



Manage protocols S3 services

REST API reference

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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": "vs1",
      "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": 1048576000,
    "logical_used_size": 78643200,
    "encryption": {
      "enabled": false
    },
    "comment": "s3 bucket"
  }
],
"users": [
  {
    "name": "user-1",
    "comment": "S3 user",
    "access_key": "KEOYV21G156K8AB4ZISH"
  },
  {
    "name": "user-2",
    "comment": "",
    "access_key": "ANOYV22L156K8AB4ZISB"
  }
]
}

```

```
],  
"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": "KEOYV21G156K8AB4ZISH"
    },
    {
        "name": "user-2",

```

```

    "comment": "",
    "access_key": "ANOYV22L156K8AB4ZISB"
  }
]
}

```

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": "KEOYV21G156K8AB4ZISH",
          "secret_key": "fu9PD3gWxrTZWilDru_TzNZUIncJ_Qa01st3NNhA"
        },
        {
          "name": "user-2",
          "access_key": "ANOYV22L156K8AB4ZISB",
          "secret_key": "YcmjAnPpnqZzyV4OVRbbswdX88____96Xlqb6453Y"
        }
      ]
    },
    {
      "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": "KEOYV21G156K8AB4ZISH",
          "secret_key": "YcmjAnPpnqZzyV4OVRbbswdX88____96Xlqb6453Y"
        },
        {
          "name": "user-2",
          "access_key": "M4U4922OTO9QGXm3YR2I",
          "secret_key": "fu9PD3gWxrTZWilDru_TzNZUIncJ_Qa01st3NNhA"
        }
      ],
      "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 computational 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
certificate.uuid	string	query	False	Filter by certificate.uuid • Introduced in: 9.8
certificate.name	string	query	False	Filter by certificate.name • Introduced in: 9.8
statistics.throughput_raw.total	integer	query	False	Filter by statistics.throughput_raw.total • 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.iops_raw.total	integer	query	False	Filter by statistics.iops_raw.total • Introduced in: 9.8

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

Name	Type	In	Required	Description
statistics.latency_raw.read	integer	query	False	Filter by statistics.latency_raw.read • Introduced in: 9.8
statistics.status	string	query	False	Filter by statistics.status • Introduced in: 9.8
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
enabled	boolean	query	False	Filter by enabled
default_win_user	string	query	False	Filter by default_win_user • Introduced in: 9.12
metric.latency.total	integer	query	False	Filter by metric.latency.total • 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
metric.latency.read	integer	query	False	Filter by metric.latency.read • Introduced in: 9.8

Name	Type	In	Required	Description
metric.status	string	query	False	Filter by metric.status • Introduced in: 9.8
metric.throughput.total	integer	query	False	Filter by metric.throughput.total • 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
metric.iops.total	integer	query	False	Filter by metric.iops.total • 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.iops.read	integer	query	False	Filter by metric.iops.read • Introduced in: 9.8
metric.timestamp	string	query	False	Filter by metric.timestamp • Introduced in: 9.8
metric.duration	string	query	False	Filter by metric.duration • Introduced in: 9.8
default_unix_user	string	query	False	Filter by default_unix_user • Introduced in: 9.12
buckets.role	string	query	False	Filter by buckets.role • Introduced in: 9.10
buckets.logical_used_size	integer	query	False	Filter by buckets.logical_used_size
buckets.comment	string	query	False	Filter by buckets.comment • maxLength: 256 • minLength: 0
buckets.retention.default_period	string	query	False	Filter by buckets.retention.default_period • Introduced in: 9.14

Name	Type	In	Required	Description
buckets.retention.mode	string	query	False	Filter by buckets.retention.mode • Introduced in: 9.14
buckets.name	string	query	False	Filter by buckets.name • maxLength: 63 • minLength: 3
buckets.versioning_state	string	query	False	Filter by buckets.versioning_state • Introduced in: 9.11
buckets.type	string	query	False	Filter by buckets.type • Introduced in: 9.12
buckets.allowed	boolean	query	False	Filter by buckets.allowed • Introduced in: 9.12
buckets.uuid	string	query	False	Filter by buckets.uuid
buckets.qos_policy.uuid	string	query	False	Filter by buckets.qos_policy.uuid • Introduced in: 9.8

Name	Type	In	Required	Description
buckets.qos_policy.max_throughput_mbps	integer	query	False	Filter by buckets.qos_policy.max_throughput_mbps <ul style="list-style-type: none"> • Introduced in: 9.8 • Max value: 4194303 • Min value: 0
buckets.qos_policy.name	string	query	False	Filter by buckets.qos_policy.name <ul style="list-style-type: none"> • Introduced in: 9.8
buckets.qos_policy.max_throughput_iops	integer	query	False	Filter by buckets.qos_policy.max_throughput_iops <ul style="list-style-type: none"> • Introduced in: 9.8 • Max value: 2147483647 • Min value: 0
buckets.qos_policy.min_throughput_iops	integer	query	False	Filter by buckets.qos_policy.min_throughput_iops <ul style="list-style-type: none"> • Introduced in: 9.8 • Max value: 2147483647 • Min value: 0

Name	Type	In	Required	Description
buckets.qos_policy.min_throughput_mbps	integer	query	False	Filter by buckets.qos_policy.min_throughput_mbps <ul style="list-style-type: none"> • Introduced in: 9.8 • Max value: 4194303 • Min value: 0
buckets.size	integer	query	False	Filter by buckets.size <ul style="list-style-type: none"> • Max value: 62672162783232000 • Min value: 199229440
buckets.volume.name	string	query	False	Filter by buckets.volume.name
buckets.volume.uuid	string	query	False	Filter by buckets.volume.uuid
buckets.encryption.enabled	boolean	query	False	Filter by buckets.encryption.enabled
buckets.policy.statements.principals	string	query	False	Filter by buckets.policy.statements.principals <ul style="list-style-type: none"> • Introduced in: 9.8
buckets.policy.statements.conditions.delimiters	string	query	False	Filter by buckets.policy.statements.conditions.delimiters <ul style="list-style-type: none"> • Introduced in: 9.8

Name	Type	In	Required	Description
buckets.policy.statements.conditions.usenames	string	query	False	Filter by buckets.policy.statements.conditions.usenames • 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.source_ips	string	query	False	Filter by buckets.policy.statements.conditions.source_ips • Introduced in: 9.8
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.actions	string	query	False	Filter by buckets.policy.statements.actions • Introduced in: 9.8

Name	Type	In	Required	Description
buckets.policy.statements.effect	string	query	False	Filter by buckets.policy.statements.effect <ul style="list-style-type: none"> Introduced in: 9.8
buckets.policy.statements.resources	string	query	False	Filter by buckets.policy.statements.resources <ul style="list-style-type: none"> Introduced in: 9.8
buckets.policy.statements.sid	string	query	False	Filter by buckets.policy.statements.sid <ul style="list-style-type: none"> Introduced in: 9.8 maxLength: 256 minLength: 0
buckets.lifecycle_management.rules.expiration.expired_object_delete_marker	boolean	query	False	Filter by buckets.lifecycle_management.rules.expiration.expired_object_delete_marker <ul style="list-style-type: none"> Introduced in: 9.13
buckets.lifecycle_management.rules.expiration.object_age_days	integer	query	False	Filter by buckets.lifecycle_management.rules.expiration.object_age_days <ul style="list-style-type: none"> Introduced in: 9.13
buckets.lifecycle_management.rules.expiration.object_expiry_date	string	query	False	Filter by buckets.lifecycle_management.rules.expiration.object_expiry_date <ul style="list-style-type: none"> Introduced in: 9.13

Name	Type	In	Required	Description
buckets.lifecycle_management.rules.svm.uuid	string	query	False	Filter by buckets.lifecycle_management.rules.svm.uuid • Introduced in: 9.14
buckets.lifecycle_management.rules.svm.name	string	query	False	Filter by buckets.lifecycle_management.rules.svm.name • Introduced in: 9.14
buckets.lifecycle_management.rules.enabled	boolean	query	False	Filter by buckets.lifecycle_management.rules.enabled • Introduced in: 9.13
buckets.lifecycle_management.rules.bucket_name	string	query	False	Filter by buckets.lifecycle_management.rules.bucket_name • Introduced in: 9.14 • maxLength: 63 • minLength: 3
buckets.lifecycle_management.rules.non_current_version_expiration.non_current_days	integer	query	False	Filter by buckets.lifecycle_management.rules.non_current_version_expiration.non_current_days • Introduced in: 9.13

Name	Type	In	Required	Description
buckets.lifecycle_management.rules.non_current_version_expiration.new_non_current_versions	integer	query	False	Filter by buckets.lifecycle_management.rules.non_current_version_expiration.new_non_current_versions <ul style="list-style-type: none"> Introduced in: 9.13
buckets.lifecycle_management.rules.name	string	query	False	Filter by buckets.lifecycle_management.rules.name <ul style="list-style-type: none"> Introduced in: 9.13 maxLength: 256 minLength: 0
buckets.lifecycle_management.rules.object_filter.tags	string	query	False	Filter by buckets.lifecycle_management.rules.object_filter.tags <ul style="list-style-type: none"> Introduced in: 9.13
buckets.lifecycle_management.rules.object_filter.prefix	string	query	False	Filter by buckets.lifecycle_management.rules.object_filter.prefix <ul style="list-style-type: none"> Introduced in: 9.13
buckets.lifecycle_management.rules.object_filter.size_greater_than	integer	query	False	Filter by buckets.lifecycle_management.rules.object_filter.size_greater_than <ul style="list-style-type: none"> Introduced in: 9.13

Name	Type	In	Required	Description
buckets.lifecycle_management.rules.object_filter.size_less_than	integer	query	False	Filter by buckets.lifecycle_management.rules.object_filter.size_less_than • Introduced in: 9.13
buckets.lifecycle_management.rules.abort_incomplete_multipart_upload.after_initiation_days	integer	query	False	Filter by buckets.lifecycle_management.rules.abort_incomplete_multipart_upload.after_initiation_days • Introduced in: 9.13
buckets.lifecycle_management.rules.uuid	string	query	False	Filter by buckets.lifecycle_management.rules.uuid • Introduced in: 9.14
buckets.audit_event_selector.access	string	query	False	Filter by buckets.audit_event_selector.access • Introduced in: 9.10
buckets.audit_event_selector.permission	string	query	False	Filter by buckets.audit_event_selector.permission • Introduced in: 9.10
buckets.nas_path	string	query	False	Filter by buckets.nas_path • Introduced in: 9.12
buckets.svm.uuid	string	query	False	Filter by buckets.svm.uuid

Name	Type	In	Required	Description
buckets.svm.name	string	query	False	Filter by buckets.svm.name
buckets.protection_status.is_protected	boolean	query	False	Filter by buckets.protection_status.is_protected • Introduced in: 9.10
buckets.protection_status.destination.is_external_cloud	boolean	query	False	Filter by buckets.protection_status.destination.is_external_cloud • Introduced in: 9.12
buckets.protection_status.destination.is_ontap	boolean	query	False	Filter by buckets.protection_status.destination.is_ontap • Introduced in: 9.10
buckets.protection_status.destination.is_cloud	boolean	query	False	Filter by buckets.protection_status.destination.is_cloud • Introduced in: 9.10
port	integer	query	False	Filter by port • Introduced in: 9.8 • Max value: 65535 • Min value: 1
name	string	query	False	Filter by name • maxLength: 253 • minLength: 3

Name	Type	In	Required	Description
is_http_enabled	boolean	query	False	Filter by is_http_enabled <ul style="list-style-type: none"> Introduced in: 9.8
comment	string	query	False	Filter by comment <ul style="list-style-type: none"> maxLength: 256 minLength: 0
secure_port	integer	query	False	Filter by secure_port <ul style="list-style-type: none"> Introduced in: 9.8 Max value: 65535 Min value: 1
is_https_enabled	boolean	query	False	Filter by is_https_enabled <ul style="list-style-type: none"> Introduced in: 9.8
users.comment	string	query	False	Filter by users.comment <ul style="list-style-type: none"> maxLength: 256 minLength: 0
users.key_expiry_time	string	query	False	Filter by users.key_expiry_time <ul style="list-style-type: none"> Introduced in: 9.14
users.svm.uuid	string	query	False	Filter by users.svm.uuid
users.svm.name	string	query	False	Filter by users.svm.name

Name	Type	In	Required	Description
users.key_time_to_live	string	query	False	Filter by users.key_time_to_live <ul style="list-style-type: none"> Introduced in: 9.14
users.access_key	string	query	False	Filter by users.access_key
users.name	string	query	False	Filter by users.name <ul style="list-style-type: none"> maxLength: 64 minLength: 1
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. <ul style="list-style-type: none"> Default value: 1
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. <ul style="list-style-type: none"> Max value: 120 Min value: 0 Default value: 1

Name	Type	In	Required	Description
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"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "buckets": [
        {
          "audit_event_selector": {
            "access": "string",
            "permission": "string"
          },
          "comment": "S3 bucket.",
          "lifecycle_management": {
            "rules": [
              {
                "_links": {
                  "self": {
                    "href": "/api/resourcelink"
                  }
                },
                "abort_incomplete_multipart_upload": {
                  "_links": {
                    "self": {
                      "href": "/api/resourcelink"
                    }
                  }
                },
                "bucket_name": "bucket1",
                "expiration": {
                  "_links": {
                    "self": {
                      "href": "/api/resourcelink"
                    }
                  }
                }
              }
            ]
          }
        }
      ]
    }
  ]
}
```

```

    }
    },
    "object_expiry_date": "string"
  },
  "name": "string",
  "non_current_version_expiration": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "object_filter": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "prefix": "/logs",
    "size_greater_than": 10240,
    "size_less_than": 10485760,
    "tags": [
      "project1=projA",
      "project2=projB"
    ]
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055"
}
]
},
"logical_used_size": 0,
"name": "bucket1",
"nas_path": "/",
"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",
        "nasgroup/group1"
    ],
    "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"
    },
    "retention": {
        "default_period": "P10Y",
        "mode": "governance"
    },
    "role": "string",
    "size": 1677721600,
    "svm": {
        "_links": {
            "self": {
                "href": "/api/resourcelink"
            }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "type": "s3",
    "use_mirrored_aggregates": true,
    "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
    "versioning_state": "enabled",
    "volume": {
        "_links": {
            "self": {
                "href": "/api/resourcelink"
            }
        },
        "name": "volume1",
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
}
],
"certificate": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "string",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},

```

```

"comment": "S3 server",
"default_unix_user": "string",
"default_win_user": "string",
"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": "2017-01-25 06:20:13 -0500"
},
"name": "Server-1",
"port": 80,
"secure_port": 443,
"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": "2017-01-25 06:20:13 -0500"
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "users": [
      {
        "access_key": "HJAKU28M3SXTE2UXUACV",
        "comment": "S3 user",
        "key_expiry_time": "2023-12-31 19:00:00 -0500",
        "key_time_to_live": "PT6H3M",
        "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	returned_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	

audit_event_selector

Audit event selector allows you to specify access and permission types to audit.

Name	Type	Description
access	string	Specifies read and write access types.
permission	string	Specifies allow and deny permission types.

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket. This field cannot be specified in a POST method.

abort_incomplete_multipart_upload

Specifies a way to perform abort_incomplete_multipart_upload action on filtered objects within a bucket. It cannot be specified with tags.

Name	Type	Description
_links	_links	
after_initiation_days	integer	Number of days of initiation after which uploads can be aborted.

expiration

Specifies a way to perform expiration action on filtered objects within a bucket.

Name	Type	Description
_links	_links	
expired_object_delete_marker	boolean	Cleanup object delete markers.
object_age_days	integer	Number of days since creation after which objects can be deleted. This cannot be used along with object_expiry_date.
object_expiry_date	string	Specific date from when objects can expire. This cannot be used with object_age_days.

non_current_version_expiration

Specifies a way to perform non_current_version_expiration action on filtered objects within a bucket.

Name	Type	Description
_links	_links	
new_non_current_versions	integer	Number of latest non-current versions to be retained.

Name	Type	Description
non_current_days	integer	Number of days after which non-current versions can be deleted.

object_filter

Specifies a way to filter objects within a bucket.

Name	Type	Description
_links	_links	
prefix	string	A prefix that is matched against object-names within a bucket.
size_greater_than	integer	Size of the object greater than specified for which the corresponding lifecycle rule is to be applied.
size_less_than	integer	Size of the object smaller than specified for which the corresponding lifecycle rule is to be applied.
tags	array[string]	An array of key-value paired tags of the form <tag>or <tag=value>.</tag>

svm

Specifies the name of the SVM where this bucket exists.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

rules

Information about the lifecycle management rule of a bucket.

Name	Type	Description
_links	_links	
abort_incomplete_multipart_upload	abort_incomplete_multipart_upload	Specifies a way to perform abort_incomplete_multipart_upload action on filtered objects within a bucket. It cannot be specified with tags.
bucket_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 "-".
enabled	boolean	Specifies whether or not the associated rule is enabled.
expiration	expiration	Specifies a way to perform expiration action on filtered objects within a bucket.
name	string	Bucket lifecycle management rule identifier. The length of the name can range from 0 to 256 characters.
non_current_version_expiration	non_current_version_expiration	Specifies a way to perform non_current_version_expiration action on filtered objects within a bucket.
object_filter	object_filter	Specifies a way to filter objects within a bucket.
svm	svm	Specifies the name of the SVM where this bucket exists.
uuid	string	Specifies the unique identifier of the bucket.

lifecycle_management

Lifecycle management is implemented as an object associated with a bucket. It defines rules to be applied against objects within a bucket. These rules are applied in the background and can delete objects.

Name	Type	Description
rules	array[rules]	Specifies an object store lifecycle management policy.

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.
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. The sid length can range from 1 to 256 characters and can only contain the following combination of characters 0-9, A-Z, and a-z. Special characters are not valid.

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.

destination

Name	Type	Description
is_cloud	boolean	Specifies whether a bucket is protected within the Cloud. This field cannot be specified using a POST method.

Name	Type	Description
is_external_cloud	boolean	Specifies whether a bucket is protected on external Cloud providers. This field cannot be specified using a POST method.
is_ontap	boolean	<p>Specifies whether a bucket is protected within ONTAP. This field cannot be specified using a POST method.</p> <ul style="list-style-type: none"> • Default value: 1 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true

protection_status

Specifies attributes of bucket protection.

Name	Type	Description
destination	destination	
is_protected	boolean	<p>Specifies whether a bucket is a source and if it is protected within ONTAP and/or an external cloud. This field cannot be specified using a POST method.</p> <ul style="list-style-type: none"> • Default value: 1 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops" and/or "qos_policy.min_throughput_mbps". Specifying "min_throughput_iops" or "min_throughput_mbps" 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	

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

retention

Specifies the retention mode and default retention period configured on the bucket.

Name	Type	Description
default_period	string	Specifies the default retention period that is applied to objects while committing them to the WORM state without an associated retention period. The retention period can be in years, or days. The retention period value represents a duration and must be specified in the ISO-8601 duration format. A period specified for years and days is represented in the ISO-8601 format as "P<num>Y" and "P<num>D" respectively, for example "P10Y" represents a duration of 10 years. The period string must contain only a single time element that is, either years, or days. A duration which combines different periods is not supported, for example "P1Y10D" is not supported.</num></num>
mode	string	The lock mode of the bucket. compliance ‐ A SnapLock Compliance (SLC) bucket provides the highest level of WORM protection and an administrator cannot destroy a compliance bucket if it contains unexpired WORM objects. governance ‐ An administrator can delete a Governance bucket. no_lock ‐ Indicates the bucket does not support object locking.

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.

Name	Type	Description
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

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. This field cannot be specified in a POST or PATCH method.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6 • x-nullable: true

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
allowed	boolean	If this is set to true, an SVM administrator can manage the S3 service. If it is false, only the cluster administrator can manage the service. This field cannot be specified in a POST method.
audit_event_selector	audit_event_selector	Audit event selector allows you to specify access and permission types to audit.
comment	string	Can contain any additional information about the bucket being created or modified.

Name	Type	Description
encryption	encryption	
lifecycle_management	lifecycle_management	Lifecycle management is implemented as an object associated with a bucket. It defines rules to be applied against objects within a bucket. These rules are applied in the background and can delete objects.
logical_used_size	integer	Specifies the bucket logical used size up to this point. This field cannot be specified using a POST or PATCH method.
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 "-".
nas_path	string	Specifies the NAS path to which the nas bucket corresponds to.
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.
protection_status	protection_status	Specifies attributes of bucket protection.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops" and/or "qos_policy.min_throughput_mbps". Specifying "min_throughput_iops" or "min_throughput_mbps" 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.
retention	retention	Specifies the retention mode and default retention period configured on the bucket.
role	string	Specifies the role of the bucket. This field cannot be specified using a POST method.
size	integer	Specifies the bucket size in bytes; ranges from 190MB to 62PB.
svm	svm	SVM, applies only to SVM-scoped objects.
type	string	Specifies the bucket type. Valid values are "s3" and "nas".
uuid	string	Specifies the unique identifier of the bucket.

Name	Type	Description
versioning_state	string	Specifies the versioning state of the bucket. Valid values are "disabled", "enabled" or "suspended". Note that the versioning state cannot be modified to 'disabled' from any other state.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

certificate

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

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

iops

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

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

latency

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

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

throughput

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

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

metric

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

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

Name	Type	Description
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.
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.

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

latency_raw

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

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

throughput_raw

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

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

statistics

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

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

Name	Type	Description
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.
key_expiry_time	string	Specifies the date and time after which keys expire and are no longer valid.
key_time_to_live	string	<p>Indicates the time period from when this parameter is specified:</p> <ul style="list-style-type: none"> • when creating or modifying a user or • when the user keys were last regenerated, after which the user keys expire and are no longer valid. • Valid format is: 'PnDTnHnMnS PnW'. For example, P2DT6H3M10S specifies a time period of 2 days, 6 hours, 3 minutes, and 10 seconds. • If the value specified is '0' seconds, then the keys won't expire.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

Name	Type	Description
svm	svm	SVM, applies only to SVM-scoped objects.

s3_service

Specifies the S3 server configuration.

Name	Type	Description
_links	self_link	
buckets	array[s3_bucket]	This field cannot be specified in a PATCH method.
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.
default_unix_user	string	Specifies the default UNIX user for NAS Access.
default_win_user	string	Specifies the default Windows user for NAS Access.
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 3 to 253 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. Valid values range from 1 to 65535.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443. Valid values range from 1 to 65535.
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	SVM, applies only to SVM-scoped objects.
users	array[s3_user]	This field cannot be specified in a PATCH method.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

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

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

Create 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]	This field cannot be specified in a PATCH method.
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.
default_unix_user	string	Specifies the default UNIX user for NAS Access.
default_win_user	string	Specifies the default Windows user for NAS Access.
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.

Name	Type	Description
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 3 to 253 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. Valid values range from 1 to 65535.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443. Valid values range from 1 to 65535.
svm	svm	SVM, applies only to SVM-scoped objects.
users	array[s3_user]	This field cannot be specified in a PATCH method.

Example request

```
{
  "buckets": [
    {
      "aggregates": [
        {
          "name": "aggr1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      ],
      "audit_event_selector": {
        "access": "string",
        "permission": "string"
      },
      "comment": "S3 bucket.",
      "constituents_per_aggregate": 4,
      "lifecycle_management": {
        "rules": [
          {
            "bucket_name": "bucket1",
            "expiration": {
              "object_expiry_date": "string"
            },
            "name": "string",
            "object_filter": {
              "prefix": "/logs",
              "size_greater_than": 10240,
              "size_less_than": 10485760,
              "tags": [
                "project1=projA",
                "project2=projB"
              ]
            },
            "svm": {
              "name": "svm1",
              "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
            },
            "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055"
          }
        ]
      },
      "logical_used_size": 0,
      "name": "bucket1",
      "nas_path": "/",
      "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",
          "nasgroup/group1"
        ],
        "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"
  },
  "retention": {
    "default_period": "P10Y",
    "mode": "governance"
  },
  "role": "string",
  "size": 1677721600,
  "storage_service_level": "value",
  "svm": {
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "s3",
  "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
  "versioning_state": "enabled",
  "volume": {
    "name": "volume1",
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
},
],
"certificate": {
  "name": "string",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"comment": "S3 server",
"default_unix_user": "string",
"default_win_user": "string",
"name": "Server-1",
"port": 80,
"secure_port": 443,
"svm": {
  "name": "svm1",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"users": [
  {
    "access_key": "HJAKU28M3SXTE2UXUACV",
    "comment": "S3 user",
    "key_expiry_time": "2023-12-31 19:00:00 -0500",
    "key_time_to_live": "PT6H3M",
    "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

```
{
  "num_records": 1,
  "records": [
    {
      "job": {
        "uuid": "string"
      },
      "users": [
        {
          "access_key": "HJAKU28M3SXTE2UXUACV",
          "name": "user-1",
          "secret_key": "BcA_HX6If4581lhnx3n1TCO3mg4roCXG0ddYf_cJ"
        }
      ]
    }
  ]
}
```

Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

Error

Status: Default

ONTAP Error Response Codes

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

| 2621706 | The specified \"{svm.uuid}\" and \"{svm.name}\" refer to different SVMs. | 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 3 and 253 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. | 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.
92405863	Failed to create bucket \"{bucket name}\". Reason: "Failed to create bucket \"{bucket name}\" for SVM \"{svm.name}\". Reason: Bucket name \"{bucket name}\" contains invalid characters. Valid characters for a bucket name are 0-9, a-z, ".", and "-". ". Resolve all the issues and retry the operation.
92405863	Failed to create bucket \"{bucket name}\". Reason: "Failed to create bucket \"{bucket name}\" for SVM \"{svm.name}\". Reason: Invalid QoS policy group specified \"{qos policy}\". The specified QoS policy group has a min-throughput value set, and the workload being assigned resides on a platform that does not support min-throughput or the cluster is in a mixed version state and the effective cluster version of ONTAP does not support min-throughput on this platform. Resolve all the issues and retry the operation.
92405863	Failed to create bucket \"{bucket name}\". Reason: "User(s) \"{user name(s)}\" specified in the principal list do not exist for SVM \"{svm.name}\". Use the "object-store-server user create" command to create a user.". Resolve all the issues and retry the operation.

92405863	Failed to create user \"{user name}\". Reason: "SVM "Cluster" is not a data SVM. Specify a data SVM.". Resolve all the issues and retry the operation.
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.
92405903	Failed to configure HTTPS on an object store server for SVM \"{svm.name}\". Reason: {Reason of failure}.
92405900	Certificate not found for SVM \"{svm.name}\".
92406044	Failed to set default UNIX user for SVM \"{svm.name}\". Reason: UNIX user can only be created on a Data SVM.

Definitions

See Definitions

href

Name	Type	Description
href	string	

self_link

_links

aggregates

Aggregate

Name	Type	Description
name	string	
uuid	string	

audit_event_selector

Audit event selector allows you to specify access and permission types to audit.

Name	Type	Description
access	string	Specifies read and write access types.
permission	string	Specifies allow and deny permission types.

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket. This field cannot be specified in a POST method.

abort_incomplete_multipart_upload

Specifies a way to perform abort_incomplete_multipart_upload action on filtered objects within a bucket. It cannot be specified with tags.

Name	Type	Description
after_initiation_days	integer	Number of days of initiation after which uploads can be aborted.

expiration

Specifies a way to perform expiration action on filtered objects within a bucket.

Name	Type	Description
expired_object_delete_marker	boolean	Cleanup object delete markers.
object_age_days	integer	Number of days since creation after which objects can be deleted. This cannot be used along with object_expiry_date.
object_expiry_date	string	Specific date from when objects can expire. This cannot be used with object_age_days.

non_current_version_expiration

Specifies a way to perform non_current_version_expiration action on filtered objects within a bucket.

Name	Type	Description
new_non_current_versions	integer	Number of latest non-current versions to be retained.
non_current_days	integer	Number of days after which non-current versions can be deleted.

object_filter

Specifies a way to filter objects within a bucket.

Name	Type	Description
prefix	string	A prefix that is matched against object-names within a bucket.
size_greater_than	integer	Size of the object greater than specified for which the corresponding lifecycle rule is to be applied.

Name	Type	Description
size_less_than	integer	Size of the object smaller than specified for which the corresponding lifecycle rule is to be applied.
tags	array[string]	An array of key-value paired tags of the form <tag>or <tag=value>.</tag>

svm

Specifies the name of the SVM where this bucket exists.

Name	Type	Description
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

rules

Information about the lifecycle management rule of a bucket.

Name	Type	Description
abort_incomplete_multipart_upload	abort_incomplete_multipart_upload	Specifies a way to perform abort_incomplete_multipart_upload action on filtered objects within a bucket. It cannot be specified with tags.
bucket_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 "-".
enabled	boolean	Specifies whether or not the associated rule is enabled.
expiration	expiration	Specifies a way to perform expiration action on filtered objects within a bucket.

Name	Type	Description
name	string	Bucket lifecycle management rule identifier. The length of the name can range from 0 to 256 characters.
non_current_version_expiration	non_current_version_expiration	Specifies a way to perform non_current_version_expiration action on filtered objects within a bucket.
object_filter	object_filter	Specifies a way to filter objects within a bucket.
svm	svm	Specifies the name of the SVM where this bucket exists.
uuid	string	Specifies the unique identifier of the bucket.

lifecycle_management

Lifecycle management is implemented as an object associated with a bucket. It defines rules to be applied against objects within a bucket. These rules are applied in the background and can delete objects.

Name	Type	Description
rules	array[rules]	Specifies an object store lifecycle management policy.

s3_bucket_policy_condition

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

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

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

s3_bucket_policy_statement

Specifies information about a single access permission.

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

Name	Type	Description
sid	string	Specifies the statement identifier used to differentiate between statements. The sid length can range from 1 to 256 characters and can only contain the following combination of characters 0-9, A-Z, and a-z. Special characters are not valid.

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.

destination

Name	Type	Description
is_cloud	boolean	Specifies whether a bucket is protected within the Cloud. This field cannot be specified using a POST method.
is_external_cloud	boolean	Specifies whether a bucket is protected on external Cloud providers. This field cannot be specified using a POST method.
is_ontap	boolean	<p>Specifies whether a bucket is protected within ONTAP. This field cannot be specified using a POST method.</p> <ul style="list-style-type: none"> • Default value: 1 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true

protection_status

Specifies attributes of bucket protection.

Name	Type	Description
destination	destination	
is_protected	boolean	<p>Specifies whether a bucket is a source and if it is protected within ONTAP and/or an external cloud. This field cannot be specified using a POST method.</p> <ul style="list-style-type: none"> • Default value: 1 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops" and/or "qos_policy.min_throughput_mbps". Specifying "min_throughput_iops" or "min_throughput_mbps" 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.

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

retention

Specifies the retention mode and default retention period configured on the bucket.

Name	Type	Description
default_period	string	Specifies the default retention period that is applied to objects while committing them to the WORM state without an associated retention period. The retention period can be in years, or days. The retention period value represents a duration and must be specified in the ISO-8601 duration format. A period specified for years and days is represented in the ISO-8601 format as "P<num>Y" and "P<num>D" respectively, for example "P10Y" represents a duration of 10 years. The period string must contain only a single time element that is, either years, or days. A duration which combines different periods is not supported, for example "P1Y10D" is not supported.</num></num>

Name	Type	Description
mode	string	The lock mode of the bucket. compliance ‐ A SnapLock Compliance (SLC) bucket provides the highest level of WORM protection and an administrator cannot destroy a compliance bucket if it contains unexpired WORM objects. governance ‐ An administrator can delete a Governance bucket. no_lock ‐ Indicates the bucket does not support object locking.

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

volume

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

Name	Type	Description
name	string	The name of the volume. This field cannot be specified in a POST or PATCH method.
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. <ul style="list-style-type: none"> example: 028baa66-41bd-11e9-81d5-00a0986138f7 Introduced in: 9.6 x-nullable: true

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.
allowed	boolean	If this is set to true, an SVM administrator can manage the S3 service. If it is false, only the cluster administrator can manage the service. This field cannot be specified in a POST method.
audit_event_selector	audit_event_selector	Audit event selector allows you to specify access and permission types to audit.
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	
lifecycle_management	lifecycle_management	Lifecycle management is implemented as an object associated with a bucket. It defines rules to be applied against objects within a bucket. These rules are applied in the background and can delete objects.

Name	Type	Description
logical_used_size	integer	Specifies the bucket logical used size up to this point. This field cannot be specified using a POST or PATCH method.
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 "-".
nas_path	string	Specifies the NAS path to which the nas bucket corresponds to.
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.
protection_status	protection_status	Specifies attributes of bucket protection.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops" and/or "qos_policy.min_throughput_mbps". Specifying "min_throughput_iops" or "min_throughput_mbps" 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.
retention	retention	Specifies the retention mode and default retention period configured on the bucket.
role	string	Specifies the role of the bucket. This field cannot be specified using a POST method.
size	integer	Specifies the bucket size in bytes; ranges from 190MB to 62PB.
storage_service_level	string	Specifies the storage service level of the FlexGroup volume on which the bucket should be created. Valid values are "value", "performance" or "extreme".
svm	svm	SVM, applies only to SVM-scoped objects.
type	string	Specifies the bucket type. Valid values are "s3" and "nas".

Name	Type	Description
use_mirrored_aggregates	boolean	Specifies whether mirrored aggregates are selected when provisioning a FlexGroup. Only mirrored aggregates are used if this parameter is set to "true" and only unmirrored aggregates are used if this parameter is set to "false". The default value is "true" for a MetroCluster configuration and is "false" for a non-MetroCluster configuration.
uuid	string	Specifies the unique identifier of the bucket.
versioning_state	string	Specifies the versioning state of the bucket. Valid values are "disabled", "enabled" or "suspended". Note that the versioning state cannot be modified to 'disabled' from any other state.
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.

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

latency

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

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

throughput

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

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

metric

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

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

latency_raw

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

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

throughput_raw

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

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

statistics

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

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

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
key_expiry_time	string	Specifies the date and time after which keys expire and are no longer valid.
key_time_to_live	string	<p>Indicates the time period from when this parameter is specified:</p> <ul style="list-style-type: none"> • when creating or modifying a user or • when the user keys were last regenerated, after which the user keys expire and are no longer valid. • Valid format is: 'PnDTnHnMnS PnW'. For example, P2DT6H3M10S specifies a time period of 2 days, 6 hours, 3 minutes, and 10 seconds. • If the value specified is '0' seconds, then the keys won't expire.
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	SVM, applies only to SVM-scoped objects.

s3_service

Specifies the S3 server configuration.

Name	Type	Description
buckets	array[s3_bucket]	This field cannot be specified in a PATCH method.
certificate	certificate	Specifies the certificate that will be used for creating HTTPS connections to the S3 server.

Name	Type	Description
comment	string	Can contain any additional information about the server being created or modified.
default_unix_user	string	Specifies the default UNIX user for NAS Access.
default_win_user	string	Specifies the default Windows user for NAS Access.
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 3 to 253 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. Valid values range from 1 to 65535.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443. Valid values range from 1 to 65535.
svm	svm	SVM, applies only to SVM-scoped objects.

Name	Type	Description
users	array[s3_user]	This field cannot be specified in a PATCH method.

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
message	string	Message argument

returned_error

Name	Type	Description
arguments	array[error_arguments]	Message arguments

Name	Type	Description
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
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

```
{
  "num_records": 1,
  "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	returned_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

returned_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]	This field cannot be specified in a PATCH method.
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.

Name	Type	Description
default_unix_user	string	Specifies the default UNIX user for NAS Access.
default_win_user	string	Specifies the default Windows user for NAS Access.
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	string	Specifies the name of the S3 server. A server name can contain 3 to 253 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. Valid values range from 1 to 65535.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443. Valid values range from 1 to 65535.

Name	Type	Description
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	SVM, applies only to SVM-scoped objects.
users	array[s3_user]	This field cannot be specified in a PATCH method.

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "buckets": [
    {
      "audit_event_selector": {
        "access": "string",
        "permission": "string"
      },
      "comment": "S3 bucket.",
      "lifecycle_management": {
        "rules": [
          {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "abort_incomplete_multipart_upload": {
              "_links": {
                "self": {
                  "href": "/api/resourcelink"
                }
              }
            },
            "bucket_name": "bucket1",
            "expiration": {
              "_links": {
                "self": {
                  "href": "/api/resourcelink"
                }
              },
              "object_expiry_date": "string"
            },
            "name": "string",
            "non_current_version_expiration": {
              "_links": {
                "self": {
                  "href": "/api/resourcelink"
                }
              }
            }
          }
        ]
      }
    }
  ]
}
```

```

    },
    "object_filter": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "prefix": "/logs",
      "size_greater_than": 10240,
      "size_less_than": 10485760,
      "tags": [
        "project1=projA",
        "project2=projB"
      ]
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055"
  }
]
},
"logical_used_size": 0,
"name": "bucket1",
"nas_path": "/",
"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",
    "nasgroup/group1"
],
"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"
},
"retention": {
    "default_period": "P10Y",
    "mode": "governance"
},

```

```

    "role": "string",
    "size": 1677721600,
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "type": "s3",
    "use_mirrored_aggregates": true,
    "uuid": "414b29a1-3b26-11e9-bd58-0050568ea055",
    "versioning_state": "enabled",
    "volume": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "volume1",
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  },
  "certificate": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "string",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "comment": "S3 server",
  "default_unix_user": "string",
  "default_win_user": "string",
  "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": "2017-01-25 06:20:13 -0500"
},
"name": "Server-1",
"port": 80,
"secure_port": 443,
"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": "2017-01-25 06:20:13 -0500"
},
"svm": {
    "_links": {
        "self": {
            "href": "/api/resourcelink"
        }
    },
    "name": "svm1",

```

```

    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "users": [
    {
      "access_key": "HJAKU28M3SXTE2UXUACV",
      "comment": "S3 user",
      "key_expiry_time": "2023-12-31 19:00:00 -0500",
      "key_time_to_live": "PT6H3M",
      "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	returned_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	

audit_event_selector

Audit event selector allows you to specify access and permission types to audit.

Name	Type	Description
access	string	Specifies read and write access types.
permission	string	Specifies allow and deny permission types.

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket. This field cannot be specified in a POST method.

abort_incomplete_multipart_upload

Specifies a way to perform abort_incomplete_multipart_upload action on filtered objects within a bucket. It cannot be specified with tags.

Name	Type	Description
_links	_links	
after_initiation_days	integer	Number of days of initiation after which uploads can be aborted.

expiration

Specifies a way to perform expiration action on filtered objects within a bucket.

Name	Type	Description
_links	_links	
expired_object_delete_marker	boolean	Cleanup object delete markers.
object_age_days	integer	Number of days since creation after which objects can be deleted. This cannot be used along with object_expiry_date.
object_expiry_date	string	Specific date from when objects can expire. This cannot be used with object_age_days.

non_current_version_expiration

Specifies a way to perform non_current_version_expiration action on filtered objects within a bucket.

Name	Type	Description
_links	_links	
new_non_current_versions	integer	Number of latest non-current versions to be retained.
non_current_days	integer	Number of days after which non-current versions can be deleted.

object_filter

Specifies a way to filter objects within a bucket.

Name	Type	Description
_links	_links	

Name	Type	Description
prefix	string	A prefix that is matched against object-names within a bucket.
size_greater_than	integer	Size of the object greater than specified for which the corresponding lifecycle rule is to be applied.
size_less_than	integer	Size of the object smaller than specified for which the corresponding lifecycle rule is to be applied.
tags	array[string]	An array of key-value paired tags of the form <tag>or <tag=value>.</tag>

svm

Specifies the name of the SVM where this bucket exists.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

rules

Information about the lifecycle management rule of a bucket.

Name	Type	Description
_links	_links	
abort_incomplete_multipart_upload	abort_incomplete_multipart_upload	Specifies a way to perform abort_incomplete_multipart_upload action on filtered objects within a bucket. It cannot be specified with tags.

Name	Type	Description
bucket_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 "-".
enabled	boolean	Specifies whether or not the associated rule is enabled.
expiration	expiration	Specifies a way to perform expiration action on filtered objects within a bucket.
name	string	Bucket lifecycle management rule identifier. The length of the name can range from 0 to 256 characters.
non_current_version_expiration	non_current_version_expiration	Specifies a way to perform non_current_version_expiration action on filtered objects within a bucket.
object_filter	object_filter	Specifies a way to filter objects within a bucket.
svm	svm	Specifies the name of the SVM where this bucket exists.
uuid	string	Specifies the unique identifier of the bucket.

lifecycle_management

Lifecycle management is implemented as an object associated with a bucket. It defines rules to be applied against objects within a bucket. These rules are applied in the background and can delete objects.

Name	Type	Description
rules	array[rules]	Specifies an object store lifecycle management policy.

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. The sid length can range from 1 to 256 characters and can only contain the following combination of characters 0-9, A-Z, and a-z. Special characters are not valid.

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.

destination

Name	Type	Description
is_cloud	boolean	Specifies whether a bucket is protected within the Cloud. This field cannot be specified using a POST method.
is_external_cloud	boolean	Specifies whether a bucket is protected on external Cloud providers. This field cannot be specified using a POST method.

Name	Type	Description
is_ontap	boolean	<p>Specifies whether a bucket is protected within ONTAP. This field cannot be specified using a POST method.</p> <ul style="list-style-type: none"> • Default value: 1 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true

protection_status

Specifies attributes of bucket protection.

Name	Type	Description
destination	destination	
is_protected	boolean	<p>Specifies whether a bucket is a source and if it is protected within ONTAP and/or an external cloud. This field cannot be specified using a POST method.</p> <ul style="list-style-type: none"> • Default value: 1 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops" and/or "qos_policy.min_throughput_mbps". Specifying "min_throughput_iops" or "min_throughput_mbps" 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	<p>Specifies the maximum throughput in IOPS, 0 means none. This is mutually exclusive with name and UUID during POST and PATCH.</p>

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.

retention

Specifies the retention mode and default retention period configured on the bucket.

Name	Type	Description
default_period	string	Specifies the default retention period that is applied to objects while committing them to the WORM state without an associated retention period. The retention period can be in years, or days. The retention period value represents a duration and must be specified in the ISO-8601 duration format. A period specified for years and days is represented in the ISO-8601 format as "P<num>Y" and "P<num>D" respectively, for example "P10Y" represents a duration of 10 years. The period string must contain only a single time element that is, either years, or days. A duration which combines different periods is not supported, for example "P1Y10D" is not supported.</num></num>
mode	string	The lock mode of the bucket. compliance ‐ A SnapLock Compliance (SLC) bucket provides the highest level of WORM protection and an administrator cannot destroy a compliance bucket if it contains unexpired WORM objects. governance ‐ An administrator can delete a Governance bucket. no_lock ‐ Indicates the bucket does not support object locking.

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
_links	_links	
name	string	The name of the SVM. This field cannot be specified in a PATCH method.

Name	Type	Description
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

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. This field cannot be specified in a POST or PATCH method.
uuid	string	<p>Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move.</p> <ul style="list-style-type: none"> • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • Introduced in: 9.6 • x-nullable: true

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
allowed	boolean	If this is set to true, an SVM administrator can manage the S3 service. If it is false, only the cluster administrator can manage the service. This field cannot be specified in a POST method.
audit_event_selector	audit_event_selector	Audit event selector allows you to specify access and permission types to audit.
comment	string	Can contain any additional information about the bucket being created or modified.

Name	Type	Description
encryption	encryption	
lifecycle_management	lifecycle_management	Lifecycle management is implemented as an object associated with a bucket. It defines rules to be applied against objects within a bucket. These rules are applied in the background and can delete objects.
logical_used_size	integer	Specifies the bucket logical used size up to this point. This field cannot be specified using a POST or PATCH method.
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 "-".
nas_path	string	Specifies the NAS path to which the nas bucket corresponds to.
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.
protection_status	protection_status	Specifies attributes of bucket protection.

Name	Type	Description
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops" and/or "qos_policy.min_throughput_mbps". Specifying "min_throughput_iops" or "min_throughput_mbps" 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.
retention	retention	Specifies the retention mode and default retention period configured on the bucket.
role	string	Specifies the role of the bucket. This field cannot be specified using a POST method.
size	integer	Specifies the bucket size in bytes; ranges from 190MB to 62PB.
svm	svm	SVM, applies only to SVM-scoped objects.
type	string	Specifies the bucket type. Valid values are "s3" and "nas".
uuid	string	Specifies the unique identifier of the bucket.

Name	Type	Description
versioning_state	string	Specifies the versioning state of the bucket. Valid values are "disabled", "enabled" or "suspended". Note that the versioning state cannot be modified to 'disabled' from any other state.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

certificate

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

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

iops

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

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

latency

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

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

throughput

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

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

metric

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

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

Name	Type	Description
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.
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.

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

latency_raw

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

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

throughput_raw

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

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

statistics

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

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

Name	Type	Description
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.
key_expiry_time	string	Specifies the date and time after which keys expire and are no longer valid.
key_time_to_live	string	<p>Indicates the time period from when this parameter is specified:</p> <ul style="list-style-type: none"> • when creating or modifying a user or • when the user keys were last regenerated, after which the user keys expire and are no longer valid. • Valid format is: 'PnDTnHnMnS PnW'. For example, P2DT6H3M10S specifies a time period of 2 days, 6 hours, 3 minutes, and 10 seconds. • If the value specified is '0' seconds, then the keys won't expire.
name	string	Specifies the name of the user. A user name length can range from 1 to 64 characters and can only contain the following combination of characters 0-9, A-Z, a-z, "_", "+", "=", ",", ".", "@", and "-".

Name	Type	Description
svm	svm	SVM, applies only to SVM-scoped objects.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_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.
default_unix_user	string	Specifies the default UNIX user for NAS Access.
default_win_user	string	Specifies the default Windows user for NAS Access.
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 3 to 253 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. Valid values range from 1 to 65535.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443. Valid values range from 1 to 65535.

Example request

```
{
  "certificate": {
    "name": "string",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "comment": "S3 server",
  "default_unix_user": "string",
  "default_win_user": "string",
  "name": "Server-1",
  "port": 80,
  "secure_port": 443
}
```

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
92405789	The name \"{object server name}\" is not valid. A valid object server name must be a fully qualified domain name.

Error Code	Description
92405790	Object store server name is not valid. Object store server names must have between 3 and 253 characters.
92406151	Set the enabled field of the server to "down" before modifying following fields: {field name}

Definitions

See Definitions

href

Name	Type	Description
href	string	

self_link

_links

aggregates

Aggregate

Name	Type	Description
name	string	
uuid	string	

audit_event_selector

Audit event selector allows you to specify access and permission types to audit.

Name	Type	Description
access	string	Specifies read and write access types.
permission	string	Specifies allow and deny permission types.

encryption

Name	Type	Description
enabled	boolean	Specifies whether encryption is enabled on the bucket. By default, encryption is disabled on a bucket. This field cannot be specified in a POST method.

abort_incomplete_multipart_upload

Specifies a way to perform abort_incomplete_multipart_upload action on filtered objects within a bucket. It cannot be specified with tags.

Name	Type	Description
after_initiation_days	integer	Number of days of initiation after which uploads can be aborted.

expiration

Specifies a way to perform expiration action on filtered objects within a bucket.

Name	Type	Description
expired_object_delete_marker	boolean	Cleanup object delete markers.
object_age_days	integer	Number of days since creation after which objects can be deleted. This cannot be used along with object_expiry_date.
object_expiry_date	string	Specific date from when objects can expire. This cannot be used with object_age_days.

non_current_version_expiration

Specifies a way to perform non_current_version_expiration action on filtered objects within a bucket.

Name	Type	Description
new_non_current_versions	integer	Number of latest non-current versions to be retained.
non_current_days	integer	Number of days after which non-current versions can be deleted.

object_filter

Specifies a way to filter objects within a bucket.

Name	Type	Description
prefix	string	A prefix that is matched against object-names within a bucket.
size_greater_than	integer	Size of the object greater than specified for which the corresponding lifecycle rule is to be applied.

Name	Type	Description
size_less_than	integer	Size of the object smaller than specified for which the corresponding lifecycle rule is to be applied.
tags	array[string]	An array of key-value paired tags of the form <tag>or <tag=value>.</tag>

svm

Specifies the name of the SVM where this bucket exists.

Name	Type	Description
name	string	The name of the SVM. This field cannot be specified in a PATCH method.
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

rules

Information about the lifecycle management rule of a bucket.

Name	Type	Description
abort_incomplete_multipart_upload	abort_incomplete_multipart_upload	Specifies a way to perform abort_incomplete_multipart_upload action on filtered objects within a bucket. It cannot be specified with tags.
enabled	boolean	Specifies whether or not the associated rule is enabled.
expiration	expiration	Specifies a way to perform expiration action on filtered objects within a bucket.
non_current_version_expiration	non_current_version_expiration	Specifies a way to perform non_current_version_expiration action on filtered objects within a bucket.

Name	Type	Description
svm	svm	Specifies the name of the SVM where this bucket exists.
uuid	string	Specifies the unique identifier of the bucket.

lifecycle_management

Lifecycle management is implemented as an object associated with a bucket. It defines rules to be applied against objects within a bucket. These rules are applied in the background and can delete objects.

Name	Type	Description
rules	array[rules]	Specifies an object store lifecycle management policy.

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.

Name	Type	Description
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. The sid length can range from 1 to 256 characters and can only contain the following combination of characters 0-9, A-Z, and a-z. Special characters are not valid.

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_statemen t]	Specifies bucket access policy statement.

destination

Name	Type	Description
is_cloud	boolean	Specifies whether a bucket is protected within the Cloud. This field cannot be specified using a POST method.
is_external_cloud	boolean	Specifies whether a bucket is protected on external Cloud providers. This field cannot be specified using a POST method.
is_ontap	boolean	Specifies whether a bucket is protected within ONTAP. This field cannot be specified using a POST method. <ul style="list-style-type: none">• Default value: 1• readOnly: 1• Introduced in: 9.10• x-nullable: true

protection_status

Specifies attributes of bucket protection.

Name	Type	Description
destination	destination	

Name	Type	Description
is_protected	boolean	<p>Specifies whether a bucket is a source and if it is protected within ONTAP and/or an external cloud. This field cannot be specified using a POST method.</p> <ul style="list-style-type: none"> • Default value: 1 • readOnly: 1 • Introduced in: 9.10 • x-nullable: true

qos_policy

Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops" and/or "qos_policy.min_throughput_mbps". Specifying "min_throughput_iops" or "min_throughput_mbps" 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	Type	Description
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.

retention

Specifies the retention mode and default retention period configured on the bucket.

Name	Type	Description
default_period	string	Specifies the default retention period that is applied to objects while committing them to the WORM state without an associated retention period. The retention period can be in years, or days. The retention period value represents a duration and must be specified in the ISO-8601 duration format. A period specified for years and days is represented in the ISO-8601 format as "P<num>Y" and "P<num>D" respectively, for example "P10Y" represents a duration of 10 years. The period string must contain only a single time element that is, either years, or days. A duration which combines different periods is not supported, for example "P1Y10D" is not supported.</num></num>

svm

SVM, applies only to SVM-scoped objects.

Name	Type	Description
name	string	The name of the SVM. This field cannot be specified in a PATCH method.

Name	Type	Description
uuid	string	The unique identifier of the SVM. This field cannot be specified in a PATCH method.

volume

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

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

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
allowed	boolean	If this is set to true, an SVM administrator can manage the S3 service. If it is false, only the cluster administrator can manage the service. This field cannot be specified in a POST method.
audit_event_selector	audit_event_selector	Audit event selector allows you to specify access and permission types to audit.
comment	string	Can contain any additional information about the bucket being created or modified.
encryption	encryption	

Name	Type	Description
logical_used_size	integer	Specifies the bucket logical used size up to this point. This field cannot be specified using a POST or PATCH method.
nas_path	string	Specifies the NAS path to which the nas bucket corresponds to.
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.
protection_status	protection_status	Specifies attributes of bucket protection.
qos_policy	qos_policy	Specifies "qos_policy.max_throughput_iops" and/or "qos_policy.max_throughput_mbps" or "qos_policy.min_throughput_iops" and/or "qos_policy.min_throughput_mbps". Specifying "min_throughput_iops" or "min_throughput_mbps" 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
retention	retention	Specifies the retention mode and default retention period configured on the bucket.
role	string	Specifies the role of the bucket. This field cannot be specified using a POST method.
size	integer	Specifies the bucket size in bytes; ranges from 190MB to 62PB.
type	string	Specifies the bucket type. Valid values are "s3" and "nas".
uuid	string	Specifies the unique identifier of the bucket.
versioning_state	string	Specifies the versioning state of the bucket. Valid values are "disabled", "enabled" or "suspended". Note that the versioning state cannot be modified to 'disabled' from any other state.
volume	volume	Specifies the FlexGroup volume name and UUID where the bucket is hosted.

certificate

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

Name	Type	Description
name	string	Certificate name
uuid	string	Certificate UUID

iops

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

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

latency

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

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

throughput

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

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

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

metric

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

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

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

iops_raw

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

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

latency_raw

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

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

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

throughput_raw

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

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

statistics

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

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

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

s3_user

This is a container of S3 users.

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

Name	Type	Description
key_expiry_time	string	Specifies the date and time after which keys expire and are no longer valid.
key_time_to_live	string	<p>Indicates the time period from when this parameter is specified:</p> <ul style="list-style-type: none"> • when creating or modifying a user or • when the user keys were last regenerated, after which the user keys expire and are no longer valid. • Valid format is: 'PnDTnHnMnS PnW'. For example, P2DT6H3M10S specifies a time period of 2 days, 6 hours, 3 minutes, and 10 seconds. • If the value specified is '0' seconds, then the keys won't expire.
svm	svm	SVM, applies only to SVM-scoped objects.

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.
default_unix_user	string	Specifies the default UNIX user for NAS Access.
default_win_user	string	Specifies the default Windows user for NAS Access.

Name	Type	Description
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 3 to 253 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. Valid values range from 1 to 65535.
secure_port	integer	Specifies the HTTPS listener port for the S3 server. By default, HTTPS is enabled on port 443. Valid values range from 1 to 65535.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

Name	Type	Description
arguments	array[error_arguments]	Message arguments

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

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