 1-26. PUT Bucket versioning request headers	70
Table 1-27. PUT Bucket versioning request elements	70
Table 1-28. Delete Multiple Objects request parameters	71
Table 1-29. Delete Multiple Objects request headers	72
Table 1-30. Delete Multiple Objects request elements	72
Table 1-31. Delete Multiple Objects response elements	72
Table 1-32. Delete Object request headers	74
Table 1-33. Delete Object response headers	74
Table 1-34. GET Object request parameters	76
Table 1-35. GET Object request headers	76
Table 1-36. GET Object response headers	77
Table 1-37. GET Object response elements	78
Table 1-38. GET Object acl request parameters	79
Table 1-39. GET Object acl response elements	80

Table 1-40. HEAD Object request parameters	82
Table 1-41. HEAD Object request headers	83
Table 1-42. HEAD Object response headers	84
Table 1-43. PUT Object request parameters	86
Table 1-44. PUT Object request headers	86
Table 1-45. PUT Object response headers	88
Table 1-46. PUT Object-Copy	90
Table 1-47. PUT Object-Copy request headers	90
Table 1-48. PUT Object-Copy response headers	92
Table 1-49. PUT Object-Copy response elements	92
Table 1-50. Complete Multipart Upload request elements	95
Table 1-51. Complete Multipart Upload response headers	96
Table 1-52. Complete Multipart Upload response elements	96
Table 1-53. Complete Multipart Upload special errors	98
Table 1-54. Initiate Multipart Upload request parameters	98
Table 1-55. Initiate Multipart Upload request headers	99
Table 1-56. Initiate Multipart Upload response headers	100
Table 1-57. Initiate Multipart Upload response elements	101
Table 1-58. List Multipart Upload request parameters	102
Table 1-59. List Multipart Upload response elements	103
Table 1-60. List Parts request parameters	108
Table 1-61. List Parts response headers	108
Table 1-62. List Parts response elements	109
Table 1-63. Upload Part request headers	111
Table 1-64. Upload Part response headers	111
Table 1-65. Upload Part special errors	112
Table 1-66. Upload Part-Copy request headers	113
Table 1-67. Upload Part-Copy response headers	114
Table 1-68. Upload Part-copy response elements	114
Table 1-69. Upload Part-Copy special errors	115
Table 1-70. GET Service response elements	116
Table 2-1. Support for common request headers	119
Table 2-2. Support for common response headers	120
Table 2-3. Support for PUT Bucket request/response headers	120
Table 2-4. Support for PUT Bucket request elements	120
Table 2-5. Support for PUT Object request parameters	121
Table 2-6. Support for PUT Object request headers	121
Table 2-7. Support for GET Object request parameters	122
Table 2-8. Support for GET Object request headers	122
Table 2-9. Support for GET Object response headers	123

	Table 2-10. Support for AWS authentication v4 authentication headers	123
	Table 2-11. Support for AWS authentication v4 request parameters	124
124	Table 2-12. Support for AWS authentication v4 request headers related to signed payloads	124
	Table 2-13. Support for AWS authentication v2 authentication headers	124
	Table 2-14. Support for AWS authentication v2 request parameters	124
	Table 2-15. Support for AWS S3 API	125
	Table 2-16. Support for AWS S3 error codes	128
	Table 3-1. Differences in bucket operations	131
	Table 3-2. Differences in object operations	133
	Table 3-3. Differences in service operations.	134
	Table 3-4. Differences in requests.	135
	Table 3-5. Comparing ActiveScale Identities and AWS IAM	138
	Table A-1. Error codes	142

About this document

This guide provides reference information about the ActiveScale S3 API.

What's new in this release

Common request headers

No changes.

Common response headers

No changes.

Special request/response headers

No changes.

Authentication

No changes.

AWS S3 API compatibility

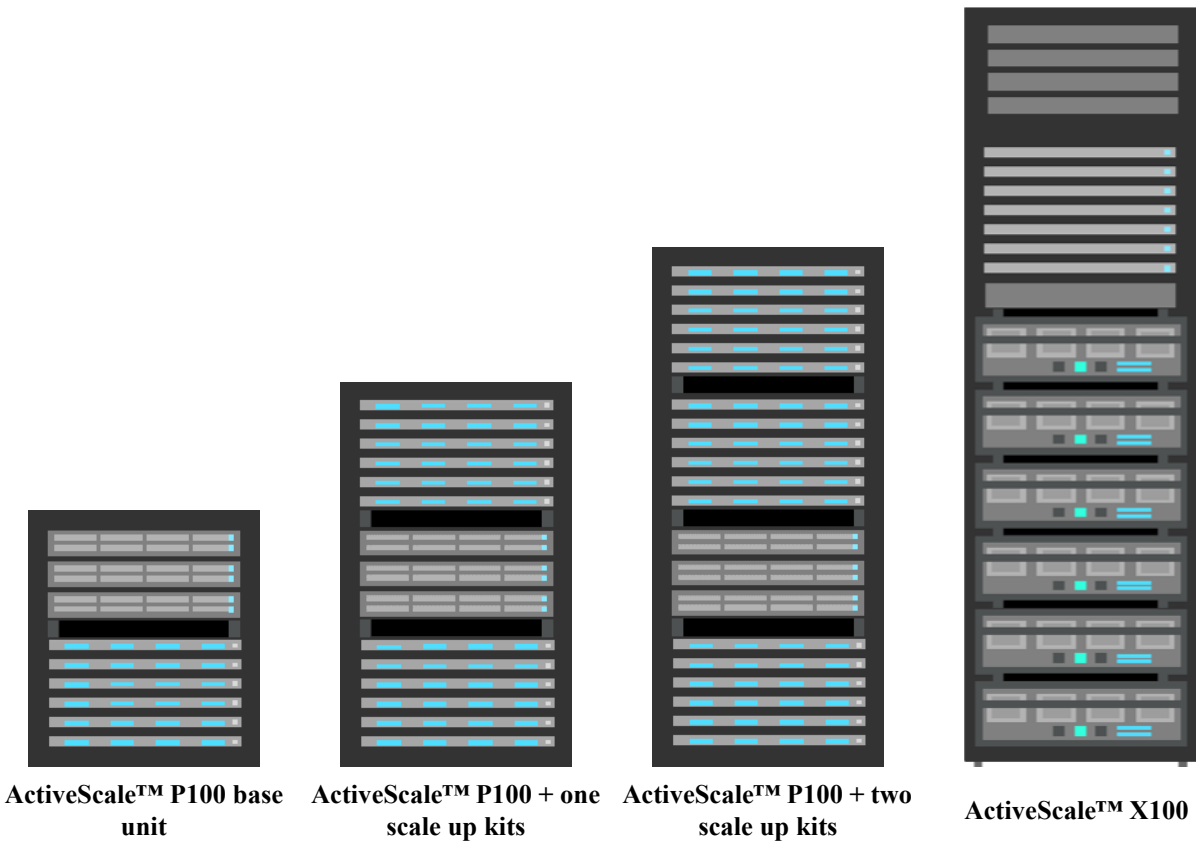
ActiveScale OS now sends 400 `Bad Request (IllegalLocationConstraint)` replies when you attempt to create a bucket (PUT Bucket) with an incompatible zone constraint for a region-specific endpoint.

ActiveScale OS now sends 403 `Forbidden (QuotaExceeded)` replies when you attempt to put a new object (PUT object, PUT object copy, or INIT object) in a bucket that has exceeded its capacity quota.

For more information on differences between this version and previous versions, see [Differences between ActiveScale S3 API releases](#) on page 119.

Supported hardware

This document supports the following hardware:



Revision history

Date	Revision	Description
February 2019	3.1	ActiveScale OS 5.5 documentation updates
January 2019	3.0	ActiveScale OS 5.4.1 Patch 1
December 2018	2.8	ActiveScale OS 5.4.1
November 2018	2.7	ActiveScale OS 5.4 documentation update
November 2018	2.6	ActiveScale OS 5.3.0.1
November 2018	2.5	ActiveScale OS 5.4
August 2018	2.4	ActiveScale OS 5.3 documentation update
May 2018	2.3	ActiveScale OS 5.3
May 2018	2.2	ActiveScale OS 5.2.0.39
April 2018	2.1	ActiveScale OS 5.2 documentation update
February 2018	2.0	ActiveScale OS 5.2
September 2017	1.9	ActiveScale OS 5.1
August 2017	1.8	ActiveScale OS 5.0.1.20
April 2017	1.7	ActiveScale OS 5.0.2
April 2017	1.6	ActiveScale OS 5.0.1 documentation update
February 2017	1.2	ActiveScale OS 5.0.1
January 2017	1.1	ActiveScale OS 5.0 documentation update
December 2016	1.0	ActiveScale OS 5.0
November 2016	N/A	ActiveScale OS 5.0 early access

Document conventions

Typography

Element	Sample typography
Command line input/output or user input to the graphical user interface	Type <code>admin</code> .
Command line input longer than one line is split with the continuation character (<code>\</code>)	<code>s3cmd \ --dump-config</code>
User-supplied values	<code>siteName</code> or <code><siteName></code>
File and directory names	<code>accounts.csv</code>
Graphical user interface elements	Click OK .
Graphical user interface menu navigation	Click Configuration > System .

Element	Sample typography
Keyboard keys or sequences	To cancel the operation, press <code>Ctrl+c</code> .

Storage notations

Convention	Prefix	Examples	Usage
xB (base 10 notation)	SI prefix: (kilo, mega, giga, tera, peta, exa, zetta, yotta)	1GB = 1 gigabyte = 1,000,000,000 bytes 1TB = 1 terabyte = 1,000,000,000,000 bytes	Disk sizes
xiB (base 2 notation)	Binary prefixes (kibi, mebi, gibi, tebi, pebi, exbi, zebi, yobi)	1GiB = 1 gibibyte = 1,073,741,824 bytes 1TiB = 1 tebibyte = 1,099,511,627,776 bytes	Storage space, and sizes of partitions or file systems

This document uses a comma (",") for digit grouping; for example, 1,000 is one thousand. This document uses a period (".") as a decimal mark; for example, 12.5%.

Notes and Warnings

Element	Sample notation
Note:	Indicates extra information that has no specific hazardous or damaging consequences.
Tip:	Indicates a faster or more efficient way to do something.
Caution:	Indicates an action that, if taken or avoided, may result in hazardous or damaging consequences.
Warning	Indicates an action that, if taken or avoided, may result in data loss or unavailability.

Document set

Title	Description
<i>ActiveScale P100/ActiveScale X100 Site Requirements</i>	Data center, power, and cabling requirements
<i>ActiveScale P100/ActiveScale X100 Site Survey</i>	Worktables of delivery, installation, and configuration settings
<i>ActiveScale P100/ActiveScale X100 Installation Guide</i>	Instructions for installation and initial bringup
<i>ActiveScale X100 Rackless Installation Guide</i>	Instructions for installation and initial bringup of a bring-your-own-rack ActiveScale X100 system
<i>ActiveScale OS Administrator Guide</i>	Instructions for system administration
<i>ActiveScale OS S3 API Reference</i>	S3 API reference
<i>ActiveScale OS Release Notes</i>	Information about changes, new features, and known limitations of ActiveScale OS
<i>ActiveScale OS Glossary</i>	ActiveScale OS terminology
<i>ActiveScale OS Software Specification</i>	Overview of ActiveScale OS
<i>ActiveScale View User Guide</i>	Instructions for S3 account owners
<i>ActiveScale P100/ActiveScale X100 Support Guide</i>	Instructions for servicing hardware components and system expansion; details about system hardware

For the latest versions of these documents, visit <https://portal.wdc.com/Support/s/login/>.

1 S3 operations

This chapter contains reference information for ActiveScale S3 API operations.

- [About parameter and element tables](#) on page 16
- [About authentication](#) on page 17
- [About bucket and object owners](#) on page 17
- [Client Timeouts and Retries](#) on page 17
- [DELETE Bucket operations](#) on page 17
- [GET Bucket operations](#) on page 27
- [HEAD Bucket operations](#) on page 56
- [List Bucket operations](#) on page 57
- [PUT Bucket operations](#) on page 58
- [DELETE Object operations](#) on page 71
- [GET Object operations](#) on page 75
- [HEAD Object operations](#) on page 82
- [OPTIONS Object operations](#) on page 85
- [POST Object operations](#) on page 85
- [PUT Object operations](#) on page 86
- [Part operations](#) on page 94
- [Service operations](#) on page 115
- [Java functions](#) on page 117

1.1 About parameter and element tables

The following sections explain how to interpret the values in the columns of parameter and element tables.

1.1.1 Request parameters tables

- A value of **Yes** in the **Supported** column means that the parameter will work with an ActiveScale API request. If there are limitations or caveats for use, they are described in the **Notes** column.
- A value of **No** in the **Supported** column means that the parameter will not work with a ActiveScale API request. If the **Notes** column explicitly indicates that the header is ignored, it is ignored. Otherwise, specifying the header will result in a 501 Not Implemented response.

1.1.2 Request headers tables

- A value of **Yes** in the **Supported** column means that the header will work with an ActiveScale API request. If there are limitations or caveats for use, they are described in the **Notes** column.
- A value of **No** in the **Supported** column means that the header will not work with a ActiveScale API request. If the **Notes** column explicitly indicates that the header is ignored, it is ignored. Otherwise, specifying the header will result in a 501 Not Implemented response.

1.1.3 Response elements tables

- A value of **Yes** in the **Supported** column means that the header will work with an ActiveScale API request. If there are limitations or caveats for use, they are described in the **Notes** column.
- A value of **No** in the **Supported** column means that the element will not will not be in an ActiveScale API response, and it is not returned.
- A value of **N/A** in the **Supported** column indicates that the element cannot be set.

Restriction: If a life cycle action is not supported by the `PUT Bucket lifecycle` operation, the corresponding response element will never be returned.

1.1.4 Response headers tables

- A value of **Yes** in the **Supported** column means that the header will work with an ActiveScale API request. If there are limitations or caveats for use, they are described in the **Notes** column.
- A value of **No** in the **Supported** column means that the element will not will not be in an ActiveScale API response, and it is not returned.
- A value of **N/A** in the **Supported** column indicates that the element cannot be set.

Restriction: If bucket replication is not supported and it is not possible to use `PUT Bucket replication` to set a bucket replication configuration, `HEAD Object` will never return the corresponding response header `x-amz-replication-status`.

1.2 About authentication

The ActiveScale S3 API supports authentication using both AWS Signature Version 2 and AWS Signature Version 4 signing.

Further information about AWS Signature Version 2 and AWS Signature Version 4 version signing is found on the following Amazon API Reference pages.

- <http://docs.aws.amazon.com/general/latest/gr/signature-version-4.html>
- <http://docs.aws.amazon.com/general/latest/gr/signature-version-2.html>

1.3 About bucket and object owners

An authenticated user can create up to 100 buckets. The user who created the bucket is the owner of the bucket. The owner of the bucket can perform all bucket operations, as described in this document. You must have the proper permissions and authentication credentials to perform operations on buckets owned by other users. Buckets are privately owned by their creator unless ACLs are given to other S3 users.

For operations on an object, the object owner must have the same identity as the bucket owner. Additionally, object owners are not registered with each object. The `GET Bucket (List Objects) Version 1` and `GET Bucket (List Objects) Version 2` operations return the bucket owner as the object owner. Permission checks for object operations takes only the bucket owner and the bucket ACL into account.

1.4 Client Timeouts and Retries

When a Virtual IP is used as an S3 endpoint, the client timeout and retries should be configured to accommodate the Virtual IP failover/failback time to get uninterrupted service in case of Virtual IP failover.

Note: For more information, refer to the ActiveScale OS Administrator Guide for [Virtual IP addresses and failover groups](#) on page 21.

1.5 DELETE Bucket operations

1.5.1 DELETE Bucket

Delete the bucket named in the URI. Before deleting the bucket you must delete all the objects in it.

Permissions

You must be the owner of the bucket in order to implement the `DELETE Bucket` operation.

Requests

Syntax

```
DELETE / HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None.

Sample request and response

The following tables show a request example and a response example for the `DELETE Bucket` operation. The request deletes the **images** bucket. The response returns a `204 No Content`, which means the request was successful, and the images in the bucket no longer exists.

Request

```
DELETE / HTTP/1.1
Host: images.s3.amazonaws.com
Date: Wed, 01 Mar 2006 12:00:00 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 204 No Content
x-amz-id-2: JuKZqmXuiwFeDQxhD7M8KtsKobSzWA1QEjLbTMTagkKdBX2z7I1/jGhDeJ3j6s80
x-amz-request-id: 32FE2CEB32F5EE25
Date: Wed, 01 Mar 2006 12:00:00 GMT
Connection: close
Server: AmazonS3
```

Special errors

None.

Related operations

- [PUT Bucket](#) on page 58
- [DELETE Object](#) on page 73

1.5.2 DELETE Bucket analytics

This operation is not supported in the ActiveScale S3 API.

Further information about the `DELETE Bucket analytics` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketDELETEAnalyticsConfiguration.html>

1.5.3 DELETE Bucket cors

Delete the **cors** configuration from a bucket. This operation returns a dummy response compatible with Amazon S3.

Permissions

To use this operation, you must have permission to perform the `s3:PutBucketCORS` action. The bucket owner has this permission by default and can grant this permission to others.

Requests

Syntax

```
DELETE /?cors HTTP/1.1
Host: bucket_name.s3.amazonaws.com
Date: date
Authorization: authorization string (see Authenticating Requests (AWS Signature Version 4))
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None.

Sample request and response

This example deletes the **cors** sub-resource from the specified bucket. This action removes the **cors** configuration that is stored in the sub-resource.

Request

```
DELETE /?cors HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Date: Tue, 13 Dec 2011 19:14:42 GMT
Authorization: signatureValue
```

Response

```
HTTP/1.1 204 No Content
x-amz-id-2: 0FmFIWsh/PpBuzZ0JFRC55ZGVmQW4SHJ7xVDqKwhEdJmf3q63RtrvH8ZuxW1Bo15
x-amz-request-id: 0CF038E9BCF63097
Date: Tue, 13 Dec 2011 19:14:42 GMT
Server: AmazonS3
Content-Length: 0
```

Special errors

None.

Related operations

- [GET Bucket cors](#) on page 29
- [PUT Bucket cors](#) on page 63
- [OPTIONS Object](#) on page 85

1.5.4 DELETE Bucket inventory

This operation is not supported in the ActiveScale S3 API.

Further information about the DELETE Bucket inventory operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketDELETEInventoryConfiguration.html>

1.5.5 DELETE Bucket lifecycle

Delete the bucket life cycle settings.

Permissions

You must be the owner of the bucket in order to implement the DELETE Bucket lifecycle operation.

Requests

Syntax

```
DELETE /?lifecycle HTTP/1.1
Host: bucket_name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None.

Sample request and response

This example deletes the life cycle configuration for the **images** bucket. The response returns a 204 No Content, which means the request was successful and the life cycle configuration for the **images** bucket no longer exists.

Request

```
DELETE /?lifecycle HTTP/1.1
Host: images.s3.amazonaws.com
Content-Length: 0
Date: Mon, 11 Jul 2016 12:08:57 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 204 No Content
x-amz-id-2: ab799629-d4f1-486a-84de-4e6bf12145bfdae08038-4452-4c45-b7f6-
c6ff91a961ff x-amz-request-id: 3FC40A223112AD8F
Date: Mon, 11 Jul 2016 12:08:57 GMT
Server: Himalaya
```

Special errors

None.

Related operations

- [PUT Bucket lifecycle](#) on page 63
- [GET Bucket lifecycle](#) on page 31

1.5.6 DELETE Bucket metrics

This operation is not supported in the ActiveScale S3 API.

Further information about the `DELETE Bucket metrics` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTDeleteBucketMetricsConfiguration.html>.

1.5.7 DELETE Bucket policy

Get the policy of a specified bucket. This operation returns a dummy response compatible with Amazon S3.

Permissions

To use this operation, you must have `DeleteBucketPolicy` permissions on the specified bucket. You must also belong to the bucket account.

Requests

Syntax

```
DELETE /?policy HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: date
Authorization: authorization string (see Authenticating Requests (AWS Signature Version 4))
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None.

Sample request and response

The following tables show a request and response example.

Request

```
DELETE /?policy HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Date: Mon, 11 Jul 2016 11:34:37 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 204 No Content
x-amz-id-2: 0FmFIWsh/PpBuzZ0JFRC55ZGVmQW4SHJ7xVDqKwhEdJmf3q63RtrvH8ZuxW1Bo15
x-amz-request-id: 0CF038E9BCF63097
Date: Mon, 11 Jul 2016 11:34:37 GMT
Server: AmazonS3
Content-Length: 0
```

Special errors

None.

Related operations

- [GET Bucket policy](#) on page 47
- [PUT Bucket policy](#) on page 66

1.5.8 DELETE Bucket replication

Delete the sub-resource that is associated with the bucket and is replicated in the bucket.

Permissions

You must be the owner of the bucket in order to implement the `DELETE` Bucket replication operation.

Requests

Syntax

```
DELETE /?replication HTTP/1.1
Host: bucket.name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None.

Sample request and response

This example deletes the sub-resource that is associated with and replicated in the **images** bucket. The response returns a 204 No Content, which means the request was successful and the sub-resource in the **images** bucket no longer exists.

Request

```
DELETE /?replication HTTP/1.1
Host: images.amazonaws.com
Content-Length: 0
Date: Mon, 11 Jul 2016 12:08:57 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 204 No Content
x-amz-id-2: UuaglLuByRx9e6j5OnimrSAMPLEtRPfTaOaA==
x-amz-request-id: 656c76696e672example
Date: Wed, 11 Feb 2015 05:37:16 GMT
Connection: keep-alive
Server: AmazonS3
```

Special errors

None.

Related operations

- [GET Bucket replication](#) on page 48
- [PUT Bucket replication](#) on page 67

1.5.9 DELETE Bucket tagging

Remove a tag set from the specified bucket. This operation returns a dummy response compatible with Amazon S3.

Permissions

To use this operation, you must have `DeleteBucketTagging` permissions for the specified bucket. By default, the bucket owner retains this permission and can grant this permission to other users.

Requests

Syntax

```
DELETE /?tagging HTTP/1.1
Host: bucket.name.s3.amazonaws.com
Date: date
Authorization: authorization string (see Authenticating Requests (AWS Signature Version 4))
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None.

Sample request and response

This example request deletes the tag set from a specified bucket.

Request

```
DELETE /?tagging HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Date: Mon, 11 Jul 2016 11:34:37 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 204 No Content x-amz-id-2: 0FmFIWsh/  
PpBuzZ0JFRC55ZGVmQW4SHJ7xVDqKwhEdJmf3q63RtrvH8ZuxW1Bo15  
x-amz-request-id: 0CF038E9BCF63097  
Date: Mon, 11 Jul 2016 11:34:37 GMT  
Server: AmazonS3  
Content-Length: 0
```

Special errors

None.

Related operations

- [GET Bucket tagging](#) on page 52
- [PUT Bucket tagging](#) on page 69

1.5.10 DELETE Bucket website

Delete the website configuration in a bucket.

Permissions

To use this operation, you must be the bucket owner.

Requests

Syntax

```
DELETE /?website HTTP/1.1  
Host: bucket name.s3.amazonaws.com  
Date: date  
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None.

Sample request and response

The following tables show a request example and a response example.

Request

```
DELETE /?website HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Date: Mon, 11 Jul 2016 11:34:37 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 204 No Content
x-amz-id-2: 0FmFIWsh/PpBuzZ0JFRC55ZGVmQW4SHJ7xVDqKwhEdJmf3q63RtrvH8ZuxW1Bo15
x-amz-request-id: 0CF038E9BCF63097
Date: Mon, 11 Jul 2016 11:34:37
GMT Server: AmazonS3
Content-Length: 0
```

Special errors

None.

Related operations

- [GET Bucket website](#) on page 55
- [PUT Bucket website](#) on page 71

1.6 GET Bucket operations

1.6.1 GET Bucket accelerate

This operation is not supported in the ActiveScale S3 API.

Further information about the `GET Bucket accelerate` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketGETaccelerate.html>

1.6.2 GET Bucket acl

Get the access control list (ACL) of a bucket.

Permissions

You must have `READ_ACP` permissions in order to implement the `GET Bucket acl` operation.

Note: A bucket owner always has `READ_ACP` and `WRITE_ACP` permissions on a bucket, plus any permissions explicitly stated in the ACL of the bucket.

Requests

Syntax

```
GET /?acl HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-1. GET Bucket acl response elements

Element	Supported	Notes
AccessControlList	Yes	None
AccessControlPolicy	Yes	None
DisplayName	Yes	None
Grant	Yes	None
Grantee	Yes	None
ID	Yes	None
Owner	Yes	None
Permission	Yes	None

Sample request and response

The following tables show a request example and a response example for the GET Bucket acl operation.

The request retrieves the access control configuration from the **images** bucket. The response returns a 200 OK, which means the request was successful. The response also returns the access control configuration.

Request

```
GET ?acl HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran x-amz-
request-id: 318BC8BC148832E5
Date: Wed, 28 Oct 2009 22:32:00 GMT
Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
Content-Length: 124Content-Type: text/plain Connection: close Server: Himalaya

<AccessControlPolicy>
  <Owner>
    <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    <DisplayName>CustomersName@amazon.com</DisplayName>
  </Owner>
  <AccessControlList>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="CanonicalUser">
        <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
        <DisplayName>CustomersName@amazon.com</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
  </AccessControlList>
</AccessControlPolicy>
```

Special errors

None.

Related operations

- [PUT Bucket](#) on page 58
- [PUT Bucket acl](#) on page 60

1.6.3 GET Bucket analytics

This operation is not supported in the ActiveScale S3 API.

Further information about the `GET Bucket analytics` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketGETAnalyticsConfig.html>

1.6.4 GET Bucket cors

Get the cross-origin resource sharing (cors) configuration information set for the bucket. This operation returns a dummy response compatible with Amazon S3.

Permissions

You must be the owner of the bucket in order to implement the `GET Bucket cors` operation. Or, you must be a user that belongs to the bucket owner account, or you must have `READ` or `WRITE` permission on the bucket.

Requests

Syntax

```
GET /?cors HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

Not applicable, because a `NoSuchCORSConfiguration` error response is returned.

Elements

Not applicable, because a `NoSuchCORSConfiguration` error response is returned.

Sample request and response

Request

```
GET /?cors HTTP/1.1
Host: s3test.s3.ActiveScale.com
x-amz-date: 20180126T011603Z
Authorization: authorization string
```

Response

```
HTTP/1.1 404 Not Found
x-amz-request-id: D3E4AEDA2CC4B7B1
x-amz-id-2: 37004c82-8320-4d61-a845-9456e2c842035b692ddd-9d7f-4b0b-b412-25c727896984
Content-Type: application/xml
Date: Fri, 26 Jan 2018 01:16:03 GMT
Server: ActiveScale
<Error>
  <Code>NoSuchCORSConfiguration</Code>
  <Message>The CORS configuration does not exist</Message>
  <BucketName>s3test</BucketName>
  <RequestId>D3E4AEDA2CC4B7B1</RequestId>
  <HostId>37004c82-8320-4d61-a845-9456e2c842035b692ddd-9d7f-4b0b-b412-25c727896984</HostId>
</Error>
```

Special errors

None.

Related operations

- [DELETE Bucket cors](#) on page 19
- [PUT Bucket cors](#) on page 63

1.6.5 GET Bucket inventory

This operation is not supported in the ActiveScale S3 API.

Further information about the `GET Bucket inventory` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketGETInventoryConfig.html>

1.6.6 GET Bucket lifecycle

Get the life cycle configuration for a bucket.

Permissions

You must be the owner of the bucket in order to implement the `GET Bucket lifecycle` operation.

Requests

Syntax

```
GET /?lifecycle HTTP/1.1
Host: bucket.name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-2. GET Bucket lifecycle response elements

Element	Supported	Notes
And	Yes	None
AbortIncompleteMultipartUp	N/A	None
Date	Yes	None

Table 1-2. GET Bucket lifecycle response elements

Element	Supported	Notes
Days	Yes	None
DayAfterInitiation	N/A	None
Expiration	Yes	None
ExpiredObjectDeleteMarker	Yes	None
ID	Yes	None
LifecycleConfiguration	Yes	None
NonCurrentDays	Yes	None
NoncurrentVersionExpiration	Yes	None
NoncurrentVersionTransition	N/A	None
Prefix	Yes	None
Rule	Yes	None
Status	Yes	None
StorageClass	N/A	None
Tag	Yes	None
Value	Yes	None
And	Yes	None

Sample request and response

This example retrieves the lifecycle configuration from the **files** bucket. The response returns a 200 OK, which means the request was successful. The response also returns the life cycle configuration.

Request

```
GET /?lifecycle HTTP/1.1
Host: files.s3.amazonaws.com Content-Length: 0
Date: Mon, 11 Jul 2016 12:19:18 GMT
Authorization: authorization string
```


Response

```

HTTP/1.1 200 OK
x-amz-id-2: ab799629-d4f1-486a-84de-4e6bf12145bfdae08038-4452-4c45-b7f6-c6ff91a961ff
x-amz-request-id: CAE0056F80DB6B53
Date: Mon, 11 Jul 2016 12:19:18 GMT
Transfer-Encoding: chunked Server: Himalaya

<LifecycleConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Rule>
  <ID>Expire logs after 100 days</ID>
  <Prefix>logs</Prefix>
  <Status>Enabled</Status>
  <Expiration>
    <Days>100</Days>
  </Expiration>
</Rule>
</LifecycleConfiguration>

```

Special errors

Table 1-3. GET Bucket lifecycle special errors

Error code	Description	HTTP status code
NoSuchLifecycleConfiguration	The life cycle configuration does not exist.	404 Not Found

Related operations

- [PUT Bucket lifecycle](#) on page 63
- [DELETE Bucket lifecycle](#) on page 21

1.6.7 GET Bucket location

Get the region a bucket is in.

Permissions

You must be an authenticated identity in order to implement the `GET Bucket location` operation.

Requests

Syntax

```

GET /?location HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string

```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-4. GET Bucket location response elements

Element	Supported	Notes
LocationConstraint	Yes	None

Sample request and response

This example retrieves the bucket location from the **files** bucket. The response returns a 200 OK, which means the request was successful. The response also returns the location; in this case, EU.

Request

```
GET /?location HTTP/1.1
Host: myImages.s3.amazonaws.com
Date: Tue, 09 Oct 2007 20:26:04 +0000
Authorization: signatureValue
```

Response

```
<LocationConstraint xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
EU</LocationConstraint>
```

Special errors

None.

Related operations

- [GET Bucket object versions](#) on page 44
- [GET Bucket \(list objects\) v1](#) on page 36
- [GET Bucket \(list objects\) v2](#) on page 39
- [PUT Bucket](#) on page 58

1.6.8 GET Bucket logging

Get the logging status of a bucket. This operation returns a dummy response compatible with Amazon S3.

Permissions

You must have READ or WRITE permission on the bucket in order to implement the GET Bucket logging operation. Or you must be one of the following:

- The bucket owner.
- A user who belongs to the bucket owners account.

Requests

Syntax

```
GET /?logging HTTP/1.1
Host: bucket_name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-5. GET Bucket logging response elements

Element	Supported	Notes
BucketLoggingStatus	Yes	None
EmailAddress	N/A	None
Grant	N/A	None
Grantee	N/A	None
LoggingEnabled	N/A	None
Permission	N/A	None
TargetBucket	N/A	None
TargetGrants	N/A	None
TargetPrefix	N/A	None

Sample request and response

The following tables show a request example and a response example for the GET Bucket logging operation.

The request retrieves the logging status from the `mybucket` bucket. The response returns a 200 OK, which means the request was successful. The response also returns the logging status.

Request

```
GET ?logging HTTP/1.1
Host: mybucket.s3.amazonaws.com
Date: Wed, 25 Nov 2009 12:00:00 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
Date: Wed, 25 Nov 2009 12:00:00 GMT
Connection: close Server: Himalaya

<BucketLoggingStatus xmlns="http://doc.s3.amazonaws.com/2006-03-01">
<LoggingEnabled>
  <TargetBucket>mybucketlogs</TargetBucket>
  <TargetPrefix>mybucket-access_log-/</TargetPrefix>
  <TargetGrants>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="AmazonCustomerByEmail">
        <EmailAddress>user@company.com</EmailAddress>
      </Grantee>
      <Permission>READ</Permission>
    </Grant>
  </TargetGrants>
</LoggingEnabled>
</BucketLoggingStatus>
```

Special errors

None.

Related operations

- [PUT Bucket logging](#) on page 65

1.6.9 GET Bucket (list objects) v1

Get some or all of the objects in a bucket.

Permissions

You must have READ permissions for the bucket in order to perform this operation.

Requests

Syntax

```
GET / HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

*Parameters***Table 1-6. GET Bucket (list objects) v1 request parameters**

Parameter	Supported	Notes
delimiter	Yes	None
encoding-type	Yes	None
marker	Yes	None
max-keys	Yes	None
prefix	Yes	None

Headers

This operation uses common request headers only.

Elements

None.

Responses*Headers*

This operation uses common response headers only.

*Elements***Table 1-7. GET Bucket (list objects) v1 response elements**

Element	Supported	Notes
Contents	Yes	None
Common Prefixes	Yes	None
Delimiter	Yes	None
DisplayName	Yes	None
Encoding-Type	Yes	None
ETag	Yes	None
ID	Yes	None
IsTruncated	Yes	None
Key	Yes	None
LastModified	Yes	None
MaxKeys	Yes	None
Element	Yes	None
Name	Yes	None
Marker	Yes	None
NextMarker	Yes	None
Owner	Yes	None
Prefix	Yes	None
Size	Yes	None

Table 1-7. GET Bucket (list objects) v1 response elements

Element	Supported	Notes
StorageClass	Yes	None

Sample request and response

This example retrieves the names of the objects that are in the `BucketName` bucket. The response returns a 200 OK, which means the request was successful. The response also returns a list of the names of the objects.

Request

```
GET / HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
```

Response

```
<?xml version="1.0" encoding="UTF-8"?>
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>bucket</Name>
  <Prefix/>
  <Marker/>
  <MaxKeys>1000</MaxKeys>
  <IsTruncated>>false</IsTruncated>
  <Contents>
    <Key>my-image.jpg</Key>
    <LastModified>2009-10-12T17:50:30.000Z</LastModified>
    <ETag>"fba9dede5f27731c9771645a39863328"</ETag>
    <Size>434234</Size>
    <StorageClass>STANDARD</StorageClass>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
      <DisplayName>mtd@amazon.com</DisplayName>
    </Owner>
  </Contents>
  <Contents>
    <Key>my-third-image.jpg</Key>
    <LastModified>2009-10-12T17:50:30.000Z</LastModified>
    <ETag>"1b2cf535f27731c974343645a3985328"</ETag>
    <Size>64994</Size>
    <StorageClass>STANDARD_IA</StorageClass></Owner>
  </Contents>
</ListBucketResult>
```

Special errors

Table 1-8. GET Bucket (list objects) v1 special errors

Error code	Description	HTTP status code
InvalidArgument	An invalid delimiter has been found.	400 Bad Request

Related operations

- [GET Bucket \(list objects\) v2](#) on page 39
- [GET Bucket object versions](#) on page 44
- [List Multipart Uploads](#) on page 101
- [List Parts](#) on page 108

1.6.10 GET Bucket (list objects) v2

Get the number of the objects in a bucket.

Permissions

You must have READ permissions for the bucket in order to perform this operation.

Requests

Syntax

```
GET /?list-type=2 HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

Table 1-9. GET Bucket (list objects) v2 request parameters

Parameter	Supported	Notes
delimiter	Yes	None
encoding-type	Yes	None
max-keys	Yes	None
prefix	Yes	None
list-type	Yes	None
continuation-token	Yes	None
fetch-after	Yes	None
start-after	Yes	None

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-10. GET Bucket (list objects) v2 response elements

Element	Supported	Notes
Contents	Yes	None
Common Prefixes	Yes	None
Delimiter	Yes	None
DisplayName	Yes	None
Encoding-Type	Yes	None
ETag	Yes	None
ID	Yes	None
IsTruncated	Yes	None
Key	Yes	None
LastModified	Yes	None
MaxKeys	Yes	None
Name	Yes	None
Owner	Yes	None
Prefix	Yes	None
Size	Yes	None
StorageClass	Yes	None
ContinuationToken	Yes	None
KeyCount	Yes	None
NextContinuationToken	Yes	None
StartAfter	Yes	None

Sample request and response

This example retrieves the names of the objects that are in the **quotes** bucket. The response returns a 200 OK, which means the operation on the **quotes** bucket was a success. The response also contains a list of the names of the objects.

Request

```
GET /?list-type=2&max-keys=3&prefix=E&start-after=ExampleGuide.pdf HTTP/1.1
Host: quotes.s3.amazonaws.com
x-amz-date: 20160430T232933Z
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: gyB+3jRPnrkN98ZajxHXr3u7EFM67bNgSaxexeEHndCX/7GRnfTXxReKUQF28IfP
x-amz-request-id: 3B3C7C725673C630
Date: Sat, 30 Apr 2016 23:29:37 GMT
Content-Type: application/xml Content-Length: length Connection: close
Server: Himalaya

<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Name>quotes</Name>
<Prefix>E</Prefix>
<StartAfter>ExampleGuide.pdf</StartAfter>
<KeyCount>1</KeyCount>
<MaxKeys>3</MaxKeys>
<IsTruncated>>false</IsTruncated>
<Contents>
  <Key>ExampleObject.txt</Key>
  <LastModified>2013-09-17T18:07:53.000Z</LastModified>
  <ETag>"599bab3ed2c697f1d26842727561fd94"</ETag>
  <Size>857</Size>
  <StorageClass>REDUCED_REDUNDANCY</StorageClass>
</Contents>
</ListBucketResult>
```

Special errors

Table 1-11. GET Bucket (list objects) v2 special errors

Error Code	Description	HTTP Status Code
InvalidArgument	An invalid delimiter has been found.	400 Bad Request

Related operations

- [GET Bucket \(list objects\) v1](#) on page 36
- [GET Bucket object versions](#) on page 44
- [List Multipart Uploads](#) on page 101
- [List Parts](#) on page 108

1.6.11 GET Bucket metrics

This operation is not supported in the ActiveScale S3 API.

Further information about the GET Bucket metrics operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketGETMetricConfiguration.html>

1.6.12 GET Bucket notification

The ActiveScale GET Bucket notification operation is used to return the notification configuration for the bucket.

Permissions

You must be the owner of the bucket in order to implement the GET Bucket replication operation.

Requests

Syntax

```
GET /?notification HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None

Response

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMgUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A02
Date: Wed, 15 May 2019 16:59:04 GMT
Server: AmazonS3
<?xml version="1.0" encoding="UTF-8"?>
{
  "TopicConfigurations": [
    {
      "Id": "nJXWQObDvvs9VtaY81yItqVlN2XTskTFEgINhTJr4mor2Jhg", "TopicArn": "arn:aws:sns:us-east-1:1:testons",
      "Events": [
        "s3:ObjectCreated:Put",
        "s3:ObjectCreated:Copy",
        "s3:ObjectCreated:CompleteMultipartUpload",
        "s3:ObjectRemoved:Delete",
        "s3:ObjectRemoved:DeleteMarkerCreated"
      ]
    }
  ]
}
```

Special errors

This implementation of the operation does not return special errors.

Related operations

- [GET Bucket \(list objects\) v1](#) on page 36
- [GET Bucket \(list objects\) v2](#) on page 39
- [GET Bucket object versions](#) on page 44

1.6.13 GET Bucket object versions

Get a metadata list about all of the versions of objects in a bucket.

Permissions

You must have READ permissions for the bucket in order to perform the `GET Bucket Object versions` operation.

Requests

Syntax

```
GET /?versions HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

Table 1-12. GET Bucket Object versions request parameters

Parameter	Supported	Notes
delimiter	Yes	None
encoding-type	Yes	None
key-marker	Yes	None
max-keys	Yes	None
prefix	Yes	None
version-id-marker	Yes	None

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

*Elements***Table 1-13. GET Object versions response elements**

Element	Supported	Notes
CommonPrefixes	Yes	None
Delimiter	Yes	None
DeleteMarker	Yes	None
DisplayName	Yes	None
Encoding-Type	Yes	None
ETag	Yes	None
ID	Yes	None
IsLatest	Yes	None
IsTruncated	Yes	None
Key	Yes	None
KeyMarker	Yes	None
LastModified	Yes	None
ListVersionsResult	Yes	None
MaxKeys	Yes	None
Name	Yes	None
NextKeyMarker	Yes	None
NextVersionIdMarker	Yes	None
Owner	Yes	None
Prefix	Yes	None
Size	Yes	None
StorageClass	Yes	None

Sample request and response

This example compiles a list of metadata about all of the versions of objects in the **BucketName** bucket. The response returns the list.

Request

```
GET /?versions HTTP/1.1
Host: BucketName.s3.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 +0000
Authorization: authorization string
```

Response

```

<?xml version="1.0"?>
<ListVersionsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <Name>bucket</Name>
  <Prefix>my</Prefix>
  <KeyMarker/>
  <VersionIdMarker/>
  <MaxKeys>5</MaxKeys>
  <IsTruncated>>false</IsTruncated>
  <Version>
    <Key>my-image.jpg</Key>
    <VersionId>3/L4kqtJl40Nr8X8gdRQBpUMLUo</VersionId>
    <IsLatest>>true</IsLatest>
    <LastModified>2009-10-12T17:50:30.000Z</LastModified>
    <ETag>"fba9dede5f27731c9771645a39863328"</ETag>
    <Size>434234</Size>
    <StorageClass>STANDARD</StorageClass>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
      <DisplayName>mtd@amazon.com</DisplayName>
    </Owner>
  </Version>
  <DeleteMarker>
    <Key>my-second-image.jpg</Key>
    <VersionId>03jpf543dhffds434rfd5FDN943f5Fkdmqnh892</VersionId>
    <IsLatest>>true
  </IsLatest>
  <LastModified>2009-11-12T17:50:30.000Z</LastModified>
  <Owner>
    <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    <DisplayName>mtd@amazon.com</DisplayName>
  </Owner>
  </DeleteMarker>
  <Version>
    <Key>my-second-image.jpg</Key>
    <VersionId>QUpfndhfd8438MNF93jdnJFkdmqnh893</VersionId>
    <IsLatest>>false</IsLatest>
    <LastModified>2009-10-10T17:50:30.000Z</LastModified>
    <ETag>"9b2cf535f27731c974343645a3985328"</ETag>
    <Size>166434</Size>
    <StorageClass>STANDARD</StorageClass>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
      <DisplayName>mtd@amazon.com</DisplayName>
    </Owner>
  </Version>
  <DeleteMarker>
    <Key>my-third-image.jpg</Key>
    <VersionId>03jpf543dhffds434rfd5FDN943f5Fkdmqnh892</VersionId>
    <IsLatest>true</IsLatest>
    <LastModified>2009-10-15T17:50:30.000Z</LastModified>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
      <DisplayName>mtd@amazon.com</DisplayName>
    </Owner>
  </DeleteMarker>
  <Version>
    <Key>my-third-image.jpg</Key>
    <VersionId>UIORUnfndfhnw89493jJFJ</VersionId>
    <IsLatest>>false</IsLatest>
    <LastModified>2009-10-11T12:50:30.000Z</LastModified>
    <ETag>"772cf535f27731c974343645a3985328"</ETag>
    <Size>64</Size>
    <StorageClass>STANDARD</StorageClass>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
      <DisplayName>mtd@amazon.com</DisplayName>
    </Owner>
  </Version>
</ListVersionsResult>

```

Special errors

Table 1-14. GET Bucket Object versions special errors

Error code	Description	HTTP status code
InvalidArgument	An invalid delimiter was found.	404 Not Found

Related operations

- [GET Object](#) on page 75
- [PUT Object](#) on page 86

1.6.14 GET Bucket policy

Get the policy of the bucket. This operation returns a dummy response compatible with Amazon S3.

Permissions

You must have READ or WRITE permission on the bucket in order to implement the GET Bucket logging operation. Or you must be one of the following:

- The bucket owner
- A user who belongs to the bucket owners account

Note: If you have the correct permissions, but you are not the bucket owner, the API returns a 405 Method Not Allowed error.

Requests

Syntax

```
GET /?policy HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None.

Sample request and response

The following tables show a request example and a response example for the `GET Bucket policy` operation.

The request retrieves the bucket policy from the **images** bucket. The response returns a 200 OK, which means the request was successful. The response also lists the policy details.

Request

```
GET /?policy HTTP/1.1
Host: s3test.s3.ActiveScale.com
x-amz-date: 20180126T012128Z
Authorization: authorization string
```

Response

```
HTTP/1.1 404 Not Found
x-amz-request-id: 6112A9DE542D0668
x-amz-id-2: 37004c82-8320-4d61-a845-9456e2c842035b692ddd-9d7f-4b0b-b412-25c727896984
Content-Type: application/xml
Date: Fri, 26 Jan 2018 01:21:28 GMT
Server: ActiveScale
<?xml version="1.0" encoding="UTF-8"?>
<Error>
  <Code>NoSuchBucketPolicy</Code>
  <Message>The bucket policy does not exist</Message>
  <BucketName>s3test</BucketName>
  <RequestId>6112A9DE542D0668</RequestId>
  <HostId>37004c82-8320-4d61-a845-9456e2c842035b692ddd-9d7f-4b0b-b412-25c727896984</HostId>
</Error>
```

Special errors

Table 1-15. GET Bucket policy special errors

Error code	Description	HTTP Status code
NoSuchBucketPolicy	The bucket policy cannot be found.	404 Not Found

Related operations

- [GET Bucket \(list objects\) v1](#) on page 36
- [GET Bucket \(list objects\) v2](#) on page 39
- [GET Bucket object versions](#) on page 44

1.6.15 GET Bucket replication

Get the replication configuration of a bucket.

Permissions

You must be the owner of the bucket in order to implement the `GET Bucket replication` operation.

Requests

Syntax

```
GET /?replication HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-16. GET Bucket replication response elements

Name	Supported	Notes
ReplicationConfiguration	N/A	None
Role	N/A	None
Rule	N/A	None
ID	N/A	None
Status	N/A	None
Prefix	N/A	None
Destination	N/A	None
Bucket	N/A	None
StorageClass	N/A	None

Sample request and response

The following tables show a request example and a response example for the GET Bucket replication operation.

The request retrieves the replication configuration from the **examplebucket** bucket. The response returns a 200 OK, which means the request was successful. The response also lists the replication configuration details.

Request

```
GET /?replication HTTP/1.1
Host: examplebucket.s3.amazonaws.com
x-amz-date: Tue, 10 Feb 2015 00:17:21 GMT
Authorization: signatureValue
```

Response

```

HTTP/1.1 200 OK
x-amz-id-2: ITnGTly4RyTmXa3rPi4hk1TXouTf0hccUjo0iCPjz6FnfIutBj3M7fPGLWO2SEWp x-amz-
request-id: 51991C342example
Date: Tue, 10 Feb 2015 00:17:23 GMT
Server: AmazonS3
Content-Length: contentlength
<?xml version="1.0" encoding="UTF-8"?>
<ReplicationConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Rule>
  <ID>rule1</ID>
  <Status>Enabled</Status>
  <Prefix/>
  <Destination>
    <Bucket>arn:aws:s3:::exampletargetbucket</Bucket>
    <StorageClass>STANDARD_IA</StorageClass>
  </Destination>
</Rule>
<Role>arn:aws:iam::35667example:role/CrossRegionReplicationRoleForS3</Role>
</ReplicationConfiguration>

```

Special errors

Table 1-17. GET Bucket replication special errors

Error code	Description	HTTP Status code
NoSuchReplication	The replicated subsource was not located.	404 Not Found

Related operations

- [PUT Bucket replication](#) on page 67
- [DELETE Bucket replication](#) on page 23

1.6.16 GET Bucket requestPayment

Get the request payment configuration of a bucket.

Permissions

You must have READ or WRITE permission on the bucket in order to implement the GET Bucket requestPayment operation. Or you must be one of the following:

- The bucket owner
- A user who belongs to the bucket owners account

Requests

Syntax

```

GET ?requestPayment HTTP/1.1
Host: BucketName.s3.amazonaws.com
Date: date
Authorization: authorization string

```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-18. GET Bucket requestPayment response elements

Name	Supported	Notes
Payer	Yes	None
RequestPaymentConfiguration	Yes	None

Sample request and response

The following tables show a request example and a response example for the GET Bucket requestPayment operation.

The request retrieves the request payment configuration from the **colorpictures** bucket. The response returns a 200 OK, which means the request was successful. The response also lists the request payment configuration details.

Request

```
GET ?requestPayment HTTP/1.1
Host: colorpictures.s3.amazonaws.com
Date: Wed, 01 Mar 2009 12:00:00 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPiFbiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo x-amz-
request-id: 236A8905248E5A01
Date: Wed, 01 Mar 2009 12:00:00 GMT
Content-Type: [type] Content-Length: 0 Connection: close Server: Himalaya

<?xml version="1.0" encoding="UTF-8"?>
<RequestPaymentConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Payer>Requester</Payer>
</RequestPaymentConfiguration>
```

Special errors

None.

Related operations

- [PUT Bucket requestPayment](#) on page 69

1.6.17 GET Bucket tagging

Get the tag set associated with a bucket.

Permissions

To use this operation, you must have `GET BucketTagging` permissions for the specified bucket. By default, the bucket owner retains this permission and can grant this permission to other users.

Requests

Syntax

```
GET /?tagging HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

Not applicable, because a `NoSuchTagSet` error response is returned.

Elements

Not applicable, because a `NoSuchTagSet` error response is returned.

Sample request and response

Request

```
GET /?tagging HTTP/1.1
Host: s3test.s3.ActiveScale.com
x-amz-date: 20180126T012243Z
Authorization: authorization string
```

Response

```
HTTP/1.1 404 Not Found
x-amz-request-id: 6680995ADA9A3BE2
x-amz-id-2: 37004c82-8320-4d61-a845-9456e2c842035b692ddd-9d7f-4b0b-b412-25c727896984
Content-Type: application/xml
Date: Fri, 26 Jan 2018 01:22:43 GMT
Server: ActiveScale
<?xml version="1.0" encoding="UTF-8"?>
<Error>
  <Code>NoSuchTagSet</Code>
  <Message>The TagSet does not exist</Message>
  <BucketName>s3test</BucketName>
  <RequestId>6680995ADA9A3BE2</RequestId>
  <HostId>37004c82-8320-4d61-a845-9456e2c842035b692ddd-9d7f-4b0b-b412-25c727896984</HostId>
</Error>
```

Special errors

None.

Related operations

- [DELETE Bucket tagging](#) on page 25
- [PUT Bucket tagging](#) on page 69

1.6.18 GET Bucket versioning

Get the versioning state of a bucket.

Permissions

You must be the owner of the bucket in order to implement the `GET Bucket versioning` operation.

Requests

Syntax

```
GET /?versioning HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-19. GET Bucket versioning response elements

Element	Supported	Notes
MfaDelete	N/A	MFA is not supported.
Status	Yes	None
VersioningConfiguration	Yes	None

Sample request and response

This example retrieves the versioning configuration from the **myBucket** bucket. The response returns the versioning status of the **myBucket** bucket.

Request

```
GET /?versioning HTTP/1.1
Host: myBucket.s3.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
```

Response

```
<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Status>Enabled</Status>
</VersioningConfiguration>
```

Special errors

None.

Related operations

- [PUT Bucket versioning](#) on page 69

1.6.19 GET Bucket website

Get the website configuration associated with a bucket.

Permissions

To use this operation, you must have `GET Bucket website` permissions for the specified bucket. By default, the bucket owner retains this permission and can grant this permission to other users.

Requests

Syntax

```
GET /?website HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string (see Authenticating Requests (AWS Signature Version 4))
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

The response elements include the same elements that were uploaded when you configured the bucket as a website.

Sample request and response

Request

```
GET /?website HTTP/1.1
Host: s3test.s3.ActiveScale.com
x-amz-date: 20180126T012403Z
Authorization: authorization string
```

Response

```
HTTP/1.1 404 Not Found
x-amz-request-id: 1A7D2CD465B2E64A
x-amz-id-2: 37004c82-8320-4d61-a845-9456e2c842035b692ddd-9d7f-4b0b-b412-
25c727896984
Content-Type: application/xml
Date: Fri, 26 Jan 2018 01:24:03 GMT
Server: ActiveScale
<?xml version="1.0" encoding="UTF-8"?>
<Error>
  <Code>NoSuchWebsiteConfiguration</Code>
  <Message>The specified bucket does not have a website configuration</
Message>
  <BucketName>s3test</BucketName>
  <RequestId>1A7D2CD465B2E64A</RequestId>
  <HostId>37004c82-8320-4d61-a845-9456e2c842035b692ddd-9d7f-4b0b-b412-
25c727896984</HostId>
</Error>
```

Special errors

None.

Related operations

- [DELETE Bucket website](#) on page 26
- [PUT Bucket website](#) on page 71

1.7 HEAD Bucket operations

1.7.1 HEAD Bucket

Determine if a bucket exists and that you have permission to access it.

Permissions

You must be the owner of the bucket in order to implement the HEAD Bucket operation.

Requests

Syntax

```
HEAD / HTTP/1.1
Host: BucketName.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

None.

Elements

None.

Sample request and response

This example pings the **myawsbucket** bucket to determine if it exists. The response returns a 200 OK, which means the operation on the **myawsbucket** bucket was a success and that the bucket exists.

Request

```
HEAD / HTTP/1.1
Date: Fri, 10 Feb 2012 21:34:55 GMT
Authorization: authorization string
Host: myawsbucket.s3.amazonaws.com
Connection: Keep-Alive
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: JuKZqmXuiwFeDQxhD7M8KtsKobSzWA1QEjLbTMTagkKdBX2z7I1/jGhDeJ3j6s80
x-amz-request-id: 32FE2CEB32F5EE25
Date: Fri, 10 2012 21:34:56 GMT
Server: AmazonS3
```

Special errors

The operation returns a 200 OK if the bucket exists and you have permission to access it. Otherwise, the operation might return responses such as 404 Not Found or 403 Forbidden.

Related operations

- [GET Bucket versioning](#) on page 53

1.8 List Bucket operations

1.8.1 List Bucket Analytics Configurations

This operation is not supported in the ActiveScale S3 API.

Further information about the List Bucket Analytics Configurations operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketListAnalyticsConfigs.html>

1.8.2 List Bucket Inventory Configurations

This operation is not supported in the ActiveScale S3 API.

Further information about the `List Bucket Inventory Configurations` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketListInventoryConfigs.html>

1.8.3 List Bucket Metrics Configurations

This operation is not supported in the ActiveScale S3 API.

Further information about the `List Bucket Metrics Configurations` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTListBucketMetricsConfiguration.html>

1.9 PUT Bucket operations

1.9.1 PUT Bucket

Create a new bucket.

Permissions

You do not need permissions to implement the `PUT Bucket` operation. However, to implement `PUT Bucket`, you must register with ActiveScale and have a valid AWS Access Key ID. Anonymous requesters are not allowed to create buckets.

Requests

Syntax

```
PUT / HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
<?xml version="1.0" encoding="UTF-8"?>
<CreateBucketConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
...
</CreateBucketConfiguration>
```

Note: The xml portion of the preceding operation is not required.

Parameters

None.

Headers

Table 1-20. PUT Bucket request headers

Header	Supported	Notes
x-amz-acl	Yes	None

Table 1-20. PUT Bucket request headers

Header	Supported	Notes
x-amz-grant-read	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/groups/s3/LogDelivery is not supported.
x-amz-grant-write	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/groups/s3/LogDelivery is not supported.
x-amz-grant-read-acp	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/groups/s3/LogDelivery is not supported.
x-amz-grant-write-acp	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/groups/s3/LogDelivery is not supported.
x-amz-grant-full-control	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/groups/s3/LogDelivery is not supported.

*Elements***Table 1-21. PUT Bucket request elements**

Element	Supported	Notes
CreateBucketConfiguration	Yes	None
LocationConstraint	Yes	The LocationConstraint element is ignored.

Responses*Headers*

None.

Elements

None.

Sample request and response

This example creates the **colorpictures** bucket. The response returns a 200 OK, which means the request was successful. The response also lists the location of the bucket.

Request

```
PUT / HTTP/1.1
Host: colorpictures.s3.amazonaws.com Content-Length: 0
Date: Wed, 01 Mar2006 12:00:00 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Mar 2006 12:00:00 GMT
Location: /colorpictures
Content-Length: 0
Connection: close
Server: AmazonS3
```

Special errors

For buckets in region us-east-1, Amazon S3 allows the use of `PUT Bucket` to change the ACL of an existing bucket owned by you. For buckets in different regions, Amazon S3 responds with `HTTP 409 Conflict` and the S3 error code `BucketAlreadyOwnedByYou`. Only the latter response is supported.

Related operations

- [PUT Object](#) on page 86
- [DELETE Bucket](#) on page 17

1.9.2 PUT Bucket accelerate

This operation is not supported in the ActiveScale S3 API.

Further information about the `PUT Bucket accelerate` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTaccelerate.html>

1.9.3 PUT Bucket acl

Set the permissions for an existing bucket using the ACL.

Permissions

You must have `WRITE_ACP` permissions on the bucket in order to implement the `PUT Bucket acl` operation.

Requests

Syntax

```

PUT /?acl HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: date
Authorization: authorization string
<AccessControlPolicy>
<Owner>
<ID>ID</ID>
<DisplayName>EmailAddress</DisplayName>
</Owner>
<AccessControlList>
<Grant>
<Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="CanonicalUser">
<ID>ID</ID>
<DisplayName>EmailAddress</DisplayName>
</Grantee>
<Permission>Permission</Permission>
</Grant>
</AccessControlList>
</AccessControlPolicy>

```

Parameters

None.

*Headers***Table 1-22. PUT Bucket acl request headers**

Header	Supported	Notes
x-amz-acl	Yes	None
x-amz-grant-read	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/
x-amz-grant-write	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/
x-amz-grant-read-acp	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/
x-amz-grant-write-acp	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/
x-amz-grant-full-control	Yes	EmailAddress, ID, and URI are fully supported. http://acs.amazonaws.com/

*Elements***Table 1-23. PUT Bucket acl request elements**

Element	Supported	Notes
AccessControlList	Yes	None
AccessControlPolicy	Yes	None
DisplayName	Yes	None
Grant	Yes	None
Grantee	Yes	URI at http://acs.amazonaws.com/groups/s3/LogDelivery is not supported.
ID	Yes	None
Owner	Yes	None
Permission	Yes	None

Responses*Headers*

None.

Elements

None.

Sample request and response

This example sets the permissions for the **examplebucket** bucket. The response returns a 200 OK, which means the request was successful.

Request

```
PUT ?acl HTTP/1.1
Host: examplebucket.s3.amazonaws.com
x-amz-date: Sun, 29 Apr 2012 22:00:57 GMT
x-amz-grant-write: uri="http://acs.amazonaws.com/groups/s3/LogDelivery",
emailAddress="xyz@amazon.com"
x-amz-grant-read: uri="http://acs.amazonaws.com/groups/global/AllUsers" Accept: */*
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: 0w9iImt23VF9s6QofOTDzelF7mrryz7d04Mw23FQCi40205Zw28Zn+d340/RytoQ
x-amz-request-id: A6A8F01A38EC7138
Date: Sun, 29 Apr 2012 22:01:10 GMT
Content-Length: 0
Server: AmazonS3
```

Special errors

None.

Related operations

- [PUT Bucket](#) on page 58
- [DELETE Bucket](#) on page 17

1.9.4 PUT Bucket analytics

This operation is not supported in the ActiveScale S3 API.

Further information about the `PUT Bucket analytics` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTAnalyticsConfig.html>

1.9.5 PUT Bucket cors

This operation is not supported in the ActiveScale S3 API.

Further information about the `PUT Bucket cors` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTcors.html>

1.9.6 PUT Bucket inventory

This operation is not supported in the ActiveScale S3 API.

Further information about the `PUT Bucket inventory` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTInventoryConfig.html>

1.9.7 PUT Bucket lifecycle

Create a new life cycle configuration on the bucket or replaces an existing life cycle configuration.

PUT Bucket lifecycle permissions

You must be the owner of the bucket in order to call the `PUT Bucket lifecycle` operation.

Requests

Syntax

```
PUT /?lifecycle HTTP/1.1
Host: bucket name.s3.amazonaws.com
Content-Length: length
Date: date
Authorization: authorization string
Content-MD5: MD5Lifecycle configuration in the request body
```

Parameters

None.

*Headers***Table 1-24. PUT Bucket lifecycle request headers**

Header	Supported	Notes
Content-MD5	Yes	This header is required.

*Elements***Table 1-25. PUT Bucket lifecycle request elements**

Element	Supported	Notes
AbortIncompleteMultipartUpload	No	None
And	No	None
Date	Yes	None
Days	Yes	None
DaysAfterInitiation	No	None
Expiration	Yes	This element requires a day value and on a date value with an ExpiredObjectDele
ExpiredObjectDeleteMarker	Yes	None
Filter	No	None
ID	Yes	None
Key	No	None
LifecycleConfiguration	Yes	None
NoncurrentDays	Yes	None
NoncurrentVersionExpiration	Yes	This element requires a NoncurrentDays
NoncurrentVersionTransition	No	None
Prefix	Yes	None
Rule	Yes	None
Status	Yes	None
StorageClass	No	None
Tag	No	None
Transition	No	None
Value	No	None

Responses*Headers*

None.

Elements

None.

Sample request and response

This example sets up the life cycle configuration for the bucket. The response returns a 200 OK, which means the request was successful.

Request

```
<LifecycleConfiguration>
  <Rule>
    <ID>id1</ID>
    <Prefix>documents/</Prefix>
    <Status>Enabled</Status>
  </Rule>
  <Rule>
    <ID>id2</ID>
    <Prefix>logs/</Prefix>
    <Status>Enabled</Status>
    <Expiration>
      <Days>365</Days>
    </Expiration>
  </Rule>
</LifecycleConfiguration>
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: r+qR7+nhXtJDDIJ0JJYcd+1j5nM/rUFiiiz/fNbDOsd3JUE8NWMLNHXmvPfwMpdC
x-amz-request-id: 9E26D08072A8EF9E
Date: Wed, 14 May 2014 02:11:22 GMT
Content-Length: 0
Server: AmazonS3
```

Special errors

None.

Related operations

- [GET Bucket lifecycle](#) on page 31
- [POST Object restore](#) on page 85

1.9.8 PUT Bucket logging

This operation is not supported in the ActiveScale S3 API.

Further information about the PUT Bucket logging operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTlogging.html>

1.9.9 PUT Bucket metrics

This operation is not supported in the ActiveScale S3 API.

Further information about the `PUT Bucket metrics` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTMetricConfiguration.html>

1.9.10 PUT Bucket policy

This operation is not supported in the ActiveScale S3 API.

Further information about the `PUT Bucket policy` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTpolicy.html>

1.9.11 PUT Bucket notification

Create a new notification configuration or replace an existing one.

Permissions

To use this operation, you must be the bucket owner.

Syntax

```
PUT /?notification HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

```
<NotificationConfiguration>
  <TopicConfiguration>
    <Id>TopicId</Id>
    <Event>EventType</Event>
    <Topic>TopicARN</Topic>
  </TopicConfiguration>
</NotificationConfiguration>
```

Note: The format of `<Topic>` tag in ActiveScale is as follows:
`arn:aws:sns:<region>:<KafkadestinationId>:<topic name>`. The default region for ActiveScale is `us-east-1`.

Sample Request and Response

Request

```
<NotificationConfiguration>
  <TopicConfiguration>
    <Id>TopicId</Id>
    <Event>s3:ObjectCreated:*</Event>
    <Topic>arn:aws:sns:us-east-1:1:BucketName</Topic>
  </TopicConfiguration>
</NotificationConfiguration>
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: r+qR7+nhXtJDDIJ0JJYcd+1j5nM/rUFiiiZ/fNbDOsd3JUE8NWMLNHXmvPfwMpdC x-amz-
request-id: 9E26D08072A8EF9E
Date: Wed, 24 Jun 2019 02:11:22 GMT
Content-Length: 0
Server: AmazonS3
```

Differences with AWS

- A system-wide notification policy is required with appropriate topic destination information with status ENABLED, in order to be able to put a new bucket notification configuration. This should be done with the ASCLI. For more information, refer to [ONS commands](#) on page 277 section in UniverStor OS Administrator Guide.
- Only Notification configurations with Topic Configurations are supported. Cloud function configurations (CloudFunctionConfiguration) and/or queue configurations (QueueConfiguration) are not supported.
- If filter rules are specified in a topic configuration, only the empty prefix and/or empty suffix are allowed.

Related operations

[GET Bucket notification](#) on page 42

1.9.12 PUT Bucket replication

Create a new replication configuration or to replace an existing one.

The configuration is stored in a replication sub-resource associated with the bucket. If a replication sub-resource does not exist, it is created. If it does exist, the new configuration replaces the configuration that is currently stored in the sub-resource.

- ActiveScale cannot validate the destination bucket.
- ActiveScale cannot compare the access control translation account with the account of the destination bucket owner.
- ActiveScale does not support access control translation.
- ActiveScale does not support replication of encrypted objects with AWS KMS-managed encryption keys.
- ActiveScale only supports one replication configuration rule.
- ActiveScale only allows empty rule prefixes.

Permissions

To use this operation, you must be the bucket owner.

Requests

Syntax

```
PUT /?replication HTTP/1.1
Host: bucket.name.s3.amazonaws.com
Content-Length: length
Date: date
Authorization: authorization string
Content-MD5: MD5
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

None.

Elements

None.

Sample request and response

Request

```
PUT /?replication HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Date: Wed, 11 Jun 2019 02:11:21 GMT
Content-MD5: q6yJD1IkcBaGGfb3QLY69A==
Authorization: authorization string
Content-Length: 406
<ReplicationConfiguration>
  <Role>arn:aws:iam::35667example:role/CrossRegionReplicationRoleForS3</Role>
  <Rule>
    <ID>rule1</ID>
    <Prefix>TaxDocs</Prefix>
    <Status>Enabled</Status>
    <Destination>
      <Bucket>arn:aws:s3:::exampletargetbucket</Bucket>
    </Destination>
  </Rule>
</ReplicationConfiguration>
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: r+qR7+nhXtJDDIJ0JJYcd+1j5nM/rUFiiiZ/fNbDOsd3JUE8NWMLNHXmvPfwMpdC
x-amz-request-id: 9E26D08072A8EF9E
Date: Wed, 11 Jun 2019 02:11:22 GMT
Content-Length: 0
Server: AmazonS3
```

Special errors

ActiveScale returns a special error if replication is not enabled.

Related operations

- [GET Bucket replication](#) on page 48
- [DELETE Bucket replication](#) on page 23

1.9.13 PUT Bucket requestPayment

This operation is not supported in the ActiveScale S3 API.

Further information about the `PUT Bucket requestPayment` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTrequestPaymentPUT.html>

1.9.14 PUT Bucket tagging

This operation is not supported in the ActiveScale S3 API.

Further information about the `PUT Bucket tagging` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTtagging.html>

1.9.15 PUT Bucket versioning

Set the versioning state of an existing bucket.

Permissions

You must be the owner of the bucket in order to implement the `PUT Bucket versioning` operation.

Requests

Syntax

```
PUT /?versioning HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
...
</VersioningConfiguration>
```

Parameters

None.

*Headers***Table 1-26. PUT Bucket versioning request headers**

Header	Supported	Notes
x-amz-mfa	No	This header is not

*Elements***Table 1-27. PUT Bucket versioning request elements**

Element	Supported	Notes
VersioningConfiguration	Yes	None
Status	Yes	None
MfaDelete	No	None

Responses*Headers*

None.

Elements

None.

Sample request and response

This example sets the versioning status of the bucket to `suspended`. The response returns a 200 OK, which means the request was successful and the versioning status has been set to `suspended`.

Request

```
PUT /?versioning HTTP/1.1 Host: bucket.s3.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
Content-Length: 124
<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Status>Suspended</Status>
</VersioningConfiguration>
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 March 2006 12:00:00 GMT
```

Special errors

None.

Related operations

- [DELETE Bucket](#) on page 17
- [PUT Bucket](#) on page 58

1.9.16 PUT Bucket website

This operation is not supported in the ActiveScale S3 API.

Further information about the `PUT Bucket website` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUTwebsite.html>

1.10 DELETE Object operations

1.10.1 Delete Multiple Objects

Delete multiple objects from a bucket.

Permissions

You must have `WRITE` permissions in order to implement the `Delete Multiple Objects` operation.

Note: A bucket owner always has `READ_ACP` and `WRITE_ACP` permissions on a bucket, plus any permissions explicitly stated in the ACL of the bucket.

Note: Permissions are evaluated per delete object operation. The response contains an error element per object if permission is denied.

Requests

Syntax

```
POST /?delete HTTP/1.1
Host: bucketname.s3.amazonaws.com Date: date
Authorization: authorization string
Content-Length: length
Content-MD5: content-md5
<?xml version="1.0" encoding="UTF-8"?>
<Delete>
...
</Delete>
```

Parameters

Table 1-28. Delete Multiple Objects request parameters

Parameter	Supported	Notes
delete	Yes	None

*Headers***Table 1-29. Delete Multiple Objects request headers**

Parameter	Supported	Notes
Content-MD5	Yes	This header is required.
Content-Length	Yes	This header is required.
x-amz-mfa	No	This header is not

*Elements***Table 1-30. Delete Multiple Objects request elements**

Parameter	Supported	Notes
Delete	Yes	None
Quiet	Yes	None
Object	Yes	None
Key	Yes	None
VersionId	Yes	None

Responses*Headers*

None.

*Elements***Table 1-31. Delete Multiple Objects response elements**

Parameter	Supported	Notes
DeleteResult	Yes	None
Deleted	Yes	None
Key	Yes	None
VersionId	Yes	None
DeleteMarker	Yes	None
DeleteMarkerVersionId	Yes	None
Error	Yes	None
Code	Yes	None
Message	Yes	None

Sample request and response

This example deletes the `sample1.txt` and `sample2.txt` files from the `bucketname` bucket. The response returns a 204 No Content, which means the request was successful and the two files are deleted out of the `bucketname` bucket.

Request

```
POST /?delete HTTP/1.1
Host: bucketname.s3.amazonaws.com Accept: */*
x-amz-date: Wed, 30 Nov 2011 03:39:05 GMT Content-MD5: p5/WA/
oEr30qrEE121PAqw==
Authorization: AWS AKIAIOSFODNN7EXAMPLE:W0qPYCLe6JwkZAD1ei6hp9XZLee= Content-
Length: 125
Connection: Keep-Alive
<Delete>
<Object>
<Key>sample1.txt</Key>
</Object>
<Object>
<Key>sample2.txt</Key>
</Object>
</Delete>
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: 5h4FxsNCUS7wP5z92eGCWDshNpMnRuXvETa4HH3LvvH6VAIr0jU7tH9kM7X+njXx
x-amz-request-id: A437B3B641629AEE
Date: Fri, 02 Dec 2011 01:53:42 GMT
Content-Type: application/xml Server: Himalaya
Content-Length: 251
<?xml version="1.0" encoding="UTF-8"?>
<DeleteResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Deleted>
```

Special errors

None.

Related operations

- [Initiate Multipart Upload](#) on page 98
- [Upload Part](#) on page 111
- [Complete Multipart Upload](#) on page 95

1.10.2 DELETE Object

Delete a single object.

Options

To remove a specific version, you must use the `versionId` sub-resource. Using this subresource permanently deletes the version. If the object deleted is a delete marker, S3 sets the response header `x-amz-delete-marker` to `true`.

Permissions

You must have `WRITE` permissions in order to implement the `DELETE Object` operation.

Requests

Syntax

```
DELETE /objectname HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

Table 1-32. Delete Object request headers

Header	Supported	Notes
x-amz-mfa	No	This header is not supported.

Elements

None.

Responses

Headers

Table 1-33. Delete Object response headers

Header	Supported	Notes
x-amz-delete-marker	Yes	None
x-amz-version-id	Yes	None

Elements

None.

Sample request and response

This example deletes the **my-second-image.jpg** file from the **bucket** bucket. The response returns a 204 No Content, which means the request was successful and the file are deleted out of the **bucket** bucket.

Request

```
DELETE /my-second-image.jpg HTTP/1.1
Host: bucket.s3.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
```

Response

```
HTTP/1.1 204
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEbla0wiIOIxl+zbwZ163pt7 x-amz-
request-id: 0A49CE4060975EAC
Date: Wed, 12 Oct 2009 17:50:00 GMT
Content-Length: 0
Connection: close
Server: Himalaya
```

Special errors

None.

Related operations

- [PUT Object](#) on page 86
- [Delete Multiple Objects](#) on page 71

1.10.3 DELETE Object tagging

This operation is not supported in the ActiveScale S3 API.

Further information about the DELETE Object tagging operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectDELETetagging.html>

1.11 GET Object operations

1.11.1 GET Object

Get the current version number of an object.

Options

By default, the GET Object operation returns the current version of an object. To return a different version, use the `versionId` subresource.

Permissions

You must have READ permissions in order to implement the GET Object operation.

Requests

Syntax

```
GET /objectname HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

*Parameters***Table 1-34. GET Object request parameters**

Parameter	Supported	Notes
response-cache-control	Yes	This parameter is stored and returned in a response header for the GET Object and HEAD Object operations.
response-content-disposition	Yes	This parameter is stored and returned in a response header for the GET Object and HEAD Object operations.
response-content-encoding	Yes	This parameter is stored and returned in a response header for the GET Object and HEAD Object operations.
response-content-language	Yes	This parameter is stored and returned in a response header for the GET Object and HEAD Object operations.
response-content-type	Yes	This parameter is stored and returned in a response header for the GET Object and HEAD Object operations.
response-expires	Yes	This parameter is stored and returned in a response header for the GET Object and HEAD Object operations.
versionId	Yes	This parameter is stored and returned in a response header for the GET Object and HEAD Object operations.

*Headers***Table 1-35. GET Object request headers**

Header	Supported	Notes
If-Modified-Since	Yes	None
If-Unmodified-Since	Yes	None
If-Match	Yes	None
If-None-Match	Yes	None

Table 1-35. GET Object request headers

Header	Supported	Notes
If-Range	Partially	The object is always considered to be changed. The message 200 OK with full content is returned. Ignoring this header could cause an incorrect 206 Partial content response.
Range	Yes	None
x-amz-server-side-encryption-customer-algorithm	No	This header is not allowed by default. Customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key	No	This header is not allowed by default. Customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key-MD5	No	This header is not allowed by default. Customer-provided encryption keys are not supported.

Elements

None.

Responses*Headers***Table 1-36. GET Object response headers**

Headers	Supported	Notes
Cache-Control	Yes	None
Content-Disposition	Yes	None
Content-Encoding	Yes	None
Content-Language	Yes	None
Content-Type	Yes	None
Expires	Yes	None
x-amz-delete-marker	Yes	None
x-amz-expiration	Yes	None
x-amz-meta-*	Yes	None

Table 1-36. GET Object response headers

Headers	Supported	Notes
x-amz-replication-status	N/A	Bucket replication is not
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value
x-amz-server-side-encryption-aws-kms-key-id	N/A	The encryption algorithm aws:kms is not supported.
x-amz-server-side-encryption-customer-algorithm	N/A	Customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key-MD5	N/A	Customer-provided encryption keys are not supported.
x-amz-storage-class	Yes	None
x-amz-tagging-count	N/A	None
x-amz-tagging-count	N/A	Object tagging is not
x-amz-version-id	Yes	None
x-amz-website-redirect-location	Yes	None

*Elements***Table 1-37. GET Object response elements**

Element	Supported	Notes
Cache-Control	Yes	None
Content-Disposition	Yes	None
Key	Yes	None
VersionID	Yes	None
DeleteMarker	Yes	None
DeleteMarkerVersionId	Yes	None
Error	Yes	None
Code	Yes	None
Message	Yes	None

Sample request and response

This example retrieves the version number of **my-image.jpg** in the **bucket** bucket. The response returns a 200 OK, which means the request was successful. The response also returns the version number.

Request

```
GET /my-image.jpg HTTP/1.1
Host: bucket.s3.amazonaws.com
Date: Mon, 3 Oct 2016 22:32:00 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran x-amz-
request-id: 318BC8BC148832E5
Date: Mon, 3 Oct 2016 22:32:00 GMT
Last-Modified: Wed, 12 Oct 2009 17:50:00 GMT
ETag: "fba9dede5f27731c9771645a39863328"
Content-Length: 434234 [434234 bytes of object data]
```

Special errors

None.

Related operations

- [GET Service](#) on page 115
- [GET Object acl](#) on page 79

1.11.2 GET Object acl

Get the access control list (ACL) of an object.

Because object owners and object ACLs are not supported, this operation maps to `GET Bucket acl` and returns the bucket owner and the bucket ACL. The bucket owner and the bucket ACL are effectively the object owner and the object ACL.

Permissions

You must have `READ` permissions in order to implement the `GET Object acl` operation.

Requests

Syntax

```
GET /objectname?acl HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

Table 1-38. GET Object acl request parameters

Parameter	Supported	Notes
versionID	Yes	This parameter is stored and returned in a response header for <code>GET Object</code>

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-39. GET Object acl response elements

Element	Supported	Notes
AccessControlList	Yes	None
AccessControlPolicy	Yes	None
DisplayName	Yes	None
Grant	Yes	None
Grantee	Yes	None
ID	Yes	None
Owner	Yes	None
Permission	Yes	None

Sample request and response

This request retrieves the access control list for **my-image.jpg** in the **bucket** bucket. The response returns a 200 OK, which means the request was successful. The response also returns the access control list details.

Request

```
GET /my-image.jpg?acl HTTP/1.1
Host: bucket.s3.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
```


Response

```
HTTP/1.1 200 OK
x-amz-id-2: eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
x-amz-request-id: 318BC8BC148832E5
x-amz-version-id: 4HL4kqtJlcpXroDTDmJ+rmSpXd3dIbrHY+MTRCxf3vjVBH40Nrjfkd
Date: Wed, 28 Oct 2009 22:32:00 GMT
Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
Content-Length: 124 Content-Type: text/plain Connection: close Server:
Himalaya

<AccessControlPolicy>
<Owner>
<ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
<DisplayName>mtd@amazon.com</DisplayName>
</Owner>
<AccessControlList>
<Grant>
<Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="CanonicalUser">
<ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
<DisplayName>mtd@amazon.com</DisplayName>
</Grantee>
<Permission>FULL_CONTROL</Permission>
</Grant>
</AccessControlList>
</AccessControlPolicy>
```

Special errors

None.

Related operations

- [GET Object](#) on page 75
- [PUT Object](#) on page 86
- [DELETE Object](#) on page 73

1.11.3 GET Object tagging

This operation is not supported in the ActiveScale S3 API.

Further information about the GET Object tagging operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectGETtagging.html>

1.11.4 GET Object torrent

This operation is not supported in the ActiveScale S3 API.

Further information about the GET Object torrent operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectGETtorrent.html>

1.12 HEAD Object operations

1.12.1 HEAD Object

Get the current version of an object.

Options

By default, the HEAD Object operation returns the current version of an object. To return a different version, use the `versionId` subresource.

Permissions

You must have READ permissions in order to implement the HEAD Object operation.

Requests

Syntax

```
HEAD /objectname HTTP/1.1
Host: bucket.name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

Table 1-40. HEAD Object request parameters

Parameter	Supported	Notes
<code>response-cache-control</code>	Yes	This parameter is stored and returned in a response header for GET Object and HEAD Object operations.
<code>response-content-disposition</code>	Yes	This parameter is stored and returned in a response header for GET Object and HEAD Object operations.
<code>response-content-encoding</code>	Yes	This parameter is stored and returned in a response header for GET Object and HEAD Object operations.
<code>response-content-language</code>	Yes	This parameter is stored and returned in a response header for GET Object and HEAD Object operations.
<code>response-content-type</code>	Yes	This parameter is stored and returned in a response header for GET Object and HEAD Object operations.

Table 1-40. HEAD Object request parameters

Parameter	Supported	Notes
response-expires	Yes	This parameter is stored and returned in a response header for GET Object and HEAD Object operations.
versionId	Yes	This parameter is stored and returned in a response header for GET Object and HEAD Object operations.

*Headers***Table 1-41. HEAD Object request headers**

Header	Supported	Notes
If-Modified-Since	Yes	None
If-Unmodified-Since	Yes	None
If-Match	Yes	None
If-None-Match	Yes	None
If-Range	Partially	None
Range	Yes	This object is always considered as changed. 200 OK with full content is returned. Ignoring this header could cause an incorrect 206 Partial Content response.
x-amz-server-side-encryption-customer-algorithm	No	None
x-amz-server-side-encryption-customer-key	No	By default, this header is not allowed. Customer-provided encryption keys
x-amz-server-side-encryption-customer-key-MD5	No	By default, this header is not allowed. Customer-provided encryption keys

Elements

None.

Responses

*Headers***Table 1-42. HEAD Object response headers**

Header	Supported	Notes
Cache-Control	Yes	None
Content-Disposition	Yes	None
Content-Encoding	Yes	None
Content-Language	Yes	None
Content-Type	Yes	None
Expires	Yes	None
x-amz-delete-marker	Yes	None
x-amz-expiration	Yes	None
x-amz-meta-*	Yes	Some limitations apply.
x-amz-missing-meta	N/A	The SOAP API is not supported.
x-amz-replication-status	N/A	Bucket replication is not supported.
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value aws:kms is not supported.
x-amz-server-side-encryption-aws-kms-key-id	N/A	The encryption algorithm aws:kms is not supported.
x-amz-server-side-encryption-customer-algorithm	N/A	Customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key-MD5	N/A	Customer-provided encryption keys are not supported.
x-amz-storage-class	Yes	None
x-amz-restore	N/A	None
x-amz-tagging-count	N/A	Object tagging is not supported.
x-amz-version-id	Yes	None
x-amz-website-redirect-location	Yes	None

Elements

None.

Sample request and response

The request retrieves the version number of **my-image.jpg** in the **bucket** bucket. The response returns a 200 OK, which means the request was successful. The response also returns the version number.

Request

```
GET /my-image.jpg HTTP/1.1
Host: bucket.s3.amazonaws.com
Date: Mon, 3 Oct 2016 22:32:00 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran x-amz-
request-id: 318BC8BC148832E5
Date: Mon, 3 Oct 2016 22:32:00 GMT
Last-Modified: Wed, 12 Oct 2009 17:50:00 GMT ETag: "fba9dede5f27731c9771645a39863328"
Content-Length: 434234 [434234 bytes of object data]
```

Special errors

None.

Related operations

- [GET Service](#) on page 115
- [GET Object acl](#) on page 79

1.13 OPTIONS Object operations

1.13.1 OPTIONS Object

This operation is not supported in the ActiveScale S3 API.

Further information about the `OPTIONS Object` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTOPTIONSObject.html>

1.14 POST Object operations

1.14.1 POST Object

This operation is not supported in the ActiveScale S3 API.

Further information about the `POST Object` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectPOST.html>

1.14.2 POST Object restore

This operation is not supported in the ActiveScale S3 API.

Further information about the `POST Object restore` operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectPOSTrestore.html>

1.15 PUT Object operations

1.15.1 PUT Object

Add an object to a bucket.

Permissions

You must have WRITE permissions in order to implement the PUT Object operation.

Requests

Syntax

```
PUT /objectname HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: date
Authorization: authorization string
Content-Length: lengthcontent
```

Parameters

Table 1-43. PUT Object request parameters

Parameter	Supported	Notes
x-amz-acl	No	Allowed, but ignored.
x-amz-grant-*	No	Allowed, but ignored.
x-amz-meta-*	Yes	Some limitations apply.
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value
x-amz-storage-class	Yes	None

Headers

Table 1-44. PUT Object request headers

Header	Supported	Notes
Cache-Control	Yes	This information is stored and returned in a response header for the GET Object and HEAD Object operations.
Content-Disposition	Yes	This information is stored and returned in a response header for the GET Object and HEAD Object operations.
Content-Encoding	Yes	This information is stored and returned in a response header for the GET Object and HEAD Object operations.

Table 1-44. PUT Object request headers

Header	Supported	Notes
Content-Language	Yes	This information is stored and returned in a response header for the GET Object and HEAD Object operations.
Content-MD5	Yes	This information is stored and returned in a response header for the GET Object and HEAD Object operations.
Content-Type	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.
Expect	Yes	The value for Expect must be 100-continue.
Expires	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.
x-amz-acl	No	This parameter is allowed, but ignored.
x-amz-grant-*	No	This parameter is allowed, but ignored.
x-amz-meta-*	Yes	Some limitations apply.
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value <code>aws:kms</code> is not supported.
x-amz-server-side-encryption-aws-kms-key-id	No	By default, this parameter is not allowed because the encryption algorithm <code>aws:kms</code> is not supported.
x-amz-server-side-encryption-context	No	By default, this parameter is not allowed because the encryption algorithm <code>aws:kms</code> is not supported.

Table 1-44. PUT Object request headers

Header	Supported	Notes
x-amz-server-side-encryption-customer-algorithm	No	By default, this parameter is not allowed because customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key	No	By default, this parameter is not allowed because customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key-MD5	No	By default, this parameter is not allowed because customer-provided encryption keys are not supported.
x-amz-storage-class	Yes	None

Elements

None.

Response elements

There are no response elements that are associated with the PUT Object operation.

Responses*Headers***Table 1-45. PUT Object response headers**

Header	Supported	Notes
x-amz-expiration	Yes	None
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value
x-amz-server-side-encryption-aws-kms-key-id	N/A	The encryption algorithm aws:kms is not
x-amz-server-side-encryption-customer-algorithm	N/A	Customer-provided encryption keys are not
x-amz-server-side-encryption-customer-key-MD5	N/A	Customer-provided encryption keys are not
x-amz-version-id	Yes	None

Elements

None.

Sample request and response

This example adds the file **TestObject.txt** to the **myBucket** bucket. The response returns a 200 OK, which means the request was successful.

Request

```
PUT TestObject.txt HTTP/1.1
Host: myBucket.s3.amazonaws.com
x-amz-date: Fri, 13 Apr 2012 05:40:14 GMT
Authorization: authorization string
x-amz-grant-write-acp:
id=8a6925ce4adf588a4532142d3f74dd8c71fa124ExampleCanonicalUserID x-amz-grant-
full-control: emailAddress="ExampleUser@amazon.com"
x-amz-grant-write: emailAddress="ExampleUser1@amazon.com",
emailAddress="ExampleUser2@amazon.com"
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: RUxG2sZJUfS+ezeAS2i0Xj6w/ST6xqF/8pFNHjTjTrECW56SCAUWGg+7QLVoj1GH
x-amz-request-id: 8D017A90827290BA
Date: Fri, 13 Apr 2012 05:40:25 GMT ETag: "dd038b344cf9553547f8b395a814b274"
Content-Length: 0 Server: Himalaya
Content-Length: 300 Expect: 100-continue Connection: Keep-Alive
...Object data in the body...
```

Special errors

None.

Related operations

- [PUT Object-Copy](#) on page 89
- [GET Object](#) on page 75

1.15.2 PUT Object acl

This operation is not supported in the ActiveScale S3 API.

Further information about the PUT Object acl operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectPUTacl.html>

1.15.3 PUT Object-Copy

Create a copy of an object that is already stored in a bucket.

Permissions

You must have WRITE permissions for the destination bucket in order to implement the PUT Object-Copy operation. You must have READ permissions for the source bucket in order to implement the PUT Object-Copy operation.

Requests

Syntax

```
PUT /objectname HTTP/1.1
Host: bucket.name.s3.amazonaws.com
Date: date
Authorization: authorization string
x-amz-copy-source: /sourcebucketname/sourceobjectname
```

*Parameters***Table 1-46. PUT Object-Copy**

Parameter	Supported	Notes
x-amz-acl	No	None
x-amz-grant-*	No	None
x-amz-meta-*	Yes	Some limitations apply.
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value
x-amz-storage-class	Yes	None

*Headers***Table 1-47. PUT Object-Copy request headers**

Header	Supported	Notes
x-amz-acl	No	None
x-amz-grant-*	No	None
x-amz-copy-source	Yes	None
x-amz-copy-source-if-match	No	None
x-amz-copy-source-if-modified-since	No	None
x-amz-copy-source-if-none-match	No	None
x-amz-copy-source-if-unmodified-since	No	None
x-amz-copy-source-server-side-encryption-customer-algorithm	No	Customer-provided encryption keys are not supported.
x-amz-copy-source-server-side-encryption-customer-key	No	Customer-provided encryption keys are not supported.

Table 1-47. PUT Object-Copy request headers

Header	Supported	Notes
x-amz-copy-source-server-side-encryption-customer-key-MD5	No	Customer-provided encryption keys are not supported.
x-amz-meta-*	Yes	Some limitations apply.
x-amz-metadata-directive	Yes	None
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value aws:kms is not supported.
x-amz-server-side-encryption-aws-kms-key-id	No	The encryption algorithm aws:kms is not supported.
x-amz-server-side-encryption-context	No	The encryption algorithm aws:kms is not supported.
x-amz-server-side-encryption-customer-algorithm	No	Customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key	No	Customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key-MD5	No	Customer-provided encryption keys are not supported.
x-amz-storage-class	Yes	None
x-amz-tagging-directive	No	Object tagging is not supported.
x-amz-website-redirect-location	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.
x-amz-acl	No	None

Elements

None.

Responses

*Headers***Table 1-48. PUT Object-Copy response headers**

Header	Supported	Notes
x-amz-copy-source-version-id	Yes	None
x-amz-expiration	Yes	None
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value
x-amz-server-side-encryption-aws-kms-key-id	N/A	The encryption algorithm aws:kms is not supported.
x-amz-server-side-encryption-customer-algorithm	N/A	Customer-provided encryption keys are not
x-amz-server-side-encryption-customer-key-MD5	N/A	Customer-provided encryption keys are not
x-amz-version-id	Yes	None

*Elements***Table 1-49. PUT Object-Copy response elements**

Element	Supported	Notes
CopyObjectResult	Yes	None
ETag	Yes	None
LastModified	Yes	None

Sample request and response

This example adds the file **my-second-image.jpg** to the **bucket** bucket. The response returns a 200 OK, which means the request was successful.

Request

```
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
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
x-amz-request-id: 318BC8BC148832E5
x-amz-copy-source-version-id: 3/L4kqtJlcpXroDTDmJ+rmSpXd3dIbrHY
+MTRCxf3vjVBH40Nr8X8gdRQBpUMLUo
x-amz-version-id: QUpfdndhfd8438MNF DN93jdnJFkdmqnh893 Date: Wed, 28 Oct 2009
22:32:00 GMT
Connection: close Server: AmazonS3
<CopyObjectResult>
<LastModified>2009-10-28T22:32:00</LastModified>
<ETag>"9b2cf535f27731c974343645a3985328"</ETag>
</CopyObjectResult>
```

Special errors

None.

Related operations

- [PUT Object](#) on page 86
- [GET Object](#) on page 75

1.15.4 PUT Object tagging

This operation is not supported in the ActiveScale S3 API.

Further information about the PUT Object tagging operation is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectPUTtagging.html>

1.16 Part operations

This section contains reference information about ActiveScale S3 API part operations.

1.16.1 Abort Multipart Upload

Stop a multipart upload.

Permissions

You must have WRITE permissions in order to implement the Abort Multipart Upload operation.

Requests

Syntax

```
DELETE /objectname?uploadId=uploadid HTTP/1.1
Host: bucket.name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

This operation uses common response elements only.

Sample request and response

This example stops the **example-object** upload to the **example-bucket** bucket. The response returns a 204 OK, which means the request was successful and that there is no additional content to send.

Request

```
DELETE /example-object?
uploadId=VXBsb2FkIEE1EIGZvciBlbHZpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZ HTTP/1.1
Host: example-bucket.s3.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 204 OK
x-amz-id-2: Weag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg== x-amz-
request-id: 996c76696e6727732072657175657374
Date: Mon, 1 Nov 2010 20:34:56 GMT
Content-Length: 0
Connection: keep-alive
Server: AmazonS3
```

Special errors

None.

Related operations

- [List Parts](#) on page 108
- [Upload Part](#) on page 111
- [Upload Part-Copy](#) on page 113

1.16.2 Complete Multipart Upload

Complete a multipart upload by assembling previously uploaded parts.

Permissions

You must have WRITE permissions in order to implement the Complete Multipart Upload operation.

Requests

Syntax

```
POST /objectname?uploadId=uploadid HTTP/1.1 Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string
Content-Length: length
<?xml version="1.0" encoding="UTF-8"?>
<CompleteMultipartUpload>
...
</CompleteMultipartUpload>
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

Table 1-50. Complete Multipart Upload request elements

Element	Supported	Notes
CompleteMultipartUpload	Yes	None
Part	Yes	None

Table 1-50. Complete Multipart Upload request elements

Element	Supported	Notes
PartNumber	Yes	None
ETag	Yes	None

Responses

Headers

Table 1-51. Complete Multipart Upload response headers

Header	Supported	Notes
x-amz-expiration	Yes	None
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value
x-amz-server-side-encryption-aws-kms-key-id	N/A	The encryption algorithm aws:kms is not supported.
x-amz-server-side-encryption-customer-algorithm	N/A	Customer-provided encryption keys are not
x-amz-server-side-encryption-customer-key-MD5	N/A	Customer-provided encryption keys are not
x-amz-version-id	Yes	None

Elements

Table 1-52. Complete Multipart Upload response elements

Element	Supported	Notes
Complete MultipartUploadResult	Yes	None
Location	Yes	None
Bucket	Yes	None
Key	Yes	None
ETag	Yes	None

Sample request and response

This example completes the multipart upload by assembling parts 1, 2, and 3 to form a single object. The response returns a 200 OK, which means the request was successful. It also returns the name of the assembled object and the bucket it was assembled in.

Request

```
POST /example-object?
uploadId=AAAsb2FkIElEIGZvciBlbHZpbmcncyWeeS1tb3ZpZS5tMnRzIRRwbG9hZA HTTP/1.1
Host: example-bucket.s3.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Content-Length: 391
Authorization: authorization string
<CompleteMultipartUpload>
<Part>
<PartNumber>1</PartNumber>
<ETag>"a54357aff0632cce46d942af68356b38"</ETag>
</Part>
<Part>
<PartNumber>2</PartNumber>
<ETag>"0c78aef83f66abc1fale8477f296d394"</ETag>
</Part>
<Part>
<PartNumber>3</PartNumber>
<ETag>"acbd18db4cc2f85cedef654fccc4a4d8"</ETag>
</Part>
</<Bucket>Example-Bucket</Bucket>
<Key>Example-Object</Key>
<ETag>"3858f62230ac3c915f300c664312c11f-9"</ETag>
</CompleteMultipartUploadResult>
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg== x-amz-
request-id: 656c76696e6727732072657175657374
Date: Mon, 1 Nov 2010 20:34:56 GMT
Connection: close
Server: AmazonS3
<?xml version="1.0" encoding="UTF-8"?>
<CompleteMultipartUploadResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Location>http://Example-Bucket.s3.amazonaws.com/Example-Object</Location>
```

Special errors

Table 1-53. Complete Multipart Upload special errors

Error Message	Description	HTTP Status Code	SOAP Fault Code Prefix
NoSuchUpload	The specified multipart upload does not exist. The upload ID might be invalid, or the multipart upload might have been aborted or completed.	404 Not Found	Client

Related operations

- [Abort Multipart Upload](#) on page 94
- [Initiate Multipart Upload](#) on page 98
- [List Multipart Uploads](#) on page 101

1.16.3 Initiate Multipart Upload

Start a multipart upload and return an upload ID.

Permissions

You must have WRITE permissions in order to implement the Initiate Multipart Upload operation.

Requests

Syntax

```
POST /objectname?uploads HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

Table 1-54. Initiate Multipart Upload request parameters

Parameter	Supported	Notes
x-amz-acl	No	None
x-amz-grant-*	No	None
x-amz-meta-*	Yes	Some limitations apply.
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value
x-amz-storage-class	Yes	None

Headers

Table 1-55. Initiate Multipart Upload request headers

Header	Supported	Notes
Cache-Control	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.
Content-Disposition	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.
Content-Encoding	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.
Content-Language	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.
Content-Type	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.
Expires	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.
x-amz-acl	No	None
x-amz-grant-*	No	Customer-provided encryption keys are not supported.
x-amz-meta-*	Yes	Some limitations apply.
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value aws:kms is not supported.
x-amz-server-side-encryption-aws-kms-key-id	No	The encryption algorithm aws:kms is not supported.
x-amz-server-side-encryption-context	No	The encryption algorithm aws:kms is not supported.

Table 1-55. Initiate Multipart Upload request headers

Header	Supported	Notes
x-amz-server-side-encryption-customer-algorithm	No	Customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key	No	Customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key-MD5	No	Customer-provided encryption keys are not supported.
x-amz-storage-class	Yes	None
x-amz-website-redirect-location	Yes	The information is stored and returned in a response header for GET Object and HEAD Object.

Elements

None.

Responses*Headers***Table 1-56. Initiate Multipart Upload response headers**

Header	Supported	Notes
x-amz-abort-date	N/A	The lifecycle action Abort Incomplete Multipart Upload
x-amz-abort-rule-id	N/A	The lifecycle action Abort Incomplete Multipart Upload
x-amz-server-side-encryption-aws-kms-key-id	N/A	The encryption algorithm aws:kms is not
x-amz-server-side-encryption-customer-algorithm	N/A	Customer-provided encryption keys are not
x-amz-server-side-encryption-customer-key-MD5	N/A	Customer-provided encryption keys are not
x-amz-version-id	Yes	Versioning is not

*Elements***Table 1-57. Initiate Multipart Upload response elements**

Element	Supported	Notes
InitiateMultipartUploadResult	Yes	None
Bucket	Yes	None
Key	Yes	None
UploadId	Yes	None

Sample request and response

This example starts a multipart upload. The response The response returns a 200 OK, which means the request was successful. The response also returns an upload ID.

Request

```
POST /example-object?uploads HTTP/1.1
Host: example-bucket.s3.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtrPpftaOFg== x-amz-
request-id: 656c76696e6727732072657175657374
Date: Mon, 1 Nov 2010 20:34:56 GMT
Content-Length: 197
Connection: keep-alive
Server: Himalaya
<?xml version="1.0" encoding="UTF-8"?>
<InitiateMultipartUploadResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Bucket>example-bucket</Bucket>
  <Key>example-object</Key>
  <UploadId>VXBsb2FkIElEIGZvciA2aWwpcmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZA</
UploadId>
</InitiateMultipartUploadResult>
```

Special errors

None.

Related operations

- [Abort Multipart Upload](#) on page 94
- [Complete Multipart Upload](#) on page 95
- [List Multipart Uploads](#) on page 101

1.16.4 List Multipart Uploads

List in-progress multipart uploads.

Permissions

You must have READ permissions in order to implement the List Multipart Uploads operation.

Requests

Syntax

```
GET /?uploads HTTP/1.1
Host: bucket.name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

Table 1-58. List Multipart Upload request parameters

Parameters	Supported	Notes
delimiter	Yes	None
encoding-type	Yes	None
max-uploads	Yes	None
key-marker	Yes	None
prefix	Yes	None
upload-id-marker	Yes	None

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

*Elements***Table 1-59. List Multipart Upload response elements**

Elements	Supported	Notes
ListMultipartUploadsResult	Yes	None
Bucket	Yes	None
KeyMarker	Yes	None
UploadIdMarker	Yes	None
NextKeyMarker	Yes	None
NextUploadIdMarker	Yes	None
Encoding-Type	Yes	None
MaxUploads	Yes	None
IsTruncated	Yes	None
Upload	Yes	None
Key	Yes	None
UploadId	Yes	None
Initiator	Yes	None
ID	Yes	None
DisplayName	Yes	None
Owner	Yes	None
StorageClass	Yes	None
Initiated	Yes	None
ListMultipartUploadsResult.Prefix	Yes	None
Delimiter	Yes	None
CommonPrefixes	Yes	None
CommonPrefixes.Prefix	Yes	None

Sample request and response

The following tables show an example of the request and response operations for List Multipart Upload.

The request compiles a list of in-progress multipart uploads. The response returns a 200 OK, which means the request was successful.

Request

```
GET /?uploads&max-uploads=3 HTTP/1.1
Host: example-bucket.s3.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtrPpfTaOFg== x-amz-
request-id: 656c76696e6727732072657175657374
Date: Mon, 1 Nov 2010 20:34:56 GMT
Content-Length: 1330 Connection: keep-alive Server: Himalaya

<?xml version="1.0" encoding="UTF-8"?>
<ListMultipartUploadsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Bucket>bucket</Bucket>
<KeyMarker></KeyMarker>
<UploadIdMarker></UploadIdMarker>
<NextKeyMarker>my-movie.m2ts</NextKeyMarker>
<NextUploadIdMarker>YW55IGlkZWVsdmluZydzIHVwbG9hZCBmYWlsZWQ</
NextUploadIdMarker>
<MaxUploads>3</MaxUploads>
<IsTruncated>true</IsTruncated>
```



```
<Upload>
<Key>my-divisor</Key>
<UploadId>XMgbGlrZSB1bHZpbmcncyBub3QgaGF2aW5nIG11Y2ggbHVjaw</UploadId>
<Initiator>
<ID>arn:aws:iam::111122223333:user/user1-11111a31-17b5-4fb7-9df5-
b111111f13de</ID>
<DisplayName>user1-11111a31-17b5-4fb7-9df5-b111111f13de</DisplayName>
</Initiator>
<Owner>
<ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
<DisplayName>OwnerDisplayName</DisplayName>
</Owner>
<<StorageClass>STANDARD</StorageClass>
<Initiated>2010-11-10T20:48:33.000Z</Initiated>
</Upload>
<Upload>
<Key>my-movie.m2ts</Key>
<UploadId>VXBsb2FkIE1EIGZvcjBlbHZpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZA</
UploadId>
<Initiator>
<ID>b1d16700c70b0b05597d7acd6a3f92be</ID>
<DisplayName>InitiatorDisplayName</DisplayName>
</Initiator>
<Owner>
<ID>b1d16700c70b0b05597d7acd6a3f92be</ID>
<DisplayName>OwnerDisplayName</DisplayName>
</Owner>
<StorageClass>STANDARD</StorageClass>
<Initiated>2010-11-10T20:48:33.000Z</Initiated>
</Upload>
<Upload>
<Key>my-movie.m2ts</Key>
<UploadId>YW55IGlkZWEd2h5IGVsdmluZydzIHVwbG9hZCBmYWlsZWQ</UploadId>
<Initiator>
<ID>arn:aws:iam::444455556666:user/user1-22222a31-17b5-4fb7-9df5-
b222222f13de</
ID>
<DisplayName>user1-22222a31-17b5-4fb7-9df5-b222222f13de</DisplayName>
</Initiator>
<Owner>
<ID>b1d16700c70b0b05597d7acd6a3f92be</ID>
<DisplayName>OwnerDisplayName</DisplayName>
</Owner>
<StorageClass>STANDARD</StorageClass>
<Initiated>2010-11-10T20:49:33.000Z</Initiated>

</Upload>
</ListMultipartUploadsResult>
```

Special errors

None.

Related operations

- [Abort Multipart Upload](#) on page 94
- [Complete Multipart Upload](#) on page 95
- [Initiate Multipart Upload](#) on page 98

1.16.5 List Parts

Get a list of the parts that have been uploaded for a specific multipart upload.

Permissions

You must have READ permissions in order to implement the `List Parts` operation.

Requests

Syntax

```
GET /objectname?uploadId=uploadid HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

Table 1-60. List Parts request parameters

Parameters	Supported	Notes
encoding-type	Yes	None
max-parts	Yes	None
part-number-marker	Yes	None
uploadId	Yes	None

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

Table 1-61. List Parts response headers

Header	Supported	Notes
x-amz-abort-date	Yes	None
x-amz-abort-rule-id	Yes	None

*Elements***Table 1-62. List Parts response elements**

Elements	Supported	Notes
ListPartsResult	Yes	None
Bucket	Yes	None
Encoding-Type	Yes	None
Key	Yes	None
UploadId	Yes	None
Initiator	Yes	None
ID	Yes	None
DisplayName	Yes	None
Owner	Yes	None
StorageClass	Yes	None
PartNumberMarker	Yes	None
NextPartNumberMarker	Yes	None
MaxParts	Yes	None
IsTruncated	Yes	None
Part	Yes	None
Owner	Yes	None
PartNumber	Yes	None
LastModified	Yes	None
ETag	Yes	None
Size	Yes	None

Sample request and response

The following tables show an example request/response for a `List Parts` operation.

The request compiles a list of the parts that have been uploaded in a specific multipart upload. The response returns a 200 OK, which means the request was successful. The response also displays the list.

Request

```
GET /example-object?
uploadId=XXBsb2FkIE1EIGZvciBlbHZpbmcncyVcdS1tb3ZpZS5tMnRzEEEwbG9hZA&max-
parts=2&part-number-marker=1 HTTP/1.1
Host: example-bucket.s3.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg== x-amz-
request-id: 656c76696e6727732072657175657374
Date: Mon, 1 Nov 2010 20:34:56 GMT
Content-Length: 985 Connection: keep-alive Server: AmazonS3
<?xml version="1.0" encoding="UTF-8"?>
<ListPartsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Bucket>example-bucket</Bucket>
<Key>example-object</Key>
<UploadId>XXBsb2FkIE1EIGZvcIBlbHZpbmcncyVcdS1tb3ZpZS5tMnRzEEEwbG9hZA</
UploadId>
<Initiator>
<ID>arn:aws:iam::111122223333:user/some-user-11116a31-17b5-4fb7-9df5-
b288870f11xx</ID>
<DisplayName>umat-user-11116a31-17b5-4fb7-9df5-b288870f11xx</DisplayName>
</Initiator>
<Owner>
<ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
<DisplayName>someName</DisplayName>
</Owner>
```

```
<StorageClass>STANDARD</StorageClass>
<PartNumberMarker>1</PartNumberMarker>
<NextPartNumberMarker>3</NextPartNumberMarker>
<MaxParts>2</MaxParts>
<IsTruncated>>true</IsTruncated>
<Part>
<PartNumber>2</PartNumber>
<LastModified>2010-11-10T20:48:34.000Z</
LastModified><ETag>"7778aef83f66abc1fale8477f296d394"</ETag>
<Size>10485760</Size>
</Part>
<Part>
<PartNumber>3</PartNumber>
<LastModified>2010-11-10T20:48:33.000Z</LastModified>
<ETag>"aaaa18db4cc2f85cedef654fccc4a4x8"</ETag>
<Size>10485760</Size>
</Part>
</ListPartsResult>
```

Special errors

None.

Related operations

- [List Parts](#) on page 108
- [Upload Part](#) on page 111
- [Upload Part-Copy](#) on page 113

1.16.6 Upload Part

Upload a part in a multipart upload.

Permissions

You must have WRITE permissions in order to implement the Upload Part operation.

Requests

Syntax

```
PUT /objectname?partNumber=partnumber&uploadId=uploadid HTTP/1.1
Host: bucket.name.s3.amazonaws.com
Date: date
Authorization: authorization string
Content-Length: lengthcontent
```

Parameters

None.

Headers

Table 1-63. Upload Part request headers

Header	Supported	Notes
x-amz-server-side-encryption-customer-algorithm	No	Customer-provided encryption keys are not
x-amz-server-side-encryption-customer-key	No	Customer-provided encryption keys are not
x-amz-server-side-encryption-customer-key-MD5	No	Customer-provided encryption keys are not

Elements

None.

Responses

Headers

Table 1-64. Upload Part response headers

Header	Supported	Notes
x-amz-server-side-encryption	Yes	None
x-amz-server-side-encryption-aws-kms-key-id	N/A	The encryption algorithm aws:kms is not

Table 1-64. Upload Part response headers

Header	Supported	Notes
x-amz-server-side-encryption-customer-algorithm	N/A	Customer-provided encryption keys are not
x-amz-server-side-encryption-customer-key-MD5	N/A	Customer-provided encryption keys are not

Elements

None.

Sample request and response

The following tables show an example of the request and response operations for Upload Part.

The request uploads the **my-movie.m2ts** file to the **example-bucket** bucket. The response returns a 200 OK, which means the request was successful.

Request

```
PUT /my-movie.m2ts?
partNumber=1&uploadId=VCVsb2FkIE1EIGZvciBlbZZpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZR
HTTP/1.1
Host: example-bucket.s3.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Content-Length: 10485760
Content-MD5: pUNXr/BjKK5G2UKvaRRrOA==
Authorization: authorization string
***part data omitted***
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: Vvag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOfg== x-amz-request-id:
656c76696e6727732072657175657374
Date: Mon, 1 Nov 2010 20:34:56 GMT
ETag: "b54357faf0632cce46e942fa68356b38"
Content-Length: 0
Connection: keep-alive
Server: Himalaya
```

Special errors**Table 1-65. Upload Part special errors**

Error message	Description	HTTP status code
NoSuchUpload	The upload cannot be completed.	404 Not Found

Related operations

- [Abort Multipart Upload](#) on page 94
- [Complete Multipart Upload](#) on page 95
- [Initiate Multipart Upload](#) on page 98

1.16.7 Upload Part-Copy

Upload a part by copying data from an existing object.

Permissions

You must have WRITE permissions in order to implement the Upload Part-Copy operation.

Requests

Syntax

```
PUT /objectname?partNumber=partnumber&uploadId=uploadid HTTP/1.1
Host: bucket name.s3.amazonaws.com
Date: date
Authorization: authorization string
x-amz-copy-source: /sourcebucketname/sourceobjectname
```

Parameters

None.

Headers

Table 1-66. Upload Part-Copy request headers

Header	Supported	Notes
x-amz-copy-source	Yes	None
x-amz-copy-source-if-match	No	None
x-amz-copy-source-if-modified-since	No	None
x-amz-copy-source-if-none-match	No	None
x-amz-copy-source-if-unmodified-since	No	None
x-amz-copy-source-server-side-encryption-customer-algorithm	No	Customer-provided encryption keys are not
x-amz-copy-source-server-side-encryption-customer-key	No	Customer-provided encryption keys are not
x-amz-copy-source-server-side-encryption-customer-key-MD5	No	Customer-provided encryption keys are not
x-amz-meta-*	Yes	Some limitations apply.
x-amz-metadata-directive	Yes	None
x-amz-server-side-encryption	Yes	The value AES256 is supported. The value

Table 1-66. Upload Part-Copy request headers

Header	Supported	Notes
x-amz-server-side-encryption-aws-kms-key-id	No	The encryption algorithm aws:kms is not
x-amz-server-side-encryption-context	No	The encryption algorithm
x-amz-server-side-encryption-customer-algorithm	No	Customer-provided encryption keys are not
x-amz-server-side-encryption-customer-key	No	Customer-provided encryption keys are not
x-amz-server-side-encryption-customer-key-MD5	No	Customer-provided encryption keys are not

Elements

None.

Responses*Headers***Table 1-67. Upload Part-Copy response headers**

Header	Supported	Notes
x-amz-copy-source-version-id	Yes	None
x-amz-server-side-encryption	Yes	None
x-amz-server-side-encryption-aws-kms-key-id	N/A	The encryption algorithm aws:kms is not supported.
x-amz-server-side-encryption-customer-algorithm	N/A	Customer-provided encryption keys are not supported.
x-amz-server-side-encryption-customer-key-MD5	N/A	Customer-provided encryption keys are not supported.

*Elements***Table 1-68. Upload Part-copy response elements**

Element	Supported	Notes
CopyPartResult	Yes	None
ETag	Yes	None
LastModified	Yes	None

Sample request and response

The following tables show an example of the request and response operations for Upload Part-Copy. The request uploads the **newobject** file to the **target-bucket** bucket. The response returns a 200 OK, which means the request was successful.

Request

```
PUT /newobject?
partNumber=2&uploadId=VCVsb2FkIE1EIGZvciBlbZzpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZR
HTTP/1.1
Host: target-bucket.s3.amazonaws.com Date: Mon, 11 Apr 2011 20:34:56 GMT
x-amz-copy-source: /source-bucket/sourceobject x-amz-copy-source-range: bytes=500-
6291456 Authorization: authorization string
```

Response

```
HTTP/1.1 200 OK
x-amz-id-2: Vvag1LuByRx9e6j5Onimru9p04ZVKnJ2Qz7/C1NPcfTWAtRPfTaOfg== x-amz-request-id:
656c76696e6727732072657175657374
Date: Mon, 11 Apr 2011 20:34:56 GMT
Server: AmazonS3
<CopyPartResult>
<LastModified>2009-10-28T22:32:00</LastModified>
<ETag>"9b2cf535f27731c974343645a3985328"</ETag>
</CopyPartResult>
```

Special errors

Table 1-69. Upload Part-Copy special errors

Error Message	Description	HTTP Status Code
NoSuchUpload	The specified multipart upload does not exist. The upload ID might be invalid, or the multipart upload might have been aborted or completed.	404 Not Found
InvalidRequest	The specified copy source is not supported as a byte-range copy source.	400 Bad Request

Related operations

- [Abort Multipart Upload](#) on page 94
- [Upload Part](#) on page 111
- [Complete Multipart Upload](#) on page 95

1.17 Service operations

This section contains reference information about ActiveScale S3 API service operations.

1.17.1 GET Service

Get a list of all buckets owned by the authenticated sender of the request.

Permissions

You must be the owner of the bucket in order to implement the GET Service operation.

Requests

Syntax

```
GET / HTTP/1.1
Host: s3.amazonaws.com
Date: date
Authorization: authorization string
```

Parameters

None.

Headers

This operation uses common request headers only.

Elements

None.

Responses

Headers

This operation uses common response headers only.

Elements

Table 1-70. GET Service response elements

Element	Supported	Notes
Bucket	Yes	None
Buckets	Yes	None
CreationDate	Yes	None
DisplayName	Yes	None
ID	Yes	None
ListAllMyBucketsResult	Yes	None
Name	Yes	None
Owner	Yes	None

Sample request and response

The following tables show an example request/response for a GET Service operation.

Request

```
GET / HTTP/1.1
Host: s3.amazonaws.com
Date: Wed, 01 Mar2006 12:00:00 GMT
Authorization: authorization string
```

Response

```
<?xml version="1.0" encoding="UTF-8"?>
<ListAllMyBucketsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <Owner>
    <ID>bcaf1ffd86f461ca5fb16fd081034f</ID>
    <DisplayName>webfile</DisplayName>
  </Owner>
  <Buckets>
    <Bucket>
      <Name>quotes</Name>
      <CreationDate>2006-02-03T16:45:09.000Z</CreationDate>
    </Bucket>
    <Bucket>
      <Name>samples</Name>
      <CreationDate>2006-02-03T16:41:58.000Z</CreationDate>
    </Bucket>
  </Buckets>
</ListAllMyBucketsResult>
```

Special errors

None.

Related operations

- [GET Bucket \(list objects\) v1](#) on page 36
- [GET Object](#) on page 75

1.18 Java functions

1.18.1 getPartCount

The `getPartCount` function returns the number of parts in a multipart message.

Permissions

You must be the owner of the bucket in order to call the `getPartCount` function.

Call syntax

```
public int getPartCount
```

Parameters

- `getObjectRequest`—The request to check for the number of parts.
- `s3`—The name of the Amazon s3 client.

Function return

The `getPartCount` function returns the number of parts in the object if it is a multipart object. If it not multipart, the `getPartCount` functions returns null.

Related functions

- `createMultipartMessage`
- `addBytesPart`
- `addMessagePart`

2 Differences between ActiveScale S3 API releases

This section describes the differences between the current and previous three releases of ActiveScale S3 API.

- [Common request headers](#) on page 119
- [Common response headers](#) on page 120
- [PUT Bucket request/response headers](#) on page 120
- [PUT Object request/response parameters and headers](#) on page 121
- [GET Object request/response parameters and headers](#) on page 122
- [Authentication with AWS signature v4](#) on page 123
- [Authentication with AWS signature v2](#) on page 124
- [AWS S3 API](#) on page 125
- [AWS S3 Error Codes](#) on page 128

2.1 Common request headers

Table 2-1. Support for common request headers

Request header	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
Authorization	V2, V4	V2, V4	V2, V4	V2, V4	V2, V4
Content-Length	✓	✓	✓	✓	✓
Content-Type	✓	✓	✓	✓	✓
Content-MD5	✓	✓	✓	✓	✓
Date	✓	✓	✓	✓	✓
Expect	✓	✓	✓	✓	✓
Host	✓	✓	✓	✓	✓
x-amz-content-sha256	✓	✓	✓	✓	✓
x-amz-date	✓	✓	✓	✓	✓
x-amz-security-token	✗	✗	✗	✗	✗

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTCommonRequestHeaders.html>

2.2 Common response headers

Table 2-2. Support for common response headers

Response header	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
Content-Length	✓	✓	✓	✓	✓
Content-Type	✓	✓	✓	✓	✓
Connection	✓	✓	✓	✓	✓
Date	✓	✓	✓	✓	✓
ETag	✓	✓	✓	✓	✓
Server	✓	✓	✓	✓	✓
x-amz-delete-marker	✓	✓	✓	✓	✓
x-amz-id-2	✓	✓	✓	✓	✓
x-amz-request-id	✓	✓	✓	✓	✓
x-amz-version-id	✓	✓	✓	✓	✓

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTCommonResponseHeaders.html>

2.3 PUT Bucket request/response headers

Table 2-3. Support for PUT Bucket request/response headers

Request header	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
x-amz-acl	✓	✓	✓	✓	✓
x-amz-grant-read	✓	✓	✓	✓	✓
x-amz-grant-write	✓	✓	✓	✓	✓
x-amz-grant-read-acp	✓	✓	✓	✓	✓
x-amz-grant-write-acp	✓	✓	✓	✓	✓
x-amx-grant-full-control	✓	✓	✓	✓	✓

Table 2-4. Support for PUT Bucket request elements

Request element	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
CreateBucketConfiguration	✓	✓	✓	✓	✓
LocationConstraint	ignored	ignored	ignored	ignored	ignored

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTBucketPUT.html>

2.4 PUT Object request/response parameters and headers

Table 2-5. Support for PUT Object request parameters

Request parameter	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
x-amz-acl	ignored	ignored	ignored	ignored	ignored
x-amz-grant-*	ignored	ignored	ignored	ignored	ignored
x-amz-meta	✓	✓	✓	✓	✓
x-amz-server-side-encryption	✓ AES256	✓ AES256	✓ AES256	✓ AES256	✓ AES256
x-amz-storage-class	✓	✓	✓	✓	✓

Table 2-6. Support for PUT Object request headers

Request header	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
Cache-Control	✓	✓	✓	✓	✓
Content-Disposition	✓	✓	✓	✓	✓
Content-Encoding	✓	✓	✓	✓	✓
Content-Language	✓	✓	✓	✓	✓
Content-Type	✓	✓	✓	✓	✓
Expires	✓	✓	✓	✓	✓
x-amz-acl	ignored	ignored	ignored	ignored	ignored
x-amz-grant-*	ignored	ignored	ignored	ignored	ignored
x-amz-meta-*	✓	✓	✓	✓	✓
x-amz-server-side-encryption	✓	✓	✓	✓	✓
x-amz-server-side-encryption-aws-kms-key-id	✗	✗	✗	✗	✗
x-amz-server-side-encryption-context	✗	✗	✗	✗	✗
x-amz-server-side-encryption-customer-algorithm	✗	✗	✗	✗	✗
x-amz-server-side-encryption-customer-key	✗	✗	✗	✗	✗
x-amz-server-side-encryption-customer-key-MD5	✗	✗	✗	✗	✗
x-amz-storage-class	✓	✓	✓	✓	✓
x-amz-website-redirect-location	✓	✓	✓	✓	✓

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectPUT.html>

2.5 GET Object request/response parameters and headers

Table 2-7. Support for GET Object request parameters

Request parameter	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
response-cache-control	✓	✓	✓	✓	✓
response-content-disposition	✓	✓	✓	✓	✓
response-content-encoding	✓	✓	✓	✓	✓
response-content-language	✓	✓	✓	✓	✓
response-content-type	✓	✓	✓	✓	✓
response-expires	✓	✓	✓	✓	✓

Table 2-8. Support for GET Object request headers

Request header	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
Range	✓	✓	✓	✓	✓
If-Modified-Since	✓	✓	✓	✓	✓
If-Unmodified-Since	✓	✓	✓	✓	✓
If-Match	✓	✓	✓	✓	✓
If-none-Match	✓	✓	✓	✓	✓
x-amz-server-side-encryption-customer-algorithm	✗	✗	✗	✗	✗
x-amz-server-side-encryption-customer-key	✗	✗	✗	✗	✗
x-amz-server-side-encryption-customer-key-md5	✗	✗	✗	✗	✗

Table 2-9. Support for GET Object response headers

Response header	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
Cache-Control	✓	✓	✓	✓	✓
Content-Disposition	✓	✓	✓	✓	✓
Content-Encoding	✓	✓	✓	✓	✓
Content-Language	✓	✓	✓	✓	✓
Content-Type	✓	✓	✓	✓	✓
Expires	✓	✓	✓	✓	✓
x-amz-delete-marker	✓	✓	✓	✓	✓
x-amz-expiration	✓	✓	✓	✓	✓
x-amz-meta-*	✓	✓	✓	✓	✓
x-amz-replication-status	✓	✓	✓	✓	
x-amz-server-side-encryption	✓	✓	✓	✓	✓
x-amz-server-side-encryption-aws-kms-key-id	✗	✗	✗	✗	✗
x-amz-server-side-encryption-customer-algorithm	✗	✗	✗	✗	✗
x-amz-server-side-encryption-customer-key-md5	✗	✗	✗	✗	✗
x-amz-storage-class	✓	✓	✓	✓	✓
x-amz-version-id	✓	✓	✓	✓	✓
x-amz-website-redirect-location	✓	✓	✓	✓	✓

<http://docs.aws.amazon.com/AmazonS3/latest/API/RESTObjectGET.html>

2.6 Authentication with AWS signature v4

Table 2-10. Support for AWS authentication v4 authentication headers

HTTP authentication header component	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
AWS4-HMAC-SHA256	✓	✓	✓	✓	✓
Credential	✓	✓	✓	✓	✓
SignedHeaders	✓	✓	✓	✓	✓
Signature	✓	✓	✓	✓	✓

Table 2-11. Support for AWS authentication v4 request parameters

Query parameter	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
X-Amz-Algorithm	✓	✓	✓	✓	✓
X-Amz-Credential	✓	✓	✓	✓	✓
X-Amz-Date	✓	✓	✓	✓	✓
X-Amz-Expires	✓	✓	✓	✓	✓
X-Amz-SignedHeaders	✓	✓	✓	✓	✓
X-Amz-Signature	✓	✓	✓	✓	✓

Table 2-12. Support for AWS authentication v4 request headers related to signed payloads

Request Headers Related To (Signed) Payload Transfer	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
x-amz-content-sha256	✓	✓	✓	✓	✓
x-amz-decoded-content-length	✓	✓	✓	✓	✓
Content-Encoding: aws-chunked	✓	✓	✓	✓	✓
Transfer-Encoding: chunked	✓	✓	✓	✓	✓

<http://docs.aws.amazon.com/AmazonS3/latest/API/sig-v4-authenticating-requests.html>

2.7 Authentication with AWS signature v2

Table 2-13. Support for AWS authentication v2 authentication headers

HTTP authorization header	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
AWS	✓	✓	✓	✓	✓
AWS-AccessKeyID	✓	✓	✓	✓	✓
Signature	✓	✓	✓	✓	✓

Table 2-14. Support for AWS authentication v2 request parameters

Query parameter	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
AWS	✓	✓	✓	✓	✓
AWS-AccessKeyID	✓	✓	✓	✓	✓
Signature	✓	✓	✓	✓	✓

<http://docs.aws.amazon.com/AmazonS3/latest/dev/RESTAuthentication.html>

2.8 AWS S3 API

Table 2-15. Support for AWS S3 API

Name	Applies to	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
GET service	Service	✓	✓	✓	✓	✓
DELETE Bucket	Buckets	✓	✓	✓	✓	✓
DELETE Bucket cors	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✗
DELETE Bucket lifecycle	Buckets	✓	✓	✓	✓	✓
DELETE Bucket policy	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✗
DELETE Bucket replication	Buckets	✓	✓	✓	✓	✓ (dummy response)
DELETE Bucket tagging	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✗
DELETE Bucket website	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✗
GET Bucket (List Objects) V1	Buckets	✓	✓	✓	✓	✓
GET Bucket (List Objects) V2	Buckets	✓	✓	✓	✓	✓
GET Bucket accelerate	Buckets	✗	✗	✗	✗	✗
GET Bucket acl	Buckets	✓	✓	✓	✓	✓
GET Bucket cors	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✗
GET Bucket lifecycle	Buckets	✓	✓	✓	✓	✓
GET Bucket location	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)
GET Bucket logging	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)
GET Bucket notification	Buckets	✓	✗	✗	✗	✗
GET Bucket object versions	Buckets	✓	✓	✓	✓	✓
GET Bucket policy	Buckets	✓	✓	✓	✓	✓ (dummy response)
GET Bucket replication	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)
GET Bucket requestPayment	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)
GET Bucket tagging	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✗

Table 2-15. Support for AWS S3 API

GET Bucket versioning	Buckets	✓	✓	✓	✓	✓
GET Bucket website	Buckets	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✓ (dummy response)	✗
HEAD Bucket	Buckets	✓	✓	✓	✓	✓
List Multipart Uploads	Buckets	✓	✓	✓	✓	✓
PUT Bucket	Buckets	✓	✓	✓	✓	✓
PUT Bucket accelerate	Buckets	✗	✗	✗	✗	✗
PUT Bucket acl	Buckets	✓	✓	✓	✓	✓
PUT Bucket cors	Buckets	✗	✗	✗	✗	✗
PUT Bucket lifecycle	Buckets	actions "Expiration" & "NoncurrentVersionsExpiration"	actions "Expiration" & "NoncurrentVersionsExpiration"	actions "Expiration" & "NoncurrentVersionsExpiration"	actions "Expiration" & "NoncurrentVersionsExpiration"	actions "Expiration" & "NoncurrentVersionsExpiration"
PUT Bucket logging	Buckets	✗	✗	✗	✗	✗
PUT Bucket notification	Buckets	✓	✗	✗	✗	✗
PUT Bucket policy	Buckets	✗	✗	✗	✗	✗
PUT bucket replication	Buckets	✓	✓	✓	✓	✓ (dummy response)
PUT Bucket requestPayment	Buckets	✗	✗	✗	✗	✗
PUT Bucket tagging	Buckets	✗	✗	✗	✗	✗
PUT Bucket versioning	Buckets	✓	✓	✓	✓	✓
PUT Bucket website	Buckets	✗	✗	✗	✗	✗
DELETE Object	Objects	✓	✓	✓	✓	✓
Delete Multiple Objects	Objects	✓	✓	✓	✓	✓
GET Object	Objects	✓	✓	✓	✓	✓
GET Object acl	Objects	Same as GET Bucket acl	Same as GET Bucket acl	Same as GET Bucket acl	Same as GET Bucket acl	Same as GET Bucket acl
GET Object torrent	Objects	✗	✗	✗	✗	✗
HEAD Object	Objects	✓	✓	✓	✓	✓
OPTIONS object	Objects	✗	✗	✗	✗	✗
POST Object	Objects	✗	✗	✗	✗	✗
POST Object restore	Objects	✗	✗	✗	✗	✗
PUT Object	Objects	✓	✓	✓	✓	✓
PUT Object acl	Objects	✗	✗	✗	✗	✗
PUT Object - Copy	Objects	✓	✓	✓	✓	✓
Initiate Multipart Upload	Objects	✓	✓	✓	✓	✓

Table 2-15. Support for AWS S3 API

Upload Part	Objects	✓	✓	✓	✓	✓
Upload Part - Copy	Objects	✓	✓	✓	✓	✓
Complete Multipart Upload	Objects	✓	✓	✓	✓	✓
Abort Multipart Upload	Objects	✓	✓	✓	✓	✓
List Parts	Objects	✓	✓	✓	✓	✓

<http://docs.aws.amazon.com/AmazonS3/latest/API/APIRest.html>

2.9 AWS S3 Error Codes

The list below represents ActiveScale support for error codes as defined by the AWS S3 API. For a comprehensive of all ActiveScale possible error codes, see [ActiveScale S3 error codes](#) on page 142.

Table 2-16. Support for AWS S3 error codes

Name	HTTP status	ActiveScale OS 5.5	ActiveScale OS 5.4	ActiveScale OS 5.3	ActiveScale OS 5.2	ActiveScale OS 5.1
AccessDenied	403 Forbidden	✓	✓	✓	✓	✓
AccountProblem	403 Forbidden	✗	✗	✗	✗	✗
AmbiguousGrantByEmailA	400 Bad Request	✗	✗	✗	✗	✗
BadDigest	400 Bad Request	✓	✓	✓	✓	✓
BucketAlreadyExists	409 Conflict	✓	✓	✓	✓	✓
BucketAlreadyOwnedByYo	409 Conflict	✓	✓	✓	✓	✓
BucketNotEmpty	409 Conflict	✓	✓	✓	✓	✓
CredentialsNotSupporte	400 Bad Request	✗	✗	✗	✗	✗
CrossLocationLoggingPr	403 Forbidden	✗	✗	✗	✗	✗
EntityTooSmall	400 Bad Request	✓	✓	✓	✓	✓
EntityTooLarge	400 Bad Request	✓	✓	✓	✓	✓
ExpiredToken	400 Bad Request	✗	✗	✗	✗	✗
IllegalVersioningConfig urationE xception	400 Bad Request	✓	✓	✓	✓	✓
IncompleteBody	400 Bad Request	✓	✓	✓	✓	✓
IncorrectNumberOfFilesI nPostReq uest	400 Bad Request	✗	✗	✗	✗	✗
InlineDataTooLarge	400 Bad Request	✗	✗	✗	✗	✗
InternalServerError	500 Internal Server Error	✓	✓	✓	✓	✓
InvalidAccessKeyId	403 Forbidden	✓	✓	✓	✓	✓
InvalidAddressingHeade	N/A	✗	✗	✗	✗	✗
InvalidArgument	400 Bad Request	✓	✓	✓	✓	✓
InvalidBucketName	400 Bad Request	✓	✓	✓	✓	✓
InvalidBucketState	409 Conflict	✗	✗	✗	✗	✗
InvalidDigest	400 Bad Request	✓	✓	✓	✓	✓
InvalidEncryptionAlgor	400 Bad Request	✓	✓	✓	✓	✓
InvalidLocationConstra	400 Bad Request	✓	✓	✓	✓	✓
InvalidObjectState	403 Forbidden	✗	✗	✗	✗	✗
InvalidPart	400 Bad Request	✓	✓	✓	✓	✓
InvalidPartOrder	400 Bad Request	✓	✓	✓	✓	✓
InvalidPayer	403 Forbidden	✗	✗	✗	✗	✗
InvalidPolicyDocument	400 Bad Request	✗	✗	✗	✗	✗
InvalidRange	416 Requested Range Not Satisfiable	✓	✓	✓	✓	✓
InvalidRequest	400 Bad Request	✓	✓	✓	✓	✓
InvalidSecurity	403 Forbidden	✗	✗	✗	✗	✗
InvalidSOAPRequest	400 Bad Request	✗	✗	✗	✗	✗

Table 2-16. Support for AWS S3 error codes

InvalidStorageClass	400 Bad Request	✓	✓	✓	✓	✓
InvalidTargetBucketFor	400 Bad Request	✗	✗	✗	✗	✗
InvalidToken	400 Bad Request	✗	✗	✗	✗	✗
InvalidURI	400 Bad Request	✓	✓	✓	✓	✓
KeyTooLong	400 Bad Request	✓	✓	✓	✓	✓
MalformedACLError	400 Bad Request	✓	✓	✓	✓	✓
MalformedPOSTRequest	400 Bad Request	✗	✗	✗	✗	✗
MalformedXML	400 Bad Request	✓	✓	✓	✓	✓
MaxMessageLengthExceed	400 Bad Request	✗	✗	✗	✗	✗
MaxPostPreDataLengthExceededError	400 Bad Request	✗	✗	✗	✗	✗
MetadataTooLarge	400 Bad Request	✓	✓	✓	✓	✓
MethodNotAllowed	405 Method Not Allowed	✓	✓	✓	✓	✓
MissingAttachment	N/A	✓	✓	✓	✓	✓
MissingContentLength	411 Length Required	✓	✓	✓	✓	✓
MissingRequestBodyError	400 Bad Request	✓	✓	✓	✓	✓
MissingSecurityElement	400 Bad Request	✗	✗	✗	✗	✗
MissingSecurityHeader	400 Bad Request	✓	✓	✓	✓	✓
NoLoggingStatusForKey	400 Bad Request	✓	✓	✓	✓	✓
NoSuchBucket	404 Not Found	✓	✓	✓	✓	✓
NoSuchKey	404 Not Found	✓	✓	✓	✓	✓
NoSuchLifecycleConfig	404 Not Found	✓	✓	✓	✓	✓
NoSuchUpload	404 Not Found	✓	✓	✓	✓	✓
NoSuchVersion	404 Not Found	✓	✓	✓	✓	✓
NotImplemented	501 Not Implemented	✓	✓	✓	✓	✓
NotSignedUp	403 Forbidden	✗	✗	✗	✗	✗
NoSuchBucketPolicy	404 Not Found	✓	✓	✓	✓	✓
OperationAborted	409 Conflict	✗	✗	✗	✗	✗
PermanentRedirect	301 Moved Permanently	✗	✗	✗	✗	✗
PreconditionFailed	412 Precondition Failed	✓	✓	✓	✓	✓
Redirect	307 Moved Temporarily	✗	✗	✗	✗	✗
RestoreAlreadyInProgress	409 Conflict	✗	✗	✗	✗	✗
RequestIsNotMultiPartC	400 Bad Request	✗	✗	✗	✗	✗
RequestTimeout	400 Bad Request	✓	✓	✓	✓	✓
RequestTimeTooSkewed	403 Forbidden	✓	✓	✓	✓	✓
RequestTorrentOfBucket	400 Bad Request	✓	✓	✓	✓	✓
SignatureDoesNotMatch	403 Forbidden	✓	✓	✓	✓	✓
ServiceUnavailable	503 Service Unavailable	✓	✓	✓	✓	✓
SlowDown	503 Slow Down	✗	✗	✗	✗	✗

Table 2-16. Support for AWS S3 error codes

TemporaryRedirect	307 Moved Temporarily					
TokenRefreshRequired	400 Bad Request	✘	✘	✘	✘	✘
TooManyBuckets	400 Bad Request					
UnexpectedContent	400 Bad Request					
UnresolvableGrantByEma	400 Bad Request					
UserKeyMustBeSpecified	400 Bad Request					

<http://docs.aws.amazon.com/AmazonS3/latest/API/ErrorResponses.html#ErrorCodeList>

3 Differences between AWS and this release

The ActiveScale S3 API provides a subset of the AWS S3 API. This section describes the differences between AWS S3 API and ActiveScale S3 API, and between the current and previous three releases of ActiveScale S3 API.

- [Date limitations](#) on page 131
- [Differences between Amazon S3 API and ActiveScale S3 API](#) on page 131
- [Headers](#) on page 136
- [Identity and access management](#) on page 137
- [Naming restrictions](#) on page 138
- [Object ACLs](#) on page 138
- [Object versioning](#) on page 138
- [Preconfigured ACLs](#) on page 138
- [Query parameters](#) on page 139
- [Regions](#) on page 139
- [S3 Request styles](#) on page 139
- [S3 whitelisting](#) on page 140
- [Server-side encryption](#) on page 140
- [Storage classes](#) on page 140
- [User defined metadata](#) on page 141

3.1 Date limitations

ActiveScale S3 API only supports a subset of date values supported by Amazon S3. Amazon S3 allows dates with very large year values.

The maximum year value that is allowed by ActiveScale is 9999. The Amazon S3 allows the user to specify time zones after the date; for example, 2016-08-18T04:00:00.000+04. This is not allowed in ActiveScale.

3.2 Differences between Amazon S3 API and ActiveScale S3 API

The following sections provide information about the differences between Amazon S3 and ActiveScale S3.

3.2.1 Differences in bucket operations

This section provides information about the differences between AWS S3 bucket operations and ActiveScale S3 bucket operations.

Table 3-1. Differences in bucket operations

Application	Amazon S3	ActiveScale S3
Executing PUT Bucket with an existing bucket name.	Amazon S3 returns an HTTP 200 OK message.	ActiveScale S3 returns an HTTP 409 Conflict message.

Table 3-1. Differences in bucket operations

Application	Amazon S3	ActiveScale S3
Executing <code>PUT Bucket</code> with a bucket name containing any of the following special characters. <ul style="list-style-type: none"> • { • } • < • > • [•] • • ` • ^ • " 	Amazon S3 returns an HTTP 400 Bad Request message.	ActiveScale S3 returns a 400 Bad Request message.
Creating too many buckets for the same user.		ActiveScale S3 reports the following missing elements. <ul style="list-style-type: none"> • CurrentNumberOfBuckets • AllowedNumberOfBuckets • HostId ActiveScale S3 reports the following extra elements. <ul style="list-style-type: none"> • Resource
Executing <code>DELETE Bucket</code> on an bucket that is not empty.		
Executing <code>GET Bucket (List Objects)</code> with a <code>max-keys</code> value greater than 1000.	Amazon S3 returns a maximum of 1,000 keys.	ActiveScale S3 does not allow a maximum key value greater than 1000, due to a possible stack overflow. It returns an Invalid Parameter message.
Executing <code>HEAD Bucket</code> .		ActiveScale S3 returns an extra <code>charset=UTF-8</code> in <code>Content-Type</code> in the header.
Executing <code>HEAD Bucket</code> for a bucket or key that does not exist.	Amazon S3 returns an HTTP 404 Page Not Found message.	ActiveScale S3 returns HTTP 404 Page Not Found and with the messages <code>NoSuchBucket</code> or <code>NoSuchKey</code> in the body.
Executing <code>HEAD Bucket</code> without sufficient permissions to access that bucket.	Amazon S3 returns an HTTP 403 Forbidden message.	ActiveScale S3 returns an HTTP 403 Forbidden message with the message <code>Access Denied</code> in the body.

Table 3-1. Differences in bucket operations

Application	Amazon S3	ActiveScale S3
Executing GET Bucket with a maximum key value greater than 1,000.	Amazon S3 returns a maximum of 1,000 keys.	ActiveScale S3 returns an HTTP 400 Invalid Argument message.
Executing GET Bucket (List Objects) with a maximum key value greater than 1000.	Amazon S3 returns a maximum of 1,000 keys.	ActiveScale S3 does not allow a maximum key value greater than 1000, due to a possible stack overflow. ActiveScale S3 returns an Invalid Parameter message.
Executing HEAD Bucket.		ActiveScale S3 returns an extra charset=UTF-8 in Content-Type in the header.
Executing HEAD Bucket for a bucket or key that does not exist.	Amazon S3 returns an HTTP 404 Page Not Found message.	ActiveScale S3 returns HTTP 404 Page Not Found together with the messages NoSuchBucket or NoSuchKey in the body.
Executing HEAD Bucket without sufficient permissions to access that bucket.	Amazon S3 returns an HTTP 403 Forbidden message.	ActiveScale S3 returns an HTTP 403 Forbidden message together with the message AccessDenied in the body.
Executing GET Bucket with a maximum key value greater than 1,000.	Amazon S3 returns a maximum of 1,000 keys.	ActiveScale S3 returns an HTTP 400 Invalid Argument message.

3.2.2 Differences in object operations

This section provides information about the differences between Amazon S3 object operations and ActiveScale S3 object operations.

Table 3-2. Differences in object operations

Application	Amazon S3	ActiveScale S3
Specifying an object key name.	Amazon S3 allows a maximum of 1024 characters.	ActiveScale S3 allows more than 1024 characters.
Specifying an object with a name containing the following special characters, using <code>s3cmd</code> . <ul style="list-style-type: none"> • [•] • \ • ^ 	Amazon S3 returns an HTTP 200 OK message.	ActiveScale S3 returns an HTTP 501 Not Implemented message.
Adding custom metadata to objects.	Amazon S3 allows a maximum of 2 KiB for custom metadata in objects.	ActiveScale S3 allows custom metadata to exceed 2 KiB. However, this is not recommended.

Table 3-2. Differences in object operations

Application	Amazon S3	ActiveScale S3
Executing DELETE Object on an object that does not exist.	Amazon S3 returns an HTTP 200 OK message.	ActiveScale S3 returns errors.
Executing PUT Object for an object larger than 5 GB.	Amazon S3 does not support this operation. You must use the multipart upload APIs.	ActiveScale S3 supports this operation. However, it may produce errors.
Executing PUT Object on a bucket that does not exist.		ActiveScale S3 returns the following missing elements. <ul style="list-style-type: none"> • BucketName • HostId
Executing PUT Object with the following headers. <ul style="list-style-type: none"> • x-amz-server-sideencryption • x-amz-website-redirectlocation • x-amz-grant-read • x-amz-grant-write • x-amz-grant-read-acp • x-amz-grant-write-acp • x-amz-grant-fullcontrol 		ActiveScale S3 returns an HTTP 501 Not Implemented message.
Canceling a multipart upload and then trying to upload another part.	Amazon S3 returns a socket timeout.	ActiveScale S3 returns an HTTP 404 Not Found, with a message in the body, NoSuchUpload.

3.2.3 Differences in service operations

This section provides information about the differences between AWS S3 service operations and ActiveScale S3 service operations.

Table 3-3. Differences in service operations

Application	Amazon S3	ActiveScale S3
Executing GET Service with query parameters using a WebDrive client.		ActiveScale S3 does not handle multiple query parameters when they are using a WebDrive client. Be sure to specify a bucket name in the request.

3.2.4 Differences in requests

This section provides information about the differences between AWS S3 requests and ActiveScale S3 requests.

Table 3-4. Differences in requests

Application	Amazon S3	ActiveScale S3
Sending dummy headers.	Amazon S3 returns an HTTP 200 OK message.	ActiveScale S3 returns errors.
Sending a request with an Expires parameter.	Amazon S3 returns an HTTP 200 OK message.	ActiveScale S3 returns an HTTP 501 Not Implemented message.
Sending a request with a TE parameter.	Amazon S3 returns an HTTP 200 OK message.	ActiveScale S3 returns an HTTP 501 Not Implemented message.
Sending a request with a timezone of <i>CETrandomstring</i> .	Amazon S3 interprets the string as CET.	ActiveScale S3 interprets the string as CETran, which is an unknown timezone.
Sending a request with an unsupported time zone format.	Amazon S3 returns an HTTP 403 Forbidden message.	ActiveScale S3 returns an HTTP 500 Internal Server Error message.
Sending a request without the HTTP Date header.	Amazon S3 returns an HTTP 403 Forbidden message.	ActiveScale S3 returns an HTTP 500 Internal Server Error message.
Sending a request with an unsupported HTTP version.	Amazon S3 returns an HTTP 505 HTTP Version Not Supported message.	ActiveScale S3 returns an HTTP 500 Internal Server Error message.
Sending a request with bad URL encoding.	Amazon S3 returns an HTTP 400 Invalid URI: EOF message.	ActiveScale S3 returns an HTTP 501 Not Implemented message.
Sending a request with an invalid path.	Amazon S3 returns an HTTP 400 Invalid URI message.	ActiveScale S3 returns an HTTP 500 Internal Server Error.
Sending a request with a different Host value than the one configured in ActiveScale.	Amazon S3 returns an HTTP 301 Moved Permanently message.	ActiveScale S3 returns an HTTP 400 Bad Request message.
Specifying an incorrect md5sum value.	AWS S3 returns the error message The Content-MD5 you specified did not match what we received.	ActiveScale S3 returns the error message The Content-MD5 you specified was an invalid.
Sending a request with Accept- Encoding: Identity.	Amazon S3 chunks Transfer-Encoding.	ActiveScale S3 ignores the header. Transfer-Encoding is not chunked.

Table 3-4. Differences in requests

Application	Amazon S3	ActiveScale S3
Sending a GET request with If- Range in the header.	AWS S3 returns an HTTP 200 OK message.	ActiveScale S3 returns an HTTP 501 Not Implemented message.

3.3 Headers

The following sections provide information about headers.

3.3.1 Common request headers

The following table lists the common request headers for the ActiveScale S3 API.

Header	Supported	Notes
Authorization	Yes	None
Content-Length	Yes	None
Content-Type	Yes	None
Content-MD5	Yes	None
Date	Yes	None
Expect	Yes	None
Host	Yes	None
x-amz-content-sha256	Yes	None
x-amz-date	Yes	None
x-amz-security-token	No	None

Note: See RFC2616 for more information about headers.

3.3.2 Common response headers

The following table lists the common response headers for the ActiveScale S3 API.

Header	Supported	Notes
Content-Length	Yes	None
Content-Type	Yes	None
Connection	Yes	None
Date	Yes	None
ETag	Yes	None
Server	Yes	None

Header	Supported	Notes
x-amz-delete-marker	Yes	None
x-amz-id-2	Yes	None
x-amz-request-id	Yes	None

Note: See RFC2616 for more information about headers.

3.3.3 Headers that are not implemented

The following headers are not implemented in the ActiveScale S3 API.

- x-amz-copy-source-if-match
- x-amz-copy-source-if-none-match
- x-amz-copy-source-if-unmodified-since
- x-amz-copy-source-if-modified-since

3.4 Identity and access management

ActiveScale Identity and Access Management (IAM) is a web service that helps to securely control user access to resources. IAM authentication controls who can use the resources.

3.4.1 System node identity model

In ActiveScale, every customer is an entity which almost always represents a company or legal entity. Every customer has the same identity model which consists of three levels.

The following list defines the identity models.

- **Storage Admin**—The **Storage Admin**, or user identity administrator of a customer, is the identity who manages the customer accounts and users. There is only one storage administrator per customer supported.
- **Account**—The **Account** identity can be considered as a division of the company. But this identity also acts as a system administrator or a super user. The account has one or more API keys, known as root keys, which allows bucket management.
- **User**—The **User** identity belongs to one account and is linked through the canonical ID of the account. The user is the machine or person who initiates S3 requests.

3.4.2 Groups

The following list defines the system node groups.

- **Authenticated users**—This group contains all users and accounts who have active S3 API keys.
- **All users**—This group contains all the users, with or without S3 API keys. This allows for anonymous bucket and object operations.

3.4.3 Comparing ActiveScale and AWS IAMs

The following table outlines a comparison between ActiveScale and AWS.

Table 3-5. Comparing ActiveScale Identities and AWS IAM

ActiveScale	AWS IAM
Three identities, Storage Admin , Account , and User .	Two identities, AWS Accounts and IAM Users .
Two groups, authenticated users and all users.	Two global groups, authenticated users and unauthenticated users.
Simpler than AWS.	The user who uploads the objects is the object owner.
More oriented towards the private cloud than the ISP cloud.	
Per-object READ permission is granted automatically for every object in a specific bucket.	

3.5 Naming restrictions

The following list outlines the naming restrictions for the ActiveScale S3 API.

- Standard ASCII characters for user names
- Standard ASCII characters for bucket names
- Standard ASCII characters for object names
- Standard ASCII characters for access and secret access keys

3.5.1 Bucket names

Information about bucket names is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/dev/BucketRestrictions.html#bucketnamingrules>

3.6 Object ACLs

Setting ACLs on individual objects is not supported. Objects will inherit the ACL settings for the bucket in which they are stored.

Objects uploaded by an S3 account other than the bucket owner, will be considered owned by the bucket owner, not the user who uploaded the object.

3.7 Object versioning

ActiveScale supports AWS S3 object versioning, which allows users to store and manage multiple instances of the same object in a bucket. For newly created buckets, versioning is disabled by default. Refer to the calls in the API guide above for more information on how to manage versioning on a bucket and object level. ActiveScale does not have support for MFA (Multi-factor Authentication) Delete in the bucket versioning policy.

Further information is found on the following Amazon API Reference page.

<http://docs.aws.amazon.com/AmazonS3/latest/dev/Versioning.html>

3.8 Preconfigured ACLs

The ActiveScale S3 API supports the following AWS pre-configured ACLs at the bucket level.

- private
- public-read—Anonymous reads only.
- public-read-write— Anonymous reads and writes.
- authenticated-reads—Read access for any successfully authenticated S3 request.

3.9 Query parameters

The ActiveScale S3 API processes the following query parameters.

With the GET Bucket requests:

- prefix
- delimiter
- marker
- max-keys

With the GET Object request:

- Expires
- AWSAccessKeyId
- Signature

3.10 Regions

PUT Bucket will accept any specified `LocationConstraint` value. The region supported in subsequent operations on the bucket is always the region specified by `LocationConstraint`. `us-east-1` is the default region. In response to some requests like GET Bucket location, the region may be left blank because an empty `LocationConstraint` value indicates `us-east-1`.

3.11 S3 Request styles

The ActiveScale S3 API supports accessing buckets with both the virtual hosted style request and the older path style request.

3.11.1 Path requests

In this request style, the bucket name is not part of the domain name. It is in the URL or the HTTP host header.

The following code block shows a path-style PUT Object request.

```
"PUT /mybucket/myfile HTTP/1.1"  
"Host: s3.hgst.com"  
...
```

The following code block shows a path-style DELETE Object request.

```
"DELETE /mybucket/myfile HTTP/1.1"  
"Host: s3.hgst.com"  
...
```

3.11.2 Virtual host requests

In this request style, the bucket name is part of the domain name. It is in the URL or the HTTP host header. The following tables show two virtual host-style PUT Object requests.

```
"PUT http://mybucket.s3.hgst.com/myfile HTTP/1.1"
```

```
"PUT /myfile HTTP/1.1"  
"Host: mybucket.s3.hgst.com"  
...
```

The following tables show two virtual host-style DELETE Object requests.

r

```
"DELETE http://mybucket.s3.hgst.com/myfile HTTP/1.1"
```

```
"DELETE /myfile HTTP/1.1" "Host: mybucket.s3.hgst.com"
```

3.12 S3 whitelisting

The ActiveScale S3 API white-lists known S3 headers and query parameters to prevent unknown headers and parameters from potentially making dangerous changes to the intent of a request. If a header or query parameter is rejected in an S3 call which you believe should be allowed, provide the header to HGST support for evaluation and potential inclusion in the white-list.

3.13 Server-side encryption

The header `x-amz-server-side-encryption: AES256` can be included in PUT Object, Initiate Multipart Upload, and COPY Object operations to indicate to the ActiveScale system that the object should be encrypted at rest. This allows S3 clients to selectively choose what objects are encrypted at rest, and which are not. The ActiveScale system must be previously configured for encryption at rest. See the Amazon S3 documentation for details about configuring encryption at rest.

3.14 Storage classes

Storage classes are partially supported in the ActiveScale API. All objects will be stored with the system configured storage durability policy. In order to allow compatibility with some S3 applications, the ActiveScale ActiveScale S3 API will not reject a PUT Object, Initiate Multipart Upload, and Put Object - Copy operations that include the `x-amz-storage-class` header. Additionally, the specified storage class will be stored in the object metadata so that it is visible during a GET Object or HEAD Object operation.

The following table lists both the supported and unsupported storage classes.

Class	Supported
GLACIER	No
REDUCED_REDUNDANCY	Yes
STANDARD	Yes

Class	Supported
STANDARD_IA	Yes

Note: All storage classes currently result in the same stored form, so that they have the same design for durability and availability.

3.15 User defined metadata

User defined metadata is provided in the `x-amz-meta-` request header in `PUT Object`, `PUT Object - Copy`, and `Initiate Multipart Upload` ActiveScale API requests. User defined metadata is returned in the `x-amz-meta-` response header in reply to `GET Object` and `HEAD Object` requests.

S3 supports MIME-encoded words in user defined metadata. This means you can use values with encodings that are not ASCII. S3 converts the provided MIME-encoded words into UTF-8 characters and returns the MIME-encoded words in UTF-8 characters as a reply to any `HEAD Object` or `GET Object` request.

MIME-encoded words of the form `=?charset?encoding?text?` in the `x-amz-meta-` requests are partially supported.

- MIME-encoded words are not converted to UTF-8, but are stored exactly as provided in the request.
- Maximum length calculation is not fully compatible with Amazon S3, because it is based on the length of the MIME- encoded word rather than on the UTF-8 encoding of the MIME-encoded text.
- The set of supported character sets is by default limited to the following sets:
 - ASCII
 - ISO-8859-1
 - ISO8859-1
 - UTF-8
 - UTF8
 - UTF-16
 - UTF16
 - UTF-32
 - UTF32

A ActiveScale S3 error codes

The table below enumerates all error codes the ActiveScale S3 API may send, and includes codes not sent by AWS S3.

Table A-1. Error codes

Error code	Description	HTTP status code
AccountProblem	There is a problem with your AWS account that prevents the operation from completing successfully.	403 Forbidden
AmbiguousGrantByEmailAddress	The email address you provided is associated with more than one account.	400 Bad Request
BadDigestClient	The Content-MD5 you specified does not match what we received.	400 Bad Request
BucketAlreadyExists	The requested bucket name is not available. The bucket name space is shared by all users of the system. Select a different name and try again.	409 Conflict
BucketAlreadyOwnedByYou	Your previous request to create the named bucket succeeded and you already own it. You will get this error in all AWS regions except the US East (N. Virginia) region, us-east-1. In the us-east-1 region, you will get a 200 OK status code, but it is no-op (if bucket exists, Amazon S3 will not do anything)	409 Conflict (in all regions except the US East (N. Virginia) region).
BucketNotEmpty	The bucket you tried to delete is not empty.	409 Conflict
CredentialsNotSupported	This request does not support credentials.	400 Bad Request
CrossLocationLoggingProhibited	Cross-location logging is not allowed. Buckets in one geographic location cannot log information to a bucket in another location.	403 Forbidden
EntityTooSmall	Your proposed upload is smaller than the minimum allowed object size.	400 Bad Request
EntityTooLarge	Your proposed upload exceeds the maximum allowed object size.	400 Bad Request
ExpiredToken	The provided token has expired.	400 Bad Request
IllegalVersioningConfigurationException	Indicates that the versioning configuration specified in the request is invalid.	400 Bad Request
IncompleteBody	You did not provide the number of bytes specified in the Content-Length HTTP header.	400 Bad Request

Table A-1. Error codes

Error code	Description	HTTP status code
IncorrectNumberOfFilesInPostRequest	POST requires exactly one file upload per request.	400 Bad Request
InlineDataTooLarge	The in-line data exceeds the maximum size allowed.	400 Bad Request
InternalServerError	An internal error was encountered. Try again.	500 Internal Server Error
InvalidAccessKeyId	The AWS access key ID you provided does not exist in our records.	403 Forbidden
InvalidAddressingHeader	You must specify the anonymous role.	N/A
InvalidArgument	Invalid Argument	400 Bad Request
InvalidBucketState	The request is not valid because of the current state of the bucket.	409 Conflict
InvalidDigest	The Content-MD5 you specified is not valid.	400 Bad Request
InvalidEncryptionAlgorithmError	The encryption request you specified is not valid. The valid value is AES256.	400 Bad Request
InvalidBucketName	The specified bucket is not valid.	400 Bad Request
InvalidLocationConstraint	The specified location constraint is not valid. For more information about regions, see <i>How to Select a Region for Your Buckets</i> .	400 Bad Request
InvalidObjectState	The operation is not valid because of the current state of the object.	403 Forbidden
InvalidPart	One or more of the specified parts could not be found. The part might not have been uploaded, or the specified entity tag might not have matched the part's entity tag.	400 Bad Request
InvalidPartOrder	The list of parts was not in ascending order. Lists must be specified in order by part number.	400 Bad Request
InvalidRequest	S3 Transfer Acceleration is not supported for buckets with non-DNS compliant names.	400 Bad Request
InvalidRequest	S3 Transfer Acceleration is not supported for buckets with periods (.) in their names.	400 Bad Request

Table A-1. Error codes

Error code	Description	HTTP status code
InvalidRequest	S3 Transfer Accelerate endpoints support only virtual style requests.	400 Bad Request
InvalidRequest	SOAP requests must be made over an HTTPS connection.	400 Bad Request
InvalidPolicyDocument	The content of the form does not meet the conditions specified in the policy document.	400 Bad Request
InvalidRange	The requested range cannot be satisfied.	416 Requested Range Not Satisfiable
InvalidRequest	Use AWS4-HMAC-SHA256 as your encryption scheme.	400 Bad Request
InvalidRequest	S3 Transfer Accelerate is not configured on this bucket.	400 Bad Request
InvalidRequest	S3 Transfer Accelerate is disabled on this bucket.	400 Bad Request
InvalidRequest	S3 Transfer Acceleration is not supported on this bucket. Contact AWS support for more information.	400 Bad Request
InvalidRequest	S3 Transfer Acceleration cannot be enabled on this bucket. Contact AWS support for more information.	400 Bad Request
InvalidPayer	All access to this object has been disabled.	403 Forbidden
InvalidSOAPRequest	The SOAP request body is invalid.	400 Bad Request
InvalidStorageClass	The storage class you specified is not valid.	400 Bad Request
InvalidTargetBucketForLogging	The target bucket for logging does not exist, is not owned by you, or does not have the appropriate grants for the log-delivery group.	400 Bad Request
InvalidSecurity	The provided security credentials are not valid.	403 Forbidden
InvalidURI	Could not parse the specified URI.	400 Bad Request
KeyTooLong	Your key is too long.	400 Bad Request

Table A-1. Error codes

Error code	Description	HTTP status code
MalformedACLError	The XML you provided was not well-formed or did not validate against our published schema.	400 Bad Request
InvalidToken	The provided token is malformed or otherwise invalid.	400 Bad Request
MalformedXML	The user sent malformed XML for the configuration. The error message is The XML you provided was not well- formed or did not validate against our published schema.	400 Bad Request
MaxMessageLengthExceeded	Your request was too big.	400 Bad Request
MaxPostPreDataLengthExceededError	Your POST request fields preceding the upload file were too large.	400 Bad Request
MalformedPOSTRequest	The body of your POST request is not well-formed multipart form-data.	400 Bad Request
MalformedXML	The user sent malformed XML for the configuration. The error message is The XML you provided was not well- formed or did not validate against our published schema.	400 Bad Request
MaxMessageLengthExceeded	Your request was too big.	400 Bad Request
MaxPostPreDataLengthExceededError	Your POST request fields preceding the upload file were too large.	400 Bad Request
MethodNotAllowed	The specified method is not allowed for this resource.	405 Method Not Allowed
MissingAttachment	A SOAP attachment was expected, but none were found.	N/A
MissingContentLength	You must provide the Content-Length HTTP header.	411 Length Required
MetadataTooLarge	Your metadata headers exceed the maximum allowed metadata size.	400 Bad Request
MissingSecurityElement	The SOAP 1.1 request is missing a security element.	400 Bad Request
NoLoggingStatusForKey	There is no such thing as a logging status subresource for a key.	400 Bad Request

Table A-1. Error codes

Error code	Description	HTTP status code
NoSuchBucket	The specified bucket does not exist.	404 Not Found
MissingRequestBodyError	The user sent an empty XML document as a request. The error message is Request body is empty.	400 Bad Request
NoSuchKey	The specified key does not exist.	404 Not Found
NoSuchLifecycle Configuration	The lifecycle configuration does not exist.	404 Not Found
NoSuchUpload	The specified multipart upload does not exist. The upload ID might be invalid, or the multipart upload might have been aborted or completed.	404 Not Found
NoSuchVersion	The version ID specified in the request does not match an existing version.	404 Not Found
NotImplemented	A header you provided implies functionality that is not implemented	501 Not Implemented
NotSignedUp	Your account has not been signed up for the Amazon S3 service. You must sign up before you can use Amazon S3. You can sign up at https://aws.amazon.com/s3	403 Forbidden
NoSuchBucketPolicy	The specified bucket does not have a bucket policy.	404 Not Found
OperationAborted	A conflicting conditional operation is currently in progress for this resource. Try the operation again.	409 Conflict
PreconditionFailed	At least one of the preconditions you specified did not hold.	412 Precondition Failed
Redirect	Temporary redirect is in progress.	307 Moved Temporarily
RestoreAlreadyInProgress	Object restore is already in progress.	409 Conflict
PermanentRedirect	The bucket you are attempting to access must be addressed using the specified endpoint. Send all future requests to this endpoint.	301 Moved Permanently
RequestIsNotMultiPartContent	POST Bucket must be of the enclosure-type multipart/form-data.	400 Bad Request
RequestTimeout	Your socket connection to the server was not read or written to within the timeout period.	400 Bad Request

Table A-1. Error codes

Error code	Description	HTTP status code
RequestTimeTooSkewed	The difference between the request time and the server time is too large.	403 Forbidden
RequestTorrentOfBucketError	Requesting the torrent file of a bucket is not permitted.	400 Bad Request
SlowDown	Reduce your request rate.	503 Slow Down
ServiceUnavailable	Reduce your request rate.	503 Service Unavailable
TemporaryRedirect	You are being redirected to the bucket while DNS updates.	307 Moved Temporarily
SignatureDoesNotMatch	The request signature we calculated does not match the signature you provided. Check your AWS secret access key and signing method.	403Forbidden
TokenRefreshRequired	The provided token must be refreshed.	400 Bad Request
TooManyBuckets	You have attempted to create more buckets than allowed.	400 Bad Request
UnexpectedContent	This request does not support content.	400 Bad Request
UnresolvableGrantByEmailAddress	The email address you provided does not match any account on record.	400 Bad Request
UserKeyMustBeSpecified	POST Bucket must contain the specified field name. If it is specified, check the order of the fields.	400Bad Request
AccessDenied	Access is denied.	403: forbidden
AccountProblem	There is a problem with your account that prevents the operation from completing successfully. Use Contact Us for help.	403: forbidden
AmbiguousGrantByEmailAddress	The e-mail address you provided is associated with more than one account. Retry your request using a different identification method after resolving the ambiguity.	400: bad request
BadDigest	The Content-MD5 element you specified did not match what we received.	400: bad request
BucketAlreadyExists	The requested bucket name is not available. The bucket name space is shared by all users of the system. Select a different name and try again.	409: conflict

Table A-1. Error codes

Error code	Description	HTTP status code
BucketAlreadyOwnedByYou	Your previous request to create the named bucket succeeded and you already own it.	409: conflict
BucketNotEmpty	The bucket you tried to delete is not empty.	409: conflict
CredentialsNotSupported	This request does not support credentials that were provided.	400: bad_request
CrossLocationLogging Prohibited	Cross location logging not allowed. Buckets in one geographic location cannot log information to a bucket in another location.	403: forbidden
EntityTooSmall	Your proposed upload is smaller than the minimum allowed size.	400: bad_request
EntityTooLarge	Your proposed upload exceeds the maximum allowed size.	400: bad_request
ExpiredToken	The provided token has expired.	400: bad_request
IllegalVersioningConfigurationException	The Versioning element must be specified	400: bad_request
IncompleteBody	You did not provide the number of bytes specified by the Content-Length HTTP header	400: bad_request
IncorrectNumberOfFilesInPost Request	The POST operation requires exactly one file upload per request.	400: bad_request
InlineDataTooLarge	The inline data exceeds the maximum allowed size.	400: bad_request
InternalServerError	An internal error was encountered. Try again.	500: internal_server_error
InvalidAccessKeyId	The AWS access key ID you provided does not exist in our records.	403: forbidden
InvalidArgument	An invalid argument was provided.	400: bad_request
InvalidBucketName	The specified bucket is not valid.	400: bad_request
InvalidBucketState	The request is not valid because of the current state of the bucket.	409: conflict

Table A-1. Error codes

Error code	Description	HTTP status code
InvalidDigest	The Content-MD5 you specified was invalid.	400: bad_request
InvalidLocationConstraint	The specified element location-constraint is not valid.	400: bad_request
InvalidObjectState	The operation is not valid for the current state of the object.	403: forbidden
InvalidPart	One or more of the specified parts could not be found. The part may not have been uploaded, or the specified entity tag may not match the part entity tag.	400: bad_request
InvalidPartOrder	The list of parts was not in ascending order. Parts must be ordered by part number.	400: bad_request
InvalidPayer	All access to this object has been disabled.	403: forbidden
InvalidPolicyDocument	The content of the form does not meet the conditions specified in the policy document.	400: bad_request
InvalidRange	The requested range is not satisfiable.	416: requested_ range_not_ satisfiable
InvalidRequest	SOAP requests must be made over an HTTPS connection.	400: bad_request
InvalidSecurity	The security credentials that were provided are not valid.	403: forbidden
InvalidSOAPRequest	The provided SOAP request body is invalid.	400: bad_request
InvalidStorageClass	The storage class element that was specified is not valid.	400: bad_request
InvalidTargetBucketForLogging	The target bucket for logging does not exist, is not owned by you, or does not have the appropriate grants for the log-delivery group.	400: bad_request
InvalidToken	The token that was provided is malformed or otherwise invalid.	400: bad_request
InvalidURI	The URI that was specified could not be parsed.	400: bad_request
KeyTooLong	The key that was provided key is too long.	400: bad_request

Table A-1. Error codes

Error code	Description	HTTP status code
MalformedACLError	The XML that was provided was not well-formed or did not validate against our published schema.	400: bad_request
MalformedPOSTRequest	The body of the POST request is not well-formed multipart form-data.	400: bad_request
MalformedXML	The XML that was provided was not well-formed or it did not validate against our published schema.	400: bad_request
MaxMessageLengthExceeded	The request that was provided was too large.	400: bad_request
MaxPostPreDataLengthExceeded Error	The POST request fields preceding the upload file were too large.	400: bad_request
MetadataTooLarge	Your metadata headers exceed the maximum allowed size.	400: bad_request
MethodNotAllowed	The specified method is not allowed against this resource.	405: method_not_allowed
MissingContentLength	You must provide the Content-Length HTTP header.	411: length_required
MissingRequestBodyError	The request body is empty.	400: bad_request
MissingSecurityElement	The SOAP 1.1 request is missing a security element.	400: bad_request
MissingSecurityHeader	The request is missing a required header.	400: bad_request
NoLoggingStatusForKey	There is no such thing as the ? logging sub-resource for a key.	400: bad_request
NoSuchBucket	The specified bucket does not exist.	404: not_found
NoSuchKey	The specified key does not exist.	404: not_found
NoSuchLifecycleConfiguration	The specified lifecycle configuration does not exist.	404: not_found
NoSuchUpload	The specified upload does not exist. The upload ID may be invalid, or the upload may have been aborted or completed.	404: not_found

Table A-1. Error codes

Error code	Description	HTTP status code
NoSuchVersion	The specified version does not exist.	404: not_found
NotImplemented	A header you provided implies functionality that is not implemented.	501: not_implemented
NotSignedUp	The account is not signed up.	403: forbidden
NoSuchBucketPolicy	The bucket policy does not exist.	404: not_found
OperationAborted	A conflicting conditional operation is currently in progress against this resource. Try the operation again.	409: conflict
PermanentRedirect	The bucket you are attempting to access must be addressed using the specified endpoint. Send all future requests to this endpoint.	301: moved_permanently
PreconditionFailed	At least one of the pre-conditions that were specified did not hold.	412: precondition_failed
Redirect	The data has been temporarily redirected.	307: temporary_redirect
RestoreAlreadyInProgress	The restoration of the object is already in progress.	409: conflict
RequestIsNotMultiPartContent	The Bucket POST operation must be enclosure-type multipart form-data.	400: bad_request
RequestTimeout	The socket connection to the server was not read from or written to within the timeout period. Idle connections are closed.	400: bad_request
RequestTimeTooSkewed	The difference between the request time and the current time is too large.	403: forbidden
RequestTorrentOfBucketError	A request for the torrent file of a bucket is not permitted.	400: bad_request
SignatureDoesNotMatch	The request signature we calculated does not match the signature you provided. Check your key and signing method.	403: forbidden
ServiceUnavailable	Reduce your request rate.	503: service_unavailable
SlowDown	Reduce your request rate.	503: service_unavailable

Table A-1. Error codes

Error code	Description	HTTP status code
TemporaryRedirect	The data is redirected to the bucket while DNS updates.	307: temporary_redirect
TokenRefreshRequired	The token that was provided must be refreshed.	400: bad_request
TooManyBuckets	An attempt was made to create more buckets than are allowed.	400: bad_request
UnexpectedContent	The request that was made does not support content.	400: bad_request
UnresolvableGrantByEmailAddress	The e-mail address you provided does not match any account on record.	400: bad_request
UserKeyMustBeSpecified	The Bucket POST operation must contain the specified field name. If it is specified, check the order of the fields.	400: bad_request
InvalidURI_isHexDigit	The specified URI could not be parsed.	400: bad_request
InvalidURI_EOF	The specified URI could not be parsed.	400: bad_request
NoVersionsStatusForKey	There is no such thing as the ? versions sub-resource for a key.	400: bad_request
BadOptionsRequest	There is insufficient information in the request. The origin request header is needed.	400: bad_request
InvalidMaxUploads	The max-uploads element that was provided is not an integer or it is not within integer range.	400: bad_request
InvalidEncodingMethod	There is an invalid encoding method specified in the request.	400: bad_request
InvalidValue	The value must be a sequence of Unicode characters which cannot include null.	400: bad_request
InvalidUploadIdMarker	There is an invalid uploadId marker specified in the request.	400: bad_request
InvalidPartNumber	The part number is invalid. A part number must be an integer between 1 and 10000, inclusive.	400: bad_request
UploadsExpectsNoKey	A key is not expected for the GET operation ? uploads subresource.	400: bad_request

Table A-1. Error codes

Error code	Description	HTTP status code
InvalidRedirectLocation	The website redirect location must have a prefix of http:// or https:// or /.	400: bad_request
InvalidEncryptionMethod	The encryption method specified is not supported.	400: bad_request
InvalidRedirectLocation_TooLong	The length of the website redirect location cannot exceed 2,048 characters.	400: bad_request
BadRequestInvalidURI	The specified URL could not be parsed.	400: bad_request
SmallPartNumber	The part number must be equal to or greater than one.	400: bad_request
TooManyUploadParts	The CompleteMultipartUpload request was made for than 10000 parts.	400: bad_request
UnexpectedQueryStringParameter	An unexpected query string parameter was found.	400: bad_request
EmptyVersionId	The Version-Id string cannot must contain a value.	400: bad_request
VersionIdMethodMismatch	This operation does not accept a Version-Id string.	400: bad_request
NoPartsSpecified	At least one part must be specified.	400: bad_request
RequestUploadsOfBucket	A key must be specified.	400: bad_request
RequestUploadIdOfBucket	A key must be specified.	400: bad_request
RequestPartNumberOfBucket	A key must be specified.	400: bad_request
NonOverridableResponseHeader		400: bad_request
InvalidArgumentGlacier	GLACIER is not allowed.	400: bad_request
InvalidMarker	An invalid marker was found.	400: bad_request

Table A-1. Error codes

Error code	Description	HTTP status code
<code>InvalidKeyMarker</code>	An invalid key marker was found.	400: bad_request
<code>InvalidPrefix</code>	An invalid prefix was found.	400: bad_request
<code>InvalidDelimiter</code>	An invalid delimiter was found.	400: bad_request
<code>NotModified</code>	An invalid precondition header was found.	400: bad_request
<code>InvalidCopySourceMethod</code>	Only a copy source header can be specified for a copy request.	400: bad_request
<code>NonEmptyBody</code>	The request included a body. Requests of this type must not include a non-empty body.	400: bad_request
<code>InvalidHeaderForContext</code>	The specified header is not valid in this context.	400: bad_request
<code>CopyInvalidSource</code>	The <code>Copy Source</code> element must specify the source bucket and key in the elements <code>sourcebucket</code> and <code>sourcekey</code> .	400: bad_request
<code>MetadataInContext</code>	The metadata cannot be specified in this context.	400: bad_request
<code>InvalidMetadataDirective</code>	An unknown metadata directive was found.	400: bad_request
<code>InvalidCopyToSelf</code>	This copy request is illegal because it is trying to copy an object to itself without changing the metadata, storage class, website redirect location, or encryption attributes.	400: bad_request
<code>CopyInvalidSourceEncoding</code>	Invalid copy source encoding was found.	400: bad_request
<code>CopyInvalidSourceRange</code>	The <code>x-amz-copy-source-range</code> value must be in a certain format. Bytes should be first-last, where first and last are the zero-based offsets of the first and last bytes to copy.	400: bad_request
<code>CopyInvalidSourceParameter</code>	An unsupported <code>copy source</code> parameter was found.	400: bad_request
<code>CopyInvalidSourceUri</code>	An invalid copy source URI was found.	400: bad_request
<code>CopyIllegalCopyHeader</code>	An illegal copy header was found.	400: bad_request

Table A-1. Error codes

Error code	Description	HTTP status code
Content_MD5_Missing	A required header for the request Content-MD5 was missing.	400: bad_request
User_Key_Not_Specified	The user key must be specified.	400: bad_request
VersionIdTooLong	The version ID is too long.	400: bad_request
QueryParamNotImplemented	A query parameter implies functionality that is not implemented.	400: bad_request
ACPIInvalidCannedACL		400: bad_request
ACPIInvalidArgumentFormat	The argument format was not recognized.	400: bad_request
ACPIInvalidID	An invalid ID was found.	400: bad_request
ACPIInvalidGroupURI	An invalid group URI was found.	400: bad_request
ACPCannedACLAndGrantHeader	Canned ACLs and Header Grants were specified. This is not allowed.	400: bad_request
ACPTooManyGrants	The request specified more grants than are allowed.	400: bad_request
AnonymousAccessForbidden	Anonymous access is forbidden for this operation.	403: forbidden
UnsupportedAuthorizationType	An unsupported authorization type was found.	400: bad_request
AuthorizationHeaderNeedsOneSpace	An invalid authorization header was found. Only one ' ' (space) is required.	400: bad_request
InvalidV2AuthorizationHeader	An invalid AWS authorization header was found. An <code>AwsAccessKeyId:signature</code> was expected.	400: bad_request
OnlyOneAuthMechanismAllowed	Only one authorization element is allowed. The element would be either the <code>X-Amz-Algorithm</code> query parameter, the <code>Signature</code> query string parameter, or the <code>Authorization</code> header should be specified.	400: bad_request
QueryAuthenticationRequiresParameters	The Query-string authentication operation requires the <code>Signature</code> , <code>Expires</code> , and <code>AWSAccessKeyId</code> parameters.	403: forbidden

Table A-1. Error codes

Error code	Description	HTTP status code
InvalidDate	An invalid date was found. This should be seconds since epoch.	403: forbidden
RequestExpired	The request has expired.	403: forbidden
AWSAuthenticationRequiresDate	The AWS authentication operation requires a valid Date or x-amz-date header.	403: forbidden
XAmzContentSHA256Mismatch	The x-amz-content-sha256 header that was provided does not match what was computed.	400: bad_request
V4MHIncorrectAuthorizationDateFormat	The authorization header is malformed. It has an incorrect date format.	400: bad_request
V4MHAuthorizationCredentialMalformed	The authorization header is malformed. The Credential element is malformed. A <YOUR-AKID>/YYYYMMDD/REGION/SERVICE/aws4_request was expected.	400: bad_request
V4MHEmptyAuthorizationAccessKey	The authorization header is malformed. A non-empty Access Key must be specified in the credential.	400: bad_request
V4MHEmptyAuthorizationRegion	The authorization header is malformed. A non-empty Region must be provided in the credential.	400: bad_request
V4MHIncorrectAuthorizationRegion	The authorization header is malformed. '<region>' is syntactically incorrect. '<region>' is the proper syntax.	400: bad_request
V4MHIncorrectAuthorizationService	The authorization header is malformed. "<service>" is syntactically incorrect.	400: bad_request
V4MHIncorrectAuthorizationRequestType	The authorization header is malformed. incorrect terminal "<terminal>" is syntactically incorrect. This endpoint requires "aws4_request".	400: bad_request
AuthorizationHeaderRequiresThreeComponents	The authorization header is malformed. The authorization header requires three components, Credential, SignedHeaders, and Signature.	400: bad_request
AuthorizationComponentMalformed	The authorization header is malformed. The authorization component "<component>" is malformed.	400: bad_request
MissingAuthorizationCredential	The authorization header is malformed. It is missing the Credential component.	400: bad_request
MissingAuthorizationSignedHeaders	The authorization header is malformed. It is missing the SignedHeaders component.	400: bad_request

Table A-1. Error codes

Error code	Description	HTTP status code
MissingAuthorizationSignature	The authorization header is malformed. It is missing the Signature component.	400: bad_request
AuthorizationHeadersNotSigned	There were headers present in the request which were not signed.	403: forbidden
EmptyContentSha256	The provided x-amz-content-sha256 header must be a valid SHA256.	400: bad_request
UseV4AuthorizationMechanism	The authorization mechanism you have provided is not supported. Use AWS4-HMAC-SHA256.	400: bad_request
UseV2AuthorizationMechanism	The authorization mechanism you have provided is not supported. Use AWS.	400: bad_request
UseNoAuthorizationMechanism	The authorization mechanism you have provided is not supported. Do not use any authorization mechanism.	400: bad_request
IncompleteBodyBodyTerminated Unexpectedly	The request body terminated unexpectedly.	400: bad_request
InvalidChunkSizeError	Only the last chunk is allowed to have a size less than 8192 bytes.	403: forbidden
CopySourceTooBig	The specified copy source is larger than the maximum allowable size.	400: bad_request
NotAllV4QueryParameters Provided	Query-string authentication version 4 requires the X-Amz-Algorithm, X-Amz-Credential, X-Amz-Signature, X-Amz-Date, X-Amz-SignedHeaders, and X-Amz-Expires parameters.	400: bad_request
XAmzAlgorithmUnsupported	X-Amz-Algorithm only supports AWS4-HMAC-SHA256.	400: bad_request
V4QPAuthorizationCredential Malformed	There was an error parsing the X-Amz-Credential parameter. The Credential is malformed. "<YOUR-AKID>/YYYYMMDD/REGION/SERVICE/aws4_request" was expected.	400: bad_request
V4QPEmptyAuthorizationRegion	There was an error parsing the X-Amz-Credential parameter. A non-empty region must be provided in the credential.	400: bad_request
V4QPIncorrectAuthorization Region	There was an error parsing the X-Amz-Credential parameter. The '<region>' parameter is wrong.	400: bad_request
V4QPIncorrectAuthorization Service	There was an error parsing the X-Amz-Credential parameter. "<service>" is not correct.	400: bad_request

Table A-1. Error codes

Error code	Description	HTTP status code
V4MHAuthorizationCredentialMalformed	There was an error parsing the X-Amz-Credential parameter. "<terminal>" is not correct. This endpoint uses "aws4_request".	400: bad_request
V4QPIncorrectAuthorizationDateFormat	There was an error parsing the X-Amz-Credential parameter. The "<date>" is formatted incorrectly. The date in the parameter must be in the format yyyyMMdd.	400: bad_request
XAmzDateIncorrectFormat	X-Amz-Date must be in the ISO8601 long format. The format would be "yyyyMMdd'T'HHmmss'Z'".	400: bad_request
XAmzExpiresShouldBeANumber	X-Amz-Expires should be a number.	400: bad_request
XAmzExpiresMustBeNonNegative	X-Amz-Expires must be non-negative.	400: bad_request
XAmzExpiresLongerThanAWeek	The X-Amz-Expires parameter must be less than a week in seconds. It must be less than 604800 seconds.	400: bad_request
EncryptionDisallowed	Access is denied. The message header x-amz-server-side-encryption is not allowed.	403: forbidden
EncryptionRequired	Access is denied. The message header x-amz-server-side-encryption is required.	403: forbidden
OnlyOneEncryptionAlgorithmAllowed	The encryption request you specified is not valid. Only one encryption algorithm can be specified.	400: bad_request
XAmzServerSideEncryptionHeaderNotSupportedForThisOperation	The x-amz-server-side-encryption header is not supported for this operation.	400: bad_request
InsufficientStorage	The storage is full.	507: insufficient_storage
OnlyOneWebsiteRedirectLocationAllowed	Only one header for website redirect location may be specified.	400: bad_request
OnlyOneMetadataDirectiveAllowed	Only one value should be specified.	400: bad_request
XAmzWebsiteRedirectLocationNotSupportedForThisOperation	The x-amz-website-redirect-location header is not supported for this operation.	400: bad_request
BucketLifecycleRuleIDTooLong	The ID length should not exceed allowed limit of 255.	400: bad_request
BucketLifecycleRuleIDMustBeUnique	Rule ID must be unique. The same ID was found for more than one rule.	400: bad_request

Table A-1. Error codes

Error code	Description	HTTP status code
BucketLifecycleRulePrefixTooLong	The specified prefix is longer than maximum allowed key length of 1024.	400: bad_request
BucketLifecycleRuleNeedsAtLeastOneAction	At least one action has to be specified in a rule.	400: bad_request
BucketLifecycleRulesWithSamePrefix	The same prefix ' was found in two rules.	400: bad_request
BucketLifecycleActionDaysMustBePositiveInteger		400: bad_request
BucketLifecycleActionDateNotBeforeEpoch	The 'Date' parameter must be no earlier than 1970-01-01T00:00:00.000Z.	400: bad_request
BucketLifecycleActionDateMustBeMidnightGMT	Some overlapping prefixes ' were found.	400: bad_request
BucketLifecycleActionNotImplemented	A bucket lifecycle action that was provided implies functionality that is not implemented.	501: not_implemented
ReplicationConfigurationNotFound	The replication configuration was not found.	404: not_found
InvalidVersionId	An invalid version ID was specified.	400: bad_request
BadRequest	An error occurred while parsing the HTTP request.	400: bad_request
InvalidHeaderValue	An invalid header value was found.	400: bad_request
RangeIsNotSupportedInCopy	The RANGE parameter is not supported in Copy.	400: bad_request
SourceCopyMayNotBeDeleteMarker	The source of a copy request may not specifically refer to a delete marker by version ID.	400: bad_request
VersionIdMarkerWithoutKeyMarker	A version-id marker cannot be specified without a key marker.	400: bad_request
EmptyVersionIdMarker	A version-id marker cannot be empty.	400: bad_request
InvalidMaxKeys	The max-keys parameter that was provided is not an integer or within integer range.	400: bad_request

Table A-1. Error codes

Error code	Description	HTTP status code
VersionedBucketNotEmpty	The bucket you tried to delete is not empty. You must delete all versions in the bucket.	409: conflict
RangeNotSatisfiable	The requested part number is not satisfiable	416: requested_ range_not_ satisfiable
CannotSetBothRangeAndPartnumber	Cannot specify both the Range header and the partNumber query parameter	400: bad_request
InappropriateReplicationVersionId	The version ID that was provided cannot be replicated with this operation.	400: bad_request
InvalidSiteId	An invalid site ID was specified.	400: bad_request
MultipartReplicaVersionIdNotAvailable	The destination bucket cannot be null or empty.	409: conflict
InvalidBucketARN	The ARN for the bucket is invalid.	400: bad_request
InvalidRuleId	The rule ID cannot be greater than 1000.	400: bad_request
NonEmptyReplicationRulePrefix	The rule prefix must be empty.	400: bad_request
StorageClassNotSupportedForReplication	The storage class '.	400: bad_request
InvalidArgumentBucketName	The specified bucket is not valid.	400: bad_request
CannotChangeVersioningStateIfReplicationIsEnabled	A replication configuration is present on this bucket, so the versioning state cannot be changed. To change the versioning state, first delete the replication configuration.	409: conflict
MultipartAlreadyInitialized	Multipart is already initialized for the requested object version.	409: conflict
ObjectsNotEquivalent	The object is not equivalent to the original.	409: conflict
ReplicationNotActivatedOnSystemError	Replication is not activated on the system.	400: bad_request
SseKmsEncryptedObjectsRequiredInSourceSelectionCriteria	The account must be specified if the Owner in Access-ControlTranslation has a value.	400: bad_request

Table A-1. Error codes

Error code	Description	HTTP status code
InvalidAccountId	The account must contain a valid AccountId.	400: bad_request
ReplicaKmsKeyIDRequiredForSseKmsEncryptedObjects	The ReplicaKmsKeyID must be specified if the SseKmsEncryptedObjects tag is present.	400: bad_request
ReplicaKmsKeyIDRequiredInEncryptionConfiguration	The ReplicaKmsKeyID tag must be specified in the encryption configuration.	400: bad_request
SseKmsEncryptedObjectsRequiredForEncryptionConfiguration	The SseKmsEncryptedObjects must be specified if the encryption configuration is present.	400: bad_request
ChangingReplicaOwnerNotSupported	Changing the owner of a replicated object is not supported.	501: not_implemented
ReplicationOfKmsEncryptedObjectsNotSupported	Replication of KMS-encrypted objects is not supported.	501: not_implemented
CredentialDateNotSameAsXamzDate	Invalid credential date '	400: bad_request
MissingContentSha256	There is a missing required x-amz-content-sha256 header for this request.	400: bad_request
InvalidContentSha256	x-amz-content-sha256 must be UNSIGNED-PAYLOAD, STREAMING-AWS4-HMAC-SHA256-PAYLOAD, or a valid SHA256 value.	400: bad_request

B ActiveScale S3 HTTP status codes

The ActiveScale S3 API may send the following HTTP status codes.

Figure B-1. HTTP status codes

Status code	Type	Description
100 - Continue	Success	The client should continue with the request.
201 - Object Created	Success	The request was successfully executed and the object was created.
304 - Not Modified	Redirection	The precondition is not satisfied.
400 - Bad Request	Error	The request could not be understood by the server due to malformed syntax. The client should not repeat the request without performing modifications to the request.
401 - Unauthorized	Error	The request failed because of lack of permissions.
403 - Forbidden	Error	The server understood the request, but it refused to fulfill it.
404 - Object Not Found	Error	The server has not found anything matching the request URI.
409 - Conflict	Error	The operation was aborted because of a conflict.
412 - Precondition Failed	Error	The precondition given in the request header field evaluated to false when it was tested on the server.
413 - Request Entity Too Large	Error	The requested data, object, customer, or data, is larger than the server was able to process.
500 - Metastore <id> is full	Error	There is no more free space in the given meta-store.
501 - Internal Server Error	Error	The server encountered an internal error.
505 - HTTP Version Not Supported	Failure	The server does not support the HTTP protocol version that was used in the request message.
507 - Insufficient Storage	Error	There is no more free space in the block-stores.

Points of contact

Contact Western Digital Support with your rack serial number or deployment ID.

Support website	https://portal.wdc.com/Support/s/login/
Telephone number	1-844-717-7766 or 1-408-717-7766
Company website	www.wdc.com