NetApp

Manage application consistency groups

ONTAP 9.11.1 REST API reference

NetApp
May 08, 2024

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Application consistency-groups endpoint overview

Overview

A consistency group is a group of volumes that supports capabilities such as creating a snapshot of all of its member volumes at the same point-in-time with a write-fence, thus ensuring a consistent image of the volumes at that time.

Applications with datasets scoped to a single volume can have its contents saved to a Snapshot copy, replicated, or cloned in a crash-consistent manner implicitly with corresponding native ONTAP volume-granular operations. Applications with datasets spanning a group of multiple volumes must have such operations performed on the group. Typically, by first fencing writes to all the volumes in the group, flushing any writes pending in queues, executing the intended operation, that is, take Snapshot copy of every volume in the group and when that is complete, unfence and resume writes. A consistency group is the conventional mechanism for providing such group semantics.

Consistency group APIs

The following APIs are used to perform operations related to consistency groups:

– GET /api/application/consistency-groups

– POST /api/application/consistency-groups

– GET /api/application/consistency-groups/{uuid}

– PATCH /api/application/consistency-groups/{uuid}

– DELETE /api/application/consistency-groups/{uuid}

Examples

Retrieving all consistency groups of an SVM

```
# The API:
/api/application/consistency-groups

# The call:
curl -X GET "https://<mgmt-ip>/api/application/consistency-
groups?svm.name=vs1" -H "accept: application/hal+json"

# The response:
{
"records": [
  {
    "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
    "name": "vol1",
```

```
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-
a449-005056bbcf9f"
        }
      }
    },
    {
      "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
      "name": "parent_cg",
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
        }
      }
    },
    {
      "uuid": "c1b270b1-0a82-11ec-a449-005056bbcf9f",
      "name": "child_1",
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/c1b270b1-0a82-11ec-
a449-005056bbcf9f"
        }
      }
    },
    {
      "uuid": "c1b270c3-0a82-11ec-a449-005056bbcf9f",
      "name": "child_2",
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/c1b270c3-0a82-11ec-
a449-005056bbcf9f"
        }
      }
    }
  ],
  "num_records": 4,
  "_links": {
    "self": {
      "href": "/api/application/consistency-groups"
    }
  }
}
}
```

Retrieving details of all consistency groups of an SVM

Retrieving details of the consistency groups for a specified SVM. These details are considered to be performant and will return within 1 second when 40 records or less are requested.

```
curl -X GET "https://<mgmt-ip>/api/application/consistency-
groups?svm.name=vs1&fields=*&max_records=40"

#### Response:
{
"records": [
  {
    "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
    "name": "vol1",
    "svm": {
      "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
        }
      }
    },
    "space": {
      "size": 108003328,
      "available": 107704320,
      "used": 299008
    },
    "replicated": false,
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-
a449-005056bbcf9f"
      }
    }
  },
  {
    "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
    "name": "parent_cg",
    "svm": {
      "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
        }
      }
```

```
      },
      "snapshot_policy": {
        "name": "default-1weekly",
        "uuid": "a30bd0fe-067d-11ec-a449-005056bbcf9f",
        "_links": {
          "self": {
            "href": "/api/storage/snapshot-policies/a30bd0fe-067d-11ec-a449-
005056bbcf9f"
          }
        }
      },
      "consistency_groups": [
        {
          "uuid": "c1b270b1-0a82-11ec-a449-005056bbcf9f",
          "name": "child_1",
          "space": {
            "size": 41943040,
            "available": 39346176,
            "used": 499712
          },
          "_links": {
            "self": {
              "href": "/api/application/consistency-groups/c1b270b1-0a82-
11ec-a449-005056bbcf9f"
            }
          }
        },
        {
          "uuid": "c1b270c3-0a82-11ec-a449-005056bbcf9f",
          "name": "child_2",
          "space": {
            "size": 41943040,
            "available": 39350272,
            "used": 495616
          },
          "_links": {
            "self": {
              "href": "/api/application/consistency-groups/c1b270c3-0a82-
11ec-a449-005056bbcf9f"
            }
          }
        }
      ],
      "space": {
        "size": 83886080,
        "available": 78696448,
```

```
          "used": 995328
      },
      "replicated": false,
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
        }
      }
    },
    {
      "uuid": "c1b270b1-0a82-11ec-a449-005056bbcf9f",
      "name": "child_1",
      "parent_consistency_group": {
        "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
        "name": "parent_cg",
        "_links": {
          "self": {
            "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
          }
        }
      },
      "svm": {
        "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
        "name": "vs1",
        "_links": {
          "self": {
            "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
          }
        }
      },
      "snapshot_policy": {
        "name": "default",
        "uuid": "a30b60a4-067d-11ec-a449-005056bbcf9f",
        "_links": {
          "self": {
            "href": "/api/storage/snapshot-policies/a30b60a4-067d-11ec-a449-
005056bbcf9f"
          }
        }
      },
      "space": {
        "size": 41943040,
        "available": 39346176,
        "used": 499712
```

```
    },
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/c1b270b1-0a82-11ec-
a449-005056bbcf9f"
      }
    }
  },
  {
    "uuid": "c1b270c3-0a82-11ec-a449-005056bbcf9f",
    "name": "child_2",
    "parent_consistency_group": {
      "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
      "name": "parent_cg",
      "_links": {
        "self": {
          "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
        }
      }
    },
    "svm": {
      "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
        }
      }
    },
    "snapshot_policy": {
      "name": "default",
      "uuid": "a30b60a4-067d-11ec-a449-005056bbcf9f",
      "_links": {
        "self": {
          "href": "/api/storage/snapshot-policies/a30b60a4-067d-11ec-a449-
005056bbcf9f"
        }
      }
    },
    "space": {
      "size": 41943040,
      "available": 39350272,
      "used": 495616
    },
    "_links": {
```

```
      "self": {
        "href": "/api/application/consistency-groups/c1b270c3-0a82-11ec-
a449-005056bbcf9f"
      }
    }
  }
],
"num_records": 4,
"_links": {
  "self": {
    "href": "/api/application/consistency-
groups?svm.name=vs1&fields=*&max_records=40"
  }
}
}
```

Retrieving details of non-nested consistency groups

Retrieves details of the consistency groups without nested consistency groups, or only the parent consistency group for a number of consistency groups of a specified SVM.

```
curl -X GET "https://<mgmt-ip>/api/application/consistency-
groups?svm.name=vs1&parent_consistency_group.uuid=null"

#### Response:
{
"records": [
  {
    "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
    "name": "vol1",
    "svm": {
      "name": "vs1"
    },
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-
a449-005056bbcf9f"
      }
    }
  },
  {
    "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
    "name": "parent_cg",
    "svm": {
      "name": "vs1"
    },
    "_links": {
      "self": {
        "href": "/api/application/consistency-groups/c1b22c85-0a82-11ec-
a449-005056bbcf9f"
      }
    }
  }
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/application/consistency-
groups?svm.name=vs1&parent_consistency_group.uuid=null"
  }
}
}
```

Creating a single consistency group with a new SAN volume

Provisions an application with one consistency group, each with one new SAN volumes, with one LUN, an

igroup and no explicit Snapshot copy policy, FabricPool tiering policy, storage service, and QoS policy specification. The igroup to map a LUN to is specified at LUN-granularity.

```
curl -X POST https://<mgmt-ip>/api/application/consistency-
groups?return_records=true -d '{ "svm": { "name": "vs1" }, "luns": [ {
"name": "/vol/vol1/lun1", "space": { "size": "100mb" }, "os_type":
"linux", "lun_maps": [ { "igroup": { "name": "igroup1", "initiators": [ {
"name": "iqn.2021-07.com.netapp.englab.gdl:scspr2429998001" } ] } } ] } ]
}'

#### Response:
{
"num_records": 1,
"records": [
  {
    "uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
    "name": "vol1",
    "svm": {
    "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
    "name": "vs1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
      }
    }
    },
    "luns": [
    {
      "lun_maps": [
        {
          "igroup": {
            "name": "igroup1",
            "initiators": [
              {
                "name": "iqn.2021-
07.com.netapp.englab.gdl:scspr2429998001"
              }
            ]
          }
        }
      ],
      "name": "/vol/vol1/lun1",
      "os_type": "linux",
      "space": {
        "size": 104857600
      }
```

```
      }
    ]
  }
],
"job": {
  "uuid": "6f4907ae-0a7f-11ec-a449-005056bbcf9f",
  "_links": {
    "self": {
    "href": "/api/cluster/jobs/6f4907ae-0a7f-11ec-a449-005056bbcf9f"
    }
  }
}
}
}
```

Creating an Application with two consistency groups with existing SAN volumes

Provisions an application with two consistency groups, each with two existing SAN volumes, a Snapshot copy policy at application-granularity, and a distinct consistency group granular Snapshot copy policy.

```
curl -X POST https://<mgmt-ip>/api/application/consistency-
groups?return_records=true -d '{ "svm": { "name": "vs1" }, "name":
"parent_cg", "snapshot_policy": { "name": "default-1weekly" },
"consistency_groups": [ { "name": "child_1", "snapshot_policy": { "name":
"default" }, "volumes": [ { "name": "existing_vol1",
"provisioning_options": { "action": "add" } }, { "name": "existing_vol2",
"provisioning_options": { "action": "add" } } ] }, { "name": "child_2",
"snapshot_policy": { "name": "default" }, "volumes": [ { "name":
"existing_vol3", "provisioning_options": { "action": "add" } }, { "name":
"existing_vol4", "provisioning_options": { "action": "add" } } ] } ] }'

#### Response:
{
"num_records": 1,
"records": [
  {
    "uuid": "c1b22c85-0a82-11ec-a449-005056bbcf9f",
    "name": "parent_cg",
    "svm": {
      "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
      "name": "vs1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
        }
      }
    },
```

```
      "snapshot_policy": {
        "name": "default-1weekly"
      },
      "consistency_groups": [
        {
          "uuid": "c1b270b1-0a82-11ec-a449-005056bbcf9f",
          "name": "child_1",
          "snapshot_policy": {
            "name": "default"
          },
          "volumes": [
            {
              "name": "existing_vol1"
            },
            {
              "name": "existing_vol2"
            }
          ]
        },
        {
          "uuid": "c1b270c3-0a82-11ec-a449-005056bbcf9f",
          "name": "child_2",
          "snapshot_policy": {
            "name": "default"
          },
          "volumes": [
            {
              "name": "existing_vol3"
            },
            {
              "name": "existing_vol4"
            }
          ]
        }
      ]
    }
],
"job": {
  "uuid": "c1b272b9-0a82-11ec-a449-005056bbcf9f",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/c1b272b9-0a82-11ec-a449-005056bbcf9f"
    }
  }
}
}
}
```

Retrieving specific details of an existing consistency group

Retrieves the details of an existing consistency group.

```
curl -X GET https://<mgmt-ip>/api/application/consistency-groups/6f48d798-
0a7f-11ec-a449-005056bbcf9f

#### Response:
{
"uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
"name": "vol1",
"svm": {
  "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
  "name": "vs1",
  "_links": {
    "self": {
      "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
    }
  }
},
"space": {
  "size": 108003328,
  "available": 107724800,
  "used": 278528
},
"replicated": false,
"_links": {
  "self": {
    "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-a449-
005056bbcf9f"
  }
}
}
```

Retrieving all details of an existing consistency group

Retrieves all details of an existing consistency group. These details are not considered to be performant and are not guaranteed to return within one second.

```
curl -X GET https://<mgmt-ip>/api/application/consistency-groups/6f48d798-
0a7f-11ec-a449-005056bbcf9f?fields=**

#### Response:
{
"uuid": "6f48d798-0a7f-11ec-a449-005056bbcf9f",
"name": "vol1",
```

```
  "svm": {
    "uuid": "4853f97a-0a63-11ec-a449-005056bbcf9f",
    "name": "vs1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/4853f97a-0a63-11ec-a449-005056bbcf9f"
      }
    }
  },
  "qos": {
    "policy": {
      "uuid": "b7189398-e572-48ab-8f69-82cd46580812",
      "name": "extreme-fixed",
      "_links": {
        "self": {
          "href": "/api/storage/qos/policies/b7189398-e572-48ab-8f69-
82cd46580812"
        }
      }
    }
  },
  "tiering": {
    "policy": "none"
  },
  "create_time": "2021-08-31T13:18:24-04:00",
  "volumes": [
    {
      "uuid": "6f516c6c-0a7f-11ec-a449-005056bbcf9f",
      "qos": {
        "policy": {
          "uuid": "b7189398-e572-48ab-8f69-82cd46580812",
          "name": "extreme-fixed",
          "_links": {
            "self": {
              "href": "/api/storage/qos/policies/b7189398-e572-48ab-8f69-
82cd46580812"
            }
          }
        }
      },
      "tiering": {
        "policy": "none"
      },
      "comment": "",
      "create_time": "2021-08-31T13:18:22-04:00",
      "name": "vol1",
```

```
    "snapshot_policy": {
      "name": "default",
      "uuid": "a30b60a4-067d-11ec-a449-005056bbcf9f"
    },
    "space": {
      "size": 108003328,
      "available": 107569152,
      "used": 434176,
      "snapshot": {
        "used": 151552,
        "reserve_percent": 0,
        "autodelete_enabled": false
      }
    },
    "activity_tracking": {
      "supported": false,
      "unsupported_reason": {
        "message": "Volume activity tracking is not supported on volumes
that contain LUNs.",
        "code": "124518405"
      },
      "state": "off"
    },
    "_links": {
      "self": {
        "href": "/api/storage/volumes/6f516c6c-0a7f-11ec-a449-
005056bbcf9f"
      }
    }
  }
],
"luns": [
  {
    "uuid": "6f51748a-0a7f-11ec-a449-005056bbcf9f",
    "location": {
      "logical_unit": "lun1",
      "node": {
        "name": "johnhil-vsim1",
        "uuid": "6eb682f2-067d-11ec-a449-005056bbcf9f",
        "_links": {
          "self": {
            "href": "/api/cluster/nodes/6eb682f2-067d-11ec-a449-
005056bbcf9f"
          }
        }
      },
```

```
        "volume": {
          "uuid": "6f516c6c-0a7f-11ec-a449-005056bbcf9f",
          "name": "vol1",
          "_links": {
            "self": {
              "href": "/api/storage/volumes/6f516c6c-0a7f-11ec-a449-
005056bbcf9f"
            }
          }
        }
      },
      "lun_maps": [
        {
          "igroup": {
            "uuid": "6f4a4b86-0a7f-11ec-a449-005056bbcf9f",
            "name": "igroup1",
            "os_type": "linux",
            "protocol": "mixed",
            "initiators": [
              {
                "name": "iqn.2021-07.com.netapp.englab.gdl:scspr2429998001"
              }
            ],
            "_links": {
              "self": {
                "href": "/api/protocols/san/igroups/6f4a4b86-0a7f-11ec-a449-
005056bbcf9f"
              }
            }
          },
          "logical_unit_number": 0
        }
      ],
      "name": "/vol/vol1/lun1",
      "auto_delete": false,
      "class": "regular",
      "create_time": "2021-08-31T13:18:24-04:00",
      "os_type": "linux",
      "serial_number": "wIqM6]RfQK3t",
      "space": {
        "size": 104857600,
        "used": 0,
        "guarantee": {
          "requested": false,
          "reserved": false
        }
```

```
    },
    "status": {
      "container_state": "online",
      "mapped": true,
      "read_only": false,
      "state": "online"
    },
    "_links": {
      "self": {
        "href": "/api/storage/luns/6f51748a-0a7f-11ec-a449-005056bbcf9f"
      }
    }
  }
],
"space": {
  "size": 108003328,
  "available": 107569152,
  "used": 434176
},
"replicated": false,
"_links": {
  "self": {
    "href": "/api/application/consistency-groups/6f48d798-0a7f-11ec-a449-
005056bbcf9f?fields=**"
  }
}
}
```

Adding LUNs to an existing volume in an existing consistency group

Adds two NVMe namespaces to an existing volume in an existing consistency group, creates a new subsystem, and binds the new namespaces to it.

```
curl -X PATCH 'https://<mgmt-ip>/api/application/consistency-
groups/6f48d798-0a7f-11ec-a449-005056bbcf9f' -d '{ "luns": [ { "name":
"/vol/vol1/new_luns", "provisioning_options": { "count": 2, "action":
"create" }, "space": { "size": "100mb" }, "os_type": "linux", "lun_maps":
[ { "igroup": { "name": "igroup2", "initiators": [ { "name":
"01:02:03:04:05:06:07:01" } ] } } ] } ] }'

#### Response:
{
"job": {
  "uuid": "5306ea44-0a87-11ec-a449-005056bbcf9f",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/5306ea44-0a87-11ec-a449-005056bbcf9f"
    }
  }
}
}
```

Restoring a consistency group to the contents of an existing snapshot

Restores an existing consistency group to the contents of an existing snapshot of the consistency group.

```
curl -X PATCH 'https://<mgmt-ip>/api/application/consistency-
groups/6f51748a-0a7f-11ec-a449-005056bbcf9f' -d '{ "restore_to": {
"snapshot": { "uuid": "92c6c770-17a1-11eb-b141-005056acd498"} } }' -H
"Accept: Application/hal+json"

#### Response:
{
"job": {
  "uuid": "8907bd9e-1463-11eb-a719-005056ac70af",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/8907bd9e-1463-11eb-a719-005056ac70af"
    }
  }
}
}
```

Deleting a consistency group

Deletes a consistency group, where all storage originally associated with that consistency group remains in place.

```
curl -X DELETE 'https://<mgmt-ip>/api/application/consistency-
groups/6f48d798-0a7f-11ec-a449-005056bbcf9f'

#### Response:
{
}
```

Retrieve details of a collection or consistency group

GET `/application/consistency-groups`

Introduced In: 9.10

Retrieve details of a collection or a specific consistency group.

Notes

When volume granular properties, such as, the storage SLC, Fabric Pool tiering are not the same for all the existing volumes of a consistency group, the corresponding property is not reported at consistency group granularity. It is only reported if all the volumes of the consistency group have the same value for that property.

If this consistency group instance is part of a replication relationship, the "replicated" parameter will be true. Otherwise, it is false. Also, the "replicated" parameter will not be present in the output for Nested-consistency groups, it is included only for single and top-level consistency groups. If this consistency group instance is the source of a replication relationship, the "replication_source" parameter will be true. Otherwise, it is false.

Expensive properties

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

- `volumes`

- `luns`

- `namespaces`

Parameters

Name	Type	In	Required	Description
qos.policy.min_throughput_iops	integer	query	False	Filter by qos.policy.min_throughput_iops
qos.policy.max_throughput_iops	integer	query	False	Filter by qos.policy.max_throughput_iops

Name	Type	In	Required	Description
qos.policy.uuid	string	query	False	Filter by qos.policy.uuid
qos.policy.min_throughput_mbps	integer	query	False	Filter by qos.policy.min_throughput_mbps
qos.policy.max_throughput_mbps	integer	query	False	Filter by qos.policy.max_throughput_mbps
qos.policy.name	string	query	False	Filter by qos.policy.name
replication_source	boolean	query	False	Filter by replication_source
consistency_groups.space.used	integer	query	False	Filter by consistency_groups.space.used
consistency_groups.space.size	integer	query	False	Filter by consistency_groups.space.size
consistency_groups.space.available	integer	query	False	Filter by consistency_groups.space.available
consistency_groups.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.qos.policy.min_throughput_iops
consistency_groups.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.qos.policy.max_throughput_iops
consistency_groups.qos.policy.uuid	string	query	False	Filter by consistency_groups.qos.policy.uuid
consistency_groups.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.qos.policy.min_throughput_mbps

Name	Type	In	Required	Description
consistency_groups.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.qos.policy.max_throughput_mbps
consistency_groups.qos.policy.name	string	query	False	Filter by consistency_groups.qos.policy.name
consistency_groups.name	string	query	False	Filter by consistency_groups.name
consistency_groups.uuid	string	query	False	Filter by consistency_groups.uuid
consistency_groups.snapshot_policy.name	string	query	False	Filter by consistency_groups.snapshot_policy.name
consistency_groups.snapshot_policy.uuid	string	query	False	Filter by consistency_groups.snapshot_policy.uuid
consistency_groups.luns.serial_number	string	query	False	Filter by consistency_groups.luns.serial_number - maxLength: 12 - minLength: 12
consistency_groups.luns.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.luns.qos.policy.max_throughput_iops
consistency_groups.luns.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.luns.qos.policy.min_throughput_iops

Name	Type	In	Required	Description
consistency_groups.luns.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.luns.qos.policy.max_throughput_mbps
consistency_groups.luns.qos.policy.name	string	query	False	Filter by consistency_groups.luns.qos.policy.name
consistency_groups.luns.qos.policy.uuid	string	query	False	Filter by consistency_groups.luns.qos.policy.uuid
consistency_groups.luns.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.luns.qos.policy.min_throughput_mbps
consistency_groups.luns.lun_maps.igroup.os_type	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.os_type
consistency_groups.luns.lun_maps.igroup.protocol	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.protocol
consistency_groups.luns.lun_maps.igroup.igroups.uuid	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.igroups.uuid
consistency_groups.luns.lun_maps.igroup.igroups.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.igroups.name • maxLength: 96 • minLength: 1
consistency_groups.luns.lun_maps.igroup.initiators.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.initiators.name

Name	Type	In	Required	Description
consistency_groups.luns.lun_maps.igroup.initiators.comment	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.initiators.comment • maxLength: 254 • minLength: 0
consistency_groups.luns.lun_maps.igroup.comment	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.comment • Introduced in: 9.11 • maxLength: 254 • minLength: 0
consistency_groups.luns.lun_maps.igroup.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.name • maxLength: 96 • minLength: 1
consistency_groups.luns.lun_maps.igroup.uuid	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.uuid
consistency_groups.luns.lun_maps.logical_unit_number	integer	query	False	Filter by consistency_groups.luns.lun_maps.logical_unit_number
consistency_groups.luns.space.guarantee.reserved	boolean	query	False	Filter by consistency_groups.luns.space.guarantee.reserved • Introduced in: 9.11

Name	Type	In	Required	Description
consistency_groups.luns.space.guarantee.requested	boolean	query	False	Filter by consistency_groups.luns.space.guarantee.requested • Introduced in: 9.11
consistency_groups.luns.space.size	integer	query	False	Filter by consistency_groups.luns.space.size • Max value: 140737488355328 • Min value: 4096
consistency_groups.luns.space.used	integer	query	False	Filter by consistency_groups.luns.space.used
consistency_groups.luns.os_type	string	query	False	Filter by consistency_groups.luns.os_type
consistency_groups.luns.enabled	boolean	query	False	Filter by consistency_groups.luns.enabled
consistency_groups.luns.comment	string	query	False	Filter by consistency_groups.luns.comment • maxLength: 254 • minLength: 0
consistency_groups.luns.name	string	query	False	Filter by consistency_groups.luns.name
consistency_groups.luns.uuid	string	query	False	Filter by consistency_groups.luns.uuid
consistency_groups.luns.create_time	string	query	False	Filter by consistency_groups.luns.create_time

Name	Type	In	Required	Description
consistency_groups. svm.uuid	string	query	False	Filter by consistency_groups. svm.uuid
consistency_groups. svm.name	string	query	False	Filter by consistency_groups. svm.name
consistency_groups. volumes.tiering.polic y	string	query	False	Filter by consistency_groups. volumes.tiering.polic y
consistency_groups. volumes.name	string	query	False	Filter by consistency_groups. volumes.name • maxLength: 203 • minLength: 1
consistency_groups. volumes.comment	string	query	False	Filter by consistency_groups. volumes.comment • maxLength: 1023 • minLength: 0
consistency_groups. volumes.snapshot_p olicy.name	string	query	False	Filter by consistency_groups. volumes.snapshot_p olicy.name
consistency_groups. volumes.snapshot_p olicy.uuid	string	query	False	Filter by consistency_groups. volumes.snapshot_p olicy.uuid
consistency_groups. volumes.uuid	string	query	False	Filter by consistency_groups. volumes.uuid
consistency_groups. volumes.qos.policy. min_throughput_iops	integer	query	False	Filter by consistency_groups. volumes.qos.policy. min_throughput_iop s

Name	Type	In	Required	Description
consistency_groups. volumes.qos.policy. max_throughput_iop s	integer	query	False	Filter by consistency_groups. volumes.qos.policy. max_throughput_iop s
consistency_groups. volumes.qos.policy.u uid	string	query	False	Filter by consistency_groups. volumes.qos.policy. uuid
consistency_groups. volumes.qos.policy. min_throughput_mb ps	integer	query	False	Filter by consistency_groups. volumes.qos.policy. min_throughput_mb ps
consistency_groups. volumes.qos.policy. max_throughput_mb ps	integer	query	False	Filter by consistency_groups. volumes.qos.policy. max_throughput_mb ps
consistency_groups. volumes.qos.policy.n ame	string	query	False	Filter by consistency_groups. volumes.qos.policy. name
consistency_groups. volumes.language	string	query	False	Filter by consistency_groups. volumes.language
consistency_groups. volumes.space.size	integer	query	False	Filter by consistency_groups. volumes.space.size
consistency_groups. volumes.space.avail able	integer	query	False	Filter by consistency_groups. volumes.space.avail able
consistency_groups. volumes.space.used	integer	query	False	Filter by consistency_groups. volumes.space.used

Name	Type	In	Required	Description
consistency_groups. parent_consistency_ group.name	string	query	False	Filter by consistency_groups. parent_consistency_ group.name
consistency_groups. parent_consistency_ group.uuid	string	query	False	Filter by consistency_groups. parent_consistency_ group.uuid
consistency_groups. tiering.policy	string	query	False	Filter by consistency_groups. tiering.policy
space.used	integer	query	False	Filter by space.used
space.size	integer	query	False	Filter by space.size
space.available	integer	query	False	Filter by space.available
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
parent_consistency_ group.name	string	query	False	Filter by parent_consistency_ group.name
parent_consistency_ group.uuid	string	query	False	Filter by parent_consistency_ group.uuid
name	string	query	False	Filter by name
snapshot_policy.na me	string	query	False	Filter by snapshot_policy.na me
snapshot_policy.uuid	string	query	False	Filter by snapshot_policy.uui d

Name	Type	In	Required	Description
luns.serial_number	string	query	False	Filter by luns.serial_number • maxLength: 12 • minLength: 12
luns.qos.policy.max_throughput_iops	integer	query	False	Filter by luns.qos.policy.max_throughput_iops
luns.qos.policy.min_throughput_iops	integer	query	False	Filter by luns.qos.policy.min_throughput_iops
luns.qos.policy.max_throughput_mbps	integer	query	False	Filter by luns.qos.policy.max_throughput_mbps
luns.qos.policy.name	string	query	False	Filter by luns.qos.policy.name
luns.qos.policy.uuid	string	query	False	Filter by luns.qos.policy.uuid
luns.qos.policy.min_throughput_mbps	integer	query	False	Filter by luns.qos.policy.min_throughput_mbps
luns.lun_maps.igroup.os_type	string	query	False	Filter by luns.lun_maps.igroup.os_type
luns.lun_maps.igroup.protocol	string	query	False	Filter by luns.lun_maps.igroup.protocol
luns.lun_maps.igroup.igroups.uuid	string	query	False	Filter by luns.lun_maps.igroup.igroups.uuid
luns.lun_maps.igroup.igroups.name	string	query	False	Filter by luns.lun_maps.igroup.igroups.name • maxLength: 96 • minLength: 1

Name	Type	In	Required	Description
luns.lun_maps.igroup.initiators.name	string	query	False	Filter by luns.lun_maps.igroup.initiators.name
luns.lun_maps.igroup.initiators.comment	string	query	False	Filter by luns.lun_maps.igroup.initiators.comment • maxLength: 254 • minLength: 0
luns.lun_maps.igroup.comment	string	query	False	Filter by luns.lun_maps.igroup.comment • Introduced in: 9.11 • maxLength: 254 • minLength: 0
luns.lun_maps.igroup.name	string	query	False	Filter by luns.lun_maps.igroup.name • maxLength: 96 • minLength: 1
luns.lun_maps.igroup.uuid	string	query	False	Filter by luns.lun_maps.igroup.uuid
luns.lun_maps.logical_unit_number	integer	query	False	Filter by luns.lun_maps.logical_unit_number
luns.space.guarantee.reserved	boolean	query	False	Filter by luns.space.guarantee.reserved • Introduced in: 9.11

Name	Type	In	Required	Description
luns.space.guarantee.requested	boolean	query	False	Filter by luns.space.guarantee.requested • Introduced in: 9.11
luns.space.size	integer	query	False	Filter by luns.space.size • Max value: 140737488355328 • Min value: 4096
luns.space.used	integer	query	False	Filter by luns.space.used
luns.os_type	string	query	False	Filter by luns.os_type
luns.enabled	boolean	query	False	Filter by luns.enabled
luns.comment	string	query	False	Filter by luns.comment • maxLength: 254 • minLength: 0
luns.name	string	query	False	Filter by luns.name
luns.uuid	string	query	False	Filter by luns.uuid
luns.create_time	string	query	False	Filter by luns.create_time
volumes.tiering.policy	string	query	False	Filter by volumes.tiering.policy
volumes.name	string	query	False	Filter by volumes.name • maxLength: 203 • minLength: 1

Name	Type	In	Required	Description
volumes.comment	string	query	False	Filter by volumes.comment • maxLength: 1023 • minLength: 0
volumes.snapshot_policy.name	string	query	False	Filter by volumes.snapshot_policy.name
volumes.snapshot_policy.uuid	string	query	False	Filter by volumes.snapshot_policy.uuid
volumes.uuid	string	query	False	Filter by volumes.uuid
volumes.qos.policy.min_throughput_iops	integer	query	False	Filter by volumes.qos.policy.min_throughput_iops
volumes.qos.policy.max_throughput_iops	integer	query	False	Filter by volumes.qos.policy.max_throughput_iops
volumes.qos.policy.uuid	string	query	False	Filter by volumes.qos.policy.uuid
volumes.qos.policy.min_throughput_mbps	integer	query	False	Filter by volumes.qos.policy.min_throughput_mbps
volumes.qos.policy.max_throughput_mbps	integer	query	False	Filter by volumes.qos.policy.max_throughput_mbps
volumes.qos.policy.name	string	query	False	Filter by volumes.qos.policy.name

Name	Type	In	Required	Description
volumes.language	string	query	False	Filter by volumes.language
volumes.space.size	integer	query	False	Filter by volumes.space.size
volumes.space.available	integer	query	False	Filter by volumes.space.available
volumes.space.used	integer	query	False	Filter by volumes.space.used
tiering.policy	string	query	False	Filter by tiering.policy
uuid	string	query	False	Filter by uuid
replicated	boolean	query	False	Filter by replicated
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Max value: 120 • Min value: 0 • Default value: 1
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[records]	

Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "consistency_groups": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "luns": {
        "clone": {
          "source": {
            "name": "/vol/volume1/lun1",
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
          }
        },
        "comment": "string",
        "create_time": "2018-06-04T19:00:00Z",
        "lun_maps": {
          "igroup": {
            "comment": "string",
            "igroups": {
              "_links": {
                "self": {
                  "href": "/api/resourcelink"
                }
              },
              "name": "igroup1",
              "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
            },
            "initiators": {
              "comment": "my comment",
```

```
            "name": "iqn.1998-01.com.corp.iscsi:name1"
          },
          "name": "igroup1",
          "os_type": "aix",
          "protocol": "fcp",
          "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "name": "/vol/volume1/lun1",
      "os_type": "aix",
      "provisioning_options": {
        "action": "create"
      },
      "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"
        }
      },
      "serial_number": "string",
      "space": {
        "size": 1073741824
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "namespaces": {
      "comment": "string",
      "create_time": "2018-06-04T19:00:00Z",
      "name": "/vol/volume1/qtree1/namespace1",
      "os_type": "aix",
      "provisioning_options": {
        "action": "create"
      },
      "subsystem_map": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
```

```
          }
        },
        "anagrpid": "00103050h",
        "nsid": "00000001h",
        "subsystem": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "parent_consistency_group": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "my_consistency_group",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "provisioning_options": {
      "action": "create",
      "storage_service": {
        "name": "extreme"
      }
    },
    "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"
      }
    },
    "snapshot_policy": {
```

```json
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "default",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "space": {
      "available": 5737418,
      "size": 1073741824,
      "used": 5737418
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "tiering": {
      "control": "allowed",
      "policy": "all"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
    "volumes": {
      "comment": "string",
      "language": "ar",
      "name": "vol_cs_dept",
      "provisioning_options": {
        "action": "create",
        "storage_service": {
          "name": "extreme"
        }
      },
      "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"
        }
      },
      "snapshot_policy": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "default",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "tiering": {
        "control": "allowed",
        "policy": "all"
      },
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  },
  "luns": {
    "clone": {
      "source": {
        "name": "/vol/volume1/lun1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "comment": "string",
    "create_time": "2018-06-04T19:00:00Z",
    "lun_maps": {
      "igroup": {
        "comment": "string",
        "igroups": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "igroup1",
          "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        },
        "initiators": {
          "comment": "my comment",
          "name": "iqn.1998-01.com.corp.iscsi:name1"
```

```json
        },
        "name": "igroup1",
        "os_type": "aix",
        "protocol": "fcp",
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "name": "/vol/volume1/lun1",
    "os_type": "aix",
    "provisioning_options": {
      "action": "create"
    },
    "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"
      }
    },
    "serial_number": "string",
    "space": {
      "size": 1073741824
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "namespaces": {
    "comment": "string",
    "create_time": "2018-06-04T19:00:00Z",
    "name": "/vol/volume1/qtree1/namespace1",
    "os_type": "aix",
    "provisioning_options": {
      "action": "create"
    },
    "subsystem_map": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
```

```
        },
        "anagrpid": "00103050h",
        "nsid": "00000001h",
        "subsystem": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "parent_consistency_group": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "my_consistency_group",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "provisioning_options": {
      "action": "create",
      "storage_service": {
        "name": "extreme"
      }
    },
    "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"
      }
    },
    "snapshot_policy": {
      "_links": {
```

```
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "default",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "space": {
      "available": 5737418,
      "size": 1073741824,
      "used": 5737418
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "tiering": {
      "control": "allowed",
      "policy": "all"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
    "volumes": {
      "comment": "string",
      "language": "ar",
      "name": "vol_cs_dept",
      "provisioning_options": {
        "action": "create",
        "storage_service": {
          "name": "extreme"
        }
      },
      "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"
        }
      },
      "snapshot_policy": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "default",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "tiering": {
        "control": "allowed",
        "policy": "all"
      },
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  }
}
```

Error

```
Status: Default, Error
```

Name	Type	Description
error	error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

collection_links

Name	Type	Description
next	href	
self	href	

self_link

Name	Type	Description
self	href	

source

The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.

Name	Type	Description
name	string	The fully qualified path name of the clone source LUN composed of a "/vol" prefix, the volume name, the (optional) qtree name, and base name of the LUN. Valid in POST and PATCH.
uuid	string	The unique identifier of the clone source LUN. Valid in POST and PATCH.

clone

This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`.

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following

properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`.

Persistent reservations for the patched LUN are also preserved.

Name	Type	Description
source	source	The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN. Valid in POST to create a new LUN as a clone of the source. Valid in PATCH to overwrite an existing LUN's data as a clone of another.

igroups

Name	Type	Description
_links	self_link	
name	string	The name of the initiator group.
uuid	string	The unique identifier of the initiator group.

initiators

The initiators that are members of the initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator.
name	string	Name of initiator that is a member of the initiator group.

igroup

The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator. Valid in POST and PATCH.
igroups	array[igroups]	Separate igroup definitions to include in this igroup.
initiators	array[initiators]	The initiators that are members of the group.
name	string	The name of the initiator group. Required in POST; optional in PATCH.
os_type	string	The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.
protocol	string	The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to *mixed*. The protocol of an initiator group cannot be changed after creation of the group.
uuid	string	The unique identifier of the initiator group.

lun_maps

A LUN map is an association between a LUN and an initiator group.

When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.

Name	Type	Description
igroup	igroup	The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.
logical_unit_number	integer	The logical unit number assigned to the LUN when mapped to the specified initiator group. The number is used to identify the LUN to initiators in the initiator group when communicating through the Fibre Channel Protocol or iSCSI. Optional in POST; if no value is provided, ONTAP assigns the lowest available value. • Introduced in: 9.6 • readCreate: 1

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.

policy

The QoS policy

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

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

qos

Name	Type	Description
policy	policy	The QoS policy

guarantee

Properties that request and report the space guarantee for the LUN.

Name	Type	Description
requested	boolean	The requested space reservation policy for the LUN. If *true*, a space reservation is requested for the LUN; if *false*, the LUN is thin provisioned. Guaranteeing a space reservation request for a LUN requires that the volume in which the LUN resides is also space reserved and that the fractional reserve for the volume is 100%. Valid in POST and PATCH.
reserved	boolean	Reports if the LUN is space guaranteed. If *true*, a space guarantee is requested and the containing volume and aggregate support the request. If *false*, a space guarantee is not requested or a space guarantee is requested and either the containing volume or aggregate do not support the request.

space

The storage space related properties of the LUN.

Name	Type	Description
guarantee	guarantee	Properties that request and report the space guarantee for the LUN.

Name	Type	Description
size	integer	The total provisioned size of the LUN. The LUN size can be increased but not reduced using the REST interface. The maximum and minimum sizes listed here are the absolute maximum and absolute minimum sizes, in bytes. The actual minimum and maxiumum sizes vary depending on the ONTAP version, ONTAP platform, and the available space in the containing volume and aggregate. For more information, see *Size properties* in the *docs* section of the ONTAP REST API documentation. • example: 1073741824 • format: int64 • Max value: 140737488355328 • Min value: 4096 • Introduced in: 9.6

Name	Type	Description
used	integer	The amount of space consumed by the main data stream of the LUN. This value is the total space consumed in the volume by the LUN, including filesystem overhead, but excluding prefix and suffix streams. Due to internal filesystem overhead and the many ways SAN filesystems and applications utilize blocks within a LUN, this value does not necessarily reflect actual consumption/availability from the perspective of the filesystem or application. Without specific knowledge of how the LUN blocks are utilized outside of ONTAP, this property should not be used as an indicator for an out-of-space condition. For more information, see *Size properties* in the *docs* section of the ONTAP REST API documentation. • format: int64 • Introduced in: 9.6 • readOnly: 1

luns

A LUN is the logical representation of storage in a storage area network (SAN).

In ONTAP, a LUN is located within a volume. Optionally, it can be located within a qtree in a volume.

A LUN can be created to a specified size using thin or thick provisioning. A LUN can then be renamed, resized, cloned, and moved to a different volume. LUNs support the assignment of a quality of service (QoS) policy for performance management or a QoS policy can be assigned to the volume containing the LUN. See the LUN object model to learn more about each of the properties supported by the LUN REST API.

A LUN must be mapped to an initiator group to grant access to the initiator group's initiators (client hosts). Initiators can then access the LUN and perform I/O over a Fibre Channel (FC) fabric using the Fibre Channel Protocol or a TCP/IP network using iSCSI.

Name	Type	Description
clone	clone	This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`. When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`. Persistent reservations for the patched LUN are also preserved.
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the LUN was created.

Name	Type	Description
enabled	boolean	The enabled state of the LUN. LUNs can be disabled to prevent access to the LUN. Certain error conditions also cause the LUN to become disabled. If the LUN is disabled, you can consult the `state` property to determine if the LUN is administratively disabled (*offline*) or has become disabled as a result of an error. A LUN in an error condition can be brought online by setting the `enabled` property to *true* or brought administratively offline by setting the `enabled` property to *false*. Upon creation, a LUN is enabled by default. Valid in PATCH.
lun_maps	array[lun_maps]	An array of LUN maps. A LUN map is an association between a LUN and an initiator group. When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.
name	string	The fully qualified path name of the LUN composed of the "/vol" prefix, the volume name, the qtree name (optional), and the base name of the LUN. Valid in POST and PATCH.
os_type	string	The operating system type of the LUN. Required in POST when creating a LUN that is not a clone of another. Disallowed in POST when creating a LUN clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
serial_number	string	The LUN serial number. The serial number is generated by ONTAP when the LUN is created. • maxLength: 12 • minLength: 12 • readOnly: 1 • Introduced in: 9.10
space	space	The storage space related properties of the LUN.
uuid	string	The unique identifier of the LUN. The UUID is generated by ONTAP when the LUN is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.10

_links

Name	Type	Description
self	href	

nvme_subsystem_reference

An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

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

subsystem_map

The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems.

There is an added cost to retrieving property values for `subsystem_map`. They are not populated for

either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.

Name	Type	Description
_links	self_link	
anagrpid	string	The Asymmetric Namespace Access Group ID (ANAGRPID) of the NVMe namespace. The format for an ANAGRPID is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
nsid	string	The NVMe namespace identifier. This is an identifier used by an NVMe controller to provide access to the NVMe namespace. The format for an NVMe namespace identifier is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
subsystem	nvme_subsystem_reference	An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

namespaces

An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the storage virtual machine using the NVMe over Fabrics protocol.

In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

Name	Type	Description
auto_delete	boolean	This property marks the NVMe namespace for auto deletion when the volume containing the namespace runs out of space. This is most commonly set on namespace clones. When set to *true*, the NVMe namespace becomes eligible for automatic deletion when the volume runs out of space. Auto deletion only occurs when the volume containing the namespace is also configured for auto deletion and free space in the volume decreases below a particular threshold. This property is optional in POST and PATCH. The default value for a new NVMe namespace is *false*. There is an added cost to retrieving this property's value. It is not populated for either a collection GET or an instance GET unless it is explicitly requested using the `fields` query parameter. See Requesting specific fields to learn more.
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the NVMe namespace was created.
enabled	boolean	The enabled state of the NVMe namespace. Certain error conditions cause the namespace to become disabled. If the namespace is disabled, you can check the `state` property to determine what error disabled the namespace. An NVMe namespace is enabled automatically when it is created.

Name	Type	Description
name	string	The fully qualified path name of the NVMe namespace composed of a "/vol" prefix, the volume name, the (optional) qtree name and base name of the namespace. Valid in POST. NVMe namespaces do not support rename, or movement between volumes.
os_type	string	The operating system type of the NVMe namespace. Required in POST when creating an NVMe namespace that is not a clone of another. Disallowed in POST when creating a namespace clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
subsystem_map	array[subsystem_map]	The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems. There is an added cost to retrieving property values for `subsystem_map`. They are not populated for either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.
uuid	string	The unique identifier of the NVMe namespace.

parent_consistency_group

The parent consistency group.

Name	Type	Description
_links	self_link	

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

storage_service

Determines the placement of any storage object created during this operation.

Name	Type	Description
name	string	Storage service name. If not specified, the default value is the most performant for the platform.

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
storage_service	storage_service	Determines the placement of any storage object created during this operation.

snapshot

A consistency group's Snapshot copy

Name	Type	Description
name	string	The name of the consistency group's Snapshot copy to restore to.
uuid	string	The UUID of the consistency group's Snapshot copy to restore to.

restore_to

Use to restore a consistency group to a previous Snapshot copy

Name	Type	Description
snapshot	snapshot	A consistency group's Snapshot copy

snapshot_policy_reference

This is a reference to the Snapshot copy policy.

Name	Type	Description
_links	_links	
name	string	
uuid	string	

space

Space information for the consistency group.

Name	Type	Description
available	integer	The amount of space available in the consistency group, in bytes.
size	integer	The total provisioned size of the consistency group, in bytes.
used	integer	The amount of space consumed in the consistency group, in bytes.

svm

The Storage Virtual Machine (SVM) in which the consistency group is located.

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

tiering

The tiering placement and policy definitions for volumes in this consistency group.

Name	Type	Description
control	string	Storage tiering placement rules for the object.
policy	string	Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold. FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH. all ‐ Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks. auto ‐ Allows tiering of both snapshot and active file system user data to the cloud store none ‐ Volume blocks are not be tiered to the cloud store. snapshot_only ‐ Allows tiering of only the volume Snapshot copies not associated with the active file system. The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.
storage_service	storage_service	Determines the placement of any storage object created during this operation.

qos

The QoS policy for this volume.

Name	Type	Description
policy	policy	The QoS policy

space

Name	Type	Description
available	integer	The available space, in bytes.
size	integer	Total provisioned size, in bytes.
used	integer	The virtual space used (includes volume reserves) before storage efficiency, in bytes.

tiering

The tiering placement and policy definitions for this volume.

Name	Type	Description
control	string	Storage tiering placement rules for the object.

Name	Type	Description
policy	string	Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold. FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH. all ‐ Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks. auto ‐ Allows tiering of both snapshot and active file system user data to the cloud store none ‐ Volume blocks are not be tiered to the cloud store. snapshot_only ‐ Allows tiering of only the volume Snapshot copies not associated with the active file system. The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.

volumes

Name	Type	Description
comment	string	A comment for the volume. Valid in POST or PATCH.

Name	Type	Description
language	string	Language encoding setting for volume. If no language is specified, the volume inherits its SVM language encoding setting.
name	string	Volume name. The name of volume must start with an alphabetic character (a to z or A to Z) or an underscore (_). The name must be 197 or fewer characters in length for FlexGroups, and 203 or fewer characters in length for all other types of volumes. Volume names must be unique within an SVM. Required on POST.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	The QoS policy for this volume.
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	
tiering	tiering	The tiering placement and policy definitions for this volume.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • readOnly: 1 • Introduced in: 9.8

consistency_groups

Name	Type	Description
_links	self_link	

Name	Type	Description
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.
name	string	Name of the consistency group. The consistency group name must be unique within an SVM. If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

Name	Type	Description
namespaces	array[namespaces]	An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

- maxItems: 16
- minItems: 0
- uniqueItems: 1
- Introduced in: 9.10
- x-ntap-modifyOnly: true |
| parent_consistency_group | parent_consistency_group | The parent consistency group. |
| provisioning_options | provisioning_options | Options that are applied to the operation. |

Name	Type	Description
qos	qos	
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group. The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group. The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.

records

Name	Type	Description
_links	self_link	
consistency_groups	array[consistency_groups]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.

Name	Type	Description
name	string	Name of the consistency group. The consistency group name must be unique within an SVM. If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

Name	Type	Description
namespaces	array[namespaces]	An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API. An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol. • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.

Name	Type	Description
qos	qos	
replicated	boolean	Indicates whether or not replication has been enabled on this consistency group.
replication_source	boolean	Indicates whether or not this consistency group is the source for replication.
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.6 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group. The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group. The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

Create a consistency group

POST /application/consistency-groups

Introduced In: 9.10

Creates a consistency group with one or more consistency groups having:

- new SAN volumes,
- existing SAN, NVMe or NAS FlexVol volumes in a new or existing consistency group

Required properties

- `svm.uuid` or `svm.name` - Existing SVM in which to create the group.
- `volumes`, `luns` or `namespaces`

Naming Conventions

Consistency groups

- name or consistency_groups[].name, if specified
- derived from volumes[0].name, if only one volume is specified, same as volume name

Volume

- volumes[].name, if specified
- derived from volume prefix in luns[].name
- derived from cg[].name, suffixed by "_#" where "#" is a system generated unique number
- suffixed by "_#" where "#" is a system generated unique number, if provisioning_options.count is provided

LUN

- luns[].name, if specified
- derived from volumes[].name, suffixed by "_#" where "#" is a system generated unique number
- suffixed by "_#" where "#" is a system generated unique number, if provisioning_options.count is provided

NVMe Namespace

- namespaces[].name, if specified
- derived from volumes[].name, suffixed by "_#" where "#" is a system generated unique number
- suffixed by "_#" where "#" is a system generated unique number, if provisioning_options.count is provided

Related ONTAP commands

There are no ONTAP commands for managing consistency group.

Parameters

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
_links	self_link	

Name	Type	Description
consistency_groups	array[consistency_groups]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.
name	string	Name of the consistency group. The consistency group name must be unique within an SVM. If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

Name	Type	Description
namespaces	array[namespaces]	An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API. An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol. • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
replicated	boolean	Indicates whether or not replication has been enabled on this consistency group.
replication_source	boolean	Indicates whether or not this consistency group is the source for replication.
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.
		The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.
		The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.

Example request

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "consistency_groups": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "luns": {
      "clone": {
        "source": {
          "name": "/vol/volume1/lun1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "comment": "string",
      "create_time": "2018-06-04T19:00:00Z",
      "lun_maps": {
        "igroup": {
          "comment": "string",
          "igroups": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "igroup1",
            "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
          },
          "initiators": {
            "comment": "my comment",
            "name": "iqn.1998-01.com.corp.iscsi:name1"
          },
          "name": "igroup1",
          "os_type": "aix",
          "protocol": "fcp",
          "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "name": "/vol/volume1/lun1",
```

```json
        "os_type": "aix",
        "provisioning_options": {
          "action": "create"
        },
        "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"
          }
        },
        "serial_number": "string",
        "space": {
          "size": 1073741824
        },
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "namespaces": {
        "comment": "string",
        "create_time": "2018-06-04T19:00:00Z",
        "name": "/vol/volume1/qtree1/namespace1",
        "os_type": "aix",
        "provisioning_options": {
          "action": "create"
        },
        "subsystem_map": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "anagrpid": "00103050h",
          "nsid": "00000001h",
          "subsystem": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
```

```
        },
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "parent_consistency_group": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "my_consistency_group",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "provisioning_options": {
    "action": "create",
    "storage_service": {
      "name": "extreme"
    }
  },
  "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"
    }
  },
  "snapshot_policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "default",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "space": {
```

```
        "available": 5737418,
        "size": 1073741824,
        "used": 5737418
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "tiering": {
      "control": "allowed",
      "policy": "all"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
    "volumes": {
      "comment": "string",
      "language": "ar",
      "name": "vol_cs_dept",
      "provisioning_options": {
        "action": "create",
        "storage_service": {
          "name": "extreme"
        }
      },
      "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"
        }
      },
      "snapshot_policy": {
        "_links": {
          "self": {
```

```json
            "href": "/api/resourcelink"
          }
        },
        "name": "default",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "tiering": {
        "control": "allowed",
        "policy": "all"
      },
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
  },
  "luns": {
    "clone": {
      "source": {
        "name": "/vol/volume1/lun1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "comment": "string",
    "create_time": "2018-06-04T19:00:00Z",
    "lun_maps": {
      "igroup": {
        "comment": "string",
        "igroups": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "igroup1",
          "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        },
        "initiators": {
          "comment": "my comment",
          "name": "iqn.1998-01.com.corp.iscsi:name1"
        },
        "name": "igroup1",
        "os_type": "aix",
        "protocol": "fcp",
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "name": "/vol/volume1/lun1",
    "os_type": "aix",
```

```json
      "provisioning_options": {
        "action": "create"
      },
      "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"
        }
      },
      "serial_number": "string",
      "space": {
        "size": 1073741824
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "namespaces": {
      "comment": "string",
      "create_time": "2018-06-04T19:00:00Z",
      "name": "/vol/volume1/qtree1/namespace1",
      "os_type": "aix",
      "provisioning_options": {
        "action": "create"
      },
      "subsystem_map": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "anagrpid": "00103050h",
        "nsid": "00000001h",
        "subsystem": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
```

```
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "parent_consistency_group": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "my_consistency_group",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "provisioning_options": {
      "action": "create",
      "storage_service": {
        "name": "extreme"
      }
    },
    "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"
      }
    },
    "snapshot_policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "default",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "space": {
      "available": 5737418,
```

```
      "size": 1073741824,
      "used": 5737418
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "tiering": {
      "control": "allowed",
      "policy": "all"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
    "volumes": {
      "comment": "string",
      "language": "ar",
      "name": "vol_cs_dept",
      "provisioning_options": {
        "action": "create",
        "storage_service": {
          "name": "extreme"
        }
      },
      "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"
        }
      },
      "snapshot_policy": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
```

```
        }
      },
      "name": "default",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "tiering": {
      "control": "allowed",
      "policy": "all"
    },
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
}
```

Response

```
Status: 202, Accepted
```

Name	Type	Description
job	job_link	

Example response

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

Response

```
Status: 201, Created
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
53411842	Consistency group does not exist.
53411843	A consistency group with specified UUID was not found.
53411844	Specified consistency group was not found in the specified SVM.
53411845	The specified UUID and name refer to different consistency groups.
53411846	Either name or UUID must be provided.
53411853	Fields provided in the request conflict with each other.
53411856	Field provided is only supported when provisioning new objects.
53411857	LUNs that are not members of the application are not supported by this API. LUNs can be added to an application by adding the volume containing the LUNs to the application.
53411860	An object with the same identifier in the same scope exists.
53411861	Volume specified does not exist in provided volume array.
53411862	Modifying existing igroups is not supported using this API.
53411864	Request content insufficient to add an existing volume to an application.
53411865	Volumes contained in one consistency group can not be added to a different consistency group.
53411866	LUNs are not supported on FlexGroups volumes.
53411867	LUN name is too long after appending a unique suffix.
53411869	Volume name is too long after appending a unique suffix.
53411870	When using the "round_robin" layout, the volume count must not be greater than the LUN count.

Name	Type	Description
error	error	

Example error

```json
{
  "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	

source

The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.

Name	Type	Description
name	string	The fully qualified path name of the clone source LUN composed of a "/vol" prefix, the volume name, the (optional) qtree name, and base name of the LUN. Valid in POST and PATCH.
uuid	string	The unique identifier of the clone source LUN. Valid in POST and PATCH.

clone

This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`.

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`.

Persistent reservations for the patched LUN are also preserved.

Name	Type	Description
source	source	The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN. Valid in POST to create a new LUN as a clone of the source. Valid in PATCH to overwrite an existing LUN's data as a clone of another.

igroups

Name	Type	Description
_links	self_link	
name	string	The name of the initiator group.
uuid	string	The unique identifier of the initiator group.

initiators

The initiators that are members of the initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator.
name	string	Name of initiator that is a member of the initiator group.

igroup

The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator. Valid in POST and PATCH.

Name	Type	Description
igroups	array[igroups]	Separate igroup definitions to include in this igroup.
initiators	array[initiators]	The initiators that are members of the group.
name	string	The name of the initiator group. Required in POST; optional in PATCH.
os_type	string	The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.
protocol	string	The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to *mixed*. The protocol of an initiator group cannot be changed after creation of the group.
uuid	string	The unique identifier of the initiator group.

lun_maps

A LUN map is an association between a LUN and an initiator group.

When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.

Name	Type	Description
igroup	igroup	The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
logical_unit_number	integer	The logical unit number assigned to the LUN when mapped to the specified initiator group. The number is used to identify the LUN to initiators in the initiator group when communicating through the Fibre Channel Protocol or iSCSI. Optional in POST; if no value is provided, ONTAP assigns the lowest available value. • Introduced in: 9.6 • readCreate: 1

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.

policy

The QoS policy

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

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

qos

Name	Type	Description
policy	policy	The QoS policy

guarantee

Properties that request and report the space guarantee for the LUN.

Name	Type	Description
requested	boolean	The requested space reservation policy for the LUN. If *true*, a space reservation is requested for the LUN; if *false*, the LUN is thin provisioned. Guaranteeing a space reservation request for a LUN requires that the volume in which the LUN resides is also space reserved and that the fractional reserve for the volume is 100%. Valid in POST and PATCH.

Name	Type	Description
reserved	boolean	Reports if the LUN is space guaranteed. If *true*, a space guarantee is requested and the containing volume and aggregate support the request. If *false*, a space guarantee is not requested or a space guarantee is requested and either the containing volume or aggregate do not support the request.

space

The storage space related properties of the LUN.

Name	Type	Description
guarantee	guarantee	Properties that request and report the space guarantee for the LUN.
size	integer	The total provisioned size of the LUN. The LUN size can be increased but not reduced using the REST interface. The maximum and minimum sizes listed here are the absolute maximum and absolute minimum sizes, in bytes. The actual minimum and maxiumum sizes vary depending on the ONTAP version, ONTAP platform, and the available space in the containing volume and aggregate. For more information, see *Size properties* in the *docs* section of the ONTAP REST API documentation. - example: 1073741824 - format: int64 - Max value: 140737488355328 - Min value: 4096 - Introduced in: 9.6

Name	Type	Description
used	integer	The amount of space consumed by the main data stream of the LUN. This value is the total space consumed in the volume by the LUN, including filesystem overhead, but excluding prefix and suffix streams. Due to internal filesystem overhead and the many ways SAN filesystems and applications utilize blocks within a LUN, this value does not necessarily reflect actual consumption/availability from the perspective of the filesystem or application. Without specific knowledge of how the LUN blocks are utilized outside of ONTAP, this property should not be used as an indicator for an out-of-space condition. For more information, see *Size properties* in the *docs* section of the ONTAP REST API documentation. - format: int64 - Introduced in: 9.6 - readOnly: 1

luns

A LUN is the logical representation of storage in a storage area network (SAN).

In ONTAP, a LUN is located within a volume. Optionally, it can be located within a qtree in a volume.

A LUN can be created to a specified size using thin or thick provisioning. A LUN can then be renamed, resized, cloned, and moved to a different volume. LUNs support the assignment of a quality of service (QoS) policy for performance management or a QoS policy can be assigned to the volume containing the LUN. See the LUN object model to learn more about each of the properties supported by the LUN REST API.

A LUN must be mapped to an initiator group to grant access to the initiator group's initiators (client hosts). Initiators can then access the LUN and perform I/O over a Fibre Channel (FC) fabric using the Fibre Channel Protocol or a TCP/IP network using iSCSI.

Name	Type	Description
clone	clone	This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`. When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`. Persistent reservations for the patched LUN are also preserved.
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the LUN was created.

Name	Type	Description
enabled	boolean	The enabled state of the LUN. LUNs can be disabled to prevent access to the LUN. Certain error conditions also cause the LUN to become disabled. If the LUN is disabled, you can consult the `state` property to determine if the LUN is administratively disabled (*offline*) or has become disabled as a result of an error. A LUN in an error condition can be brought online by setting the `enabled` property to *true* or brought administratively offline by setting the `enabled` property to *false*. Upon creation, a LUN is enabled by default. Valid in PATCH.
lun_maps	array[lun_maps]	An array of LUN maps. A LUN map is an association between a LUN and an initiator group. When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.
name	string	The fully qualified path name of the LUN composed of the "/vol" prefix, the volume name, the qtree name (optional), and the base name of the LUN. Valid in POST and PATCH.
os_type	string	The operating system type of the LUN. Required in POST when creating a LUN that is not a clone of another. Disallowed in POST when creating a LUN clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
serial_number	string	The LUN serial number. The serial number is generated by ONTAP when the LUN is created. • maxLength: 12 • minLength: 12 • readOnly: 1 • Introduced in: 9.10
space	space	The storage space related properties of the LUN.
uuid	string	The unique identifier of the LUN. The UUID is generated by ONTAP when the LUN is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.10

_links

Name	Type	Description
self	href	

nvme_subsystem_reference

An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

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

subsystem_map

The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems.

There is an added cost to retrieving property values for `subsystem_map`. They are not populated for

either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.

Name	Type	Description
_links	self_link	
anagrpid	string	The Asymmetric Namespace Access Group ID (ANAGRPID) of the NVMe namespace. The format for an ANAGRPID is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
nsid	string	The NVMe namespace identifier. This is an identifier used by an NVMe controller to provide access to the NVMe namespace. The format for an NVMe namespace identifier is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
subsystem	nvme_subsystem_reference	An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

namespaces

An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the storage virtual machine using the NVMe over Fabrics protocol.

In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

Name	Type	Description
auto_delete	boolean	This property marks the NVMe namespace for auto deletion when the volume containing the namespace runs out of space. This is most commonly set on namespace clones. When set to *true*, the NVMe namespace becomes eligible for automatic deletion when the volume runs out of space. Auto deletion only occurs when the volume containing the namespace is also configured for auto deletion and free space in the volume decreases below a particular threshold. This property is optional in POST and PATCH. The default value for a new NVMe namespace is *false*. There is an added cost to retrieving this property's value. It is not populated for either a collection GET or an instance GET unless it is explicitly requested using the `fields` query parameter. See Requesting specific fields to learn more.
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the NVMe namespace was created.
enabled	boolean	The enabled state of the NVMe namespace. Certain error conditions cause the namespace to become disabled. If the namespace is disabled, you can check the `state` property to determine what error disabled the namespace. An NVMe namespace is enabled automatically when it is created.

Name	Type	Description
name	string	The fully qualified path name of the NVMe namespace composed of a "/vol" prefix, the volume name, the (optional) qtree name and base name of the namespace. Valid in POST. NVMe namespaces do not support rename, or movement between volumes.
os_type	string	The operating system type of the NVMe namespace. Required in POST when creating an NVMe namespace that is not a clone of another. Disallowed in POST when creating a namespace clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
subsystem_map	array[subsystem_map]	The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems. There is an added cost to retrieving property values for `subsystem_map`. They are not populated for either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.
uuid	string	The unique identifier of the NVMe namespace.

parent_consistency_group

The parent consistency group.

Name	Type	Description
_links	self_link	

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

storage_service

Determines the placement of any storage object created during this operation.

Name	Type	Description
name	string	Storage service name. If not specified, the default value is the most performant for the platform.

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
storage_service	storage_service	Determines the placement of any storage object created during this operation.

snapshot

A consistency group's Snapshot copy

Name	Type	Description
name	string	The name of the consistency group's Snapshot copy to restore to.
uuid	string	The UUID of the consistency group's Snapshot copy to restore to.

restore_to

Use to restore a consistency group to a previous Snapshot copy

Name	Type	Description
snapshot	snapshot	A consistency group's Snapshot copy

snapshot_policy_reference

This is a reference to the Snapshot copy policy.

Name	Type	Description
_links	_links	
name	string	
uuid	string	

space

Space information for the consistency group.

Name	Type	Description
available	integer	The amount of space available in the consistency group, in bytes.
size	integer	The total provisioned size of the consistency group, in bytes.
used	integer	The amount of space consumed in the consistency group, in bytes.

svm

The Storage Virtual Machine (SVM) in which the consistency group is located.

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

tiering

The tiering placement and policy definitions for volumes in this consistency group.

Name	Type	Description
control	string	Storage tiering placement rules for the object.
policy	string	Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold. FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH. all ‐ Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks. auto ‐ Allows tiering of both snapshot and active file system user data to the cloud store none ‐ Volume blocks are not be tiered to the cloud store. snapshot_only ‐ Allows tiering of only the volume Snapshot copies not associated with the active file system. The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.
storage_service	storage_service	Determines the placement of any storage object created during this operation.

qos

The QoS policy for this volume.

Name	Type	Description
policy	policy	The QoS policy

space

Name	Type	Description
available	integer	The available space, in bytes.
size	integer	Total provisioned size, in bytes.
used	integer	The virtual space used (includes volume reserves) before storage efficiency, in bytes.

tiering

The tiering placement and policy definitions for this volume.

Name	Type	Description
control	string	Storage tiering placement rules for the object.

Name	Type	Description
policy	string	Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.

FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.

all ‐ Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.

auto ‐ Allows tiering of both snapshot and active file system user data to the cloud store

none ‐ Volume blocks are not be tiered to the cloud store.

snapshot_only ‐ Allows tiering of only the volume Snapshot copies not associated with the active file system.

The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days. |

volumes

Name	Type	Description
comment	string	A comment for the volume. Valid in POST or PATCH.

Name	Type	Description
language	string	Language encoding setting for volume. If no language is specified, the volume inherits its SVM language encoding setting.
name	string	Volume name. The name of volume must start with an alphabetic character (a to z or A to Z) or an underscore (_). The name must be 197 or fewer characters in length for FlexGroups, and 203 or fewer characters in length for all other types of volumes. Volume names must be unique within an SVM. Required on POST.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	The QoS policy for this volume.
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	
tiering	tiering	The tiering placement and policy definitions for this volume.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • readOnly: 1 • Introduced in: 9.8

consistency_groups

Name	Type	Description
_links	self_link	

Name	Type	Description
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.
name	string	Name of the consistency group. The consistency group name must be unique within an SVM. If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

Name	Type	Description
namespaces	array[namespaces]	An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API. An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol. • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.

Name	Type	Description
qos	qos	
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group. The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group. The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.

consistency_group

Name	Type	Description
_links	self_link	
consistency_groups	array[consistency_groups]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.

Name	Type	Description
name	string	Name of the consistency group. The consistency group name must be unique within an SVM. If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

Name	Type	Description
namespaces	array[namespaces]	An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

- maxItems: 16
- minItems: 0
- uniqueItems: 1
- Introduced in: 9.10
- x-ntap-modifyOnly: true |
| parent_consistency_group | parent_consistency_group | The parent consistency group. |
| provisioning_options | provisioning_options | Options that are applied to the operation. |

Name	Type	Description
qos	qos	
replicated	boolean	Indicates whether or not replication has been enabled on this consistency group.
replication_source	boolean	Indicates whether or not this consistency group is the source for replication.
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.

The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.

The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit. |

job_link

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

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

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

Delete a consistency group

DELETE `/application/consistency-groups/{uuid}`

Introduced In: 9.10

Deletes a consistency group.

> ⓘ   this will not delete any associated volumes or LUNs. To remove those elements, you can use the appropriate object endpoint.

Related ONTAP commands

There are no ONTAP commands for managing consistency groups.

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the consistency group to delete.
delete_data	boolean	query	False	Delete the underlying storage as well as the consistency group association. **This parameter should be used with caution.** • Default value:

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0

Response

```
Status: 200, Ok
```

Response

```
Status: 202, Accepted
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
53411842	Consistency group does not exist.
53411843	A consistency group with specified UUID was not found.
53411844	Specified consistency group was not found in the specified SVM.
53411845	The specified UUID and name refer to different consistency groups.
53411846	Either name or UUID must be provided.

Name	Type	Description
error	error	

Example error

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

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

Retrieve a consistency group

GET /application/consistency-groups/{uuid}

Introduced In: 9.10

Retrieves a single consistency group.

Expensive properties

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

- `volumes`
- `luns`
- `namespaces`

Related ONTAP commands

There are no ONTAP commands for managing consistency groups.

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	The unique identifier of the group to retrieve.
qos.policy.min_throughput_iops	integer	query	False	Filter by qos.policy.min_throughput_iops
qos.policy.max_throughput_iops	integer	query	False	Filter by qos.policy.max_throughput_iops
qos.policy.uuid	string	query	False	Filter by qos.policy.uuid
qos.policy.min_throughput_mbps	integer	query	False	Filter by qos.policy.min_throughput_mbps
qos.policy.max_throughput_mbps	integer	query	False	Filter by qos.policy.max_throughput_mbps
qos.policy.name	string	query	False	Filter by qos.policy.name
replication_source	boolean	query	False	Filter by replication_source
consistency_groups.space.used	integer	query	False	Filter by consistency_groups.space.used
consistency_groups.space.size	integer	query	False	Filter by consistency_groups.space.size
consistency_groups.space.available	integer	query	False	Filter by consistency_groups.space.available
consistency_groups.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.qos.policy.min_throughput_iops

Name	Type	In	Required	Description
consistency_groups. qos.policy.max_thro ughput_iops	integer	query	False	Filter by consistency_groups. qos.policy.max_thro ughput_iops
consistency_groups. qos.policy.uuid	string	query	False	Filter by consistency_groups. qos.policy.uuid
consistency_groups. qos.policy.min_throu ghput_mbps	integer	query	False	Filter by consistency_groups. qos.policy.min_throu ghput_mbps
consistency_groups. qos.policy.max_thro ughput_mbps	integer	query	False	Filter by consistency_groups. qos.policy.max_thro ughput_mbps
consistency_groups. qos.policy.name	string	query	False	Filter by consistency_groups. qos.policy.name
consistency_groups. name	string	query	False	Filter by consistency_groups. name
consistency_groups. uuid	string	query	False	Filter by consistency_groups. uuid
consistency_groups. snapshot_policy.na me	string	query	False	Filter by consistency_groups. snapshot_policy.na me
consistency_groups. snapshot_policy.uuid	string	query	False	Filter by consistency_groups. snapshot_policy.uui d
consistency_groups.l uns.serial_number	string	query	False	Filter by consistency_groups. luns.serial_number • maxLength: 12 • minLength: 12

Name	Type	In	Required	Description
consistency_groups.luns.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.luns.qos.policy.max_throughput_iops
consistency_groups.luns.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.luns.qos.policy.min_throughput_iops
consistency_groups.luns.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.luns.qos.policy.max_throughput_mbps
consistency_groups.luns.qos.policy.name	string	query	False	Filter by consistency_groups.luns.qos.policy.name
consistency_groups.luns.qos.policy.uuid	string	query	False	Filter by consistency_groups.luns.qos.policy.uuid
consistency_groups.luns.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.luns.qos.policy.min_throughput_mbps
consistency_groups.luns.lun_maps.igroup.os_type	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.os_type
consistency_groups.luns.lun_maps.igroup.protocol	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.protocol
consistency_groups.luns.lun_maps.igroup.igroups.uuid	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.igroups.uuid

Name	Type	In	Required	Description
consistency_groups.luns.lun_maps.igroup.igroups.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.igroups.name • maxLength: 96 • minLength: 1
consistency_groups.luns.lun_maps.igroup.initiators.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.initiators.name
consistency_groups.luns.lun_maps.igroup.initiators.comment	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.initiators.comment • maxLength: 254 • minLength: 0
consistency_groups.luns.lun_maps.igroup.comment	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.comment • Introduced in: 9.11 • maxLength: 254 • minLength: 0
consistency_groups.luns.lun_maps.igroup.name	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.name • maxLength: 96 • minLength: 1
consistency_groups.luns.lun_maps.igroup.uuid	string	query	False	Filter by consistency_groups.luns.lun_maps.igroup.uuid

Name	Type	In	Required	Description
consistency_groups.luns.lun_maps.logical_unit_number	integer	query	False	Filter by consistency_groups.luns.lun_maps.logical_unit_number
consistency_groups.luns.space.guarantee.reserved	boolean	query	False	Filter by consistency_groups.luns.space.guarantee.reserved • Introduced in: 9.11
consistency_groups.luns.space.guarantee.requested	boolean	query	False	Filter by consistency_groups.luns.space.guarantee.requested • Introduced in: 9.11
consistency_groups.luns.space.size	integer	query	False	Filter by consistency_groups.luns.space.size • Max value: 140737488355328 • Min value: 4096
consistency_groups.luns.space.used	integer	query	False	Filter by consistency_groups.luns.space.used
consistency_groups.luns.os_type	string	query	False	Filter by consistency_groups.luns.os_type
consistency_groups.luns.enabled	boolean	query	False	Filter by consistency_groups.luns.enabled
consistency_groups.luns.comment	string	query	False	Filter by consistency_groups.luns.comment • maxLength: 254 • minLength: 0

Name	Type	In	Required	Description
consistency_groups.luns.name	string	query	False	Filter by consistency_groups.luns.name
consistency_groups.luns.uuid	string	query	False	Filter by consistency_groups.luns.uuid
consistency_groups.luns.create_time	string	query	False	Filter by consistency_groups.luns.create_time
consistency_groups.svm.uuid	string	query	False	Filter by consistency_groups.svm.uuid
consistency_groups.svm.name	string	query	False	Filter by consistency_groups.svm.name
consistency_groups.volumes.tiering.policy	string	query	False	Filter by consistency_groups.volumes.tiering.policy
consistency_groups.volumes.name	string	query	False	Filter by consistency_groups.volumes.name • maxLength: 203 • minLength: 1
consistency_groups.volumes.comment	string	query	False	Filter by consistency_groups.volumes.comment • maxLength: 1023 • minLength: 0
consistency_groups.volumes.snapshot_policy.name	string	query	False	Filter by consistency_groups.volumes.snapshot_policy.name

Name	Type	In	Required	Description
consistency_groups.volumes.snapshot_policy.uuid	string	query	False	Filter by consistency_groups.volumes.snapshot_policy.uuid
consistency_groups.volumes.uuid	string	query	False	Filter by consistency_groups.volumes.uuid
consistency_groups.volumes.qos.policy.min_throughput_iops	integer	query	False	Filter by consistency_groups.volumes.qos.policy.min_throughput_iops
consistency_groups.volumes.qos.policy.max_throughput_iops	integer	query	False	Filter by consistency_groups.volumes.qos.policy.max_throughput_iops
consistency_groups.volumes.qos.policy.uuid	string	query	False	Filter by consistency_groups.volumes.qos.policy.uuid
consistency_groups.volumes.qos.policy.min_throughput_mbps	integer	query	False	Filter by consistency_groups.volumes.qos.policy.min_throughput_mbps
consistency_groups.volumes.qos.policy.max_throughput_mbps	integer	query	False	Filter by consistency_groups.volumes.qos.policy.max_throughput_mbps
consistency_groups.volumes.qos.policy.name	string	query	False	Filter by consistency_groups.volumes.qos.policy.name
consistency_groups.volumes.language	string	query	False	Filter by consistency_groups.volumes.language

Name	Type	In	Required	Description
consistency_groups. volumes.space.size	integer	query	False	Filter by consistency_groups. volumes.space.size
consistency_groups. volumes.space.avail able	integer	query	False	Filter by consistency_groups. volumes.space.avail able
consistency_groups. volumes.space.used	integer	query	False	Filter by consistency_groups. volumes.space.used
consistency_groups. parent_consistency_ group.name	string	query	False	Filter by consistency_groups. parent_consistency_ group.name
consistency_groups. parent_consistency_ group.uuid	string	query	False	Filter by consistency_groups. parent_consistency_ group.uuid
consistency_groups. tiering.policy	string	query	False	Filter by consistency_groups. tiering.policy
space.used	integer	query	False	Filter by space.used
space.size	integer	query	False	Filter by space.size
space.available	integer	query	False	Filter by space.available
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
parent_consistency_ group.name	string	query	False	Filter by parent_consistency_ group.name
parent_consistency_ group.uuid	string	query	False	Filter by parent_consistency_ group.uuid

Name	Type	In	Required	Description
name	string	query	False	Filter by name
snapshot_policy.name	string	query	False	Filter by snapshot_policy.name
snapshot_policy.uuid	string	query	False	Filter by snapshot_policy.uuid
luns.serial_number	string	query	False	Filter by luns.serial_number • maxLength: 12 • minLength: 12
luns.qos.policy.max_throughput_iops	integer	query	False	Filter by luns.qos.policy.max_throughput_iops
luns.qos.policy.min_throughput_iops	integer	query	False	Filter by luns.qos.policy.min_throughput_iops
luns.qos.policy.max_throughput_mbps	integer	query	False	Filter by luns.qos.policy.max_throughput_mbps
luns.qos.policy.name	string	query	False	Filter by luns.qos.policy.name
luns.qos.policy.uuid	string	query	False	Filter by luns.qos.policy.uuid
luns.qos.policy.min_throughput_mbps	integer	query	False	Filter by luns.qos.policy.min_throughput_mbps
luns.lun_maps.igroup.os_type	string	query	False	Filter by luns.lun_maps.igroup.os_type
luns.lun_maps.igroup.protocol	string	query	False	Filter by luns.lun_maps.igroup.protocol

Name	Type	In	Required	Description
luns.lun_maps.igroup.igroups.uuid	string	query	False	Filter by luns.lun_maps.igroup.igroups.uuid
luns.lun_maps.igroup.igroups.name	string	query	False	Filter by luns.lun_maps.igroup.igroups.name • maxLength: 96 • minLength: 1
luns.lun_maps.igroup.initiators.name	string	query	False	Filter by luns.lun_maps.igroup.initiators.name
luns.lun_maps.igroup.initiators.comment	string	query	False	Filter by luns.lun_maps.igroup.initiators.comment • maxLength: 254 • minLength: 0
luns.lun_maps.igroup.comment	string	query	False	Filter by luns.lun_maps.igroup.comment • Introduced in: 9.11 • maxLength: 254 • minLength: 0
luns.lun_maps.igroup.name	string	query	False	Filter by luns.lun_maps.igroup.name • maxLength: 96 • minLength: 1
luns.lun_maps.igroup.uuid	string	query	False	Filter by luns.lun_maps.igroup.uuid
luns.lun_maps.logical_unit_number	integer	query	False	Filter by luns.lun_maps.logical_unit_number

Name	Type	In	Required	Description
luns.space.guarante e.reserved	boolean	query	False	Filter by luns.space.guarante e.reserved • Introduced in: 9.11
luns.space.guarante e.requested	boolean	query	False	Filter by luns.space.guarante e.requested • Introduced in: 9.11
luns.space.size	integer	query	False	Filter by luns.space.size • Max value: 1407374883553 28 • Min value: 4096
luns.space.used	integer	query	False	Filter by luns.space.used
luns.os_type	string	query	False	Filter by luns.os_type
luns.enabled	boolean	query	False	Filter by luns.enabled
luns.comment	string	query	False	Filter by luns.comment • maxLength: 254 • minLength: 0
luns.name	string	query	False	Filter by luns.name
luns.uuid	string	query	False	Filter by luns.uuid
luns.create_time	string	query	False	Filter by luns.create_time
volumes.tiering.polic y	string	query	False	Filter by volumes.tiering.polic y

Name	Type	In	Required	Description
volumes.name	string	query	False	Filter by volumes.name • maxLength: 203 • minLength: 1
volumes.comment	string	query	False	Filter by volumes.comment • maxLength: 1023 • minLength: 0
volumes.snapshot_policy.name	string	query	False	Filter by volumes.snapshot_policy.name
volumes.snapshot_policy.uuid	string	query	False	Filter by volumes.snapshot_policy.uuid
volumes.uuid	string	query	False	Filter by volumes.uuid
volumes.qos.policy.min_throughput_iops	integer	query	False	Filter by volumes.qos.policy.min_throughput_iops
volumes.qos.policy.max_throughput_iops	integer	query	False	Filter by volumes.qos.policy.max_throughput_iops
volumes.qos.policy.uuid	string	query	False	Filter by volumes.qos.policy.uuid
volumes.qos.policy.min_throughput_mbps	integer	query	False	Filter by volumes.qos.policy.min_throughput_mbps
volumes.qos.policy.max_throughput_mbps	integer	query	False	Filter by volumes.qos.policy.max_throughput_mbps

Name	Type	In	Required	Description
volumes.qos.policy.name	string	query	False	Filter by volumes.qos.policy.name
volumes.language	string	query	False	Filter by volumes.language
volumes.space.size	integer	query	False	Filter by volumes.space.size
volumes.space.available	integer	query	False	Filter by volumes.space.available
volumes.space.used	integer	query	False	Filter by volumes.space.used
tiering.policy	string	query	False	Filter by tiering.policy
replicated	boolean	query	False	Filter by replicated
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. • Default value: 1

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

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	self_link	
consistency_groups	array[consistency_groups]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.

Name	Type	Description
name	string	Name of the consistency group. The consistency group name must be unique within an SVM. If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

Name	Type	Description
namespaces	array[namespaces]	An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume. An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API. An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol. • maxItems: 16 • minItems: 0 • uniqueItems: 1 • Introduced in: 9.10 • x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
replicated	boolean	Indicates whether or not replication has been enabled on this consistency group.
replication_source	boolean	Indicates whether or not this consistency group is the source for replication.
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group. The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group. The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit.

Example response

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "consistency_groups": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "luns": {
      "clone": {
        "source": {
          "name": "/vol/volume1/lun1",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "comment": "string",
      "create_time": "2018-06-04T19:00:00Z",
      "lun_maps": {
        "igroup": {
          "comment": "string",
          "igroups": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "igroup1",
            "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
          },
          "initiators": {
            "comment": "my comment",
            "name": "iqn.1998-01.com.corp.iscsi:name1"
          },
          "name": "igroup1",
          "os_type": "aix",
          "protocol": "fcp",
          "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "name": "/vol/volume1/lun1",
```

```json
      "os_type": "aix",
      "provisioning_options": {
        "action": "create"
      },
      "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"
        }
      },
      "serial_number": "string",
      "space": {
        "size": 1073741824
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "namespaces": {
      "comment": "string",
      "create_time": "2018-06-04T19:00:00Z",
      "name": "/vol/volume1/qtree1/namespace1",
      "os_type": "aix",
      "provisioning_options": {
        "action": "create"
      },
      "subsystem_map": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "anagrpid": "00103050h",
        "nsid": "00000001h",
        "subsystem": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
```

```
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"parent_consistency_group": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "my_consistency_group",
  "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
},
"provisioning_options": {
  "action": "create",
  "storage_service": {
    "name": "extreme"
  }
},
"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"
  }
},
"snapshot_policy": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"space": {
```

```json
          "available": 5737418,
          "size": 1073741824,
          "used": 5737418
      },
      "svm": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "tiering": {
        "control": "allowed",
        "policy": "all"
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
      "volumes": {
        "comment": "string",
        "language": "ar",
        "name": "vol_cs_dept",
        "provisioning_options": {
          "action": "create",
          "storage_service": {
            "name": "extreme"
          }
        },
        "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"
          }
        },
        "snapshot_policy": {
          "_links": {
            "self": {
```

```json
          "href": "/api/resourcelink"
        }
      },
      "name": "default",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "tiering": {
      "control": "allowed",
      "policy": "all"
    },
    "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
  }
},
"luns": {
  "clone": {
    "source": {
      "name": "/vol/volume1/lun1",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "comment": "string",
  "create_time": "2018-06-04T19:00:00Z",
  "lun_maps": {
    "igroup": {
      "comment": "string",
      "igroups": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "igroup1",
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      },
      "initiators": {
        "comment": "my comment",
        "name": "iqn.1998-01.com.corp.iscsi:name1"
      },
      "name": "igroup1",
      "os_type": "aix",
      "protocol": "fcp",
      "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
    }
  },
  "name": "/vol/volume1/lun1",
  "os_type": "aix",
```

```json
      "provisioning_options": {
        "action": "create"
      },
      "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"
        }
      },
      "serial_number": "string",
      "space": {
        "size": 1073741824
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "namespaces": {
      "comment": "string",
      "create_time": "2018-06-04T19:00:00Z",
      "name": "/vol/volume1/qtree1/namespace1",
      "os_type": "aix",
      "provisioning_options": {
        "action": "create"
      },
      "subsystem_map": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "anagrpid": "00103050h",
        "nsid": "00000001h",
        "subsystem": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
```

```
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "parent_consistency_group": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "my_consistency_group",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "provisioning_options": {
    "action": "create",
    "storage_service": {
      "name": "extreme"
    }
  },
  "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"
    }
  },
  "snapshot_policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "default",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "space": {
    "available": 5737418,
```

```
      "size": 1073741824,
      "used": 5737418
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "tiering": {
      "control": "allowed",
      "policy": "all"
    },
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
    "volumes": {
      "comment": "string",
      "language": "ar",
      "name": "vol_cs_dept",
      "provisioning_options": {
        "action": "create",
        "storage_service": {
          "name": "extreme"
        }
      },
      "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"
        }
      },
      "snapshot_policy": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
```

```
            }
          },
          "name": "default",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "tiering": {
          "control": "allowed",
          "policy": "all"
        },
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
      }
    }
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
53411842	Consistency group does not exist.
53411843	A consistency group with specified UUID was not found.
53411844	Specified consistency group was not found in the specified SVM.
53411845	The specified UUID and name refer to different consistency groups.
53411846	Either name or UUID must be provided.

Name	Type	Description
error	error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

self_link

Name	Type	Description
self	href	

source

The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.

Name	Type	Description
name	string	The fully qualified path name of the clone source LUN composed of a "/vol" prefix, the volume name, the (optional) qtree name, and base name of the LUN. Valid in POST and PATCH.
uuid	string	The unique identifier of the clone source LUN. Valid in POST and PATCH.

clone

This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`.

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`.

Persistent reservations for the patched LUN are also preserved.

Name	Type	Description
source	source	The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN. Valid in POST to create a new LUN as a clone of the source. Valid in PATCH to overwrite an existing LUN's data as a clone of another.

igroups

Name	Type	Description
_links	self_link	
name	string	The name of the initiator group.
uuid	string	The unique identifier of the initiator group.

initiators

The initiators that are members of the initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator.
name	string	Name of initiator that is a member of the initiator group.

igroup

The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
comment	string	A comment available for use by the administrator. Valid in POST and PATCH.

Name	Type	Description
igroups	array[igroups]	Separate igroup definitions to include in this igroup.
initiators	array[initiators]	The initiators that are members of the group.
name	string	The name of the initiator group. Required in POST; optional in PATCH.
os_type	string	The host operating system of the initiator group. All initiators in the group should be hosts of the same operating system. Required in POST; optional in PATCH.
protocol	string	The protocols supported by the initiator group. This restricts the type of initiators that can be added to the initiator group. Optional in POST; if not supplied, this defaults to *mixed*.

The protocol of an initiator group cannot be changed after creation of the group. |
| uuid | string | The unique identifier of the initiator group. |

lun_maps

A LUN map is an association between a LUN and an initiator group.

When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.

Name	Type	Description
igroup	igroup	The initiator group that directly owns the initiator, which is where modification of the initiator is supported. This property will only be populated when the initiator is a member of a nested initiator group.

Name	Type	Description
logical_unit_number	integer	The logical unit number assigned to the LUN when mapped to the specified initiator group. The number is used to identify the LUN to initiators in the initiator group when communicating through the Fibre Channel Protocol or iSCSI. Optional in POST; if no value is provided, ONTAP assigns the lowest available value. • Introduced in: 9.6 • readCreate: 1

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.

policy

The QoS policy

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

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

qos

Name	Type	Description
policy	policy	The QoS policy

guarantee

Properties that request and report the space guarantee for the LUN.

Name	Type	Description
requested	boolean	The requested space reservation policy for the LUN. If *true*, a space reservation is requested for the LUN; if *false*, the LUN is thin provisioned. Guaranteeing a space reservation request for a LUN requires that the volume in which the LUN resides is also space reserved and that the fractional reserve for the volume is 100%. Valid in POST and PATCH.

Name	Type	Description
reserved	boolean	Reports if the LUN is space guaranteed. If *true*, a space guarantee is requested and the containing volume and aggregate support the request. If *false*, a space guarantee is not requested or a space guarantee is requested and either the containing volume or aggregate do not support the request.

space

The storage space related properties of the LUN.

Name	Type	Description
guarantee	guarantee	Properties that request and report the space guarantee for the LUN.
size	integer	The total provisioned size of the LUN. The LUN size can be increased but not reduced using the REST interface. The maximum and minimum sizes listed here are the absolute maximum and absolute minimum sizes, in bytes. The actual minimum and maxiumum sizes vary depending on the ONTAP version, ONTAP platform, and the available space in the containing volume and aggregate. For more information, see *Size properties* in the *docs* section of the ONTAP REST API documentation. • example: 1073741824 • format: int64 • Max value: 140737488355328 • Min value: 4096 • Introduced in: 9.6

Name	Type	Description
used	integer	The amount of space consumed by the main data stream of the LUN. This value is the total space consumed in the volume by the LUN, including filesystem overhead, but excluding prefix and suffix streams. Due to internal filesystem overhead and the many ways SAN filesystems and applications utilize blocks within a LUN, this value does not necessarily reflect actual consumption/availability from the perspective of the filesystem or application. Without specific knowledge of how the LUN blocks are utilized outside of ONTAP, this property should not be used as an indicator for an out-of-space condition. For more information, see *Size properties* in the *docs* section of the ONTAP REST API documentation. • format: int64 • Introduced in: 9.6 • readOnly: 1

luns

A LUN is the logical representation of storage in a storage area network (SAN).

In ONTAP, a LUN is located within a volume. Optionally, it can be located within a qtree in a volume.

A LUN can be created to a specified size using thin or thick provisioning. A LUN can then be renamed, resized, cloned, and moved to a different volume. LUNs support the assignment of a quality of service (QoS) policy for performance management or a QoS policy can be assigned to the volume containing the LUN. See the LUN object model to learn more about each of the properties supported by the LUN REST API.

A LUN must be mapped to an initiator group to grant access to the initiator group's initiators (client hosts). Initiators can then access the LUN and perform I/O over a Fibre Channel (FC) fabric using the Fibre Channel Protocol or a TCP/IP network using iSCSI.

Name	Type	Description
clone	clone	This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`. When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`. Persistent reservations for the patched LUN are also preserved.
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the LUN was created.

Name	Type	Description
enabled	boolean	The enabled state of the LUN. LUNs can be disabled to prevent access to the LUN. Certain error conditions also cause the LUN to become disabled. If the LUN is disabled, you can consult the `state` property to determine if the LUN is administratively disabled (*offline*) or has become disabled as a result of an error. A LUN in an error condition can be brought online by setting the `enabled` property to *true* or brought administratively offline by setting the `enabled` property to *false*. Upon creation, a LUN is enabled by default. Valid in PATCH.
lun_maps	array[lun_maps]	An array of LUN maps. A LUN map is an association between a LUN and an initiator group. When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.
name	string	The fully qualified path name of the LUN composed of the "/vol" prefix, the volume name, the qtree name (optional), and the base name of the LUN. Valid in POST and PATCH.
os_type	string	The operating system type of the LUN. Required in POST when creating a LUN that is not a clone of another. Disallowed in POST when creating a LUN clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	

Name	Type	Description
serial_number	string	The LUN serial number. The serial number is generated by ONTAP when the LUN is created. • maxLength: 12 • minLength: 12 • readOnly: 1 • Introduced in: 9.10
space	space	The storage space related properties of the LUN.
uuid	string	The unique identifier of the LUN. The UUID is generated by ONTAP when the LUN is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • readOnly: 1 • Introduced in: 9.10

_links

Name	Type	Description
self	href	

nvme_subsystem_reference

An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

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

subsystem_map

The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems.

There is an added cost to retrieving property values for `subsystem_map`. They are not populated for

either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.

Name	Type	Description
_links	self_link	
anagrpid	string	The Asymmetric Namespace Access Group ID (ANAGRPID) of the NVMe namespace. The format for an ANAGRPID is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
nsid	string	The NVMe namespace identifier. This is an identifier used by an NVMe controller to provide access to the NVMe namespace. The format for an NVMe namespace identifier is 8 hexadecimal digits (zero-filled) followed by a lower case "h".
subsystem	nvme_subsystem_reference	An NVMe subsystem maintains configuration state and NVMe namespace access control for a set of NVMe-connected hosts.

namespaces

An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the storage virtual machine using the NVMe over Fabrics protocol.

In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

Name	Type	Description
auto_delete	boolean	This property marks the NVMe namespace for auto deletion when the volume containing the namespace runs out of space. This is most commonly set on namespace clones. When set to *true*, the NVMe namespace becomes eligible for automatic deletion when the volume runs out of space. Auto deletion only occurs when the volume containing the namespace is also configured for auto deletion and free space in the volume decreases below a particular threshold. This property is optional in POST and PATCH. The default value for a new NVMe namespace is *false*. There is an added cost to retrieving this property's value. It is not populated for either a collection GET or an instance GET unless it is explicitly requested using the `fields` query parameter. See Requesting specific fields to learn more.
comment	string	A configurable comment available for use by the administrator. Valid in POST and PATCH.
create_time	string	The time the NVMe namespace was created.
enabled	boolean	The enabled state of the NVMe namespace. Certain error conditions cause the namespace to become disabled. If the namespace is disabled, you can check the `state` property to determine what error disabled the namespace. An NVMe namespace is enabled automatically when it is created.

Name	Type	Description
name	string	The fully qualified path name of the NVMe namespace composed of a "/vol" prefix, the volume name, the (optional) qtree name and base name of the namespace. Valid in POST. NVMe namespaces do not support rename, or movement between volumes.
os_type	string	The operating system type of the NVMe namespace. Required in POST when creating an NVMe namespace that is not a clone of another. Disallowed in POST when creating a namespace clone.
provisioning_options	provisioning_options	Options that are applied to the operation.
subsystem_map	array[subsystem_map]	The NVMe subsystem with which the NVMe namespace is associated. A namespace can be mapped to zero (0) or one (1) subsystems. There is an added cost to retrieving property values for `subsystem_map`. They are not populated for either a collection GET or an instance GET unless explicitly requested using the `fields` query parameter.
uuid	string	The unique identifier of the NVMe namespace.

parent_consistency_group

The parent consistency group.

Name	Type	Description
_links	self_link	

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

storage_service

Determines the placement of any storage object created during this operation.

Name	Type	Description
name	string	Storage service name. If not specified, the default value is the most performant for the platform.

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
storage_service	storage_service	Determines the placement of any storage object created during this operation.

snapshot

A consistency group's Snapshot copy

Name	Type	Description
name	string	The name of the consistency group's Snapshot copy to restore to.
uuid	string	The UUID of the consistency group's Snapshot copy to restore to.

restore_to

Use to restore a consistency group to a previous Snapshot copy

Name	Type	Description
snapshot	snapshot	A consistency group's Snapshot copy

snapshot_policy_reference

This is a reference to the Snapshot copy policy.

Name	Type	Description
_links	_links	
name	string	
uuid	string	

space

Space information for the consistency group.

Name	Type	Description
available	integer	The amount of space available in the consistency group, in bytes.
size	integer	The total provisioned size of the consistency group, in bytes.
used	integer	The amount of space consumed in the consistency group, in bytes.

svm

The Storage Virtual Machine (SVM) in which the consistency group is located.

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

tiering

The tiering placement and policy definitions for volumes in this consistency group.

Name	Type	Description
control	string	Storage tiering placement rules for the object.
policy	string	Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold. FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH. all ‐ Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks. auto ‐ Allows tiering of both snapshot and active file system user data to the cloud store none ‐ Volume blocks are not be tiered to the cloud store. snapshot_only ‐ Allows tiering of only the volume Snapshot copies not associated with the active file system. The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.

provisioning_options

Options that are applied to the operation.

Name	Type	Description
action	string	Operation to perform
count	integer	Number of elements to perform the operation on.
storage_service	storage_service	Determines the placement of any storage object created during this operation.

qos

The QoS policy for this volume.

Name	Type	Description
policy	policy	The QoS policy

space

Name	Type	Description
available	integer	The available space, in bytes.
size	integer	Total provisioned size, in bytes.
used	integer	The virtual space used (includes volume reserves) before storage efficiency, in bytes.

tiering

The tiering placement and policy definitions for this volume.

Name	Type	Description
control	string	Storage tiering placement rules for the object.

Name	Type	Description
policy	string	Policy that determines whether the user data blocks of a volume in a FabricPool will be tiered to the cloud store when they become cold.
		FabricPool combines flash (performance tier) with a cloud store into a single aggregate. Temperature of a volume block increases if it is accessed frequently and decreases when it is not. Valid in POST or PATCH.
		all ‐ Allows tiering of both Snapshot copies and active file system user data to the cloud store as soon as possible by ignoring the temperature on the volume blocks.
		auto ‐ Allows tiering of both snapshot and active file system user data to the cloud store
		none ‐ Volume blocks are not be tiered to the cloud store.
		snapshot_only ‐ Allows tiering of only the volume Snapshot copies not associated with the active file system.
		The default tiering policy is "snapshot-only" for a FlexVol volume and "none" for a FlexGroup volume. The default minimum cooling period for the "snapshot-only" tiering policy is 2 days and for the "auto" tiering policy it is 31 days.

volumes

Name	Type	Description
comment	string	A comment for the volume. Valid in POST or PATCH.

Name	Type	Description
language	string	Language encoding setting for volume. If no language is specified, the volume inherits its SVM language encoding setting.
name	string	Volume name. The name of volume must start with an alphabetic character (a to z or A to Z) or an underscore (_). The name must be 197 or fewer characters in length for FlexGroups, and 203 or fewer characters in length for all other types of volumes. Volume names must be unique within an SVM. Required on POST.
provisioning_options	provisioning_options	Options that are applied to the operation.
qos	qos	The QoS policy for this volume.
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	
tiering	tiering	The tiering placement and policy definitions for this volume.
uuid	string	Unique identifier for the volume. This corresponds to the instance-uuid that is exposed in the CLI and ONTAPI. It does not change due to a volume move. • example: 028baa66-41bd-11e9-81d5-00a0986138f7 • readOnly: 1 • Introduced in: 9.8

consistency_groups

Name	Type	Description
_links	self_link	

Name	Type	Description
luns	array[luns]	The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are located on a volume that is a member of the consistency group.
name	string	Name of the consistency group. The consistency group name must be unique within an SVM. If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

Name	Type	Description
namespaces	array[namespaces]	An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol. In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.
		An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.
		An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.
		- maxItems: 16 - minItems: 0 - uniqueItems: 1 - Introduced in: 9.10 - x-ntap-modifyOnly: true
parent_consistency_group	parent_consistency_group	The parent consistency group.
provisioning_options	provisioning_options	Options that are applied to the operation.

Name	Type	Description
qos	qos	
restore_to	restore_to	Use to restore a consistency group to a previous Snapshot copy
snapshot_policy	snapshot_policy_reference	This is a reference to the Snapshot copy policy.
space	space	Space information for the consistency group.
svm	svm	The Storage Virtual Machine (SVM) in which the consistency group is located.
tiering	tiering	The tiering placement and policy definitions for volumes in this consistency group.
uuid	string	The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created. • example: 1cd8a442-86d1-11e0-ae1c-123478563412 • Introduced in: 9.10 • readOnly: 1

Name	Type	Description
volumes	array[volumes]	A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.

The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.

The total number of volumes across all child consistency groups contained in a consistency group is constrained by the same limit. |

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

Update a consistency group

PATCH /application/consistency-groups/{uuid}

Introduced In: 9.10

Updates a consistency group.

> ⓘ that this operation will never delete storage elements. You can specify only elements that should be added to the consistency group regardless of existing storage objects.

Related ONTAP commands

N/A. There are no ONTAP commands for managing consistency groups.

Examples:

Adding namespaces to an existing volume in an existing consistency group

To add two NVMe Namespaces to an existing volume in an existing consistency group, create a new subsystem and bind the new namespaces to it.

```
curl -X PATCH 'https://<mgmt-ip>/api/application/consistency-
groups/6f51748a-0a7f-11ec-a449-005056bbcf9f' -d '{ "namespaces": [ {
"name": "/vol/vol1/new_namespace", "space": { "size": "10M" }, "os_type":
"windows", "provisioning_options": { "count": 2 }, "subsystem_map": {
"subsystem": { "name": "mySubsystem", "hosts": [ { "nqn": "nqn.1992-
08.com.netapp:sn.d04594ef915b4c73b642169e72e4c0b1:subsystem.host1" }, {
"nqn": "nqn.1992-
08.com.netapp:sn.d04594ef915b4c73b642169e72e4c0b1:subsystem.host2" } ] } }
} ] }'

### Response:
```

{ "job": { "uuid": "8c9cabf3-0a88-11ec-a449-005056bbcf9f", "_links": { "self": { "href": "/api/cluster/jobs/8c9cabf3-0a88-11ec-a449-005056bbcf9f" } } } }

```
== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|uuid
|string
|path
|True
```

a|The unique identifier of the consistency group to modify.

|return_timeout
|integer
|query
|False
a|The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.

* Default value: 1
* Max value: 120
* Min value: 0

|===

== Request Body

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|consistency_groups
|array[link:#consistency_groups[consistency_groups]]
a|A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A consistency group can only be associated with one direct parent consistency group.

|luns
|array[link:#luns[luns]]
a|The LUNs array can be used to create or modify LUNs in a consistency group on a new or existing volume that is a member of the consistency group. LUNs are considered members of a consistency group if they are

located on a volume that is a member of the consistency group.

|name
|string
a|Name of the consistency group. The consistency group name must be unique within an SVM.

If not provided and the consistency group contains only one volume, the name will be generated based on the volume name. If the consistency group contains more than one volume, the name is required.

|namespaces
|array[link:#namespaces[namespaces]]
a|An NVMe namespace is a collection of addressable logical blocks presented to hosts connected to the SVM using the NVMe over Fabrics protocol.
In ONTAP, an NVMe namespace is located within a volume. Optionally, it can be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

* maxItems: 16
* minItems: 0
* uniqueItems: 1
* Introduced in: 9.10
* x-ntap-modifyOnly: true

|parent_consistency_group
|link:#parent_consistency_group[parent_consistency_group]
a|The parent consistency group.

|provisioning_options

|link:#provisioning_options[provisioning_options]
a|Options that are applied to the operation.

|qos
|link:#qos[qos]
a|

|replicated
|boolean
a|Indicates whether or not replication has been enabled on this
consistency group.

|replication_source
|boolean
a|Indicates whether or not this consistency group is the source for
replication.

|restore_to
|link:#restore_to[restore_to]
a|Use to restore a consistency group to a previous Snapshot copy

|snapshot_policy
|link:#snapshot_policy_reference[snapshot_policy_reference]
a|This is a reference to the Snapshot copy policy.

|space
|link:#space[space]
a|Space information for the consistency group.

|svm
|link:#svm[svm]
a|The Storage Virtual Machine (SVM) in which the consistency group is
located.

|tiering
|link:#tiering[tiering]
a|The tiering placement and policy definitions for volumes in this
consistency group.

```
|uuid
|string
a|The unique identifier of the consistency group. The UUID is generated by
ONTAP when the consistency group is created.

* example: 1cd8a442-86d1-11e0-ae1c-123478563412
* Introduced in: 9.10
* readOnly: 1


|volumes
|array[link:#volumes[volumes]]
a|A consistency group is a mutually exclusive aggregation of volumes or
other consistency groups. A volume can only be associated with one direct
parent consistency group.

The volumes array can be used to create new volumes in the consistency
group, add existing volumes to the consistency group, or modify existing
volumes that are already members of the consistency group.

The total number of volumes across all child consistency groups contained
in a consistency group is constrained by the same limit.


|===


.Example request
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "consistency_groups": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "luns": {
      "clone": {
        "source": {
```

```
        "name": "/vol/volume1/lun1",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "comment": "string",
    "create_time": "2018-06-04T19:00:00Z",
    "lun_maps": {
      "igroup": {
        "comment": "string",
        "igroups": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "igroup1",
          "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        },
        "initiators": {
          "comment": "my comment",
          "name": "iqn.1998-01.com.corp.iscsi:name1"
        },
        "name": "igroup1",
        "os_type": "aix",
        "protocol": "fcp",
        "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
      }
    },
    "name": "/vol/volume1/lun1",
    "os_type": "aix",
    "provisioning_options": {
      "action": "create"
    },
    "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"
```

```
        }
      },
      "serial_number": "string",
      "space": {
        "size": 1073741824
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "namespaces": {
      "comment": "string",
      "create_time": "2018-06-04T19:00:00Z",
      "name": "/vol/volume1/qtree1/namespace1",
      "os_type": "aix",
      "provisioning_options": {
        "action": "create"
      },
      "subsystem_map": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "anagrpid": "00103050h",
        "nsid": "00000001h",
        "subsystem": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "parent_consistency_group": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "my_consistency_group",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "provisioning_options": {
      "action": "create",
```

```
      "storage_service": {
        "name": "extreme"
      }
    },
    "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"
      }
    },
    "snapshot_policy": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "default",
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "space": {
      "available": 5737418,
      "size": 1073741824,
      "used": 5737418
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "tiering": {
      "control": "allowed",
      "policy": "all"
    },
```

```
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
      "volumes": {
        "comment": "string",
        "language": "ar",
        "name": "vol_cs_dept",
        "provisioning_options": {
          "action": "create",
          "storage_service": {
            "name": "extreme"
          }
        },
        "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"
          }
        },
        "snapshot_policy": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "name": "default",
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        },
        "tiering": {
          "control": "allowed",
          "policy": "all"
        },
        "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
      }
    },
    "luns": {
      "clone": {
        "source": {
          "name": "/vol/volume1/lun1",
```

```
            "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "comment": "string",
      "create_time": "2018-06-04T19:00:00Z",
      "lun_maps": {
        "igroup": {
          "comment": "string",
          "igroups": {
            "_links": {
              "self": {
                "href": "/api/resourcelink"
              }
            },
            "name": "igroup1",
            "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
          },
          "initiators": {
            "comment": "my comment",
            "name": "iqn.1998-01.com.corp.iscsi:name1"
          },
          "name": "igroup1",
          "os_type": "aix",
          "protocol": "fcp",
          "uuid": "4ea7a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "name": "/vol/volume1/lun1",
      "os_type": "aix",
      "provisioning_options": {
        "action": "create"
      },
      "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"
        }
```

```
      },
      "serial_number": "string",
      "space": {
        "size": 1073741824
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "namespaces": {
      "comment": "string",
      "create_time": "2018-06-04T19:00:00Z",
      "name": "/vol/volume1/qtree1/namespace1",
      "os_type": "aix",
      "provisioning_options": {
        "action": "create"
      },
      "subsystem_map": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "anagrpid": "00103050h",
        "nsid": "00000001h",
        "subsystem": {
          "_links": {
            "self": {
              "href": "/api/resourcelink"
            }
          },
          "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
        }
      },
      "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
    },
    "parent_consistency_group": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "my_consistency_group",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    },
    "provisioning_options": {
      "action": "create",
      "storage_service": {
```

```
      "name": "extreme"
    }
  },
  "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"
    }
  },
  "snapshot_policy": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "default",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "space": {
    "available": 5737418,
    "size": 1073741824,
    "used": 5737418
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "tiering": {
    "control": "allowed",
    "policy": "all"
  },
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412",
```

```
    "volumes": {
      "comment": "string",
      "language": "ar",
      "name": "vol_cs_dept",
      "provisioning_options": {
        "action": "create",
        "storage_service": {
          "name": "extreme"
        }
      },
      "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"
        }
      },
      "snapshot_policy": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "default",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "tiering": {
        "control": "allowed",
        "policy": "all"
      },
      "uuid": "028baa66-41bd-11e9-81d5-00a0986138f7"
    }
}
====

== Response
```

Status: 200, Ok

```
== Response
```

Status: 202, Accepted

```
== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 53411842
| Consistency group does not exist.

| 53411843
| A consistency group with specified UUID was not found.

| 53411844
| Specified consistency group was not found in the specified SVM.

| 53411845
| The specified UUID and name refer to different consistency groups.

| 53411846
| Either name or UUID must be provided.

| 53411852
| A consistency group with the same identifier in the same scope exists.

| 53411853
| Fields provided in the request conflict with each other.

| 53411856
| Field provided is only supported when provisioning new objects.

| 53411857
| LUNs that are not members of the application are not supported by this
API. LUNs can be added to an application by adding the volume containing
the LUNs to the application.

| 53411860
| An object with the same identifier in the same scope exists.
```

| 53411861
| Volume specified does not exist in provided volume array.

| 53411862
| Modifying existing igroups is not supported using this API.

| 53411864
| Request content insufficient to add an existing volume to an application.

| 53411865
| Volumes contained in one consistency group cannot be added to a different consistency group.

| 53411866
| LUNs are not supported on FlexGroup volumes.

| 53411867
| LUN name is too long after appending a unique suffix.

| 53411869
| Volume name is too long after appending a unique suffix.

| 53411870
| When using the "round_robin" layout, the volume count must not be greater than the LUN count.
|===

[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#error[error]
a|

|===

.Example error
[%collapsible%closed]
====

```
[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===


[#self_link]
[.api-collapsible-fifth-title]
self_link

[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|self
|link:#href[href]
a|

|===


[#source]
[.api-collapsible-fifth-title]
source

The source LUN for a LUN clone operation. This can be specified using
property `clone.source.uuid` or `clone.source.name`. If both properties
are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The fully qualified path name of the clone source LUN composed of a
"/vol" prefix, the volume name, the (optional) qtree name, and base name
of the LUN. Valid in POST and PATCH.


|uuid
|string
a|The unique identifier of the clone source LUN. Valid in POST and PATCH.


|===


[#clone]
[.api-collapsible-fifth-title]
clone
```

This sub-object is used in POST to create a new LUN as a clone of an existing LUN, or PATCH to overwrite an existing LUN as a clone of another. Setting a property in this sub-object indicates that a LUN clone is desired. Consider the following other properties when cloning a LUN: `auto_delete`, `qos_policy`, `space.guarantee.requested` and `space.scsi_thin_provisioning_support_enabled`.

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`.

Persistent reservations for the patched LUN are also preserved.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|source
|link:#source[source]
a|The source LUN for a LUN clone operation. This can be specified using property `clone.source.uuid` or `clone.source.name`. If both properties are supplied, they must refer to the same LUN.

Valid in POST to create a new LUN as a clone of the source.

Valid in PATCH to overwrite an existing LUN's data as a clone of another.

|===
```

```
[#igroups]
[.api-collapsible-fifth-title]
igroups

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
```

a|

|name
|string
a|The name of the initiator group.

|uuid
|string
a|The unique identifier of the initiator group.

|===

[#initiators]
[.api-collapsible-fifth-title]
initiators

The initiators that are members of the initiator group.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator.

|name
|string
a|Name of initiator that is a member of the initiator group.

|===

[#igroup]
[.api-collapsible-fifth-title]
igroup

The initiator group that directly owns the initiator, which is where
modification of the initiator is supported. This property will only be

populated when the initiator is a member of a nested initiator group.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|comment
|string
a|A comment available for use by the administrator. Valid in POST and
PATCH.


|igroups
|array[link:#igroups[igroups]]
a|Separate igroup definitions to include in this igroup.


|initiators
|array[link:#initiators[initiators]]
a|The initiators that are members of the group.


|name
|string
a|The name of the initiator group. Required in POST; optional in PATCH.


|os_type
|string
a|The host operating system of the initiator group. All initiators in the
group should be hosts of the same operating system. Required in POST;
optional in PATCH.


|protocol
|string
a|The protocols supported by the initiator group. This restricts the type
of initiators that can be added to the initiator group. Optional in POST;
if not supplied, this defaults to _mixed_.

The protocol of an initiator group cannot be changed after creation of the
group.
```

```
|uuid
|string
a|The unique identifier of the initiator group.


|===


[#lun_maps]
[.api-collapsible-fifth-title]
lun_maps

A LUN map is an association between a LUN and an initiator group.

When a LUN is mapped to an initiator group, the initiator group's
initiators are granted access to the LUN. The relationship between a LUN
and an initiator group is many LUNs to many initiator groups.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|igroup
|link:#igroup[igroup]
a|The initiator group that directly owns the initiator, which is where
modification of the initiator is supported. This property will only be
populated when the initiator is a member of a nested initiator group.


|logical_unit_number
|integer
a|The logical unit number assigned to the LUN when mapped to the specified
initiator group. The number is used to identify the LUN to initiators in
the initiator group when communicating through the Fibre Channel Protocol
or iSCSI. Optional in POST; if no value is provided, ONTAP assigns the
lowest available value.

* Introduced in: 9.6
* readCreate: 1


|===
```

```
[#provisioning_options]
[.api-collapsible-fifth-title]
provisioning_options

Options that are applied to the operation.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|action
|string
a|Operation to perform


|count
|integer
a|Number of elements to perform the operation on.


|===


[#policy]
[.api-collapsible-fifth-title]
policy

The QoS policy


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|max_throughput_iops
|integer
a|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
a|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
a|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
a|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
a|The QoS policy group name. This is mutually exclusive with UUID and
other QoS attributes during POST and PATCH.


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


|===


[#qos]
[.api-collapsible-fifth-title]
qos

[cols=3*,options=header]
|===
|Name
|Type
|Description
```

```
|policy
|link:#policy[policy]
a|The QoS policy


|===



[#guarantee]
[.api-collapsible-fifth-title]
guarantee


Properties that request and report the space guarantee for the LUN.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|requested
|boolean
a|The requested space reservation policy for the LUN. If _true_, a space
reservation is requested for the LUN; if _false_, the LUN is thin
provisioned. Guaranteeing a space reservation request for a LUN requires
that the volume in which the LUN resides is also space reserved and that
the fractional reserve for the volume is 100%. Valid in POST and PATCH.


|reserved
|boolean
a|Reports if the LUN is space guaranteed.

If _true_, a space guarantee is requested and the containing volume and
aggregate support the request. If _false_, a space guarantee is not
requested or a space guarantee is requested and either the containing
volume or aggregate do not support the request.


|===


[#space]
[.api-collapsible-fifth-title]
space
```

The storage space related properties of the LUN.

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|guarantee
|link:#guarantee[guarantee]
a|Properties that request and report the space guarantee for the LUN.


|size
|integer
a|The total provisioned size of the LUN. The LUN size can be increased but
not reduced using the REST interface.
The maximum and minimum sizes listed here are the absolute maximum and
absolute minimum sizes, in bytes. The actual minimum and maxiumum sizes
vary depending on the ONTAP version, ONTAP platform, and the available
space in the containing volume and aggregate.
For more information, see _Size properties_ in the _docs_ section of the
ONTAP REST API documentation.

* example: 1073741824
* format: int64
* Max value: 140737488355328
* Min value: 4096
* Introduced in: 9.6


|used
|integer
a|The amount of space consumed by the main data stream of the LUN.

This value is the total space consumed in the volume by the LUN, including
filesystem overhead, but excluding prefix and suffix streams. Due to
internal filesystem overhead and the many ways SAN filesystems and
applications utilize blocks within a LUN, this value does not necessarily
reflect actual consumption/availability from the perspective of the
filesystem or application. Without specific knowledge of how the LUN
blocks are utilized outside of ONTAP, this property should not be used as
an indicator for an out-of-space condition.

For more information, see _Size properties_ in the _docs_ section of the
ONTAP REST API documentation.
```

```
* format: int64
* Introduced in: 9.6
* readOnly: 1



|===



[#luns]
[.api-collapsible-fifth-title]
luns

A LUN is the logical representation of storage in a storage area network
(SAN).

In ONTAP, a LUN is located within a volume. Optionally, it can be located
within a qtree in a volume.

A LUN can be created to a specified size using thin or thick provisioning.
A LUN can then be renamed, resized, cloned, and moved to a different
volume. LUNs support the assignment of a quality of service (QoS) policy
for performance management or a QoS policy can be assigned to the volume
containing the LUN. See the LUN object model to learn more about each of
the properties supported by the LUN REST API.

A LUN must be mapped to an initiator group to grant access to the
initiator group's initiators (client hosts). Initiators can then access
the LUN and perform I/O over a Fibre Channel (FC) fabric using the Fibre
Channel Protocol or a TCP/IP network using iSCSI.



[cols=3*,options=header]
|===
|Name
|Type
|Description

|clone
|link:#clone[clone]
a|This sub-object is used in POST to create a new LUN as a clone of an
existing LUN, or PATCH to overwrite an existing LUN as a clone of another.
Setting a property in this sub-object indicates that a LUN clone is
desired. Consider the following other properties when cloning a LUN:
`auto_delete`, `qos_policy`, `space.guarantee.requested` and
`space.scsi_thin_provisioning_support_enabled`.
```

When used in a PATCH, the patched LUN's data is over-written as a clone of the source and the following properties are preserved from the patched LUN unless otherwise specified as part of the PATCH: `class`, `auto_delete`, `lun_maps`, `serial_number`, `status.state`, and `uuid`.

Persistent reservations for the patched LUN are also preserved.

|comment
|string
a|A configurable comment available for use by the administrator. Valid in POST and PATCH.

|create_time
|string
a|The time the LUN was created.

|enabled
|boolean
a|The enabled state of the LUN. LUNs can be disabled to prevent access to the LUN. Certain error conditions also cause the LUN to become disabled. If the LUN is disabled, you can consult the `state` property to determine if the LUN is administratively disabled (_offline_) or has become disabled as a result of an error. A LUN in an error condition can be brought online by setting the `enabled` property to _true_ or brought administratively offline by setting the `enabled` property to _false_. Upon creation, a LUN is enabled by default. Valid in PATCH.

|lun_maps
|array[link:#lun_maps[lun_maps]]
a|An array of LUN maps.

A LUN map is an association between a LUN and an initiator group. When a LUN is mapped to an initiator group, the initiator group's initiators are granted access to the LUN. The relationship between a LUN and an initiator group is many LUNs to many initiator groups.

|name
|string
a|The fully qualified path name of the LUN composed of the "/vol" prefix, the volume name, the qtree name (optional), and the base name of the LUN. Valid in POST and PATCH.

```
|os_type
|string
a|The operating system type of the LUN.

Required in POST when creating a LUN that is not a clone of another.
Disallowed in POST when creating a LUN clone.


|provisioning_options
|link:#provisioning_options[provisioning_options]
a|Options that are applied to the operation.


|qos
|link:#qos[qos]
a|

|serial_number
|string
a|The LUN serial number. The serial number is generated by ONTAP when the
LUN is created.

* maxLength: 12
* minLength: 12
* readOnly: 1
* Introduced in: 9.10


|space
|link:#space[space]
a|The storage space related properties of the LUN.


|uuid
|string
a|The unique identifier of the LUN.  The UUID is generated by ONTAP when
the LUN is created.

* example: 1cd8a442-86d1-11e0-ae1c-123478563412
* readOnly: 1
* Introduced in: 9.10


|===
```

```
[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===



[#nvme_subsystem_reference]
[.api-collapsible-fifth-title]
nvme_subsystem_reference

An NVMe subsystem maintains configuration state and NVMe namespace access
control for a set of NVMe-connected hosts.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the NVMe subsystem.


|uuid
|string
a|The unique identifier of the NVMe subsystem.


|===
```

```
[#subsystem_map]
[.api-collapsible-fifth-title]
subsystem_map

The NVMe subsystem with which the NVMe namespace is associated. A
namespace can be mapped to zero (0) or one (1) subsystems.

There is an added cost to retrieving property values for `subsystem_map`.
They are not populated for either a collection GET or an instance GET
unless explicitly requested using the `fields` query parameter.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|anagrpid
|string
a|The Asymmetric Namespace Access Group ID (ANAGRPID) of the NVMe
namespace.

The format for an ANAGRPID is 8 hexadecimal digits (zero-filled) followed
by a lower case "h".


|nsid
|string
a|The NVMe namespace identifier. This is an identifier used by an NVMe
controller to provide access to the NVMe namespace.

The format for an NVMe namespace identifier is 8 hexadecimal digits (zero-
filled) followed by a lower case "h".


|subsystem
|link:#nvme_subsystem_reference[nvme_subsystem_reference]
a|An NVMe subsystem maintains configuration state and NVMe namespace
access control for a set of NVMe-connected hosts.
```

```
|===


[#namespaces]
[.api-collapsible-fifth-title]
namespaces

An NVMe namespace is a collection of addressable logical blocks presented
to hosts connected to the storage virtual machine using the NVMe over
Fabrics protocol.

In ONTAP, an NVMe namespace is located within a volume. Optionally, it can
be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick
provisioning as determined by the volume on which it is created. NVMe
namespaces support being cloned. An NVMe namespace cannot be renamed,
resized, or moved to a different volume. NVMe namespaces do not support
the assignment of a QoS policy for performance management, but a QoS
policy can be assigned to the volume containing the namespace. See the
NVMe namespace object model to learn more about each of the properties
supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to
the subsystem's hosts. Hosts can then access the NVMe namespace and
perform I/O using the NVMe over Fabrics protocol.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|auto_delete
|boolean
a|This property marks the NVMe namespace for auto deletion when the volume
containing the namespace runs out of space. This is most commonly set on
namespace clones.

When set to _true_, the NVMe namespace becomes eligible for automatic
deletion when the volume runs out of space. Auto deletion only occurs when
the volume containing the namespace is also configured for auto deletion
and free space in the volume decreases below a particular threshold.

This property is optional in POST and PATCH. The default value for a new
NVMe namespace is _false_.
```

There is an added cost to retrieving this property's value. It is not
populated for either a collection GET or an instance GET unless it is
explicitly requested using the `fields` query parameter. See
xref:{relative_path}getting_started_with_the_ontap_rest_api.html#Requestin
g_specific_fields[Requesting specific fields] to learn more.

|comment
|string
a|A configurable comment available for use by the administrator. Valid in
POST and PATCH.

|create_time
|string
a|The time the NVMe namespace was created.

|enabled
|boolean
a|The enabled state of the NVMe namespace. Certain error conditions cause
the namespace to become disabled. If the namespace is disabled, you can
check the `state` property to determine what error disabled the namespace.
An NVMe namespace is enabled automatically when it is created.

|name
|string
a|The fully qualified path name of the NVMe namespace composed of a "/vol"
prefix, the volume name, the (optional) qtree name and base name of the
namespace. Valid in POST.

NVMe namespaces do not support rename, or movement between volumes.

|os_type
|string
a|The operating system type of the NVMe namespace.

Required in POST when creating an NVMe namespace that is not a clone of
another. Disallowed in POST when creating a namespace clone.

|provisioning_options
|link:#provisioning_options[provisioning_options]
a|Options that are applied to the operation.

```
|subsystem_map
|array[link:#subsystem_map[subsystem_map]]
a|The NVMe subsystem with which the NVMe namespace is associated. A
namespace can be mapped to zero (0) or one (1) subsystems.

There is an added cost to retrieving property values for `subsystem_map`.
They are not populated for either a collection GET or an instance GET
unless explicitly requested using the `fields` query parameter.


|uuid
|string
a|The unique identifier of the NVMe namespace.


|===


[#parent_consistency_group]
[.api-collapsible-fifth-title]
parent_consistency_group

The parent consistency group.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|name
|string
a|The name of the consistency group.


|uuid
|string
a|The unique identifier of the consistency group.
```

```
|===

[#storage_service]
[.api-collapsible-fifth-title]
storage_service

Determines the placement of any storage object created during this
operation.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|Storage service name. If not specified, the default value is the most
performant for the platform.


|===


[#provisioning_options]
[.api-collapsible-fifth-title]
provisioning_options

Options that are applied to the operation.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|action
|string
a|Operation to perform


|storage_service
|link:#storage_service[storage_service]
a|Determines the placement of any storage object created during this
```

```
operation.


|===


[#snapshot]
[.api-collapsible-fifth-title]
snapshot

A consistency group's Snapshot copy


[cols=3*,options=header]
|===
|Name
|Type
|Description

|name
|string
a|The name of the consistency group's Snapshot copy to restore to.


|uuid
|string
a|The UUID of the consistency group's Snapshot copy to restore to.


|===


[#restore_to]
[.api-collapsible-fifth-title]
restore_to

Use to restore a consistency group to a previous Snapshot copy


[cols=3*,options=header]
|===
|Name
|Type
|Description

|snapshot
|link:#snapshot[snapshot]
```

a|A consistency group's Snapshot copy

|===

[#snapshot_policy_reference]
[.api-collapsible-fifth-title]
snapshot_policy_reference

This is a reference to the Snapshot copy policy.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|

|uuid
|string
a|

|===

[#space]
[.api-collapsible-fifth-title]
space

Space information for the consistency group.

[cols=3*,options=header]
|===
|Name
|Type
|Description

```
|available
|integer
a|The amount of space available in the consistency group, in bytes.


|size
|integer
a|The total provisioned size of the consistency group, in bytes.


|used
|integer
a|The amount of space consumed in the consistency group, in bytes.


|===


[#svm]
[.api-collapsible-fifth-title]
svm

The Storage Virtual Machine (SVM) in which the consistency group is
located.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name
|string
a|The name of the SVM.


|uuid
|string
a|The unique identifier of the SVM.


|===
```

```
[#tiering]
[.api-collapsible-fifth-title]
tiering

The tiering placement and policy definitions for volumes in this
consistency group.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|control
|string
a|Storage tiering placement rules for the object.


|policy
|string
a|Policy that determines whether the user data blocks of a volume in a
FabricPool will be tiered to the cloud store when they become cold.

FabricPool combines flash (performance tier) with a cloud store into a
single aggregate. Temperature of a volume block increases if it is
accessed frequently and decreases when it is not. Valid in POST or PATCH.

all &dash; Allows tiering of both Snapshot copies and active file system
user data to the cloud store as soon as possible by ignoring the
temperature on the volume blocks.

auto &dash; Allows tiering of both snapshot and active file system user
data to the cloud store

none &dash; Volume blocks are not be tiered to the cloud store.

snapshot_only &dash; Allows tiering of only the volume Snapshot copies not
associated with the active file system.

The default tiering policy is "snapshot-only" for a FlexVol volume and
"none" for a FlexGroup volume. The default minimum cooling period for the
"snapshot-only" tiering policy is 2 days and for the "auto" tiering policy
it is 31 days.
```

```
|===


[#provisioning_options]
[.api-collapsible-fifth-title]
provisioning_options

Options that are applied to the operation.


[cols=3*,options=header]
|===
|Name
|Type
|Description

|action
|string
a|Operation to perform


|count
|integer
a|Number of elements to perform the operation on.


|storage_service
|link:#storage_service[storage_service]
a|Determines the placement of any storage object created during this
operation.


|===


[#qos]
[.api-collapsible-fifth-title]
qos

The QoS policy for this volume.


[cols=3*,options=header]
|===
|Name
|Type
```

```
|Description

|policy
|link:#policy[policy]
a|The QoS policy


|===



[#space]
[.api-collapsible-fifth-title]
space

[cols=3*,options=header]
|===
|Name
|Type
|Description

|available
|integer
a|The available space, in bytes.


|size
|integer
a|Total provisioned size, in bytes.


|used
|integer
a|The virtual space used (includes volume reserves) before storage
efficiency, in bytes.


|===



[#tiering]
[.api-collapsible-fifth-title]
tiering

The tiering placement and policy definitions for this volume.


[cols=3*,options=header]
```

```
|===
|Name
|Type
|Description


|control
|string
a|Storage tiering placement rules for the object.



|policy
|string
a|Policy that determines whether the user data blocks of a volume in a
FabricPool will be tiered to the cloud store when they become cold.

FabricPool combines flash (performance tier) with a cloud store into a
single aggregate. Temperature of a volume block increases if it is
accessed frequently and decreases when it is not. Valid in POST or PATCH.

all &dash; Allows tiering of both Snapshot copies and active file system
user data to the cloud store as soon as possible by ignoring the
temperature on the volume blocks.

auto &dash; Allows tiering of both snapshot and active file system user
data to the cloud store

none &dash; Volume blocks are not be tiered to the cloud store.

snapshot_only &dash; Allows tiering of only the volume Snapshot copies not
associated with the active file system.

The default tiering policy is "snapshot-only" for a FlexVol volume and
"none" for a FlexGroup volume. The default minimum cooling period for the
"snapshot-only" tiering policy is 2 days and for the "auto" tiering policy
it is 31 days.



|===


[#volumes]
[.api-collapsible-fifth-title]
volumes

[cols=3*,options=header]
|===
|Name
```

|Type
|Description

|comment
|string
a|A comment for the volume. Valid in POST or PATCH.

|language
|string
a|Language encoding setting for volume. If no language is specified, the volume inherits its SVM language encoding setting.

|name
|string
a|Volume name. The name of volume must start with an alphabetic character (a to z or A to Z) or an underscore (_). The name must be 197 or fewer characters in length for FlexGroups, and 203 or fewer characters in length for all other types of volumes. Volume names must be unique within an SVM. Required on POST.

|provisioning_options
|link:#provisioning_options[provisioning_options]
a|Options that are applied to the operation.

|qos
|link:#qos[qos]
a|The QoS policy for this volume.

|snapshot_policy
|link:#snapshot_policy_reference[snapshot_policy_reference]
a|This is a reference to the Snapshot copy policy.

|space
|link:#space[space]
a|

|tiering
|link:#tiering[tiering]
a|The tiering placement and policy definitions for this volume.

```
|uuid
|string
a|Unique identifier for the volume. This corresponds to the instance-uuid
that is exposed in the CLI and ONTAPI. It does not change due to a volume
move.

* example: 028baa66-41bd-11e9-81d5-00a0986138f7
* readOnly: 1
* Introduced in: 9.8


|===



[#consistency_groups]
[.api-collapsible-fifth-title]
consistency_groups

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|luns
|array[link:#luns[luns]]
a|The LUNs array can be used to create or modify LUNs in a consistency
group on a new or existing volume that is a member of the consistency
group. LUNs are considered members of a consistency group if they are
located on a volume that is a member of the consistency group.


|name
|string
a|Name of the consistency group. The consistency group name must be unique
within an SVM.

If not provided and the consistency group contains only one volume, the
name will be generated based on the volume name. If the consistency group
contains more than one volume, the name is required.


|namespaces
```

|array[link:#namespaces[namespaces]]
a|An NVMe namespace is a collection of addressable logical blocks
presented to hosts connected to the SVM using the NVMe over Fabrics
protocol.
In ONTAP, an NVMe namespace is located within a volume. Optionally, it can
be located within a qtree in a volume.

An NVMe namespace is created to a specified size using thin or thick
provisioning as determined by the volume on which it is created. NVMe
namespaces support being cloned. An NVMe namespace cannot be renamed,
resized, or moved to a different volume. NVMe namespaces do not support
the assignment of a QoS policy for performance management, but a QoS
policy can be assigned to the volume containing the namespace. See the
NVMe namespace object model to learn more about each of the properties
supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to
the subsystem's hosts. Hosts can then access the NVMe namespace and
perform I/O using the NVMe over Fabrics protocol.

* maxItems: 16
* minItems: 0
* uniqueItems: 1
* Introduced in: 9.10
* x-ntap-modifyOnly: true

|parent_consistency_group
|link:#parent_consistency_group[parent_consistency_group]
a|The parent consistency group.

|provisioning_options
|link:#provisioning_options[provisioning_options]
a|Options that are applied to the operation.

|qos
|link:#qos[qos]
a|

|restore_to
|link:#restore_to[restore_to]
a|Use to restore a consistency group to a previous Snapshot copy

|snapshot_policy

|link:#snapshot_policy_reference[snapshot_policy_reference]
a|This is a reference to the Snapshot copy policy.

|space
|link:#space[space]
a|Space information for the consistency group.

|svm
|link:#svm[svm]
a|The Storage Virtual Machine (SVM) in which the consistency group is
located.

|tiering
|link:#tiering[tiering]
a|The tiering placement and policy definitions for volumes in this
consistency group.

|uuid
|string
a|The unique identifier of the consistency group. The UUID is generated by
ONTAP when the consistency group is created.

* example: 1cd8a442-86d1-11e0-ae1c-123478563412
* Introduced in: 9.10
* readOnly: 1

|volumes
|array[link:#volumes[volumes]]
a|A consistency group is a mutually exclusive aggregation of volumes or
other consistency groups. A volume can only be associated with one direct
parent consistency group.

The volumes array can be used to create new volumes in the consistency
group, add existing volumes to the consistency group, or modify existing
volumes that are already members of the consistency group.

The total number of volumes across all child consistency groups contained
in a consistency group is constrained by the same limit.

|===

```
[#consistency_group]
[.api-collapsible-fifth-title]
consistency_group

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#self_link[self_link]
a|

|consistency_groups
|array[link:#consistency_groups[consistency_groups]]
a|A consistency group is a mutually exclusive aggregation of volumes or
other consistency groups. A consistency group can only be associated with
one direct parent consistency group.


|luns
|array[link:#luns[luns]]
a|The LUNs array can be used to create or modify LUNs in a consistency
group on a new or existing volume that is a member of the consistency
group. LUNs are considered members of a consistency group if they are
located on a volume that is a member of the consistency group.


|name
|string
a|Name of the consistency group. The consistency group name must be unique
within an SVM.

If not provided and the consistency group contains only one volume, the
name will be generated based on the volume name. If the consistency group
contains more than one volume, the name is required.


|namespaces
|array[link:#namespaces[namespaces]]
a|An NVMe namespace is a collection of addressable logical blocks
presented to hosts connected to the SVM using the NVMe over Fabrics
protocol.
In ONTAP, an NVMe namespace is located within a volume. Optionally, it can
be located within a qtree in a volume.
```

An NVMe namespace is created to a specified size using thin or thick provisioning as determined by the volume on which it is created. NVMe namespaces support being cloned. An NVMe namespace cannot be renamed, resized, or moved to a different volume. NVMe namespaces do not support the assignment of a QoS policy for performance management, but a QoS policy can be assigned to the volume containing the namespace. See the NVMe namespace object model to learn more about each of the properties supported by the NVMe namespace REST API.

An NVMe namespace must be mapped to an NVMe subsystem to grant access to the subsystem's hosts. Hosts can then access the NVMe namespace and perform I/O using the NVMe over Fabrics protocol.

* maxItems: 16
* minItems: 0
* uniqueItems: 1
* Introduced in: 9.10
* x-ntap-modifyOnly: true

|parent_consistency_group
|link:#parent_consistency_group[parent_consistency_group]
a|The parent consistency group.

|provisioning_options
|link:#provisioning_options[provisioning_options]
a|Options that are applied to the operation.

|qos
|link:#qos[qos]
a|

|replicated
|boolean
a|Indicates whether or not replication has been enabled on this consistency group.

|replication_source
|boolean
a|Indicates whether or not this consistency group is the source for replication.

|restore_to
|link:#restore_to[restore_to]
a|Use to restore a consistency group to a previous Snapshot copy

|snapshot_policy
|link:#snapshot_policy_reference[snapshot_policy_reference]
a|This is a reference to the Snapshot copy policy.

|space
|link:#space[space]
a|Space information for the consistency group.

|svm
|link:#svm[svm]
a|The Storage Virtual Machine (SVM) in which the consistency group is located.

|tiering
|link:#tiering[tiering]
a|The tiering placement and policy definitions for volumes in this consistency group.

|uuid
|string
a|The unique identifier of the consistency group. The UUID is generated by ONTAP when the consistency group is created.

* example: 1cd8a442-86d1-11e0-ae1c-123478563412
* Introduced in: 9.10
* readOnly: 1

|volumes
|array[link:#volumes[volumes]]
a|A consistency group is a mutually exclusive aggregation of volumes or other consistency groups. A volume can only be associated with one direct parent consistency group.

The volumes array can be used to create new volumes in the consistency group, add existing volumes to the consistency group, or modify existing volumes that are already members of the consistency group.

The total number of volumes across all child consistency groups contained
in a consistency group is constrained by the same limit.

|===

[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code

|message
|string
a|Message argument

|===

[#error]
[.api-collapsible-fifth-title]
error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments

|code
|string

```
a|Error code


|message
|string
a|Error message


|target
|string
a|The target parameter that caused the error.


|===


//end collapsible .Definitions block
====



:leveloffset: -1


:leveloffset: -1

<<<
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```