Manage protocols S3 services

REST API reference

NetApp
September 12, 2025

Table of Contents

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_w162ypaTi7_aAQuJo76Z16zc9Gz_W3IN83bDQWkcCN3jYU_z_xn20XATMKKa90509KCH
__r4lh1IPU58vf1QlWAJt8k2F1BPjPtM6CsDRX_dOP_QZkF5N9fBuz3"
      },
      {
        "name": "user-2",
        "comment": "",
        "access_key":
"g6T24qhH92dOA6gc1WTcDO_2oNZhQ6Drl2zu5_s5Id_QK1wLgghgxsD2xP1xqG7oX1T_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": "de146bff-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_w162ypaTi7_aAQuJo76Z16zc9Gz_W3IN83bDQWkcCN3jYU_z_xn20XATMKKa90509KCH
__r4lh1IPU58vf1QlWAJt8k2F1BPjPtM6CsDRX_dOP_QZkF5N9fBuz3"
  },
  {
    "name": "user-2",
    "comment": "",
    "access_key":
"g6T24qhH92dOA6gc1WTcDO_2oNZhQ6Drl2zu5_s5Id_QK1wLgghgxsD2xP1xqG7oX1T_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
qht82X6vcE32c3uLZB8pXAAx819LWPgpOSwD5xga2RE3czr1qhCd9V6"
      },
      {
        "name": "user-2",
        "access_key":
"nntYZrNN65mKn57yS04o1sDp_D0AY58jdwCW573_5x2OPW09AbyFl86DB7r30N2373_bA12n0
8aovQp8ySItRss9AjsYoSj7TsIiHOW_Y21DaqYPl5I2a849b11y8X4c",
        "secret_key":
"bjtsPXV2D8BM6pZNQ9pzmKoXU3qIv2yQ3957dhjK4X7M2dB6Rjtrq1As_8cS_4bSP0jt_P31R
5eLdZ_zcBO9Z_ZRMldTc1Bw_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_5x2OPW09AbyFl86DB7r30N2373_bA12n0
8aovQp8ySItRss9AjsYoSj7TsIiHOW_Y21DaqYPl5I2a849b11y8X4c",
        "secret_key":
"bjtsPXV2D8BM6pZNQ9pzmKoXU3qIv2yQ3957dhjK4X7M2dB6Rjtrq1As_8cS_4bSP0jt_P31R
5eLdZ_zcBO9Z_ZRMldTc1Bw_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 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 • 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 • 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.usernames	string	query	False	Filter by buckets.policy.statements.conditions.usernames • 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	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_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

Specifes "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifes "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	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. • 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	Specifes "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifes "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	Peformance 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	Peformance 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	Peformance 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	Peformance 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	Peformance 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	Peformance 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	The default is false. If set to true, the records are returned. • 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

Specifes "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifes "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	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. • 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	Specifes "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifes "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	Peformance 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	Peformance 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	Peformance 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	Peformance 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	Peformance 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	Peformance 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. • 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-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	

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

Specifes "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifes "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	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. • 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	Specifes "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifes "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	Peformance 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	Peformance 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	Peformance 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	Peformance 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	Peformance 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	Peformance 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

Specifes "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops". Specifes "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	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. • 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	Specifes "qos_policy.max_throughput_iops " and/or "qos_policy.max_throughput_mb ps" or "qos_policy.min_throughput_iops ". Specifes "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	Peformance 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	Peformance 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	Peformance 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	Peformance 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	Peformance 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	Peformance 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.

Copyright information

Trademark information