



Object-store

REST API reference

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Object-store

Manage S3 buckets

Protocols S3 buckets endpoint overview

Overview

An S3 bucket is a container of objects. Each bucket defines an object namespace. S3 server requests specify objects using a bucket-name and object-name pair. An object consists of data, along with optional metadata and access controls, that is accessible using a name. An object resides within a bucket. There can be more than one bucket in an S3 server. Buckets that are created for the server are associated with an S3 user that is created on the S3 server.

Examples

Retrieving all fields for all S3 buckets of a cluster

```
# The API:
/api/protocols/s3/buckets

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/s3/buckets?fields=*&return_records=true" -H "accept:
application/json"

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "12f3ba4c-7ae0-11e9-8c06-0050568ea123",
        "name": "vs1"
      },
      "uuid": "527812ab-7c6d-11e9-97e8-0050568ea123",
      "name": "bucket-2",
      "volume": {
        "name": "fg_oss_1558514455",
        "uuid": "51276f5f-7c6d-11e9-97e8-0050568ea123"
      },
      "size": 209715200,
      "logical_used_size": 157286400,
      "encryption": {
        "enabled": false
      },
      "comment": "S3 bucket.",
      "qos_policy": {
```

```

    "min_throughput_iops": 0,
    "max_throughput_iops": 1000,
    "max_throughput_mbps": 0,
    "uuid": "39ac471f-ff35-11e9-b0f9-005056a7ab52",
    "name": "vs0_auto_gen_policy_39a9522f_ff35_11e9_b0f9_005056a7ab52"
  }
},
{
  "svm": {
    "uuid": "12f3ba4c-7ae0-11e9-8c06-0050568ea123",
    "name": "vs1"
  },
  "uuid": "a8234aec-7e06-11e9-97e8-0050568ea123",
  "name": "bucket-1",
  "volume": {
    "name": "fg_oss_1558690256",
    "uuid": "a36a1ea7-7e06-11e9-97e8-0050568ea123"
  },
  "size": 1677721600,
  "logical_used_size": 0,
  "encryption": {
    "enabled": false
  },
  "comment": "bucket2",
  "qos_policy": {
    "min_throughput_iops": 0,
    "max_throughput_iops": 1000,
    "max_throughput_mbps": 0,
    "uuid": "39ac471f-ff35-11e9-b0f9-005056a7ab52",
    "name": "vs0_auto_gen_policy_39a9522f_ff35_11e9_b0f9_005056a7ab52"
  }
},
{
  "svm": {
    "uuid": "ee30eb2d-7ae1-11e9-8abe-0050568ea123",
    "name": "vs2"
  },
  "uuid": "19283b75-7ae2-11e9-8abe-0050568ea123",
  "name": "bucket-3",
  "volume": {
    "name": "fg_oss_1558690257",
    "uuid": "a46a1ea7-7e06-11e9-97e8-0050568ea123"
  },
  "size": 1677721600,
  "logical_used_size": 1075838976,
  "encryption": {

```

```

    "enabled": false
  },
  "comment": "bucket3",
  "qos_policy": {
    "min_throughput_iops": 0,
    "max_throughput_iops": 1000,
    "max_throughput_mbps": 0,
    "uuid": "39ac471f-ff35-11e9-b0f9-005056a7ab52",
    "name": "vs0_auto_gen_policy_39a9522f_ff35_11e9_b0f9_005056a7ab52"
  },
  "policy": {
    "statements": [
      {
        "effect": "allow",
        "actions": [
          "*"
        ],
        "principals": [
          "Alice"
        ],
        "resources": [
          "bucket-3",
          "bucket-3/*"
        ],
        "sid": "fullAccessForAliceToBucket",
        "conditions": [
          {
            "operator": "ip_address",
            "source_ips": [
              "1.1.1.1/10"
            ]
          }
        ]
      }
    ]
  }
},
"num_records": 3
}

```

Retrieving all S3 buckets of a cluster ordered by size

```

# The API:
/api/protocols/s3/buckets

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/s3/buckets?return_records=true&order_by=size" -H
"accept: application/json"

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "12f3ba4c-7ae0-11e9-8c06-0050568ea123",
        "name": "vs1"
      },
      "uuid": "754389d0-7e13-11e9-bfdc-0050568ea123",
      "name": "bb1",
      "size": 83886080
    },
    {
      "svm": {
        "uuid": "ee30eb2d-7ae1-11e9-8abe-0050568ea123",
        "name": "vs2"
      },
      "uuid": "19283b75-7ae2-11e9-8abe-0050568ea123",
      "name": "bb2",
      "size": 838860800
    },
    {
      "svm": {
        "uuid": "12f3ba4c-7ae0-11e9-8c06-0050568ea123",
        "name": "vs1"
      },
      "uuid": "a8234aec-7e06-11e9-97e8-0050568ea123",
      "name": "bucket-1",
      "size": 1677721600
    }
  ],
  "num_records": 3
}

```

Retrieving all S3 buckets of a cluster with name "bb2"

```

# The API:
/api/protocols/s3/buckets

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/s3/buckets?name=bb2&return_records=true" -H "accept:
application/json"

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "12f3ba4c-7ae0-11e9-8c06-0050568ea123",
        "name": "vs1"
      },
      "uuid": "087d940e-7e15-11e9-bfdc-0050568ea123",
      "name": "bb2"
    },
    {
      "svm": {
        "uuid": "ee30eb2d-7ae1-11e9-8abe-0050568ea123",
        "name": "vs2"
      },
      "uuid": "19283b75-7ae2-11e9-8abe-0050568ea123",
      "name": "bb2"
    }
  ],
  "num_records": 2
}

```

Retrieving the specified bucket associated with an SVM


```
# The API:
/api/protocols/s3/buckets/{svm.uuid}/{uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/buckets/12f3ba4c-7ae0-11e9-8c06-0050568ea123/527812ab-7c6d-11e9-97e8-0050568ea123" -H "accept: application/json"

# The response:
{
  "svm": {
    "uuid": "12f3ba4c-7ae0-11e9-8c06-0050568ea123",
    "name": "vs1"
  },
  "uuid": "527812ab-7c6d-11e9-97e8-0050568ea123",
  "name": "bucket-2",
  "volume": {
    "name": "fg_oss_1558514455",
    "uuid": "51276f5f-7c6d-11e9-97e8-0050568ea123"
  },
  "size": 209715200,
  "logical_used_size": 157286400,
  "encryption": {
    "enabled": false
  },
  "comment": "S3 bucket.",
  "qos_policy": {
    "min_throughput_iops": 0,
    "max_throughput_iops": 1000,
    "max_throughput_mbps": 0,
    "uuid": "39ac471f-ff35-11e9-b0f9-005056a7ab52",
    "name": "vs0_auto_gen_policy_39a9522f_ff35_11e9_b0f9_005056a7ab52"
  }
}
```

Creating an S3 bucket for an SVM

```
# The API:
/api/protocols/s3/buckets

# The call:
curl -iku admin:netappl! -X POST "https://<mgmt-
ip>/api/protocols/s3/buckets?return_timeout=0&return_records=true" -H
"accept: application/json" -H "Content-Type: application/json" -d "{
\"aggregates\": [ { \"name\": \"aggr5\", \"uuid\": \"12f3ba4c-7ae0-11e9-
8c06-0050568ea123\" } ], \"comment\": \"S3 bucket.\",
\"constituents_per_aggregate\": 4, \"name\": \"bucket-3\", \"svm\": {
\"name\": \"vs1\" } }"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:22:14 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/buckets/259b4e46-2d33-11ea-9145-
005056bbbec1/?name=bucket-3
Content-Length: 353
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "name": "bucket-3",
      "comment": "S3 bucket."
    }
  ],
  "job": {
    "uuid": "2e880171-7e16-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/2e880171-7e16-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

Creating an S3 bucket along with QoS policy for an SVM

```
# The API:
/api/protocols/s3/buckets

# The call:
curl -iku admin:netapp1! -X POST "https://<mgmt-
ip>/api/protocols/s3/buckets?return_timeout=0&return_records=true" -H
"accept: application/json" -H "Content-Type: application/json" -d "{
\"comment\": \"S3 bucket.\", \"name\": \"bucket-3\", \"svm\": { \"name\":
\"vs1\" }, \"qos_policy\": { \"min_throughput_iops\": 0,
\"max_throughput_iops\": 1000000, \"max_throughput_mbps\": 900000,
\"uuid\": \"02d07a93-6177-11ea-b241-000c293feac8\", \"name\":
\"vs0_auto_gen_policy_02cfa02a_6177_11ea_b241_000c293feac8\" } }"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:22:14 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/buckets/259b4e46-2d33-11ea-9145-
005056bbbec1/?name=bucket-3
Content-Length: 353
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "name": "bucket-3",
      "comment": "S3 bucket."
    }
  ],
  "job": {
    "uuid": "2e880171-7e16-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/2e880171-7e16-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

Creating an S3 bucket along with policies and conditions for an SVM

```
# The API:
/api/protocols/s3/buckets
```

```
# The call:
curl -iku admin:netapp1! -X POST "https://<mgmt-
ip>/api/protocols/s3/buckets?return_timeout=0&return_records=true" -H
"accept: application/json" -H "Content-Type: application/json" -d "{
\"aggregates\": [ { \"name\": \"aggr5\", \"uuid\": \"12f3ba4c-7ae0-11e9-
8c06-0050568ea123\" } ], \"comment\": \"S3 bucket.\",
\"constituents_per_aggregate\": 4, \"name\": \"bucket-3\", \"policy\": {
\"statements\": [ { \"actions\": [ \"GetObject\" ], \"conditions\": [ {
\"operator\": \"ip_address\", \"source_ips\": [ \"1.1.1.1/23\",
\"1.2.2.2/20\" ] } ] }, \"effect\": \"allow\", \"resources\": [ \"bucket-
3/policies/examples/*\" ], \"sid\": \"AccessToGetObjectForAllUsersofSVM\"
}, { \"actions\": [ \"*Object\" ], \"effect\": \"deny\", \"principals\": [
\"mike\" ], \"resources\": [ \"bucket-3/policy-docs/*\", \"bucket-
3/confidential-*\" ], \"sid\": \"DenyAccessToObjectForMike\" }, {
\"actions\": [ \"GetObject\" ], \"effect\": \"allow\", \"principals\": [
\"*\" ], \"resources\": [ \"bucket-3/readme\" ], \"sid\":
\"AnonymousAccessToGetObjectForUsers\" } ] }, \"svm\": { \"uuid\":
\"259b4e46-2d33-11ea-9145-005056bbb1\" } }"
```

```
# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:22:14 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/buckets/259b4e46-2d33-11ea-9145-
005056bbb1/?name=bucket-3
Content-Length: 353
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "name": "bucket-3",
      "comment": "S3 bucket."
    }
  ],
  "job": {
    "uuid": "2e880171-7e16-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/2e880171-7e16-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

```
}
```

Updating an S3 bucket for an SVM

```
# The API:
/api/protocols/s3/buckets/{svm.uuid}/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/buckets/259b4e46-2d33-11ea-9145-005056bbb1/376a2efd-2d4d-11ea-9c30-005056bb883a?return_records=true" -H "accept: application/json?return_records=true" -H "Content-Type: application/json" -d "{ \"comment\": \"Bucket modified.\", \"size\": 11111111111, \"qos_policy\": { \"min_throughput_iops\": 0, \"max_throughput_iops\": 1000000, \"max_throughput_mbps\": 900000, \"uuid\": \"02d07a93-6177-11ea-b241-000c293feac8\", \"name\": \"vs0_auto_gen_policy_02cfa02a_6177_11ea_b241_000c293feac8\" } }"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
{
  "job": {
    "uuid": "9beafabb-7e17-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/9beafabb-7e17-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

Updating an S3 bucket policy for an SVM

```

# The API:
/api/protocols/s3/buckets/{svm.uuid}/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/buckets/259b4e46-2d33-11ea-9145-005056bbbec1/376a2efd-2d4d-11ea-9c30-005056bb883a?return_records=true" -H "accept: application/json" -H "Content-Type: application/json" -d "{ \"policy\": { \"statements\": [ { \"actions\": [ \"*\"] , \"conditions\": [ { \"operator\": \"ip_address\", \"source_ips\": [ \"1.1.1.5/23\" ] } ] , \"effect\": \"allow\", \"resources\": [ \"*\"] , \"sid\": \"fullAccessForAllPrincipalsToBucket\" } ] } }"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
{
  "job": {
    "uuid": "9beafabb-7e17-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/9beafabb-7e17-11e9-bfdc-0050568ea123"
      }
    }
  }
}

```

Deleting an S3 bucket for a specified SVM

```
# The API:
/api/protocols/s3/buckets/{svm.uuid}/{uuid}

# The call:
curl -iku admin:netapp1! -X DELETE "https://<mgmt-
ip>/api/protocols/s3/buckets/259b4e46-2d33-11ea-9145-
005056bbbec1/98528221-2d52-11ea-892e-005056bbbec1?return_records=true" -H
"accept: application/json"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:40:17 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
{
  "job": {
    "uuid": "b3af4a54-7e18-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/b3af4a54-7e18-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

Retrieve all S3 buckets for all SVMs

GET /protocols/s3/buckets

Introduced In: 9.7

Retrieves all S3 buckets for all SVMs. Note that in order to retrieve S3 bucket policy conditions, the 'fields' option should be set to '**'.

Related ONTAP commands

- vserver object-store-server bucket show
- vserver object-store-server bucket policy statement show
- vserver object-store-server bucket policy-statement-condition show

Learn more

- [DOC /protocols/s3/buckets](#)

Parameters

Name	Type	In	Required	Description
size	integer	query	False	Filter by size
volume.uuid	string	query	False	Filter by volume.uuid
volume.name	string	query	False	Filter by volume.name
uuid	string	query	False	Filter by uuid
comment	string	query	False	Filter by comment
name	string	query	False	Filter by name
policy.statements.conditions.source_ips	string	query	False	Filter by policy.statements.conditions.source_ips <ul style="list-style-type: none"> Introduced in: 9.8
policy.statements.conditions.prefixes	string	query	False	Filter by policy.statements.conditions.prefixes <ul style="list-style-type: none"> Introduced in: 9.8
policy.statements.conditions.operator	string	query	False	Filter by policy.statements.conditions.operator <ul style="list-style-type: none"> Introduced in: 9.8
policy.statements.conditions.max_keys	integer	query	False	Filter by policy.statements.conditions.max_keys <ul style="list-style-type: none"> Introduced in: 9.8

Name	Type	In	Required	Description
policy.statements.conditions.usernames	string	query	False	Filter by policy.statements.conditions.usernames <ul style="list-style-type: none"> • Introduced in: 9.8
policy.statements.conditions.delimiters	string	query	False	Filter by policy.statements.conditions.delimiters <ul style="list-style-type: none"> • Introduced in: 9.8
policy.statements.principals	string	query	False	Filter by policy.statements.principals <ul style="list-style-type: none"> • Introduced in: 9.8
policy.statements.sid	string	query	False	Filter by policy.statements.sid <ul style="list-style-type: none"> • Introduced in: 9.8
policy.statements.effect	string	query	False	Filter by policy.statements.effect <ul style="list-style-type: none"> • Introduced in: 9.8
policy.statements.actions	string	query	False	Filter by policy.statements.actions <ul style="list-style-type: none"> • Introduced in: 9.8
policy.statements.resources	string	query	False	Filter by policy.statements.resources <ul style="list-style-type: none"> • Introduced in: 9.8

Name	Type	In	Required	Description
logical_used_size	integer	query	False	Filter by logical_used_size
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
qos_policy.max_throughput_mbps	integer	query	False	Filter by qos_policy.max_throughput_mbps • Introduced in: 9.8
qos_policy.max_throughput_iops	integer	query	False	Filter by qos_policy.max_throughput_iops • Introduced in: 9.8
qos_policy.uuid	string	query	False	Filter by qos_policy.uuid • Introduced in: 9.8
qos_policy.min_throughput_iops	integer	query	False	Filter by qos_policy.min_throughput_iops • Introduced in: 9.8
qos_policy.min_throughput_mbps	integer	query	False	Filter by qos_policy.min_throughput_mbps • Introduced in: 9.8
qos_policy.name	string	query	False	Filter by qos_policy.name • Introduced in: 9.8

Name	Type	In	Required	Description
encryption.enabled	boolean	query	False	Filter by encryption.enabled
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	collection_links	

Name	Type	Description
num_records	integer	Number of records
records	array[s3_bucket]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "comment": "S3 bucket.",
      "logical_used_size": 0,
      "name": "bucket1",
      "policy": {
        "statements": [
          {
            "actions": [
              "GetObject",
              "PutObject",
              "DeleteObject",
              "ListBucket"
            ],
            "conditions": [
              {
                "delimiters": [
                  "/"
                ],
                "max_keys": [
                  "1000"
                ],
                "operator": "ip_address",
                "prefixes": [
                  "pref"
                ],
                "source_ips": [
                  "1.1.1.1",
                  "1.2.2.0/24"
                ],
                "usernames": [
                  "user1"
                ]
              }
            ]
          }
        ]
      }
    }
  ],
}
```

```

        "effect": "allow",
        "principals": [
            "user1",
            "group/grp1"
        ],
        "resources": [
            "bucket1",
            "bucket1/*"
        ],
        "sid": "FullAccessToUser1"
    }
]
},
"qos_policy": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"size": "1677721600",
"svm": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
"volume": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}

```

```
}  
]  
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{  
  "error": {  
    "arguments": [  
      {  
        "code": "string",  
        "message": "string"  
      }  
    ],  
    "code": "4",  
    "message": "entry doesn't exist",  
    "target": "uuid"  
  }  
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

aggregates

Aggregate

Name	Type	Description
_links	_links	
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.

Name	Type	Description
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.

Name	Type	Description
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
_links	_links	
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.

Name	Type	Description
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
_links	_links	
name	string	The name of the volume.

Name	Type	Description
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code

Name	Type	Description
message	string	Error message
target	string	The target parameter that caused the error.

Create the S3 bucket configuration for an SVM

POST /protocols/s3/buckets

Introduced In: 9.8

Creates the S3 bucket configuration of an SVM.

Important notes

- Each SVM can have one or more bucket configurations.
- Aggregate lists should be specified explicitly. If not specified, then the bucket is auto-provisioned as a FlexGroup volume.
- Constituents per aggregate specifies the number of components (or FlexVol volumes) per aggregate. Is specified only when an aggregate list is explicitly defined.
- An access policy can be created along with a bucket create. If creating an access policy fails, bucket configurations are saved and the access policy can be created using the PATCH endpoint.
- "qos_policy" can be specified if a bucket needs to be attached to a QoS group policy during creation time.

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the bucket configuration.
- `name` - Bucket name that is to be created.

Recommended optional properties

- `aggregates` - List of aggregates for the FlexGroup volume on which the bucket is hosted on.
- `constituents_per_aggregate` - Number of constituents per aggregate.
- `size` - Specifying the bucket size is recommended.
- `policy` - Specifying a policy enables users to perform operations on buckets; specifying the resource permissions is recommended.
- `qos_policy` - A QoS policy for buckets.

Default property values

- `size` - 800MB
- `comment` - ""
- `aggregates` - No default value.

- `constituents_per_aggregate` - 4 , if an aggregates list is specified. Otherwise, no default value.
- `policy.statements.actions` - `GetObject`, `PutObject`, `DeleteObject`, `ListBucket`.
- `policy.statements.principals` - all S3 users and groups in the SVM.
- `policy.statements.resources` - all objects in the bucket.
- `policy.statements.conditions` - list of bucket policy conditions.

Related ONTAP commands

- `vserver object-store-server bucket create`
- `vserver object-store-server bucket policy statement create`

Learn more

- [DOC /protocols/s3/buckets](#)

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
return_records	boolean	query	False	<p>The default is false. If set to true, the records are returned.</p> <ul style="list-style-type: none"> • Default value:

Request Body

Name	Type	Description
aggregates	array[aggregates]	A list of aggregates for FlexGroup volume constituents where the bucket is hosted. If this option is not specified, the bucket is auto-provisioned as a FlexGroup volume.
comment	string	Can contain any additional information about the bucket being created or modified.
constituents_per_aggregate	integer	Specifies the number of constituents or FlexVol volumes per aggregate. A FlexGroup volume consisting of all such constituents across all specified aggregates is created. This option is used along with the aggregates option and cannot be used independently.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Example request

```
{
  "aggregates": [
    {
      "name": "aggr1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "comment": "S3 bucket.",
  "constituents_per_aggregate": "4",
  "logical_used_size": 0,
  "name": "bucket1",
  "policy": {
    "statements": [
      {
        "actions": [
          "GetObject",
          "PutObject",
          "DeleteObject",
          "ListBucket"
        ],
        "conditions": [
          {
            "delimiters": [
              "/"
            ],
            "max_keys": [
              "1000"
            ],
            "operator": "ip_address",
            "prefixes": [
              "pref"
            ],
            "source_ips": [
              "1.1.1.1",
              "1.2.2.0/24"
            ],
            "usernames": [
              "user1"
            ]
          }
        ],
        "effect": "allow",
        "principals": [
          "user1",
```

```

        "group/grp1"
      ],
      "resources": [
        "bucket1",
        "bucket1/*"
      ],
      "sid": "FullAccessToUser1"
    }
  ],
  "qos_policy": {
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "size": "1677721600",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
  "volume": {
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
}

```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

```
{
  "job": {
    "uuid": "string"
  }
}
```

Error

Status: Default

ONTAP Error Response Codes

Error code	Message
92405777	"Failed to create bucket "{bucket name}" for SVM "{svm.name}". Reason: {Reason of failure}. ";
92405785	"Bucket name "{bucket name}" contains invalid characters. Valid characters for a bucket name are 0-9, a-z, ".", and "-". ";
92405786	"Bucket name "{bucket name}" is not valid. Bucket names must have between 3 and 63 characters. ";
92405811	"Failed to create bucket "{bucket name}" for SVM "{svm.name}". Wait a few minutes and try the operation again.";
92405812	"Failed to create the object store volume. Reason: {Reason for failure}.";
92405819	"Cannot provision an object store server volume for bucket "{bucket name}" in SVM "{svm.name}" on the following aggregates because they are SnapLock aggregates: {List of aggregates.name}.";
92405820	"Failed to check whether the aggregate "{aggregates.name}" is a FabricPool. Reason: {Reason for failure}.";
92405821	"Cannot provision an object store server volume for bucket "{bucket name}" in SVM "{svm.name}" on the following aggregates because they are FabricPool: {List of aggregates.name}.";
92405827	"Internal Error. Unable to generate object store volume name.";
92405857	"One or more aggregates must be specified if "constituents_per_aggregate" is specified.";

Error code	Message
92405858	"Failed to "create" the "bucket" because the operation is only supported on data SVMs.";
92405859	"The specified "aggregates.uuid" "{aggregates.uuid}" does not exist.";
92405860	"The specified "aggregates.name" "{aggregates.name}" and "aggregates.uuid" "{aggregates.uuid}" refer to different aggregates.";
92405861	"The specified SVM UUID or bucket UUID does not exist.";
92405863	"An error occurs when creating an access policy. The reason for failure is detailed in the error message.";
92405891	The resources specified in the access policy are not valid. Valid ways to specify a resource are *, <bucket-name>, <bucket-name>/.../.... Valid characters for a resource are 0-9, A-Z, a-z, _, +, comma, ;, :, =, ., &, @, ?, (,), single quote, *, !, - and \$.
92405894	"Statements, principals and resources list can have a maximum of 10 entries.";
92405897	The principals specified in the access policy are not in the correct format. User name must be in between 1 and 64 characters. Valid characters for a user name are 0-9, A-Z, a-z, _, +, =, comma, ., @, and - .
92405898	"The SID specified in the access policy is not valid. Valid characters for a SID are 0-9, A-Z and a-z.";

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

aggregates

Aggregate

Name	Type	Description
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.

Name	Type	Description
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.

Name	Type	Description
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
name	string	The name of the volume.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
aggregates	array[aggregates]	A list of aggregates for FlexGroup volume constituents where the bucket is hosted. If this option is not specified, the bucket is auto-provisioned as a FlexGroup volume.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
constituents_per_aggregate	integer	Specifies the number of constituents or FlexVol volumes per aggregate. A FlexGroup volume consisting of all such constituents across all specified aggregates is created. This option is used along with the aggregates option and cannot be used independently.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

job_link

Name	Type	Description
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete the S3 bucket configuration for an SVM

```
DELETE /protocols/s3/buckets/{svm.uuid}/{uuid}
```

Introduced In: 9.8

Deletes the S3 bucket configuration of an SVM. An access policy is also deleted on an S3 bucket "delete" command.

Related ONTAP commands

- `vserver object-store-server bucket delete`
- `vserver object-store-server bucket policy statement delete`
- `vserver object-store-server bucket policy-statement-condition delete`

Learn more

- [DOC /protocols/s3/buckets](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the bucket.

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```

Error

Status: Default

ONTAP Error Response Codes

Error code	Message
92405811	"Failed to delete bucket "{bucket name}" for SVM "{svm.name}". Wait a few minutes and try the operation again.";
92405858	"Failed to "delete" the "bucket" because the operation is only supported on data SVMs.";
92405861	"The specified SVM UUID or bucket UUID does not exist.";
92405779	"Failed to remove bucket "{bucket name}" for SVM "{svm.name}". Reason: {Reason for failure}. ";
92405813	"Failed to delete the object store volume. Reason: {Reason for failure}.";
92405864	"An error occurred when deleting an access policy. The reason for failure is detailed in the error message.";

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve the S3 bucket configuration for an SVM

GET /protocols/s3/buckets/{svm.uuid}/{uuid}

Introduced In: 9.8

Retrieves the S3 bucket configuration of an SVM. Note that in order to retrieve S3 bucket policy conditions, the 'fields' option should be set to `***`.

Related ONTAP commands

- `vserver object-store-server bucket show`
- `vserver object-store-server bucket policy statement show`
- `vserver object-store-server bucket policy-statement-condition show`

Learn more

- [DOC /protocols/s3/buckets](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the bucket.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.

Name	Type	Description
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Example response

```
{
  "comment": "S3 bucket.",
  "logical_used_size": 0,
  "name": "bucket1",
  "policy": {
    "statements": [
      {
        "actions": [
          "GetObject",
          "PutObject",
          "DeleteObject",
          "ListBucket"
        ],
        "conditions": [
          {
            "delimiters": [
              "/"
            ],
            "max_keys": [
              "1000"
            ],
            "operator": "ip_address",
            "prefixes": [
              "pref"
            ],
            "source_ips": [
              "1.1.1.1",
              "1.2.2.0/24"
            ],
            "usernames": [
              "user1"
            ]
          }
        ],
        "effect": "allow",
        "principals": [
          "user1",
          "group/grp1"
        ],
        "resources": [
          "bucket1",
          "bucket1/*"
        ],
        "sid": "FullAccessToUser1"
      }
    ]
  }
}
```

```

    }
  ],
  "qos_policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "size": "1677721600",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
  "volume": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
}

```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

aggregates

Aggregate

Name	Type	Description
_links	_links	
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.

Name	Type	Description
operator	string	Condition operator that is applied to the specified condition key.
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
principals	array[string]	
resources	array[string]	

Name	Type	Description
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
_links	_links	
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.

Name	Type	Description
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
_links	_links	
name	string	The name of the volume.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update the S3 bucket configuration for an SVM

PATCH /protocols/s3/buckets/{svm.uuid}/{uuid}

Introduced In: 9.8

Updates the S3 bucket configuration of an SVM.

Important notes

- The following fields can be modified for a bucket:
 - `comment` - Any information related to the bucket.
 - `size` - Bucket size.
 - `policy` - An access policy for resources (buckets and objects) that defines their permissions. New policies are created after existing policies are deleted. To retain any of the existing policy statements, you need to specify those statements again. Also, policy conditions can be specified as part of a bucket policy.
 - `qos_policy` - A QoS policy for buckets.

Related ONTAP commands

- `vserver object-store-server bucket modify`
- `vserver object-store-server bucket policy statement modify`
- `vserver object-store-server bucket policy-statement-condition modify`

Learn more

- [DOC /protocols/s3/buckets](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the bucket.
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none">• Default value: 1• Max value: 120• Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Example request

```
{
  "comment": "S3 bucket.",
  "logical_used_size": 0,
  "policy": {
    "statements": [
      {
        "actions": [
          "GetObject",
          "PutObject",
          "DeleteObject",
          "ListBucket"
        ],
        "conditions": [
          {
            "delimiters": [
              "/"
            ],
            "max_keys": [
              "1000"
            ],
            "operator": "ip_address",
            "prefixes": [
              "pref"
            ],
            "source_ips": [
              "1.1.1.1",
              "1.2.2.0/24"
            ],
            "usernames": [
              "user1"
            ]
          }
        ],
        "effect": "allow",
        "principals": [
          "user1",
          "group/grp1"
        ],
        "resources": [
          "bucket1",
          "bucket1/*"
        ],
        "sid": "FullAccessToUser1"
      }
    ]
  }
}
```

```

    ]
  },
  "qos_policy": {
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "size": "1677721600",
  "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
  "volume": {
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
}

```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

```

{
  "job": {
    "uuid": "string"
  }
}

```

Error

Status: Default

ONTAP Error Response Codes

Error code	Message
92405778	"Failed to modify bucket "{bucket name}" for SVM "{svm.name}". Reason: {Reason for failure}. ";
92405846	"Failed to modify the object store volume. Reason: {Reason for failure}.";
92405811	"Failed to modify bucket "{bucket name}" for SVM "{svm.name}". Wait a few minutes and try the operation again.";
92405858	"Failed to "modify" the "bucket" because the operation is only supported on data SVMs.";
92405861	"The specified SVM UUID or bucket UUID does not exist.";
92405863	"An error occurs when creating an access policy. The reason for failure is detailed in the error message.";
92405864	"An error occurs when deleting an access policy. The reason for failure is detailed in the error message.";
92405891	The resources specified in the access policy are not valid. Valid ways to specify a resource are *, <bucket-name>, <bucket-name>/.../.... Valid characters for a resource are 0-9, A-Z, a-z, _, +, comma, ;, :, =, ., &, @, ?, (,), single quote, *, !, - and \$.
92405894	"Statements, principals and resources list can have a maximum of 10 entries.";
92405897	The principals specified in the access policy are not in the correct format. User name must be in between 1 and 64 characters. Valid characters for a user name are 0-9, A-Z, a-z, _, +, =, comma, ., @, and - .
92405898	"The SID specified in the access policy is not valid. Valid characters for a SID are 0-9, A-Z and a-z.";

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

aggregates

Aggregate

Name	Type	Description
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.

Name	Type	Description
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.

Name	Type	Description
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
name	string	The name of the volume.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.

Name	Type	Description
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

job_link

Name	Type	Description
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage protocols S3 services

Protocols S3 services endpoint overview

Overview

An S3 server is an object store server that is compatible with the Amazon S3 protocol. In the initial version, only a subset of the protocol features necessary to support Fabric Pool capacity tier usecases are implemented. S3 server allows you to store objects in ONTAP using Amazon S3 protocol. This feature can be used as a target object store server for ONTAP FabricPools.

Performance monitoring

Performance of the SVM can be monitored by the `metric.*` and `statistics.*` properties. These show the performance of the SVM in terms of IOPS, latency and throughput. The `metric.*` properties denote an average whereas `statistics.*` properties denote a real-time monotonically increasing value aggregated across all nodes.

Examples

Retrieving all of the S3 configurations

```
# The API:
/api/protocols/s3/services

# The call:
curl -X GET "https://<mgmt-
ip>/api/protocols/s3/services?fields=*&return_records=true&return_timeout=
15" -H "accept: application/json"

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "cf90b8f2-8071-11e9-8190-0050568eae21",
        "name": "vs2"
      },
      "name": "s1",
      "comment": "S3 server",
      "enabled": false,
    },
    {
      "svm": {
        "uuid": "d7f1219c-7f8e-11e9-9124-0050568eae21",
        "name": "vs1"
      },
      "name": "Server-1",
      "comment": "S3 server",
      "enabled": true,
      "buckets": [
        {
          "uuid": "e08665af-8114-11e9-8190-0050568eae21",
          "name": "bucket-1",
          "volume": {
            "name": "fg_oss_1559026220",
            "uuid": "de146bff-8114-11e9-8190-0050568eae21"
          },
          "size": 209715200,
          "logical_used_size": 157286400,
          "encryption": {
            "enabled": false
          },
          "comment": "s3 bucket"
        },
      ]
    }
  ]
}
```

```

    "uuid": "fb1912ef-8114-11e9-8190-0050568eae21",
    "name": "bucket-2",
    "volume": {
      "name": "fg_oss_1559026269",
      "uuid": "f9b1cdd0-8114-11e9-8190-0050568eae21"
    },
    "size": 104857600,
    "logical_used_size": 78643200,
    "encryption": {
      "enabled": false
    },
    "comment": "s3 bucket"
  }
],
"users": [
  {
    "name": "user-1",
    "comment": "S3 user",
    "access_key":
"3333_wl62ypaTi7_aAQuJo76Z16zc9Gz_W3IN83bDQWkcCN3jYU_z_xn20XATMKKa90509KCH
__r4lh1IPU58vf1QlWAJt8k2F1BPjPtM6CsDRX_dOP_QZkF5N9fBuz3"
  },
  {
    "name": "user-2",
    "comment": "",
    "access_key":
"g6T24qhH92dOA6gc1WTcDO_2oNZhQ6Drl2zu5_s5Id_QK1wLgghgxSD2xPlxqG7oX1T_9AI0D
39q65CY3FAg0CbAtVU_903bSnCnht3xqjbrF5_3Cs9RnY8nE_az1Ltc"
  }
]
}
],
"num_records": 2
}

```

Retrieving all S3 configurations for a particular SVM

```

# The API:
/api/protocols/s3/services/{svm.uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/24c2567a-f269-
11e8-8852-0050568e5298?fields=*" -H "accept: application/json"

# The response:

```



```

{
  "svm": {
    "uuid": "d7f1219c-7f8e-11e9-9124-0050568eae21",
    "name": "vs1"
  },
  "name": "Server-1",
  "comment": "S3 server",
  "enabled": true,
  "buckets": [
    {
      "uuid": "e08665af-8114-11e9-8190-0050568eae21",
      "name": "bucket-1",
      "volume": {
        "name": "fg_oss_1559026220",
        "uuid": "de146bfff-8114-11e9-8190-0050568eae21"
      },
      "size": 209715200,
      "logical_used_size": 157286400,
      "encryption": {
        "enabled": false
      },
      "comment": "s3 bucket",
      "policy": {
        "statements": [
          {
            "effect": "deny",
            "actions": [
              "*Object"
            ],
            "principals": [
              "mike"
            ],
            "resources": [
              "bucket-1/policy-docs/*",
              "bucket-1/confidential-*"
            ],
            "sid": "DenyAccessToGetPutDeleteObjectForMike"
          },
          {
            "effect": "allow",
            "actions": [
              "GetObject"
            ],
            "principals": [
              "*"
            ]
          }
        ]
      }
    }
  ]
}

```

```

        "resources": [
            "bucket-1/readme"
        ],
        "sid": "AccessToGetObjectForAnonymousUser"
    }
]
},
{
    "uuid": "fb1912ef-8114-11e9-8190-0050568eae21",
    "name": "bucket-2",
    "volume": {
        "name": "fg_oss_1559026269",
        "uuid": "f9b1cdd0-8114-11e9-8190-0050568eae21"
    },
    "size": 1677721600,
    "logical_used_size": 1075838976,
    "encryption": {
        "enabled": false
    },
    "comment": "s3 bucket"
}
],
"users": [
    {
        "name": "user-1",
        "comment": "s3 user",
        "access_key":
"3333_wl62ypaTi7_aAQuJo76Zl6zc9Gz_W3IN83bDQWkcCN3jYU_z_xn20XATMKKa90509KCH
__r4lh1IPU58vf1QlWAJt8k2F1BPjPtM6CsDRX_dOP_QZkF5N9fBuz3"
    },
    {
        "name": "user-2",
        "comment": "",
        "access_key":
"g6T24qhH92dOA6gc1WTcDO_2oNZhQ6Dr12zu5_s5Id_QK1wLgghgxSD2xPlxqG7oX1T_9AI0D
39q65CY3FAg0CbAtVU_903bSnCnht3xqjbrF5_3Cs9RnY8nE_az1Ltc"
    }
]
}

```

Creating an S3 server, users, and buckets configurations with required fields specified

```

# The API:
/api/protocols/s3/services

```

```
# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/s3/services" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{
\"buckets\": [ { \"name\": \"bucket-1\" }, { \"name\": \"bucket-2\" } ],
\"enabled\": true, \"name\": \"Server-1\", \"svm\": { \"uuid\":
\"d49ef663-7f8e-11e9-9b2c-0050568e4594\" }, \"users\": [ { \"name\":
\"user-1\" }, { \"name\": \"user-2\" } ]}"

# The response:
HTTP/1.1 201 Created
Date: Fri, 31 May 2019 08:44:16 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/services/
Content-Length: 623
Content-Type: application/hal+json
{
  "num_records": 1,
  "records": [
    {
      "users": [
        {
          "name": "user-1",
          "access_key":
"x129aL0q9bu3J_4_2S0OcU34AA5DJXXB_j9R34_60tqiqAS5_c8PAgN6Lg1zkv_76P4IxNWir
9st9uhhgldb31u364Cczq_c39C1fUP7HDheUmYY6u4xt61_N7Sw6c33",
          "secret_key":
"gh0pYc__43Csnx_Ks4_C0tb_5AfT4HZTfQl8xN8Dl5TjqB90oNt5ZaPO6Hs4h6Q4Fq4B4uq5C
qht82X6vcE32c3uLZB8pXAAx819LWPgpOSwD5xga2RE3czrlqhCd9V6"
        },
        {
          "name": "user-2",
          "access_key":
"nntYZrNN65mKn57yS04o1sDp_D0AY58jdwCW573_5x2OPW09AbyF186DB7r30N2373_bA12n0
8aovQp8ySItRss9AjsYoSj7TsIiHOW_Y21DaqYPl5I2a849b11y8X4c",
          "secret_key":
"bjtsPXV2D8BM6pZNQ9pzmKoXU3qIv2yQ3957dhjK4X7M2dB6Rjtrq1As_8cS_4bSP0jt_P31R
5eLdZ_zcBO9Z_ZRMldTclBw_5c7LugBnzG2D3xxB91jqLaP2xnKn_Zg"
        }
      ],
      "job": {
        "uuid": "f51675dd-820a-11e9-a762-0050568e4594",
        "_links": {
          "self": {
```

```

        "href": "/api/cluster/jobs/f51675dd-820a-11e9-a762-0050568e4594"
      }
    }
  },
  "_links": {
    "self": {
      "href": "/api/protocols/s3/services/"
    }
  }
}
]
}

```

Creating an S3 server, users, and buckets configurations

```

# The API:
/api/protocols/s3/services

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/s3/services" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{
  \"buckets\": [ { \"aggregates\": [ { \"name\": \"aggr1\", \"uuid\":
  \"1cd8a442-86d1-11e0-ae1c-123478563412\" } ],
  \"constituents_per_aggregate\": 4, \"name\": \"bucket-1\", \"size\":
  \"209715200\", \"policy\": { \"statements\": [ { \"actions\": [ \"*\"] },
  \"conditions\": [ { \"operator\": \"ip_address\", \"source_ips\": [
  \"1.1.1.1/23\", \"1.2.2.2/20\" ] } ], \"effect\": \"allow\",
  \"resources\": [ \"bucket-1\", \"bucket-1*\" ], \"sid\":
  \"fullAccessForAllPrincipalsToBucket\" } ] } }, { \"aggregates\": [ {
  \"name\": \"aggr1\", \"uuid\": \"1cd8a442-86d1-11e0-ae1c-123478563412\" },
  { \"name\": \"aggr2\", \"uuid\": \"982fc4d0-d1a2-4da4-9c47-5b433f24757d\" }
  ], \"constituents_per_aggregate\": 4, \"name\": \"bucket-2\" } ],
  \"enabled\": true, \"name\": \"Server-1\", \"svm\": { \"name\": \"vs1\",
  \"uuid\": \"d49ef663-7f8e-11e9-9b2c-0050568e4594\" }, \"users\": [ {
  \"name\": \"user-1\" }, { \"name\": \"user-2\" } ] } }"

# The response:
HTTP/1.1 201 Created
Date: Fri, 31 May 2019 08:44:16 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/services/
Content-Length: 623
Content-Type: application/hal+json

```

```

{
  "num_records": 1,
  "records": [
    {
      "users": [
        {
          "name": "user-1",
          "access_key":
"x129aL0q9bu3J_4_2S0OcU34AA5DJXXB_j9R34_60tqiqAS5_c8PAgN6Lg1zkv_76P4IxNWir
9st9uhhgldb31u364Cczq_c39C1fUP7HDheUmYY6u4xt61_N7Sw6c33",
          "secret_key":
"gh0pYc__43Csnx_Ks4_C0tb_5AfT4HZTfQl8xN8Dl5TjqB90oNt5ZaPO6Hs4h6Q4Fq4B4uq5C
qht82X6vcE32c3uLZB8pXAAx819LWPgpOSwD5xga2RE3czr1qhCd9V6"
        },
        {
          "name": "user-2",
          "access_key":
"nntYZrNN65mKn57yS04o1sDp_D0AY58jdwCW573_5x2OPW09AbyF186DB7r30N2373_bA12n0
8aovQp8ySItRss9AjsYoSj7TsIiHOW_Y21DaqYP15I2a849b11y8X4c",
          "secret_key":
"bjtsPXV2D8BM6pZNQ9pzmKoXU3qIv2yQ3957dhjK4X7M2dB6Rjtrq1As_8cS_4bSP0jt_P31R
5eLdZ_zcBO9Z_ZRMldTc1Bw_5c7LugBnzG2D3xB91jqLaP2xnKn_Zg"
        }
      ],
      "job": {
        "uuid": "f51675dd-820a-11e9-a762-0050568e4594",
        "_links": {
          "self": {
            "href": "/api/cluster/jobs/f51675dd-820a-11e9-a762-0050568e4594"
          }
        }
      },
      "_links": {
        "self": {
          "href": "/api/protocols/s3/services/"
        }
      }
    }
  ]
}

```

Creating an S3 server configuration

```
# The API:
/api/protocols/s3/services

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/s3/services" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"comment\":
\"S3 server\", \"enabled\": true, \"name\": \"Server-1\", \"svm\": {
\"name\": \"vs1\", \"uuid\": \"db2ec036-8375-11e9-99e1-0050568e3ed9\" } }"
```

Disable s3 server for the specified SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/services/03ce5c36-f269-
11e8-8852-0050568e5298" -H "accept: application/json" -H "Content-Type:
application/json" -d "{ \"enabled\": false }"
```

Deleting the S3 server for a specified SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/s3/services/a425f10b-ad3b-11e9-b559-0050568e8222?delete_all=false" -H "accept: application/json"
HTTP/1.1 200 OK
Date: Wed, 14 Aug 2019 07:04:24 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 132
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "job": {
        "uuid": "bf74ba50-be61-11e9-bea8-0050568e8222"
      }
    }
  ]
}
```

Deleting all of the S3 server configuration for a specified SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/s3/services/03ce5c36-f269-11e8-8852-0050568e5298?delete_all=true" -H "accept: application/json"

# The response:
HTTP/1.1 200 OK
Date: Sat, 01 Jun 2019 15:46:39 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 132
Content-Type: application/hal+json
{
  "num_records": 1,
  "records": [
    {
      "job": {
        "uuid": "71eaaf02-8484-11e9-91f7-0050568ebc5f"
      }
    }
  ]
}
```

Retrieve the S3 server configuration for all SVMs

GET /protocols/s3/services

Introduced In: 9.7

Retrieves the S3 server configuration for all SVMs. Note that in order to retrieve S3 bucket policy conditions, 'fields' option should be set to '*'.

Expensive properties

There is an added cost to retrieving values for these properties. They are not included by default in GET results and must be explicitly requested using the `fields` query parameter. See [Requesting specific fields](#) to learn more.

- `statistics.*`
- `metric.*`

Related ONTAP commands

- `vserver object-store-server show`

Learn more

- [DOC /protocols/s3/services](#)

Parameters

Name	Type	In	Required	Description
secure_port	integer	query	False	Filter by secure_port <ul style="list-style-type: none">• Introduced in: 9.8
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
buckets.size	integer	query	False	Filter by buckets.size
buckets.volume.uuid	string	query	False	Filter by buckets.volume.uuid
buckets.volume.name	string	query	False	Filter by buckets.volume.name
buckets.uuid	string	query	False	Filter by buckets.uuid
buckets.comment	string	query	False	Filter by buckets.comment
buckets.name	string	query	False	Filter by buckets.name
buckets.policy.statements.conditions.source_ips	string	query	False	Filter by buckets.policy.statements.conditions.source_ips <ul style="list-style-type: none">• Introduced in: 9.8

Name	Type	In	Required	Description
buckets.policy.statements.conditions.prefixes	string	query	False	Filter by buckets.policy.statements.conditions.prefixes • Introduced in: 9.8
buckets.policy.statements.conditions.operator	string	query	False	Filter by buckets.policy.statements.conditions.operator • Introduced in: 9.8
buckets.policy.statements.conditions.max_keys	integer	query	False	Filter by buckets.policy.statements.conditions.max_keys • Introduced in: 9.8
buckets.policy.statements.conditions.usenames	string	query	False	Filter by buckets.policy.statements.conditions.usenames • Introduced in: 9.8
buckets.policy.statements.conditions.delimiters	string	query	False	Filter by buckets.policy.statements.conditions.delimiters • Introduced in: 9.8
buckets.policy.statements.principals	string	query	False	Filter by buckets.policy.statements.principals • Introduced in: 9.8

Name	Type	In	Required	Description
buckets.policy.statements.sid	string	query	False	Filter by buckets.policy.statements.sid • Introduced in: 9.8
buckets.policy.statements.effect	string	query	False	Filter by buckets.policy.statements.effect • Introduced in: 9.8
buckets.policy.statements.actions	string	query	False	Filter by buckets.policy.statements.actions • Introduced in: 9.8
buckets.policy.statements.resources	string	query	False	Filter by buckets.policy.statements.resources • Introduced in: 9.8
buckets.logical_used_size	integer	query	False	Filter by buckets.logical_used_size
buckets.svm.uuid	string	query	False	Filter by buckets.svm.uuid
buckets.svm.name	string	query	False	Filter by buckets.svm.name
buckets.qos_policy.max_throughput_mbps	integer	query	False	Filter by buckets.qos_policy.max_throughput_mbps • Introduced in: 9.8

Name	Type	In	Required	Description
buckets.qos_policy.max_throughput_iops	integer	query	False	Filter by buckets.qos_policy.max_throughput_iops • Introduced in: 9.8
buckets.qos_policy.uuid	string	query	False	Filter by buckets.qos_policy.uuid • Introduced in: 9.8
buckets.qos_policy.min_throughput_iops	integer	query	False	Filter by buckets.qos_policy.min_throughput_iops • Introduced in: 9.8
buckets.qos_policy.min_throughput_mbps	integer	query	False	Filter by buckets.qos_policy.min_throughput_mbps • Introduced in: 9.8
buckets.qos_policy.name	string	query	False	Filter by buckets.qos_policy.name • Introduced in: 9.8
buckets.encryption.enabled	boolean	query	False	Filter by buckets.encryption.enabled
statistics.latency_raw.total	integer	query	False	Filter by statistics.latency_raw.total • Introduced in: 9.8

Name	Type	In	Required	Description
statistics.latency_raw.read	integer	query	False	Filter by statistics.latency_raw.read • Introduced in: 9.8
statistics.latency_raw.other	integer	query	False	Filter by statistics.latency_raw.other • Introduced in: 9.8
statistics.latency_raw.write	integer	query	False	Filter by statistics.latency_raw.write • Introduced in: 9.8
statistics.timestamp	string	query	False	Filter by statistics.timestamp • Introduced in: 9.8
statistics.iops_raw.total	integer	query	False	Filter by statistics.iops_raw.total • Introduced in: 9.8
statistics.iops_raw.read	integer	query	False	Filter by statistics.iops_raw.read • Introduced in: 9.8
statistics.iops_raw.other	integer	query	False	Filter by statistics.iops_raw.other • Introduced in: 9.8

Name	Type	In	Required	Description
statistics.iops_raw.write	integer	query	False	Filter by statistics.iops_raw.write • Introduced in: 9.8
statistics.throughput_raw.write	integer	query	False	Filter by statistics.throughput_raw.write • Introduced in: 9.8
statistics.throughput_raw.read	integer	query	False	Filter by statistics.throughput_raw.read • Introduced in: 9.8
statistics.throughput_raw.total	integer	query	False	Filter by statistics.throughput_raw.total • Introduced in: 9.8
statistics.status	string	query	False	Filter by statistics.status • Introduced in: 9.8
metric.throughput.write	integer	query	False	Filter by metric.throughput.write • Introduced in: 9.8
metric.throughput.read	integer	query	False	Filter by metric.throughput.read • Introduced in: 9.8

Name	Type	In	Required	Description
metric.throughput.total	integer	query	False	Filter by metric.throughput.total • Introduced in: 9.8
metric.duration	string	query	False	Filter by metric.duration • Introduced in: 9.8
metric.timestamp	string	query	False	Filter by metric.timestamp • Introduced in: 9.8
metric.status	string	query	False	Filter by metric.status • Introduced in: 9.8
metric.iops.total	integer	query	False	Filter by metric.iops.total • Introduced in: 9.8
metric.iops.read	integer	query	False	Filter by metric.iops.read • Introduced in: 9.8
metric.iops.other	integer	query	False	Filter by metric.iops.other • Introduced in: 9.8
metric.iops.write	integer	query	False	Filter by metric.iops.write • Introduced in: 9.8

Name	Type	In	Required	Description
metric.latency.total	integer	query	False	Filter by metric.latency.total • Introduced in: 9.8
metric.latency.read	integer	query	False	Filter by metric.latency.read • Introduced in: 9.8
metric.latency.other	integer	query	False	Filter by metric.latency.other • Introduced in: 9.8
metric.latency.write	integer	query	False	Filter by metric.latency.write • Introduced in: 9.8
comment	string	query	False	Filter by comment
name	string	query	False	Filter by name
certificate.name	string	query	False	Filter by certificate.name • Introduced in: 9.8
certificate.uuid	string	query	False	Filter by certificate.uuid • Introduced in: 9.8
enabled	boolean	query	False	Filter by enabled
port	integer	query	False	Filter by port • Introduced in: 9.8

Name	Type	In	Required	Description
is_https_enabled	boolean	query	False	Filter by is_https_enabled • Introduced in: 9.8
is_http_enabled	boolean	query	False	Filter by is_http_enabled • Introduced in: 9.8
users.access_key	string	query	False	Filter by users.access_key
users.svm.uuid	string	query	False	Filter by users.svm.uuid
users.svm.name	string	query	False	Filter by users.svm.name
users.comment	string	query	False	Filter by users.comment
users.name	string	query	False	Filter by users.name
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	collection_links	
num_records	integer	Number of records
records	array[s3_service]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "buckets": [
        {
          "comment": "S3 bucket.",
          "logical_used_size": 0,
          "name": "bucket1",
          "policy": {
            "statements": [
              {
                "actions": [
                  "GetObject",
                  "PutObject",
                  "DeleteObject",
                  "ListBucket"
                ],
                "conditions": [
                  {
                    "delimiters": [
                      "/"
                    ],
                    "max_keys": [
                      "1000"
                    ],
                    "operator": "ip_address",
                    "prefixes": [
                      "pref"
                    ],
                    "source_ips": [
                      "1.1.1.1",
```

```

        "1.2.2.0/24"
    ],
    "usernames": [
        "user1"
    ]
}
],
"effect": "allow",
"principals": [
    "user1",
    "group/grp1"
],
"resources": [
    "bucket1",
    "bucket1/*"
],
"sid": "FullAccessToUser1"
}
]
},
"qos_policy": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"size": "1677721600",
"svm": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
"volume": {
    "_links": {

```

```

        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
},
"certificate": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "cert1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"comment": "S3 server",
"metric": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "duration": "PT15S",
    "iops": {
        "read": "200",
        "total": "1000",
        "write": "100"
    },
    "latency": {
        "read": "200",
        "total": "1000",
        "write": "100"
    },
    "status": "ok",
    "throughput": {
        "read": "200",
        "total": "1000",
        "write": "100"
    },
    "timestamp": "2017-01-25T11:20:13Z"
},
"name": "Server-1",
"statistics": {

```

```

    "iops_raw": {
      "read": "200",
      "total": "1000",
      "write": "100"
    },
    "latency_raw": {
      "read": "200",
      "total": "1000",
      "write": "100"
    },
    "status": "ok",
    "throughput_raw": {
      "read": "200",
      "total": "1000",
      "write": "100"
    },
    "timestamp": "2017-01-25T11:20:13Z"
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "users": [
    {
      "access_key":
"Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
      "comment": "S3 user",
      "name": "user-1",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}

```

```
]
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

self_link

Name	Type	Description
self	href	

_links

Name	Type	Description
self	href	

aggregates

Aggregate

Name	Type	Description
_links	_links	
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.

Name	Type	Description
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
_links	_links	
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.

Name	Type	Description
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	The name of the volume.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

certificate

Specifies the certificate that will be used for creating HTTPS connections to the S3 server.

Name	Type	Description
_links	_links	
name	string	Certificate name
uuid	string	Certificate UUID

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.

Name	Type	Description
write	integer	Performance metric for write I/O operations.

metric

Performance numbers, such as IOPS latency and throughput, for SVM protocols.

Name	Type	Description
_links	_links	
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.

Name	Type	Description
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

iops_raw

The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency_raw

The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.

Name	Type	Description
write	integer	Performance metric for write I/O operations.

throughput_raw

Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

statistics

These are raw performance numbers, such as IOPS latency and throughput for SVM protocols. These numbers are aggregated across all nodes in the cluster and increase with the uptime of the cluster.

Name	Type	Description
iops_raw	iops_raw	The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.
latency_raw	latency_raw	The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.

Name	Type	Description
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
svm	svm	

s3_service

Specifies the S3 server configuration.

Name	Type	Description
_links	self_link	
buckets	array[s3_bucket]	
certificate	certificate	Specifies the certificate that will be used for creating HTTPS connections to the S3 server.
comment	string	Can contain any additional information about the server being created or modified.
enabled	boolean	Specifies whether the S3 server being created or modified should be up or down.
is_http_enabled	boolean	Specifies whether HTTP is enabled on the S3 server being created or modified. By default, HTTP is disabled on the S3 server.
is_https_enabled	boolean	Specifies whether HTTPS is enabled on the S3 server being created or modified. By default, HTTPS is enabled on the S3 server.
metric	metric	Performance numbers, such as IOPS latency and throughput, for SVM protocols.

Name	Type	Description
name	string	Specifies the name of the S3 server. A server name can contain 0 to 15 characters using only the following combination of characters:' 0-9, A-Z, a-z, ".", and "-".
port	integer	Specifies the HTTP listener port for the S3 server. By default, HTTP is enabled on port 80.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443.
statistics	statistics	These are raw performance numbers, such as IOPS latency and throughput for SVM protocols. These numbers are aggregated across all nodes in the cluster and increase with the uptime of the cluster.
svm	svm	
users	array[s3_user]	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create S3 server, users, and buckets configurations

POST /protocols/s3/services

Introduced In: 9.7

Creates an S3 server, users, and buckets configurations.

Important notes

- Each SVM can have one S3 server configuration.
- One or more buckets and users can also be created using this end-point.
- If creating a user configuration fails, buckets are not created either and already created users are not saved.
- If creating a bucket configuration fails, all buckets already created are saved with no new buckets created.

Required properties

- `svm.uuid` - Existing SVM in which to create an S3 server configuration.

Recommended optional properties

- `enabled` - Specifies the state of the server created.
- `comment` - Any information related to the server created.

Default property values

- `comment` - ""
- `enabled` - *true*

Related ONTAP commands

- `vserver object-store-server create`
- `vserver object-store-server bucket create`
- `vserver object-store-server bucket policy statement create`
- `vserver object-store-server bucket policy-statement-condition create`
- `vserver object-store-server user create`

Learn more

- [DOC /protocols/s3/services](#)

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	<p>The default is false. If set to true, the records are returned.</p> <ul style="list-style-type: none"> • Default value:

Request Body

Name	Type	Description
buckets	array[s3_bucket]	
certificate	certificate	Specifies the certificate that will be used for creating HTTPS connections to the S3 server.
comment	string	Can contain any additional information about the server being created or modified.
enabled	boolean	Specifies whether the S3 server being created or modified should be up or down.
is_http_enabled	boolean	Specifies whether HTTP is enabled on the S3 server being created or modified. By default, HTTP is disabled on the S3 server.
is_https_enabled	boolean	Specifies whether HTTPS is enabled on the S3 server being created or modified. By default, HTTPS is enabled on the S3 server.
name	string	Specifies the name of the S3 server. A server name can contain 0 to 15 characters using only the following combination of characters: '0-9, A-Z, a-z, ".", and "-".
port	integer	Specifies the HTTP listener port for the S3 server. By default, HTTP is enabled on port 80.

Name	Type	Description
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443.
svm	svm	
users	array[s3_user]	

Example request

```
{
  "buckets": [
    {
      "aggregates": [
        {
          "name": "aggr1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      ],
      "comment": "S3 bucket.",
      "constituents_per_aggregate": "4",
      "logical_used_size": 0,
      "name": "bucket1",
      "policy": {
        "statements": [
          {
            "actions": [
              "GetObject",
              "PutObject",
              "DeleteObject",
              "ListBucket"
            ],
            "conditions": [
              {
                "delimiters": [
                  "/"
                ],
                "max_keys": [
                  "1000"
                ],
                "operator": "ip_address",
                "prefixes": [
                  "pref"
                ],
                "source_ips": [
                  "1.1.1.1",
                  "1.2.2.0/24"
                ],
                "usernames": [
                  "user1"
                ]
              }
            ]
          }
        ],
        "effect": "allow",

```



```

        "principals": [
            "user1",
            "group/grp1"
        ],
        "resources": [
            "bucket1",
            "bucket1/*"
        ],
        "sid": "FullAccessToUser1"
    }
]
},
"qos_policy": {
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"size": "1677721600",
"svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
"volume": {
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
}
],
"certificate": {
    "name": "cert1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"comment": "S3 server",
"name": "Server-1",
"svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"users": [
    {
        "access_key":
"Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c

```

```
q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
  "comment": "S3 user",
  "name": "user-1",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
]
```

Response

Status: 201, Created

Name	Type	Description
num_records	integer	Number of Records
records	array[records]	

Example response

```
{
  "records": [
    {
      "job": {
        "uuid": "string"
      },
      "users": [
        {
          "access_key":
"Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
          "name": "user-1",
          "secret_key":
"A20_tDhC_cux2C2BmtL45bXB_a_Q65c_96FsAcOdo14Az8V31jBKDTc0uCL62Bh559gPB8
s9rrn0868QrF38_1dsV2u1_9H2tSf3qQ5xp9NT259C6z_GiZQ883Qn63X1"
        }
      ]
    }
  ]
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
2621706	The specified SVM UUID is incorrect for the specified SVM name.
92405789	The specified object server name contains invalid characters or not a fully qualified domain name. Valid characters for an object store server name are 0-9, A-Z, a-z, ".", and "-".
92405790	Object store server names must have between 1 and 15 characters.
92405839	Creating an object store server requires an effective cluster version of data ONTAP 9.7.0 or later. Upgrade all the nodes to 9.7.0 or later and try the operation again.

Error Code	Description
92405853	Failed to create the object store server because Cloud Volumes ONTAP does not support object store servers.
92405863	An error occurs when creating an S3 user or bucket. The reason for failure is detailed in the error message. Follow the error codes specified for the user or bucket endpoints to see details for the failure.
92405884	An object store server can only be created on a data SVM. An object store server can also be created on a system SVM on a mixed platform cluster.

Definitions

See Definitions

href

Name	Type	Description
href	string	

self_link

_links

aggregates

Aggregate

Name	Type	Description
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.

Name	Type	Description
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.

Name	Type	Description
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
name	string	The name of the volume.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
aggregates	array[aggregates]	A list of aggregates for FlexGroup volume constituents where the bucket is hosted. If this option is not specified, the bucket is auto-provisioned as a FlexGroup volume.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
constituents_per_aggregate	integer	Specifies the number of constituents or FlexVol volumes per aggregate. A FlexGroup volume consisting of all such constituents across all specified aggregates is created. This option is used along with the aggregates option and cannot be used independently.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

certificate

Specifies the certificate that will be used for creating HTTPS connections to the S3 server.

Name	Type	Description
name	string	Certificate name
uuid	string	Certificate UUID

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.

Name	Type	Description
write	integer	Performance metric for write I/O operations.

metric

Performance numbers, such as IOPS latency and throughput, for SVM protocols.

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.

Name	Type	Description
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

iops_raw

The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency_raw

The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.

Name	Type	Description
write	integer	Performance metric for write I/O operations.

throughput_raw

Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

statistics

These are raw performance numbers, such as IOPS latency and throughput for SVM protocols. These numbers are aggregated across all nodes in the cluster and increase with the uptime of the cluster.

Name	Type	Description
iops_raw	iops_raw	The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.
latency_raw	latency_raw	The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.

Name	Type	Description
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
svm	svm	

s3_service

Specifies the S3 server configuration.

Name	Type	Description
buckets	array[s3_bucket]	
certificate	certificate	Specifies the certificate that will be used for creating HTTPS connections to the S3 server.
comment	string	Can contain any additional information about the server being created or modified.
enabled	boolean	Specifies whether the S3 server being created or modified should be up or down.
is_http_enabled	boolean	Specifies whether HTTP is enabled on the S3 server being created or modified. By default, HTTP is disabled on the S3 server.
is_https_enabled	boolean	Specifies whether HTTPS is enabled on the S3 server being created or modified. By default, HTTPS is enabled on the S3 server.
name	string	Specifies the name of the S3 server. A server name can contain 0 to 15 characters using only the following combination of characters: 0-9, A-Z, a-z, ".", and "-".

Name	Type	Description
port	integer	Specifies the HTTP listener port for the S3 server. By default, HTTP is enabled on port 80.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443.
svm	svm	
users	array[s3_user]	

collection_links

job_link

Name	Type	Description
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

s3_service_user_post_response

Name	Type	Description
access_key	string	Specifies the access key for the user.
name	string	The name of the user.
secret_key	string	Specifies the secret key for the user.

records

Name	Type	Description
job	job_link	
users	array[s3_service_user_post_response]	

error_arguments

Name	Type	Description
code	string	Argument code

Name	Type	Description
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete the S3 server configuration for an SVM

DELETE /protocols/s3/services/{svm.uuid}

Introduced In: 9.7

Deletes the S3 server configuration of an SVM. If the 'delete_all' parameter is set to false, only the S3 server is deleted. Otherwise S3 users and buckets present on the SVM are also deleted. Note that only empty buckets can be deleted. This endpoint returns the S3 server delete job-uuid in response. To monitor the job status follow `/api/cluster/jobs/<job-uuid>.</job-uuid>`

Related ONTAP commands

- `vserver object-store-server delete`

Learn more

- [DOC /protocols/s3/services](#)

Parameters

Name	Type	In	Required	Description
delete_all	boolean	query	False	Delete S3 server and associated users and empty buckets. <ul style="list-style-type: none"> • Default value: 1

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

Status: 200, Ok

Name	Type	Description
num_records	integer	Number of Records
records	array[records]	

Example response

```
{
  "records": [
    {
      "job": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "uuid": "string"
      }
    }
  ]
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
92405864	An error occurs when deleting an S3 user or bucket. The reason for failure is detailed in the error message. Follow the error codes specified for the user or bucket endpoints to see details for the failure.

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

records

Name	Type	Description
job	job_link	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve the S3 server configuration for an SVM

GET /protocols/s3/services/{svm.uuid}

Introduced In: 9.7

Retrieves the S3 Server configuration of an SVM. Note that in order to retrieve S3 bucket policy conditions, the 'fields' option should be set to '**'.

Related ONTAP commands

- `vserver object-store-server show`

Learn more

- [DOC /protocols/s3/services](#)

Parameters

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
_links	self_link	
buckets	array[s3_bucket]	
certificate	certificate	Specifies the certificate that will be used for creating HTTPS connections to the S3 server.
comment	string	Can contain any additional information about the server being created or modified.
enabled	boolean	Specifies whether the S3 server being created or modified should be up or down.

Name	Type	Description
is_http_enabled	boolean	Specifies whether HTTP is enabled on the S3 server being created or modified. By default, HTTP is disabled on the S3 server.
is_https_enabled	boolean	Specifies whether HTTPS is enabled on the S3 server being created or modified. By default, HTTPS is enabled on the S3 server.
metric	metric	Performance numbers, such as IOPS latency and throughput, for SVM protocols.
name	string	Specifies the name of the S3 server. A server name can contain 0 to 15 characters using only the following combination of characters: '0-9, A-Z, a-z, ".", and "-".
port	integer	Specifies the HTTP listener port for the S3 server. By default, HTTP is enabled on port 80.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443.
statistics	statistics	These are raw performance numbers, such as IOPS latency and throughput for SVM protocols. These numbers are aggregated across all nodes in the cluster and increase with the uptime of the cluster.
svm	svm	
users	array[s3_user]	

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "buckets": [
    {
      "comment": "S3 bucket.",
      "logical_used_size": 0,
      "name": "bucket1",
      "policy": {
        "statements": [
          {
            "actions": [
              "GetObject",
              "PutObject",
              "DeleteObject",
              "ListBucket"
            ],
            "conditions": [
              {
                "delimiters": [
                  "/"
                ],
                "max_keys": [
                  "1000"
                ],
                "operator": "ip_address",
                "prefixes": [
                  "pref"
                ],
                "source_ips": [
                  "1.1.1.1",
                  "1.2.2.0/24"
                ],
                "usernames": [
                  "user1"
                ]
              }
            ],
            "effect": "allow",
            "principals": [
              "user1",
```



```

        "group/grp1"
    ],
    "resources": [
        "bucket1",
        "bucket1/*"
    ],
    "sid": "FullAccessToUser1"
}
]
},
"qos_policy": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-aelc-123478563412"
},
"size": "1677721600",
"svm": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
"volume": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}
}
],
"certificate": {

```

```

    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "cert1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "comment": "S3 server",
  "metric": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "duration": "PT15S",
    "iops": {
      "read": "200",
      "total": "1000",
      "write": "100"
    },
    "latency": {
      "read": "200",
      "total": "1000",
      "write": "100"
    },
    "status": "ok",
    "throughput": {
      "read": "200",
      "total": "1000",
      "write": "100"
    },
    "timestamp": "2017-01-25T11:20:13Z"
  },
  "name": "Server-1",
  "statistics": {
    "iops_raw": {
      "read": "200",
      "total": "1000",
      "write": "100"
    },
    "latency_raw": {
      "read": "200",
      "total": "1000",
      "write": "100"
    }
  },

```

```

    "status": "ok",
    "throughput_raw": {
      "read": "200",
      "total": "1000",
      "write": "100"
    },
    "timestamp": "2017-01-25T11:20:13Z"
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "users": [
    {
      "access_key":
"Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
      "comment": "S3 user",
      "name": "user-1",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}

```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

self_link

Name	Type	Description
self	href	

_links

Name	Type	Description
self	href	

aggregates

Aggregate

Name	Type	Description
_links	_links	
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.

Name	Type	Description
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.

Name	Type	Description
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
_links	_links	
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.

Name	Type	Description
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
_links	_links	
name	string	The name of the volume.

Name	Type	Description
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

certificate

Specifies the certificate that will be used for creating HTTPS connections to the S3 server.

Name	Type	Description
_links	_links	
name	string	Certificate name
uuid	string	Certificate UUID

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.

Name	Type	Description
write	integer	Performance metric for write I/O operations.

metric

Performance numbers, such as IOPS latency and throughput, for SVM protocols.

Name	Type	Description
_links	_links	
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.

Name	Type	Description
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

iops_raw

The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency_raw

The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.

Name	Type	Description
write	integer	Performance metric for write I/O operations.

throughput_raw

Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

statistics

These are raw performance numbers, such as IOPS latency and throughput for SVM protocols. These numbers are aggregated across all nodes in the cluster and increase with the uptime of the cluster.

Name	Type	Description
iops_raw	iops_raw	The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.
latency_raw	latency_raw	The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.

Name	Type	Description
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update the S3 server configuration for an SVM

PATCH /protocols/s3/services/{svm.uuid}

Introduced In: 9.7

Updates the S3 Server configuration of an SVM.

Related ONTAP commands

- `vserver object-store-server modify`

Learn more

- [DOC /protocols/s3/services](#)

Parameters

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
certificate	certificate	Specifies the certificate that will be used for creating HTTPS connections to the S3 server.
comment	string	Can contain any additional information about the server being created or modified.
enabled	boolean	Specifies whether the S3 server being created or modified should be up or down.
is_http_enabled	boolean	Specifies whether HTTP is enabled on the S3 server being created or modified. By default, HTTP is disabled on the S3 server.
is_https_enabled	boolean	Specifies whether HTTPS is enabled on the S3 server being created or modified. By default, HTTPS is enabled on the S3 server.
name	string	Specifies the name of the S3 server. A server name can contain 0 to 15 characters using only the following combination of characters: '0-9, A-Z, a-z, ".", and "-".
port	integer	Specifies the HTTP listener port for the S3 server. By default, HTTP is enabled on port 80.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443.

Example request

```
{
  "certificate": {
    "name": "cert1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "comment": "S3 server",
  "name": "Server-1"
}
```

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
92405789	The specified object server name contains invalid characters. Valid characters for an object store server name are 0-9, A-Z, a-z, ".", and "-".
92405790	Object store server names must have between 1 and 15 characters.

Definitions

See Definitions

href

Name	Type	Description
href	string	

self_link

_links

aggregates

Aggregate

Name	Type	Description
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.

Name	Type	Description
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.

Name	Type	Description
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
name	string	The name of the volume.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.

Name	Type	Description
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

certificate

Specifies the certificate that will be used for creating HTTPS connections to the S3 server.

Name	Type	Description
name	string	Certificate name
uuid	string	Certificate UUID

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

metric

Performance numbers, such as IOPS latency and throughput, for SVM protocols.

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.

Name	Type	Description
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

iops_raw

The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.

Name	Type	Description
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency_raw

The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

throughput_raw

Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.

Name	Type	Description
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

statistics

These are raw performance numbers, such as IOPS latency and throughput for SVM protocols. These numbers are aggregated across all nodes in the cluster and increase with the uptime of the cluster.

Name	Type	Description
iops_raw	iops_raw	The number of I/O operations observed at the storage object. This should be used along with delta time to calculate the rate of I/O operations per unit of time.
latency_raw	latency_raw	The raw latency in microseconds observed at the storage object. This should be divided by the raw IOPS value to calculate the average latency per I/O operation.
status	string	Any errors associated with the sample. For example, if the aggregation of data over multiple nodes fails then any of the partial errors might be returned, "ok" on success, or "error" on any internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput_raw	throughput_raw	Throughput bytes observed at the storage object. This should be used along with delta time to calculate the rate of throughput bytes per unit of time.
timestamp	string	The timestamp of the performance data.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
svm	svm	

s3_service

Specifies the S3 server configuration.

Name	Type	Description
certificate	certificate	Specifies the certificate that will be used for creating HTTPS connections to the S3 server.
comment	string	Can contain any additional information about the server being created or modified.
enabled	boolean	Specifies whether the S3 server being created or modified should be up or down.
is_http_enabled	boolean	Specifies whether HTTP is enabled on the S3 server being created or modified. By default, HTTP is disabled on the S3 server.
is_https_enabled	boolean	Specifies whether HTTPS is enabled on the S3 server being created or modified. By default, HTTPS is enabled on the S3 server.
name	string	Specifies the name of the S3 server. A server name can contain 0 to 15 characters using only the following combination of characters: 0-9, A-Z, a-z, ".", and "-".

Name	Type	Description
port	integer	Specifies the HTTP listener port for the S3 server. By default, HTTP is enabled on port 80.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage S3 service bucket configuration

Protocols S3 services svm.uuid buckets endpoint overview

Overview

An S3 bucket is a container of objects. Each bucket defines an object namespace. S3 server requests specify objects using a bucket-name and object-name pair. An object consists of data, along with optional metadata and access controls, accessible via a name. An object resides within a bucket. There can be more than one bucket in an S3 server. Buckets which are created for the server are associated with an S3 user that is created on the S3 server. An access policy is an object that when associated with a resource, defines their permissions. Buckets and objects are defined as resources. By default, only the "root" user can access these resources. Access policies are used to manage access to these resources by enabling ONTAP admin to provide "grants" to allow other users to perform operations on the buckets.

Examples

Retrieving all fields for all S3 buckets of an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/buckets

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/buckets?fields=*&return_records=true" -H "accept: application/json"

# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "12f3ba4c-7ae0-11e9-8c06-0050568ea123",
        "name": "vs1"
      },
      "uuid": "527812ab-7c6d-11e9-97e8-0050568ea123",
      "name": "bucket-2",
      "volume": {
        "name": "fg_oss_1558514455",
        "uuid": "51276f5f-7c6d-11e9-97e8-0050568ea123"
      },
      "size": 209715200,
      "logical_used_size": 157286400,
      "encryption": {
        "enabled": false
      },
      "comment": "S3 bucket.",
      "qos_policy": {
        "min_throughput_iops": 0,
        "max_throughput_iops": 1000,
        "max_throughput_mbps": 50,
        "uuid": "39ac471f-ff35-11e9-b0f9-005056a7ab52",
        "name": "vs0_auto_gen_policy_39a9522f_ff35_11e9_b0f9_005056a7ab52"
      }
    },
    {
      "svm": {
        "uuid": "12f3ba4c-7ae0-11e9-8c06-0050568ea123",
        "name": "vs1"
      },
      "uuid": "a8234aec-7e06-11e9-97e8-0050568ea123",
```

```

"name": "bucket-1",
"volume": {
  "name": "fg_oss_1558690256",
  "uuid": "a36alea7-7e06-11e9-97e8-0050568ea123"
},
"size": 1677721600,
"logical_used_size": 0,
"encryption": {
  "enabled": false
},
"comment": "bucket1",
"qos_policy": {
  "min_throughput_iops": 0,
  "max_throughput_iops": 1000,
  "max_throughput_mbps": 50,
  "uuid": "39ac471f-ff35-11e9-b0f9-005056a7ab52",
  "name": "vs0_auto_gen_policy_39a9522f_ff35_11e9_b0f9_005056a7ab52"
},
"policy": {
  "statements": [
    {
      "effect": "allow",
      "actions": [
        "*"
      ],
      "principals": [
        "Alice"
      ],
      "resources": [
        "*"
      ],
      "sid": "fullAccessForAliceToBucket"
    },
    {
      "effect": "allow",
      "actions": [
        "ListBucket",
        "GetObject"
      ],
      "principals": [
        "ann",
        "jack"
      ],
      "resources": [
        "bucket-1",
        "bucket-1/*"
      ]
    }
  ]
}

```



```

],
"sid": "AccessToListAndGetObjectForAnnAndJack",
"conditions": [
  {
    "operator": "ip_address",
    "source_ips": [
      "1.1.1.1/10"
    ]
  },
  {
    "operator": "string_equals",
    "prefixes": [
      "pref1",
      "pref2"
    ],
    "usernames": [
      "user1",
      "user2"
    ],
    "delimiters": [
      "del1",
      "del2"
    ]
  },
  {
    "operator": "numeric_equals",
    "max_keys": [
      100
    ]
  }
],
},
{
  "effect": "deny",
  "actions": [
    "*Object"
  ],
  "principals": [
    "mike",
    "group/group1"
  ],
  "resources": [
    "bucket-1/policy-docs/*",
    "bucket-1/confidential-*"
  ],
  "sid": "DenyAccessToGetPutDeleteObjectForMike"
}

```

```

    },
    {
      "effect": "allow",
      "actions": [
        "GetObject"
      ],
      "principals": [
        "*"
      ],
      "resources": [
        "bucket-1/readme"
      ],
      "sid": "AccessToGetObjectForAnonymousUsers"
    },
    {
      "effect": "allow",
      "actions": [
        "GetObject"
      ],
      "principals": [
      ],
      "resources": [
        "bucket-1/policies/examples/*"
      ],
      "sid": "AccessToGetObjectForAllUsersOfSVM"
    }
  ]
}
}
],
"num_records": 2
}

```

Retrieving the specified bucket associated with an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/buckets/{uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/buckets/527812ab-7c6d-11e9-97e8-0050568ea123" -H
"accept: application/json"

# The response:
{
  "svm": {
    "uuid": "12f3ba4c-7ae0-11e9-8c06-0050568ea123",
    "name": "vs1"
  },
  "uuid": "527812ab-7c6d-11e9-97e8-0050568ea123",
  "name": "bucket-2",
  "volume": {
    "name": "fg_oss_1558514455",
    "uuid": "51276f5f-7c6d-11e9-97e8-0050568ea123"
  },
  "size": 209715200,
  "logical_used_size": 157286400,
  "encryption": {
    "enabled": false
  },
  "comment": "S3 bucket.",
  "qos_policy": {
    "min_throughput_iops": 0,
    "max_throughput_iops": 1000,
    "max_throughput_mbps": 0,
    "uuid": "39ac471f-ff35-11e9-b0f9-005056a7ab52",
    "name": "vs0_auto_gen_policy_39a9522f_ff35_11e9_b0f9_005056a7ab52"
  }
}
```

Creating an S3 bucket for an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/buckets

# The call:
curl -iku admin:netappl! -X POST "https://<mgmt-
ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-
0050568ea123/buckets?return_records=true" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"aggregates\": [ { \"name\":
\"aggr5\", \"uuid\": \"12f3ba4c-7ae0-11e9-8c06-0050568ea123\" } ],
\"comment\": \"S3 bucket.\", \"constituents_per_aggregate\": 4, \"name\":
\"bucket-3\"}"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:22:14 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-
0050568ea123/buckets/?name=bucket-3
Content-Length: 353
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "name": "bucket-3",
      "comment": "S3 bucket."
    }
  ],
  "job": {
    "uuid": "2e880171-7e16-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/2e880171-7e16-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

Creating an S3 bucket along with QoS policies for an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/buckets

# The call:
curl -iku admin:netappl! -X POST "https://<mgmt-
ip>/api/protocols/s3/services/3e538980-f0af-11e9-ba68-
0050568e9798/buckets?return_records=true" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"comment\": \"S3 bucket.\",
\"name\": \"bucket-3\", \"qos_policy\": { \"min_throughput_iops\": 0,
\"max_throughput_iops\": 1000000, \"max_throughput_mbps\": 900000,
\"uuid\": \"02d07a93-6177-11ea-b241-000c293feac8\", \"name\":
\"vs0_auto_gen_policy_02cfa02a_6177_11ea_b241_000c293feac8\" } }"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:22:14 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-
0050568ea123/buckets/?name=bucket-3
Content-Length: 353
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "name": "bucket-3",
      "comment": "S3 bucket."
    }
  ],
  "job": {
    "uuid": "2e880171-7e16-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/2e880171-7e16-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

Creating an S3 bucket along with policies for an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/buckets
```

```
# The call:
curl -iku admin:netapp1! -X POST "https://<mgmt-
ip>/api/protocols/s3/services/3e538980-f0af-11e9-ba68-
0050568e9798/buckets?return_records=true" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"aggregates\": [ { \"name\":
\"aggr5\", \"uuid\": \"12f3ba4c-7ae0-11e9-8c06-0050568ea123\" } ],
\"comment\": \"S3 bucket.\", \"constituents_per_aggregate\": 4, \"name\":
\"bucket-3\", \"policy\": { \"statements\": [ { \"actions\": [
\"GetObject\" ], \"conditions\": [ { \"operator\": \"ip_address\",
\"source_ips\": [ \"1.1.1.1/23\", \"1.2.2.2/20\" ] }, { \"max_keys\": [
1000 ], \"operator\": \"numeric_equals\" }, { \"delimiters\": [ \"/\",
\"operator\": \"string_equals\", \"prefixes\": [ \"pref\" ],
\"usernames\": [ \"user1\" ] } ], \"effect\": \"allow\", \"resources\": [
\"bucket-3/policies/examples/*\" ], \"sid\":
\"AccessToGetObjectForAllUsersofSVM\" }, { \"actions\": [ \"*Object\" ],
\"effect\": \"deny\", \"principals\": [ \"mike\", \"group/grp1\" ],
\"resources\": [ \"bucket-3/policy-docs/*\", \"bucket-3/confidential-*\"
], \"sid\": \"DenyAccessToObjectForMike\" }, { \"actions\": [
\"GetObject\" ], \"effect\": \"allow\", \"principals\": [ \"*\" ],
\"resources\": [ \"bucket-3/readme\" ], \"sid\":
\"AnonymousAccessToGetObjectForUsers\" } ] } }"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:22:14 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-
0050568ea123/buckets/?name=bucket-3
Content-Length: 353
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "name": "bucket-3",
      "comment": "S3 bucket."
    }
  ],
  "job": {
    "uuid": "2e880171-7e16-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/2e880171-7e16-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

```

    }
  }
}
}

```

Updating an S3 bucket for an SVM

```

# The API:
/api/protocols/s3/services/{svm.uuid}/buckets/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/buckets/754389d0-7e13-11e9-bfdc-0050568ea122" -H
"accept: application/json?return_records=true" -H "Content-Type:
application/json" -d "{ \"comment\": \"Bucket modified.\", \"size\":
111111111111, \"qos_policy\": { \"min_throughput_iops\": 0,
\"max_throughput_iops\": 1000000, \"max_throughput_mbps\": 900000,
\"uuid\": \"02d07a93-6177-11ea-b241-000c293feac8\", \"name\":
\"vs0_auto_gen_policy_02cfa02a_6177_11ea_b241_000c293feac8\"} }"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
{
  "job": {
    "uuid": "9beafabb-7e17-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/9beafabb-7e17-11e9-bfdc-0050568ea123"
      }
    }
  }
}

```

Updating an S3 bucket policy for an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/buckets/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/services/3e538980-f0af-11e9-ba68-0050568e9798/buckets/754389d0-7e13-11e9-bfdc-0050568ea122?return_records=true" -H "accept: application/json" -H "Content-Type: application/json" -d "{ \"policy\": { \"statements\": [ { \"actions\": [ \"*\"] , \"conditions\": [ { \"operator\": \"ip_address\", \"source_ips\": [ \"1.1.1.1/23\", \"1.2.2.2/20\" ] }, { \"max_keys\": [ 1000 ], \"operator\": \"numeric_equals\" }, { \"delimiters\": [ \"/\" ], \"operator\": \"string_equals\", \"prefixes\": [ \"pref\" ], \"usernames\": [ \"user1\" ] } ], \"effect\": \"allow\", \"resources\": [ \"*\"] , \"sid\": \"fullAccessForAllPrincipalsToBucket\"} ] } }"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
{
  "job": {
    "uuid": "9beafabb-7e17-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/9beafabb-7e17-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

Deleting an S3 bucket policy for an SVM


```
# The API:
/api/protocols/s3/services/{svm.uuid}/buckets/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/services/3e538980-f0af-11e9-ba68-0050568e9798/buckets/754389d0-7e13-11e9-bfdc-0050568ea122?return_records=true" -H "accept: application/json" -H "Content-Type: application/json" -d "{ \"policy\": { \"statements\": [ ] } }"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
{
  "job": {
    "uuid": "9beafabb-7e17-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/9beafabb-7e17-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

Deleting an S3 bucket for a specified SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/buckets/{uuid}

# The call:
curl -iku admin:netapp1! -X DELETE "https://<mgmt-
ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-
0050568ea123/buckets/754389d0-7e13-11e9-bfdc-
0050568ea123?return_records=true" -H "accept: application/json"

# The response:
HTTP/1.1 202 Accepted
Date: Fri, 24 May 2019 11:40:17 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
{
  "job": {
    "uuid": "b3af4a54-7e18-11e9-bfdc-0050568ea123",
    "_links": {
      "self": {
        "href": "/api/cluster/jobs/b3af4a54-7e18-11e9-bfdc-0050568ea123"
      }
    }
  }
}
```

Retrieve S3 bucket configurations for an SVM

GET /protocols/s3/services/{svm.uuid}/buckets

Introduced In: 9.7

Retrieves the S3 bucket's configuration of an SVM. Note that in order to retrieve S3 bucket policy conditions, the 'fields' option should be set to `***`.

Related ONTAP commands

- `vserver object-store-server bucket show`
- `vserver object-store-server bucket policy statement show`
- `vserver object-store-server bucket policy-statement-condition show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/buckets](#)

Parameters

Name	Type	In	Required	Description
policy.statements.conditions.source_ips	string	query	False	Filter by policy.statements.conditions.source_ips <ul style="list-style-type: none"> Introduced in: 9.8
policy.statements.conditions.prefixes	string	query	False	Filter by policy.statements.conditions.prefixes <ul style="list-style-type: none"> Introduced in: 9.8
policy.statements.conditions.operator	string	query	False	Filter by policy.statements.conditions.operator <ul style="list-style-type: none"> Introduced in: 9.8
policy.statements.conditions.max_keys	integer	query	False	Filter by policy.statements.conditions.max_keys <ul style="list-style-type: none"> Introduced in: 9.8
policy.statements.conditions.usernames	string	query	False	Filter by policy.statements.conditions.usernames <ul style="list-style-type: none"> Introduced in: 9.8
policy.statements.conditions.delimiters	string	query	False	Filter by policy.statements.conditions.delimiters <ul style="list-style-type: none"> Introduced in: 9.8
policy.statements.principals	string	query	False	Filter by policy.statements.principals <ul style="list-style-type: none"> Introduced in: 9.8

Name	Type	In	Required	Description
policy.statements.sid	string	query	False	Filter by policy.statements.sid • Introduced in: 9.8
policy.statements.eff ect	string	query	False	Filter by policy.statements.eff ect • Introduced in: 9.8
policy.statements.act ions	string	query	False	Filter by policy.statements.ac tions • Introduced in: 9.8
policy.statements.re sources	string	query	False	Filter by policy.statements.re sources • Introduced in: 9.8
logical_used_size	integer	query	False	Filter by logical_used_size
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
encryption.enabled	boolean	query	False	Filter by encryption.enabled
qos_policy.max_thro ughput_mbps	integer	query	False	Filter by qos_policy.max_thro ughput_mbps • Introduced in: 9.8

Name	Type	In	Required	Description
qos_policy.max_throughput_iops	integer	query	False	Filter by qos_policy.max_throughput_iops • Introduced in: 9.8
qos_policy.uuid	string	query	False	Filter by qos_policy.uuid • Introduced in: 9.8
qos_policy.min_throughput_iops	integer	query	False	Filter by qos_policy.min_throughput_iops • Introduced in: 9.8
qos_policy.min_throughput_mbps	integer	query	False	Filter by qos_policy.min_throughput_mbps • Introduced in: 9.8
qos_policy.name	string	query	False	Filter by qos_policy.name • Introduced in: 9.8
volume.uuid	string	query	False	Filter by volume.uuid
volume.name	string	query	False	Filter by volume.name
size	integer	query	False	Filter by size
uuid	string	query	False	Filter by uuid
name	string	query	False	Filter by name
comment	string	query	False	Filter by comment

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	collection_links	

Name	Type	Description
num_records	integer	Number of records
records	array[s3_bucket_svm]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "comment": "S3 bucket.",
      "logical_used_size": 0,
      "name": "bucket1",
      "policy": {
        "statements": [
          {
            "actions": [
              "GetObject",
              "PutObject",
              "DeleteObject",
              "ListBucket"
            ],
            "conditions": [
              {
                "delimiters": [
                  "/"
                ],
                "max_keys": [
                  "1000"
                ],
                "operator": "ip_address",
                "prefixes": [
                  "pref"
                ],
                "source_ips": [
                  "1.1.1.1",
                  "1.2.2.0/24"
                ],
                "usernames": [
                  "user1"
                ]
              }
            ]
          }
        ]
      }
    }
  ],
}
```



```

        "effect": "allow",
        "principals": [
            "user1",
            "group/grp1"
        ],
        "resources": [
            "bucket1",
            "bucket1/*"
        ],
        "sid": "FullAccessToUser1"
    }
]
},
"qos_policy": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"size": "1677721600",
"svm": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
"volume": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
}

```

```
}  
]  
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{  
  "error": {  
    "arguments": [  
      {  
        "code": "string",  
        "message": "string"  
      }  
    ],  
    "code": "4",  
    "message": "entry doesn't exist",  
    "target": "uuid"  
  }  
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

aggregates

Aggregate

Name	Type	Description
_links	_links	
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.

Name	Type	Description
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.

Name	Type	Description
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
_links	_links	
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.

Name	Type	Description
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
_links	_links	
name	string	The name of the volume.

Name	Type	Description
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket_svm

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code

Name	Type	Description
message	string	Error message
target	string	The target parameter that caused the error.

Create an S3 bucket configuration for an SVM

POST /protocols/s3/services/{svm.uuid}/buckets

Introduced In: 9.7

Creates the S3 bucket configuration of an SVM.

Important notes

- Each SVM can have one or more bucket configurations.
- Aggregate lists should be specified explicitly. If not specified, then the bucket is auto-provisioned as a FlexGroup.
- Constituents per aggregate specifies the number of components (or FlexVols) per aggregate. Is specified only when an aggregate list is explicitly defined.
- An access policy can be created when a bucket is created.
- "qos_policy" can be specified if a bucket needs to be attached to a QoS group policy during creation time.

Required properties

- `svm.uuid` - Existing SVM in which to create the bucket configuration.
- `name` - Bucket name that is to be created.

Recommended optional properties

- `aggregates` - List of aggregates for the FlexGroup on which the bucket is hosted on.
- `constituents_per_aggregate` - Number of constituents per aggregate.
- `size` - Specifying the bucket size is recommended.
- `policy` - Specifying policy enables users to perform operations on buckets. Hence specifying the resource permissions is recommended.
- `qos_policy` - A QoS policy for buckets.

Default property values

- `size` - 800MB
- `comment` - ""
- `aggregates` - No default value.

- `constituents_per_aggregate` - 4 , if an aggregates list is specified. Otherwise, no default value.
- `policy.statements.actions` - `GetObject`, `PutObject`, `DeleteObject`, `ListBucket`.
- `policy.statements.principals` - all S3 users and groups in the SVM.
- `policy.statements.resources` - all objects in the bucket.
- `policy.statements.conditions` - list of bucket policy conditions.
- `qos-policy` - No default value.

Related ONTAP commands

- `vserver object-store-server bucket create`
- `vserver object-store-server bucket policy statement create`
- `vserver object-store-server bucket policy-statement-condition create`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/buckets](#)

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
return_records	boolean	query	False	<p>The default is false. If set to true, the records are returned.</p> <ul style="list-style-type: none"> • Default value:
svm.uuid	string	path	True	<p>UUID of the SVM to which this object belongs.</p>

Request Body

Name	Type	Description
aggregates	array[aggregates]	A list of aggregates for FlexGroup volume constituents where the bucket is hosted. If this option is not specified, the bucket is auto-provisioned as a FlexGroup volume.
comment	string	Can contain any additional information about the bucket being created or modified.
constituents_per_aggregate	integer	Specifies the number of constituents or FlexVol volumes per aggregate. A FlexGroup volume consisting of all such constituents across all specified aggregates is created. This option is used along with the aggregates option and cannot be used independently.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Example request

```
{
  "aggregates": [
    {
      "name": "aggr1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  ],
  "comment": "S3 bucket.",
  "constituents_per_aggregate": "4",
  "logical_used_size": 0,
  "name": "bucket1",
  "policy": {
    "statements": [
      {
        "actions": [
          "GetObject",
          "PutObject",
          "DeleteObject",
          "ListBucket"
        ],
        "conditions": [
          {
            "delimiters": [
              "/"
            ],
            "max_keys": [
              "1000"
            ],
            "operator": "ip_address",
            "prefixes": [
              "pref"
            ],
            "source_ips": [
              "1.1.1.1",
              "1.2.2.0/24"
            ],
            "usernames": [
              "user1"
            ]
          }
        ],
        "effect": "allow",
        "principals": [
          "user1",
```

```

        "group/grp1"
      ],
      "resources": [
        "bucket1",
        "bucket1/*"
      ],
      "sid": "FullAccessToUser1"
    }
  ],
  "qos_policy": {
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "size": "1677721600",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
  "volume": {
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
}

```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

```
{
  "job": {
    "uuid": "string"
  }
}
```

Error

Status: Default

ONTAP Error Response Codes

Error code	Message
92405777	"Failed to create bucket "{bucket name}" for SVM "{svm.name}". Reason: {Reason of failure}. ";
92405785	"Bucket name "{bucket name}" contains invalid characters. Valid characters for a bucket name are 0-9, a-z, ".", and "-". ";
92405786	"Bucket name "{bucket name}" is not valid. Bucket names must have between 3 and 63 characters. ";
92405811	"Failed to create bucket "{bucket name}" for SVM "{svm.name}". Wait a few minutes and try the operation again.";
92405812	"Failed to create the object store volume. Reason: {Reason for failure}.";
92405819	"Cannot provision an object store server volume for bucket "{bucket name}" in SVM "{svm.name}" on the following aggregates because they are SnapLock aggregates: {List of aggregates.name}.";
92405820	"Failed to check whether the aggregate "{aggregates.name}" is a FabricPool. Reason: {Reason for failure}.";
92405821	"Cannot provision an object store server volume for bucket "{bucket name}" in SVM "{svm.name}" on the following aggregates because they are FabricPool: {List of aggregates.name}.";
92405827	"Internal Error. Unable to generate object store volume name.";
92405857	"One or more aggregates must be specified if "constituents_per_aggregate" is specified.";

Error code	Message
92405858	"Failed to "create" the "bucket" because the operation is only supported on data SVMs.";
92405859	"The specified "aggregates.uuid" "{aggregates.uuid}" does not exist.";
92405860	"The specified "aggregates.name" "{aggregates.name}" and "aggregates.uuid" "{aggregates.uuid}" refer to different aggregates.";
92405861	"The specified SVM UUID or bucket UUID does not exist.";
92405863	"An error occurs when creating an access policy. The reason for failure is detailed in the error message.";
92405891	The resources specified in the access policy are not valid. Valid ways to specify a resource are *, <bucket-name>, <bucket-name>/.../.... Valid characters for a resource are 0-9, A-Z, a-z, _, +, comma, ;, :, =, ., &, @, ?, (,), single quote, *, !, - and \$.
92405894	"Statements, principals and resources list can have a maximum of 10 entries.";
92405897	The principals specified in the access policy are not in the correct format. User name must be in between 1 and 64 characters. Valid characters for a user name are 0-9, A-Z, a-z, _, +, =, comma, ., @, and - .
92405898	"The SID specified in the access policy is not valid. Valid characters for a SID are 0-9, A-Z and a-z.";

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

aggregates

Aggregate

Name	Type	Description
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.

Name	Type	Description
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.

Name	Type	Description
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
name	string	The name of the volume.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket_svm

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
aggregates	array[aggregates]	A list of aggregates for FlexGroup volume constituents where the bucket is hosted. If this option is not specified, the bucket is auto-provisioned as a FlexGroup volume.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
constituents_per_aggregate	integer	Specifies the number of constituents or FlexVol volumes per aggregate. A FlexGroup volume consisting of all such constituents across all specified aggregates is created. This option is used along with the aggregates option and cannot be used independently.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

job_link

Name	Type	Description
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete the S3 bucket configuration for an SVM

```
DELETE /protocols/s3/services/{svm.uuid}/buckets/{uuid}
```

Introduced In: 9.7

Deletes the S3 bucket configuration of an SVM. An access policy is also deleted on an S3 bucket "delete" command.

Related ONTAP commands

- `vserver object-store-server bucket delete`
- `vserver object-store-server bucket policy statement delete`
- `vserver object-store-server bucket policy-statement-condition delete`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/buckets](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the bucket.

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```

Error

Status: Default

ONTAP Error Response Codes

Error code	Message
92405811	"Failed to delete bucket "{bucket name}" for SVM "{svm.name}". Wait a few minutes and try the operation again.";
92405858	"Failed to "delete" the "bucket" because the operation is only supported on data SVMs.";
92405861	"The specified SVM UUID or bucket UUID does not exist.";
92405779	"Failed to remove bucket "{bucket name}" for SVM "{svm.name}". Reason: {Reason for failure}. ";
92405813	"Failed to delete the object store volume. Reason: {Reason for failure}.";
92405864	"An error occurred when deleting an access policy. The reason for failure is detailed in the error message.";

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve an S3 bucket for an SVM

GET /protocols/s3/services/{svm.uuid}/buckets/{uuid}

Introduced In: 9.7

Retrieves the S3 bucket configuration of an SVM. Note that in order to retrieve S3 bucket policy conditions, the 'fields' option should be set to '*'.

Related ONTAP commands

- `vserver object-store-server bucket show`
- `vserver object-store-server bucket policy statement show`
- `vserver object-store-server bucket policy-statement-condition show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/buckets](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the bucket.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.

Name	Type	Description
name	string	Specifies the name of the bucket. Bucket name is a string that can only contain the following combination of ASCII-range alphanumeric characters 0-9, a-z, ".", and "-".
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Example response

```
{
  "comment": "S3 bucket.",
  "logical_used_size": 0,
  "name": "bucket1",
  "policy": {
    "statements": [
      {
        "actions": [
          "GetObject",
          "PutObject",
          "DeleteObject",
          "ListBucket"
        ],
        "conditions": [
          {
            "delimiters": [
              "/"
            ],
            "max_keys": [
              "1000"
            ],
            "operator": "ip_address",
            "prefixes": [
              "pref"
            ],
            "source_ips": [
              "1.1.1.1",
              "1.2.2.0/24"
            ],
            "usernames": [
              "user1"
            ]
          }
        ],
        "effect": "allow",
        "principals": [
          "user1",
          "group/grp1"
        ],
        "resources": [
          "bucket1",
          "bucket1/*"
        ],
        "sid": "FullAccessToUser1"
      }
    ]
  }
}
```

```

    }
  ],
  "qos_policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "size": "1677721600",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
  "volume": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
}

```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

aggregates

Aggregate

Name	Type	Description
_links	_links	
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.

Name	Type	Description
operator	string	Condition operator that is applied to the specified condition key.
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
principals	array[string]	
resources	array[string]	

Name	Type	Description
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
_links	_links	
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.

Name	Type	Description
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
_links	_links	
name	string	The name of the volume.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update an S3 bucket configuration for an SVM

PATCH /protocols/s3/services/{svm.uuid}/buckets/{uuid}

Introduced In: 9.7

Updates the S3 bucket configuration of an SVM.

Important notes

- The following fields can be modified for a bucket:
 - `comment` - Any information related to the bucket.
 - `size` - Bucket size.
 - `policy` - An access policy for resources (buckets and objects) that defines their permissions. New policies are created after existing policies are deleted. To retain any of the existing policy statements, you need to specify those statements again. Policy conditions can also be modified using this API.
 - `qos_policy` - A QoS policy for buckets.

Related ONTAP commands

- `vserver object-store-server bucket modify`
- `vserver object-store-server bucket policy statement modify`
- `vserver object-store-server bucket policy-statement-condition modify`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/buckets](#)

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the bucket.
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none">• Default value: 1• Max value: 120• Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Example request

```
{
  "comment": "S3 bucket.",
  "logical_used_size": 0,
  "policy": {
    "statements": [
      {
        "actions": [
          "GetObject",
          "PutObject",
          "DeleteObject",
          "ListBucket"
        ],
        "conditions": [
          {
            "delimiters": [
              "/"
            ],
            "max_keys": [
              "1000"
            ],
            "operator": "ip_address",
            "prefixes": [
              "pref"
            ],
            "source_ips": [
              "1.1.1.1",
              "1.2.2.0/24"
            ],
            "usernames": [
              "user1"
            ]
          }
        ],
        "effect": "allow",
        "principals": [
          "user1",
          "group/grp1"
        ],
        "resources": [
          "bucket1",
          "bucket1/*"
        ],
        "sid": "FullAccessToUser1"
      }
    ]
  }
}
```

```

    ]
  },
  "qos_policy": {
    "max_throughput_iops": "10000",
    "max_throughput_mbps": "500",
    "min_throughput_iops": "2000",
    "min_throughput_mbps": "500",
    "name": "performance",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "size": "1677721600",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
  "volume": {
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
}

```

Response

Status: 202, Accepted

Name	Type	Description
job	job_link	

Example response

```

{
  "job": {
    "uuid": "string"
  }
}

```

Error

Status: Default

Error code	Message
92405778	"Failed to modify bucket "{bucket name}" for SVM "{svm.name}". Reason: {Reason for failure}. ";
92405846	"Failed to modify the object store volume. Reason: {Reason for failure}.";
92405811	"Failed to modify bucket "{bucket name}" for SVM "{svm.name}". Wait a few minutes and try the operation again.";
92405858	"Failed to "modify" the "bucket" because the operation is only supported on data SVMs.";
92405861	"The specified SVM UUID or bucket UUID does not exist.";
92405863	"An error occurs when creating an access policy. The reason for failure is detailed in the error message.";
92405864	"An error occurs when deleting an access policy. The reason for failure is detailed in the error message.";
92405891	The resources specified in the access policy are not valid. Valid ways to specify a resource are *, <bucket-name>, <bucket-name>/.../.... Valid characters for a resource are 0-9, A-Z, a-z, _, +, comma, ;, :, =, ., &, @, ?, (,), single quote, *, !, - and \$.
92405894	"Statements, principals and resources list can have a maximum of 10 entries.";
92405897	The principals specified in the access policy are not in the correct format. User name must be in between 1 and 64 characters. Valid characters for a user name are 0-9, A-Z, a-z, _, +, =, comma, ., @, and - .
92405898	"The SID specified in the access policy is not valid. Valid characters for a SID are 0-9, A-Z and a-z.";

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

aggregates

Aggregate

Name	Type	Description
name	string	
uuid	string	

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket.

s3_bucket_policy_condition

Information about policy conditions based on various condition operators and condition keys.

Name	Type	Description
delimiters	array[string]	An array of delimiters that are compared with the delimiter value specified at the time of execution of an S3-based command, using the condition operator specified.
max_keys	array[integer]	An array of maximum keys that are allowed or denied to be retrieved using an S3 list operation, based on the condition operator specified.
operator	string	Condition operator that is applied to the specified condition key.

Name	Type	Description
prefixes	array[string]	An array of prefixes that are compared with the input prefix value specified at the time of execution of an S3-based command, using the condition operator specified.
source_ips	array[string]	An array of IP address ranges that are compared with the IP address of a source command at the time of execution of an S3-based command, using the condition operator specified.
usernames	array[string]	An array of usernames that a current user in the context is evaluated against using the condition operators.

s3_bucket_policy_statement

Specifies information about a single access permission.

Name	Type	Description
actions	array[string]	
conditions	array[s3_bucket_policy_condition]	Specifies bucket policy conditions.
effect	string	Specifies whether access is allowed or denied when a user requests the specific action. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
principals	array[string]	
resources	array[string]	
sid	string	Specifies the statement identifier used to differentiate between statements.

policy

A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
statements	array[s3_bucket_policy_statement]	Specifies bucket access policy statement.

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.

Name	Type	Description
max_throughput_iops	integer	Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
max_throughput_mbps	integer	Specifies the maximum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_iops	integer	Specifies the minimum throughput in IOPS, 0 means none. Setting "min_throughput" is supported on AFF platforms only, unless FabricPool tiering policies are set. This is mutually exclusive with name and UUID during POST and PATCH.
min_throughput_mbps	integer	Specifies the minimum throughput in Megabytes per sec, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.
name	string	The QoS policy group name. This is mutually exclusive with UUID and other QoS attributes during POST and PATCH.

Name	Type	Description
uuid	string	The QoS policy group UUID. This is mutually exclusive with name and other QoS attributes during POST and PATCH.

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

volume

Specifies the FlexGroup volume name and UUID where the bucket is hosted.

Name	Type	Description
name	string	The name of the volume.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6

s3_bucket_svm

A bucket is a container of objects. Each bucket defines an object namespace. S3 requests specify objects using a bucket-name and object-name pair. An object resides within a bucket.

Name	Type	Description
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	
logical_used_size	integer	Specifies the bucket logical used size up to this point.

Name	Type	Description
policy	policy	A policy is an object associated with a bucket. It defines resource (bucket, folder, or object) permissions. These policies get evaluated when an S3 user makes a request by executing a specific command. The user must be part of the principal (user or group) specified in the policy. Permissions in the policies determine whether the request is allowed or denied.
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifies "min_throughput_iops" is only supported on volumes hosted on a node that is flash optimized. A pre-created QoS policy can also be used by specifying "qos_policy.name" or "qos_policy.uuid" properties. Setting or assigning a QoS policy to a bucket is not supported if its containing volume or SVM already has a QoS policy attached.
size	integer	Specifies the bucket size in bytes; ranges from 80MB to 64TB.
svm	svm	
uuid	string	Specifies the unique identifier of the bucket.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

job_link

Name	Type	Description
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage S3 service group configuration

Protocols S3 services svm.uuid groups endpoint overview

Overview

An S3 group consists of one or many users. Policies are attached to the S3 group to have access control over S3 resources at group level.

Examples

Retrieving all fields for all S3 groups of an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/groups:

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-
```

```

0050568ea123/groups?fields=*&return_records=true&return_timeout=15" -H
"accept: application/json"

# The response:
{
  "records": [
    {
      "comment": "Admin group",
      "id": 5,
      "name": "Admin-Group",
      "policies": [
        { "name": "Policy1" },
        { "name": "Policy2" },
        { "name": "Policy3" }
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "users": [
        { "name": "User1" },
        { "name": "User2" },
        { "name": "User3" }
      ]
    },
    {
      "comment": "Admin group",
      "id": 6,
      "name": "Admin-Group1",
      "policies": [
        { "name": "Policy1" },
        { "name": "Policy2" },
        { "name": "Policy3" }
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "users": [
        { "name": "User1" },
        { "name": "User2" },
        { "name": "User6" }
      ]
    }
  ],
  "num_records": 2
}

```

```
}
```

Retrieving the specified group in the SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/groups/{group_id}:

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/groups/5?fields=*" -H "accept: application/json"

# The response:
{
  "comment": "Admin group",
  "id": 5,
  "name": "Admin-Group",
  "policies": [
    { "name": "Policy1" },
    { "name": "Policy2" },
    { "name": "Policy3" }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "users": [
    { "name": "User1" },
    { "name": "User2" },
    { "name": "User3" }
  ]
}
```

Creating an S3 group for an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/groups

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/groups?return_records=true" -H "accept: application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type: application/json" -d "{ \"comment\": \"Admin group\", \"name\": \"Admin-Group\", \"policies\": [ { \"name\": \"Policy1\" }, { \"name\": \"Policy2\" }, { \"name\": \"Policy3\" } ], \"users\": [ { \"name\": \"User1\" }, { \"name\": \"User2\" }, { \"name\": \"User3\" } ] }"

# The response:
HTTP/1.1 202 Accepted
Date: Mon, 16 Mar 2020 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 289
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "comment": "Admin group",
      "id": 5,
      "name": "Admin-Group",
      "policies": [
        { "name": "Policy1" },
        { "name": "Policy2" },
        { "name": "Policy3" }
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "users": [
        { "name": "User1" },
        { "name": "User2" },
        { "name": "User3" }
      ]
    }
  ]
}
```

Updating an S3 group for an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/groups/{group_id}:

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/groups/5" -H "accept: application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type: application/json" -d "{ \"comment\": \"Admin group\", \"name\": \"Admin-Group\", \"policies\": [ { \"name\": \"Policy1\" } ], \"users\": [ { \"name\": \"user-1\" } ] }"
```

```
# The response:
HTTP/1.1 202 Accepted
Date: Mon, 16 Mar 2020 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
```

Deleting an S3 group for a specified SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/groups/{group_id}:

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/groups/5" -H "accept: application/json"
```

```
# The response:
HTTP/1.1 202 Accepted
Date: Mon, 16 Mar 2020 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
```

Retrieve an S3 group configuration

GET /protocols/s3/services/{svm.uuid}/groups

Introduced In: 9.8

Retrieves the S3 group's SVM configuration.

Related ONTAP commands

- `vserver object-store-server group show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/groups](#)

Parameters

Name	Type	In	Required	Description
comment	string	query	False	Filter by comment
name	string	query	False	Filter by name
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
id	integer	query	False	Filter by id
users.name	string	query	False	Filter by users.name
policies.name	string	query	False	Filter by policies.name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. <ul style="list-style-type: none">• Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	collection_links	
num_records	integer	Number of records
records	array[s3_group]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "comment": "Admin group",
      "id": "5",
      "name": "Admin-Group",
      "policies": [
        {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "Policy1"
        }
      ],
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "users": [
        {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "user-1"
        }
      ]
    }
  ]
}
```



```
]
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

policies

Name	Type	Description
_links	_links	
name	string	Specifies the name of the policy. A policy name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

users

Name	Type	Description
_links	_links	

Name	Type	Description
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

s3_group

This is a container for S3 user groups.

Name	Type	Description
comment	string	Can contain any additional information about the group being created or modified.
id	integer	Specifies a unique group ID used to identify a particular group. This parameter should not be specified in the POST method. A group ID is automatically generated and it is retrieved using the GET method. Group id is SVM scoped.
name	string	Specifies the name of the group. A group name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
policies	array[policies]	Specifies a list of policies that are attached to the group. The wildcard character "*" is a valid value for specifying all policies.
svm	svm	
users	array[users]	Specifies the list of users who belong to the group.

error_arguments

Name	Type	Description
code	string	Argument code

Name	Type	Description
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create an S3 group configuration

POST /protocols/s3/services/{svm.uuid}/groups

Introduced In: 9.8

Creates the S3 group configuration.

Important notes

- Each SVM can have one or more s3 group configurations.

Required properties

- `svm.uuid` - Existing SVM in which to create the user configuration.
- `name` - Group name that is to be created.
- `users` - List of users to be added into the group.
- `policies` - List of policies are to be attached to this group.

Recommended optional properties

- `comment` - Short description about the S3 Group.

Related ONTAP commands

- `vserver object-store-server group create`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/groups](#)

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. <ul style="list-style-type: none">• Default value:
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
comment	string	Can contain any additional information about the group being created or modified.
id	integer	Specifies a unique group ID used to identify a particular group. This parameter should not be specified in the POST method. A group ID is automatically generated and it is retrieved using the GET method. Group id is SVM scoped.
name	string	Specifies the name of the group. A group name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ";", ".", "@", and "-".
policies	array[policies]	Specifies a list of policies that are attached to the group. The wildcard character "*" is a valid value for specifying all policies.
svm	svm	
users	array[users]	Specifies the list of users who belong to the group.

Example request

```
{
  "comment": "Admin group",
  "id": "5",
  "name": "Admin-Group",
  "policies": [
    {
      "name": "Policy1"
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "users": [
    {
      "name": "user-1"
    }
  ]
}
```

Response

Status: 201, Created

Name	Type	Description
num_records	integer	Number of records
records	array[s3_group]	

Example response

```
{
  "records": [
    {
      "comment": "Admin group",
      "id": "5",
      "name": "Admin-Group",
      "policies": [
        {
          "name": "Policy1"
        }
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "users": [
        {
          "name": "user-1"
        }
      ]
    }
  ]
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
92405934	"Users {users} specified in the user list do not exist for SVM \"{svm.name}\". Use the \"object-store-server user create\" command to create a user.";
92405937	"Policies {policies} specified in the policy list do not exist for SVM \"{svm.name}\". Use the \"object-store-server policy create\" command to create a policy.";

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

policies

Name	Type	Description
name	string	Specifies the name of the policy. A policy name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

users

Name	Type	Description
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

s3_group

This is a container for S3 user groups.

Name	Type	Description
comment	string	Can contain any additional information about the group being created or modified.

Name	Type	Description
id	integer	Specifies a unique group ID used to identify a particular group. This parameter should not be specified in the POST method. A group ID is automatically generated and it is retrieved using the GET method. Group id is SVM scoped.
name	string	Specifies the name of the group. A group name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
policies	array[policies]	Specifies a list of policies that are attached to the group. The wildcard character "*" is a valid value for specifying all policies.
svm	svm	
users	array[users]	Specifies the list of users who belong to the group.

collection_links

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message

Name	Type	Description
target	string	The target parameter that caused the error.

Delete the S3 group configuration for an SVM

DELETE /protocols/s3/services/{svm.uuid}/groups/{id}

Introduced In: 9.8

Deletes the S3 group configuration of an SVM.

Related ONTAP commands

- `vserver object-store-server group delete`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/groups](#)

Parameters

Name	Type	In	Required	Description
id	string	path	True	Group identifier that identifies the unique group.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

Status: 200, Ok

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve the S3 group configuration for an SVM

GET /protocols/s3/services/{svm.uuid}/groups/{id}

Introduced In: 9.8

Retrieves the S3 group configuration of an SVM.

Related ONTAP commands

- `vserver object-store-server group show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/groups](#)

Parameters

Name	Type	In	Required	Description
id	string	path	True	Group identifier that identifies the unique group.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
comment	string	Can contain any additional information about the group being created or modified.
id	integer	Specifies a unique group ID used to identify a particular group. This parameter should not be specified in the POST method. A group ID is automatically generated and it is retrieved using the GET method. Group id is SVM scoped.

Name	Type	Description
name	string	Specifies the name of the group. A group name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
policies	array[policies]	Specifies a list of policies that are attached to the group. The wildcard character "*" is a valid value for specifying all policies.
svm	svm	
users	array[users]	Specifies the list of users who belong to the group.

Example response

```
{
  "comment": "Admin group",
  "id": "5",
  "name": "Admin-Group",
  "policies": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "Policy1"
    }
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "users": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "user-1"
    }
  ]
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

policies

Name	Type	Description
_links	_links	
name	string	Specifies the name of the policy. A policy name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

users

Name	Type	Description
_links	_links	
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update S3 group configuration for an SVM

PATCH /protocols/s3/services/{svm.uuid}/groups/{id}

Introduced In: 9.8

Updates the S3 group configuration of an SVM.

Important notes

- The following fields can be modified for a group:
- `name` - Group name that needs to be modified.
- `users` - List of users present in the group.
- `policies` - List of policies to be attached to this group.

Recommended optional properties

- `comment` - Short description about the S3 Group.

Related ONTAP commands

- `vserver object-store-server group modify`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/groups](#)

Parameters

Name	Type	In	Required	Description
id	integer	path	True	Group identifier that identifies the unique group.
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
comment	string	Can contain any additional information about the group being created or modified.
id	integer	Specifies a unique group ID used to identify a particular group. This parameter should not be specified in the POST method. A group ID is automatically generated and it is retrieved using the GET method. Group id is SVM scoped.
name	string	Specifies the name of the group. A group name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
policies	array[policies]	Specifies a list of policies that are attached to the group. The wildcard character "*" is a valid value for specifying all policies.
svm	svm	
users	array[users]	Specifies the list of users who belong to the group.

Example request

```
{
  "comment": "Admin group",
  "id": "5",
  "name": "Admin-Group",
  "policies": [
    {
      "name": "Policy1"
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "users": [
    {
      "name": "user-1"
    }
  ]
}
```

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
92405934	"Users {users} specified in the user list do not exist for SVM \"{svm.name}\". Use the \"object-store-server user create\" command to create a user.";
92405937	"Policies {policies} specified in the policy list do not exist for SVM \"{svm.name}\". Use the \"object-store-server policy create\" command to create a policy.";

See Definitions

href

Name	Type	Description
href	string	

_links

policies

Name	Type	Description
name	string	Specifies the name of the policy. A policy name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

users

Name	Type	Description
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

s3_group

This is a container for S3 user groups.

Name	Type	Description
comment	string	Can contain any additional information about the group being created or modified.

Name	Type	Description
id	integer	Specifies a unique group ID used to identify a particular group. This parameter should not be specified in the POST method. A group ID is automatically generated and it is retrieved using the GET method. Group id is SVM scoped.
name	string	Specifies the name of the group. A group name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
policies	array[policies]	Specifies a list of policies that are attached to the group. The wildcard character "*" is a valid value for specifying all policies.
svm	svm	
users	array[users]	Specifies the list of users who belong to the group.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve S3 protocol historical performance metrics

GET /protocols/s3/services/{svm.uuid}/metrics

Introduced In: 9.8

Retrieves historical performance metrics for the S3 protocol of an SVM.

Parameters

Name	Type	In	Required	Description
timestamp	string	query	False	Filter by timestamp
duration	string	query	False	Filter by duration
throughput.total	integer	query	False	Filter by throughput.total
throughput.read	integer	query	False	Filter by throughput.read
throughput.other	integer	query	False	Filter by throughput.other
throughput.write	integer	query	False	Filter by throughput.write
latency.total	integer	query	False	Filter by latency.total
latency.read	integer	query	False	Filter by latency.read
latency.other	integer	query	False	Filter by latency.other
latency.write	integer	query	False	Filter by latency.write
status	string	query	False	Filter by status
iops.total	integer	query	False	Filter by iops.total
iops.read	integer	query	False	Filter by iops.read
iops.other	integer	query	False	Filter by iops.other
iops.write	integer	query	False	Filter by iops.write

Name	Type	In	Required	Description
svm.uuid	string	path	True	Unique identifier of the SVM.
interval	string	query	False	<p>The time range for the data. Examples can be 1h, 1d, 1m, 1w, 1y. The period for each time range is as follows:</p> <ul style="list-style-type: none"> • 1h: Metrics over the most recent hour sampled over 15 seconds. • 1d: Metrics over the most recent day sampled over 5 minutes. • 1w: Metrics over the most recent week sampled over 30 minutes. • 1m: Metrics over the most recent month sampled over 2 hours. • 1y: Metrics over the most recent year sampled over a day. • Default value: 1 • enum: ["1h", "1d", "1w", "1m", "1y"]

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
order_by	array[string]	query	False	Order results by specified fields and optional [asc
desc] direction. Default direction is 'asc' for ascending.	return_records	boolean	query	False

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[records]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "duration": "PT15S",
      "iops": {
        "read": "200",
        "total": "1000",
        "write": "100"
      },
      "latency": {
        "read": "200",
        "total": "1000",
        "write": "100"
      },
      "status": "ok",
      "throughput": {
        "read": "200",
        "total": "1000",
        "write": "100"
      },
      "timestamp": "2017-01-25T11:20:13Z"
    }
  ]
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

iops

The rate of I/O operations observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

latency

The round trip latency in microseconds observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

throughput

The rate of throughput bytes per second observed at the storage object.

Name	Type	Description
other	integer	Performance metric for other I/O operations. Other I/O operations can be metadata operations, such as directory lookups and so on.
read	integer	Performance metric for read I/O operations.
total	integer	Performance metric aggregated over all types of I/O operations.
write	integer	Performance metric for write I/O operations.

records

Performance numbers, such as IOPS latency and throughput.

Name	Type	Description
_links	_links	

Name	Type	Description
duration	string	The duration over which this sample is calculated. The time durations are represented in the ISO-8601 standard format. Samples can be calculated over the following durations:
iops	iops	The rate of I/O operations observed at the storage object.
latency	latency	The round trip latency in microseconds observed at the storage object.
status	string	Errors associated with the sample. For example, if the aggregation of data over multiple nodes fails, then any partial errors might return "ok" on success or "error" on an internal uncategorized failure. Whenever a sample collection is missed but done at a later time, it is back filled to the previous 15 second timestamp and tagged with "backfilled_data". "Inconsistent_delta_time" is encountered when the time between two collections is not the same for all nodes. Therefore, the aggregated value might be over or under inflated. "Negative_delta" is returned when an expected monotonically increasing value has decreased in value. "Inconsistent_old_data" is returned when one or more nodes do not have the latest data.
throughput	throughput	The rate of throughput bytes per second observed at the storage object.
timestamp	string	The timestamp of the performance data.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage S3 service policies

Protocols S3 services svm.uuid policies endpoint overview

Overview

An S3 policy is an object that when associated with a resource, defines their permissions. Buckets and objects are defined as resources. Policies are used to manage access to these resources.

Examples

Retrieving all fields for all S3 policies of an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/policies:

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/policies?fields=*&return_records=true&return_timeout=15" -H "accept: application/json"

# The response:
{
  "num_records": 2,
  "records": [
    {
```

```

"comment": "S3 policy.",
"name": "Policy1",
"statements": [
  {
    "actions": [
      "*"
    ],
    "effect": "allow",
    "index": 0,
    "resources": [
      "bucket1",
      "bucket1/*"
    ],
    "sid": "FullAccessToBucket1"
  },
  {
    "actions": [
      "DeleteObject"
    ],
    "effect": "deny",
    "index": 1,
    "resources": [
      "*"
    ],
    "sid": "DenyDeleteObjectAccessToAllResources"
  }
],
"svm": {
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
{
  "comment": "S3 policy 2.",
  "name": "Policy2",
  "statements": [
    {
      "actions": [
        "GetObject"
      ],
      "effect": "allow",
      "index": 3,
      "resources": [
        "*"
      ],
      "sid": "AllowGetObjectAccessToAllResources"
    }
  ]
}

```



```

    },
    {
      "actions": [
        "*"
      ],
      "effect": "deny",
      "index": 3,
      "resources": [
        "*"
      ],
      "sid": "DenyAccessToAllResources"
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
}
]
}

```

Retrieving the specified policy in the SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/policies/{name}:

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/policies/Policy1?fields=*" -H "accept: application/json"

# The response:
{
  "comment": "S3 policy.",
  "name": "Policy1",
  "statements": [
    {
      "actions": [
        "GetObject",
        "PutObject",
        "DeleteObject",
        "ListBucket",
        "ListMyBuckets"
      ],
      "effect": "deny",
      "index": 0,
      "resources": [
        "*"
      ],
      "sid": "DenyAccessToAllResources"
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Creating an S3 policy for an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/policies

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/policies?return_records=true" -H "accept: application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type: application/json" -d '{"comment": "S3 policy."',
```

```
\\"name\\": \\"Policy1\\", \\"statements\\": [ { \\"actions\\": [ \\"ListBucket\\",  
\\"ListMyBuckets\\" ], \\"effect\\": \\"allow\\", \\"resources\\": [ \\"*\\" ],  
\\"sid\\": \\"AllowListAccessToAllResources\\" } ]}"
```

The response:

HTTP/1.1 202 Accepted

Date: Mon, 16 Mar 2020 11:32:27 GMT

Server: libzapid-httpd

X-Content-Type-Options: nosniff

Cache-Control: no-cache,no-store,must-revalidate

Content-Length: 289

Content-Type: application/json

```
{  
  "num_records": 1,  
  "records": [  
    {  
      "comment": "S3 policy.",  
      "name": "Policy1",  
      "statements": [  
        {  
          "actions": [  
            "ListBucket",  
            "ListMyBuckets"  
          ],  
          "effect": "allow",  
          "index": 5,  
          "resources": [  
            "*"   
          ],  
          "sid": "AllowListAccessToAllResources"  
        }  
      ],  
      "svm": {  
        "name": "svm1",  
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"  
      }  
    }  
  ]  
}
```

Updating an S3 policy for an SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/policies/{name}:

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/policies/Policy1" -H "accept: application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type: application/json" -d "{ \"comment\": \"S3 policy.\", \"statements\": [ { \"actions\": [ \"GetObject\", \"PutObject\", \"DeleteObject\", \"ListBucket\", \"ListMyBuckets\" ], \"effect\": \"allow\", \"resources\": [ \"bucket1\", \"bucket1/*\" ], \"sid\": \"FullAccessToAllResources\" } ]}"

# The response:
HTTP/1.1 202 Accepted
Date: Mon, 16 Mar 2020 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
```

Deleting an S3 policy for a specified SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/policies/{name}:

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/s3/services/12f3ba4c-7ae0-11e9-8c06-0050568ea123/policies/Policy1" -H "accept: application/json"

# The response:
HTTP/1.1 202 Accepted
Date: Mon, 16 Mar 2020 11:32:27 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 189
Content-Type: application/json
```

Retrieve S3 policies in SVM configuration

```
GET /protocols/s3/services/{svm.uuid}/policies
```

Introduced In: 9.8

Retrieves the S3 policies SVM configuration.

Related ONTAP commands

- `vserver object-store-server policy show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/policies](#)

Parameters

Name	Type	In	Required	Description
name	string	query	False	Filter by name
statements.sid	string	query	False	Filter by statements.sid
statements.effect	string	query	False	Filter by statements.effect
statements.index	integer	query	False	Filter by statements.index
statements.resources	string	query	False	Filter by statements.resources
statements.actions	string	query	False	Filter by statements.actions
comment	string	query	False	Filter by comment
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
read-only	boolean	query	False	Filter by read-only
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Name	Type	In	Required	Description
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	<p>The default is true for GET calls. When set to false, only the number of records is returned.</p> <ul style="list-style-type: none"> • Default value: 1
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	collection_links	
num_records	integer	Number of records
records	array[s3_policy]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "comment": "S3 policy.",
      "name": "Policy1",
      "statements": [
        {
          "actions": [
            "*"
          ],
          "effect": "allow",
          "index": 0,
          "resources": [
            "bucket1",
            "bucket1/*"
          ],
          "sid": "FullAccessToBucket1"
        }
      ],
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

s3_policy_statement

Specifies information about a single access policy statement.

Name	Type	Description
actions	array[string]	<p>For each resource, S3 supports a set of operations. The resource operations allowed or denied are identified by an action list:</p> <ul style="list-style-type: none">• GetObject - retrieves objects from a bucket.• PutObject - puts objects in a bucket.• DeleteObject - deletes objects from a bucket.• ListBucket - lists the objects in a bucket.• GetBucketAcl - retrieves the access control list (ACL) of a bucket.• GetObjectAcl - retrieves the access control list (ACL) of an object.• ListAllMyBuckets - lists all of the buckets in a server. The wildcard character "*" can be used to form a regular expression for specifying actions.

Name	Type	Description
effect	string	Specifies whether access is allowed or denied. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.
index	integer	Specifies a unique statement index used to identify a particular statement. This parameter should not be specified in the POST method. A statement index is automatically generated and is retrieved using the GET method.
resources	array[string]	
sid	string	Specifies the statement identifier which contains additional information about the statement.

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
<u>_links</u>	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_policy

An S3 policy is an object. It defines resource (bucket, folder or object) permissions. These policies get evaluated when an object store user makes a request. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
comment	string	Can contain any additional information about the S3 policy.
name	string	Specifies the name of the policy. A policy name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
read-only	boolean	Specifies whether or not the s3 policy is read only. This parameter should not be specified in the POST method.
statements	array[s3_policy_statement]	Specifies the policy statements.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create an S3 policy configuration

POST /protocols/s3/services/{svm.uuid}/policies

Introduced In: 9.8

Creates the S3 policy configuration.

Important notes

- Each SVM can have one or more s3 policy configurations.

Required properties

- `svm.uuid` - Existing SVM in which to create the s3 policy configuration.
- `name` - Policy name that is to be created.

Recommended optional properties

- `comment` - Short description about the S3 policy.
- `statements.effect` - Indicates whether to allow or deny access.
- `statements.actions` - List of actions that can be allowed or denied access. Example: `GetObject`, `PutObject`, `DeleteObject`, `ListBucket` and `ListMyBuckets`.
- `statements.resources` - Buckets or objects that can be allowed or denied access.
- `statements.sid` - Statement identifier providing additional information about the statement.

Related ONTAP commands

- `vserver object-store-server policy create`
- `vserver object-store-server policy add-statement`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/policies](#)

Parameters

Name	Type	In	Required	Description
<code>return_records</code>	boolean	query	False	The default is false. If set to true, the records are returned. <ul style="list-style-type: none">• Default value:
<code>svm.uuid</code>	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
comment	string	Can contain any additional information about the S3 policy.
name	string	Specifies the name of the policy. A policy name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ":", "@", and "-".
read-only	boolean	Specifies whether or not the s3 policy is read only. This parameter should not be specified in the POST method.
statements	array[s3_policy_statement]	Specifies the policy statements.
svm	svm	

Example request

```
{
  "comment": "S3 policy.",
  "name": "Policy1",
  "statements": [
    {
      "actions": [
        "*"
      ],
      "effect": "allow",
      "index": 0,
      "resources": [
        "bucket1",
        "bucket1/*"
      ],
      "sid": "FullAccessToBucket1"
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

Status: 201, Created

Name	Type	Description
num_records	integer	Number of records
records	array[s3_policy]	

Example response

```
{
  "records": [
    {
      "comment": "S3 policy.",
      "name": "Policy1",
      "statements": [
        {
          "actions": [
            "*"
          ],
          "effect": "allow",
          "index": 0,
          "resources": [
            "bucket1",
            "bucket1/*"
          ],
          "sid": "FullAccessToBucket1"
        }
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

Error

Status: Default

ONTAP Error Response Codes

| Error Code | Description | | ----- | ----- |

Definitions

See Definitions

s3_policy_statement

Specifies information about a single access policy statement.

Name	Type	Description
actions	array[string]	<p>For each resource, S3 supports a set of operations. The resource operations allowed or denied are identified by an action list:</p> <ul style="list-style-type: none">• GetObject - retrieves objects from a bucket.• PutObject - puts objects in a bucket.• DeleteObject - deletes objects from a bucket.• ListBucket - lists the objects in a bucket.• GetBucketAcl - retrieves the access control list (ACL) of a bucket.• GetObjectAcl - retrieves the access control list (ACL) of an object.• ListAllMyBuckets - lists all of the buckets in a server. The wildcard character "*" can be used to form a regular expression for specifying actions.
effect	string	<p>Specifies whether access is allowed or denied. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.</p>

Name	Type	Description
index	integer	Specifies a unique statement index used to identify a particular statement. This parameter should not be specified in the POST method. A statement index is automatically generated and is retrieved using the GET method.
resources	array[string]	
sid	string	Specifies the statement identifier which contains additional information about the statement.

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_policy

An S3 policy is an object. It defines resource (bucket, folder or object) permissions. These policies get evaluated when an object store user makes a request. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
comment	string	Can contain any additional information about the S3 policy.
name	string	Specifies the name of the policy. A policy name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

Name	Type	Description
read-only	boolean	Specifies whether or not the s3 policy is read only. This parameter should not be specified in the POST method.
statements	array[s3_policy_statement]	Specifies the policy statements.
svm	svm	

collection_links

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete an S3 policy configuration

```
DELETE /protocols/s3/services/{svm.uuid}/policies/{name}
```

Introduced In: 9.8

Deletes the S3 policy configuration of an SVM.

Related ONTAP commands

- `vserver object-store-server policy delete`
- `vserver object-store-server policy delete-statement`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/policies](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	Policy name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

Status: 200, Ok

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve an S3 policy configuration

GET /protocols/s3/services/{svm.uuid}/policies/{name}

Introduced In: 9.8

Retrieves the S3 policy configuration of an SVM.

Related ONTAP commands

- `vserver object-store-server policy show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/policies](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	Policy name

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
comment	string	Can contain any additional information about the S3 policy.
name	string	Specifies the name of the policy. A policy name length can range from 1 to 128 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ";", ":", "@", and "-".
read-only	boolean	Specifies whether or not the s3 policy is read only. This parameter should not be specified in the POST method.
statements	array[s3_policy_statement]	Specifies the policy statements.
svm	svm	

Example response

```
{
  "comment": "S3 policy.",
  "name": "Policy1",
  "statements": [
    {
      "actions": [
        "*"
      ],
      "effect": "allow",
      "index": 0,
      "resources": [
        "bucket1",
        "bucket1/*"
      ],
      "sid": "FullAccessToBucket1"
    }
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

s3_policy_statement

Specifies information about a single access policy statement.

Name	Type	Description
actions	array[string]	<p>For each resource, S3 supports a set of operations. The resource operations allowed or denied are identified by an action list:</p> <ul style="list-style-type: none">• GetObject - retrieves objects from a bucket.• PutObject - puts objects in a bucket.• DeleteObject - deletes objects from a bucket.• ListBucket - lists the objects in a bucket.• GetBucketAcl - retrieves the access control list (ACL) of a bucket.• GetObjectAcl - retrieves the access control list (ACL) of an object.• ListAllMyBuckets - lists all of the buckets in a server. The wildcard character "*" can be used to form a regular expression for specifying actions.
effect	string	<p>Specifies whether access is allowed or denied. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.</p>

Name	Type	Description
index	integer	Specifies a unique statement index used to identify a particular statement. This parameter should not be specified in the POST method. A statement index is automatically generated and is retrieved using the GET method.
resources	array[string]	
sid	string	Specifies the statement identifier which contains additional information about the statement.

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update an S3 policy configuration

PATCH /protocols/s3/services/{svm.uuid}/policies/{name}

Introduced In: 9.8

Updates the S3 policy configuration of an SVM.

Important notes

- The following fields can be modified for a policy:
 - `comment` - Any information related to the policy.
 - `statements` - Specifies the array of policy statements.

Related ONTAP commands

- `vserver object-store-server policy modify`
- `vserver object-store-server policy modify-statement`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/policies](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	Policy name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
comment	string	Can contain any additional information about the S3 policy.
read-only	boolean	Specifies whether or not the s3 policy is read only. This parameter should not be specified in the POST method.
statements	array[s3_policy_statement]	Specifies the policy statements.
svm	svm	

Example request

```
{
  "comment": "S3 policy.",
  "statements": [
    {
      "actions": [
        "*"
      ],
      "effect": "allow",
      "index": 0,
      "resources": [
        "bucket1",
        "bucket1/*"
      ],
      "sid": "FullAccessToBucket1"
    }
  ],
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

| Error Code | Description | | ----- | ----- |

Definitions

See Definitions

s3_policy_statement

Specifies information about a single access policy statement.

Name	Type	Description
actions	array[string]	<p>For each resource, S3 supports a set of operations. The resource operations allowed or denied are identified by an action list:</p> <ul style="list-style-type: none">• GetObject - retrieves objects from a bucket.• PutObject - puts objects in a bucket.• DeleteObject - deletes objects from a bucket.• ListBucket - lists the objects in a bucket.• GetBucketAcl - retrieves the access control list (ACL) of a bucket.• GetObjectAcl - retrieves the access control list (ACL) of an object.• ListAllMyBuckets - lists all of the buckets in a server. The wildcard character "*" can be used to form a regular expression for specifying actions.
effect	string	<p>Specifies whether access is allowed or denied. If access (to allow) is not granted explicitly to a resource, access is implicitly denied. Access can also be denied explicitly to a resource, in order to make sure that a user cannot access it, even if a different policy grants access.</p>

Name	Type	Description
index	integer	Specifies a unique statement index used to identify a particular statement. This parameter should not be specified in the POST method. A statement index is automatically generated and is retrieved using the GET method.
resources	array[string]	
sid	string	Specifies the statement identifier which contains additional information about the statement.

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_policy

An S3 policy is an object. It defines resource (bucket, folder or object) permissions. These policies get evaluated when an object store user makes a request. Permissions in the policies determine whether the request is allowed or denied.

Name	Type	Description
comment	string	Can contain any additional information about the S3 policy.
read-only	boolean	Specifies whether or not the s3 policy is read only. This parameter should not be specified in the POST method.
statements	array[s3_policy_statement]	Specifies the policy statements.
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Manage S3 service users

Protocols S3 services svm.uuid users endpoint overview

Overview

An S3 user account is created on the S3 server. Buckets that are created for the server are associated with that user (as the owner of the buckets). The creation of the user account involves generating a pair of keys "access" and "secret". These keys are shared with clients (by the administrator out of band) who want to access the S3 server. The access_key is sent in the request and it identifies the user performing the operation. The client or server never send the secret_key over the wire. Only the access_key can be retrieved from a GET operation. The secret_key along with the access_key is returned from a POST operation and from a PATCH operation if the administrator needs to regenerate the keys.

Examples

Retrieving S3 user configurations for a particular SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/users

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users?fields=*&return_records=true" -H "accept: application/hal+json"
```

```
# The response:
{
  "records": [
    {
      "svm": {
        "uuid": "db2ec036-8375-11e9-99e1-0050568e3ed9",
        "name": "vs1",
        "_links": {
          "self": {
            "href": "/api/svm/svms/db2ec036-8375-11e9-99e1-0050568e3ed9"
          }
        }
      },
      "name": "user-1",
      "comment": "S3 user",
      "access_key":
      "8OP1Yd5gm53sTNkTNgrsJ0_4iHvw_Ir_9xtDhzGa3m2_a_Yhtv6Bm3Dq_Xv79Stq90Bwa5NrT
      L7UQ2u_0xN0IW_x39cm1h3sn69fN6cf6STA48W05PAxuGED3NcR7rsn",
      "_links": {
        "self": {
          "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-
      0050568e3ed9/users/user-1"
        }
      }
    },
    {
      "svm": {
        "uuid": "db2ec036-8375-11e9-99e1-0050568e3ed9",
        "name": "vs1",
        "_links": {
          "self": {
            "href": "/api/svm/svms/db2ec036-8375-11e9-99e1-0050568e3ed9"
          }
        }
      },
      "name": "user-2",
      "comment": "s3-user",
      "access_key":
      "uYo34d4eR8a3is7JDSCY1xrNwL7gFMA338ZEX2mNrgJ34Kb4u98QNhBGT3ghs9GA2bzNdYBSn
      5_rBfjIY4mt36CMFE4d3g0L3Pa_2nXD6g6CAq_D0422LK__pbH6wvy8",
      "_links": {
        "self": {
          "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-
      0050568e3ed9/users/user-2"
        }
      }
    }
  ]
}
```



```

    }
  ],
  "num_records": 2,
  "_links": {
    "self": {
      "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users?fields=*&return_records=true"
    }
  }
}

```

Retrieving the user configuration of a specific S3 user

```

# The API:
/api/protocols/s3/services/{svm.uuid}/users/{name}

# The call:
curl -X GET "https://<mgmt-ip>/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-1" -H "accept: application/hal+json"

# The response:
{
  "svm": {
    "uuid": "db2ec036-8375-11e9-99e1-0050568e3ed9",
    "name": "vs1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/db2ec036-8375-11e9-99e1-0050568e3ed9"
      }
    }
  },
  "name": "user-1",
  "comment": "s3-user",
  "access_key":
  "uYo34d4eR8a3is7JDSCY1xrNwL7gFMA338ZEX2mNrgJ34Kb4u98QNhBGT3ghs9GA2bzNdYBSn
  5_rBfjIY4mt36CMFE4d3g0L3Pa_2nXD6g6CAq_D0422LK__pbH6wvy8",
  "_links": {
    "self": {
      "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-1"
    }
  }
}

```

Creating an S3 user configuration

```
# The API:
/api/protocols/s3/services/{svm.uuid}/users

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users" -H "accept: application/json" -H "Content-Type: application/json" -d '{"name": "user-1"}'

# The response:
HTTP/1.1 201 Created
Date: Fri, 31 May 2019 09:34:25 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Location: /api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-1
Content-Length: 244
Content-Type: application/json
{
  "num_records": 1,
  "records": [
    {
      "name": "user-1",
      "access_key":
"8OP1Yd5gm53sTNkTNgrsJ0_4iHvw_Ir_9xtDhzGa3m2_a_Yhtv6Bm3Dq_Xv79Stq90Bwa5NrTL7UQ2u_0xN0IW_x39cm1h3sn69fN6cf6STA48W05PAxuGED3NcR7rsn",
      "secret_key":
"SSS4oNA7_43yfu_zs938T5nY9xYZccFq_60_Q925h4t535km313qb0bDvdQ2MIK_8ebVf0gnD06K8qcNBg3t_KcpjHTXA2elshTEjrdMhsM9b47uOdQGw4Mex6yrbPgr"
    }
  ]
}
```

Regenerating keys for a specific S3 user for the specified SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/users/{name}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-2?regenerate_keys=true" -H "accept: application/hal+json" -H "Content-Type: application/json" -d "{}"

# The response:
HTTP/1.1 200 OK
Date: Fri, 31 May 2019 09:55:45 GMT
Server: libzapid-httpd
X-Content-Type-Options: nosniff
Cache-Control: no-cache,no-store,must-revalidate
Content-Length: 391
Content-Type: application/hal+json
{
  "num_records": 1,
  "records": [
    {
      "name": "user-2",
      "access_key":
        "hUod3l_sg632PjPlTgdQNKWXI3E_yTra0h96xrpsAPly3Qa_KmYYXq3kIuAJ3CyD4gVOakjj_
        PwVIVjATP1C2t1IQ3KB_9ctS1Ph921b1C17N6Y0PtWfv6AZD__j_C4j",
      "secret_key":
        "3w03fT_7Pv328_dYB8FN4YsD101Hn0i1u_gmqOenYydaNc22c7AIDN46c__T_5y0A3Y69w412
        F13A1bzJSpxH4C0nNAP4N_Ce1_Z_9_d7bA08bs28ccw50ab_4osA3bq",
      "_links": {
        "self": {
          "href": "/api/protocols/s3/services/db2ec036-8375-11e9-99e1-0050568e3ed9/users/user-2"
        }
      }
    }
  ]
}
```

Deleting the specified S3 user configuration for a specified SVM

```
# The API:
/api/protocols/s3/services/{svm.uuid}/users/{name}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/s3/services/03ce5c36-f269-11e8-8852-0050568e5298/users/user-2" -H "accept: application/json"
```

Retrieve the SVM configuration for an S3 user

GET /protocols/s3/services/{svm.uuid}/users

Introduced In: 9.7

Retrieves the S3 user's SVM configuration.

Related ONTAP commands

- `vserver object-store-server user show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
access_key	string	query	False	Filter by access_key
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
comment	string	query	False	Filter by comment
name	string	query	False	Filter by name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	collection_links	
num_records	integer	Number of records
records	array[s3_user]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "access_key":
        "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
        q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
      "comment": "S3 user",
      "name": "user-1",
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

Name	Type	Description
svm	svm	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Create an S3 user configuration

POST /protocols/s3/services/{svm.uuid}/users

Introduced In: 9.7

Creates the S3 user configuration.

Important notes

- Each SVM can have one or more user configurations.
- If user creation is successful, a user access_key and secret_key is returned as part of the response.

Required properties

- `svm.uuid` - Existing SVM in which to create the user configuration.
- `name` - User name that is to be created.

Default property values

- `comment` - ""

Related ONTAP commands

- `vserver object-store-server user create`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. <ul style="list-style-type: none">• Default value:
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ";", ".", "@", and "-".
svm	svm	

Example request

```
{
  "access_key":
  "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
  q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
  "comment": "S3 user",
  "name": "user-1",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

Status: 201, Created

Name	Type	Description
num_records	integer	Number of records
records	array[s3_service_user_post_respo nse]	

Example response

```
{
  "records": [
    {
      "access_key":
      "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
      q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
      "name": "user-1",
      "secret_key":
      "A20_tDhC_cux2C2BmtL45bXB_a_Q65c_96FsAcOdo14Az8V31jBKDTc0uCL62Bh559gPB8
      s9rrn0868QrF38_1dsV2u1_9H2tSf3qQ5xp9NT259C6z_GiZQ883Qn63X1"
    }
  ]
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
92405773	Object store server is not present for specified SVM. Create a object store server and retry the operation.
92405787	The specified user name contains invalid characters. Valid characters for a user name are 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
92405788	User names must have between 1 and 64 characters.
92405791	Failed to create access-key and secret-key.
92405817	S3 users can be created only on data SVM.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".
svm	svm	

collection_links

s3_service_user_post_response

Name	Type	Description
access_key	string	Specifies the access key for the user.
name	string	The name of the user.

Name	Type	Description
secret_key	string	Specifies the secret key for the user.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Delete an S3 user configuration

```
DELETE /protocols/s3/services/{svm.uuid}/users/{name}
```

Introduced In: 9.7

Deletes the S3 user configuration of an SVM.

Related ONTAP commands

- `vserver object-store-server user delete`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	User name

Name	Type	In	Required	Description
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

Status: 200, Ok

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve the S3 user configuration for an SVM

GET /protocols/s3/services/{svm.uuid}/users/{name}

Introduced In: 9.7

Retrieves the S3 user configuration of an SVM.

Related ONTAP commands

- `vserver object-store-server user show`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	User name
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Name	Type	In	Required	Description
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ";", ":", "@", and "-".
svm	svm	

Example response

```
{
  "access_key":
    "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
    q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
  "comment": "S3 user",
  "name": "user-1",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

svm

Name	Type	Description
_links	_links	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

Update an S3 user configuration

PATCH /protocols/s3/services/{svm.uuid}/users/{name}

Introduced In: 9.7

Updates the S3 user configuration of an SVM.

Important notes

- User `access_key` and `secret_key` pair can be regenerated using the PATCH operation.
- User `access_key` and `secret_key` is returned in a PATCH operation if the "regenerate_keys" field is specified as true.

Recommended optional properties

- `regenerate_keys` - Specifies if `secret_key` and `access_key` need to be regenerated.
- `comment` - Any information related to the S3 user.

Related ONTAP commands

- `vserver object-store-server user show`
- `vserver object-store-server user regenerate-keys`

Learn more

- [DOC /protocols/s3/services/{svm.uuid}/users](#)

Parameters

Name	Type	In	Required	Description
name	string	path	True	User name
regenerate_keys	boolean	query	False	Specifies whether or not to regenerate the user keys. <ul style="list-style-type: none">• Default value:
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
access_key	string	Specifies the access key for the user.

Name	Type	Description
comment	string	Can contain any additional information about the user being created or modified.
svm	svm	

Example request

```
{
  "access_key":
  "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
  "comment": "S3 user",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

Response

Status: 200, Ok

Name	Type	Description
num_records	integer	Number of records
records	array[s3_service_user_post_response]	

Example response

```
{
  "records": [
    {
      "access_key":
      "Pz3SB54G2B_6dsXQPrA5HrTPcf478qoAW6_Xx6qyqZ948AgZ_7YfCf_9nO87YoZmskxx3c
      q41U2JAH2M3_fs321B4rkzS3a_oC5_8u7D8j_45N8OsBCBPWGD_1d_ccfq",
      "name": "user-1",
      "secret_key":
      "A20_tDhC_cux2C2BmtL45bXB_a_Q65c_96FsAcOdo14Az8V31jBKDTc0uCL62Bh559gPB8
      s9rrn0868QrF38_1dsV2u1_9H2tSf3qQ5xp9NT259C6z_GiZQ883Qn63X1"
    }
  ]
}
```

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
92405792	Failed to regenerate access-key and secret-key for user.

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

svm

Name	Type	Description
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

s3_user

This is a container of S3 users.

Name	Type	Description
access_key	string	Specifies the access key for the user.
comment	string	Can contain any additional information about the user being created or modified.
svm	svm	

collection_links

s3_service_user_post_response

Name	Type	Description
access_key	string	Specifies the access key for the user.
name	string	The name of the user.
secret_key	string	Specifies the secret key for the user.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

Name	Type	Description
arguments	array[error_arguments]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

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