



# Volume

## Astra Automation

NetApp  
July 30, 2024

# Tabla de contenidos

- Volume ..... 1
  - Volume overview ..... 1
  - List the volumes for a managed cluster ..... 1
  - Retrieve a volume for a managed cluster ..... 13
  - List the volumes for a storage backend ..... 25
  - Retrieve a volume for a storage backend ..... 36
  - List all volumes ..... 48
  - Retrieve a volume ..... 59
  - List the volumes for an app ..... 70
  - Retrieve a volume for an app ..... 81

# Volume

## Volume overview

The Volume API provides visibility into Kubernetes volumes associated with applications.

## List the volumes for a managed cluster

GET

`/accounts/{account_id}/topology/v1/managedClusters/{managedCluster_id}/volumes`

Returns a JSON array of all matching resources in the collection. If individual fields are specified in the request, the items JSON array will contain the fields requested for each matching resource in the order specified.

### Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource <ul style="list-style-type: none"><li>example: {{.Account}}</li></ul>
managedCluster_id	string	path	True	ID of the containing managedCluster resource
include	string	query	False	Indicates which fields should be returned when listing a collection.  URL examples: "include=id", "include=id,name"  OpenAPI examples: "id" <ul style="list-style-type: none"><li>example: id,name</li></ul>

Name	Type	In	Required	Description
limit	string	query	False	Indicates the maximum number of resources to return when listing a collection.  URL examples: "limit=2"  OpenAPI examples: "2"

## Response

Status: 200, Returns a JSON array of all matching resources in the collection. If individual fields are specified in the request, the items JSON array will contain the fields requested for each matching resource in the order specified.

Name	Type	Required	Description
items	array[Any of: <a href="#">volume_1.2_get_response_body</a> , array[]]	True	
metadata	<a href="#">type_astra_metadata_list</a>	True	

## Example response

```
{
  "type": "application/astra-volumes",
  "version": "1.2",
  "items": [
    [
      "24fe6e79-bf8d-45c9-96af-ef1d11fbd4a0",
      "myVolume"
    ],
    [
      "20a370f4-957f-446a-9126-08853d01933a",
      "secondVol"
    ],
    [
      "48e349a2-5bcd-4c59-896c-12b8240e634b",
      "smallVol"
    ]
  ],
  "metadata": {
    "labels": [],
    "creationTimestamp": "2022-10-06T20:58:16.305662Z",
    "modificationTimestamp": "2022-10-06T20:58:16.305662Z",
    "createdBy": "8f84cf09-8036-51e4-b579-bd30cb07b269"
  }
}
```

## Response

Status: 401, Unauthorized

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/3",
  "title": "Missing bearer token",
  "detail": "The request is missing the required bearer token.",
  "status": "401"
}
```

### Response

Status: 400, Bad request

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	
invalidParams	array[invalidParams]	False	List of invalid query parameters

### Example response

```
{
  "type": "https://astra.netapp.io/problems/5",
  "title": "Invalid query parameters",
  "detail": "The supplied query parameters are invalid.",
  "status": "400"
}
```

### Response

Status: 403, Forbidden

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/11",
  "title": "Operation not permitted",
  "detail": "The requested operation isn't permitted.",
  "status": "403"
}
```

### Error

Status: 404, Not found

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example error response

```
{
  "type": "https://astra.netapp.io/problems/2",
  "title": "Collection not found",
  "detail": "The collection specified in the request URI wasn't
found.",
  "status": "404"
}
```

# Definitions



## See Definitions

additionalDetails

type\_astra\_stateDetail

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
additionalDetails	<a href="#">additionalDetails</a>	False	

type\_astra\_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type\_astra\_metadata

Client and service-specified metadata associated with the resource. Defined values are:

- Conforms to the Astra Metadata Schema

Name	Type	Required	Description
labels	array[ <a href="#">type_astra_label</a> ]	True	
creationTimestamp	string	True	
modificationTimestamp	string	True	
createdBy	string	True	
modifiedBy	string	False	

volume\_1.2\_get\_response\_body

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none"><li>• "application/astra-volume"</li></ul>

Name	Type	Required	Description
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> <li>• "1.0"</li> <li>• "1.1"</li> <li>• "1.2"</li> </ul>
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> <li>• Conforms to the UUIDv4 Schema</li> </ul>
name	string	True	JSON string containing the name of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
state	string	False	JSON string containing a value indicating the operational state of the volume.
size	string	False	JSON string containing the size of the volume.
used	number	False	JSON number containing the number of bytes of quota used by the provisioned volume.
usedPercentage	number	False	JSON number containing the percentage of volume used.
total	number	False	JSON number containing the total bytes of volumes provisioned.

Name	Type	Required	Description
creationToken	string	False	<p>JSON string containing the creation token of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
snapshotPossible	string	False	<p>JSON string indicating whether the driver can perform a snapshot of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• "true" - Driver can take a snapshot of the volume</li> <li>• "false" - Driver cannot take a snapshot of the volume</li> </ul>
storageClass	string	False	<p>JSON string containing the storage class for the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
pvcName	string	False	<p>JSON string containing the PersistentVolumeClaim (PVC) name of the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>

Name	Type	Required	Description
internalName	string	False	<p>JSON string containing the internal name of the volume on the target storage cluster, if available. This name is obtained from the Kubernetes CSI driver.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
appsUsing	array[string]	True	<p>JSON array of JSON strings, each containing the ID of an application that is using the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
storageBackendID	string	False	<p>JSON string containing the ID of the storage backend that provides the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>

Name	Type	Required	Description
orchestrator	string	False	<p>JSON string containing the orchestrator for this volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "trident" - Trident has provisioned this volume</li> <li>• "vasa" - NetApp VASA Provider has provisioned this volume</li> <li>• "other" - The volume has been provisioned manually or the orchestrator is not known</li> </ul>
serviceLevel	string	False	<p>JSON string containing the quality of service (QoS) policy defined for this volume at the storage backend level. This will be defined for Astra Data Store volumes.</p>
exportPolicy	string	False	<p>JSON string containing the export policy associated with this volume. This will be defined for Astra Data Store volumes.</p>
nodeId	string	False	<p>JSON string containing the node ID serving the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>

Name	Type	Required	Description
healthState	string	False	<p>JSON string containing a value indicating the health state of the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity)</li> <li>• "normal" - The resource has no known issues and can provide services in accordance with the interface specification</li> <li>• "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification</li> <li>• "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification</li> </ul>
healthStateDetails	array[type_astra_stateDetail]	True	<p>JSON array of JSON objects that lists additional details about the current health. If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> <li>• Minimum Items: 0</li> </ul>

Name	Type	Required	Description
metadata	<a href="#">type_astra_metadata</a>	True	Client and service-specified metadata associated with the resource. Defined values are: <ul style="list-style-type: none"> <li>Conforms to the Astra Metadata Schema</li> </ul>

#### type\_astra\_metadata\_list

Name	Type	Required	Description
continue	string	False	
count	number	False	
labels	array[ <a href="#">type_astra_label</a> ]	False	
creationTimestamp	string	False	
modificationTimestamp	string	False	
createdBy	string	False	
modifiedBy	string	False	

#### invalidParams

Name	Type	Required	Description
name	string	True	Name of the invalid query parameter
reason	string	True	Reason why the query parameter is invalid

## Retrieve a volume for a managed cluster

GET

/accounts/{account\_id}/topology/v1/managedClusters/{managedCluster\_id}/volumes/{volume\_id}

Returns the stored Volume API resource in the JSON response body.

### Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource <ul style="list-style-type: none"> <li>example: <code>{{.Account}}</code></li> </ul>
managedCluster_id	string	path	True	ID of the containing managedCluster resource
volume_id	string	path	True	ID of the volume collection to list

## Response

Status: 200, Returns the stored Volume API resource in the JSON response body.

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none"> <li>"application/astra-volume"</li> </ul>
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> <li>"1.0"</li> <li>"1.1"</li> <li>"1.2"</li> </ul>
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> <li>Conforms to the UUIDv4 Schema</li> </ul>



Name	Type	Required	Description
name	string	True	JSON string containing the name of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
state	string	False	JSON string containing a value indicating the operational state of the volume.
size	string	False	JSON string containing the size of the volume.
used	number	False	JSON number containing the number of bytes of quota used by the provisioned volume.
usedPercentage	number	False	JSON number containing the percentage of volume used.
total	number	False	JSON number containing the total bytes of volumes provisioned.
creationToken	string	False	JSON string containing the creation token of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>

Name	Type	Required	Description
snapshotPossible	string	False	<p>JSON string indicating whether the driver can perform a snapshot of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• "true" - Driver can take a snapshot of the volume</li> <li>• "false" - Driver cannot take a snapshot of the volume</li> </ul>
storageClass	string	False	<p>JSON string containing the storage class for the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
pvcName	string	False	<p>JSON string containing the PersistentVolumeClaim (PVC) name of the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
internalName	string	False	<p>JSON string containing the internal name of the volume on the target storage cluster, if available. This name is obtained from the Kubernetes CSI driver.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>

Name	Type	Required	Description
appsUsing	array[string]	True	<p>JSON array of JSON strings, each containing the ID of an application that is using the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
storageBackendID	string	False	<p>JSON string containing the ID of the storage backend that provides the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
orchestrator	string	False	<p>JSON string containing the orchestrator for this volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "trident" - Trident has provisioned this volume</li> <li>• "vasa" - NetApp VASA Provider has provisioned this volume</li> <li>• "other" - The volume has been provisioned manually or the orchestrator is not known</li> </ul>
serviceLevel	string	False	<p>JSON string containing the quality of service (QoS) policy defined for this volume at the storage backend level. This will be defined for Astra Data Store volumes.</p>

Name	Type	Required	Description
exportPolicy	string	False	JSON string containing the export policy associated with this volume. This will be defined for Astra Data Store volumes.
nodeId	string	False	<p>JSON string containing the node ID serving the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
healthState	string	False	<p>JSON string containing a value indicating the health state of the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity)</li> <li>• "normal" - The resource has no known issues and can provide services in accordance with the interface specification</li> <li>• "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification</li> <li>• "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification</li> </ul>

Name	Type	Required	Description
healthStateDetails	array[type_astra_stateDetail]	True	<p>JSON array of JSON objects that lists additional details about the current health. If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> <li>• Minimum Items: 0</li> </ul>
metadata	type_astra_metadata	True	<p>Client and service-specified metadata associated with the resource. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Metadata Schema</li> </ul>

## Example response

```
{
  "type": "application/astra-volume",
  "version": "1.2",
  "id": "ab5c9fb8-ddba-526f-8bd3-8d5b72cf4f7f",
  "name": "myVolume",
  "state": "ready",
  "size": "512 GiB",
  "used": 10000000000,
  "usedPercentage": 10,
  "total": 10000000000,
  "creationToken": "ba7d4e0c-6ae3-4b6e-859d-9463e7ca4b4e",
  "snapshotPossible": "true",
  "storageClass": "gold",
  "pvcName": "myVolume",
  "internalName": "trident_sd234234_23424_897d_876sd65w",
  "appsUsing": [],
  "orchestrator": "trident",
  "serviceLevel": "gold",
  "exportPolicy": "astra-vp-default",
  "nodeId": "94d16dd2-9beb-4edb-ab58-1a00e9a90052",
  "healthState": "normal",
  "healthStateDetails": [],
  "metadata": {
    "labels": [],
    "creationTimestamp": "2022-10-06T20:58:16.305662Z",
    "modificationTimestamp": "2022-10-06T20:58:16.305662Z",
    "createdBy": "8f84cf09-8036-51e4-b579-bd30cb07b269"
  }
}
```

## Response

Status: 401, Unauthorized

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	

Name	Type	Required	Description
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/3",
  "title": "Missing bearer token",
  "detail": "The request is missing the required bearer token.",
  "status": "401"
}
```

### Response

Status: 400, Bad request

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	
invalidParams	array[invalidParams]	False	List of invalid query parameters

### Example response

```
{
  "type": "https://astra.netapp.io/problems/5",
  "title": "Invalid query parameters",
  "detail": "The supplied query parameters are invalid.",
  "status": "400"
}
```

### Response

Status: 403, Forbidden

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/11",
  "title": "Operation not permitted",
  "detail": "The requested operation isn't permitted.",
  "status": "403"
}
```

### Error

Status: 404, Not found

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	



## Example error response

```
{
  "type": "https://astra.netapp.io/problems/2",
  "title": "Collection not found",
  "detail": "The collection specified in the request URI wasn't
found.",
  "status": "404"
}
```

## Definitions

## See Definitions

additionalDetails

type\_astra\_stateDetail

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
additionalDetails	<a href="#">additionalDetails</a>	False	

type\_astra\_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type\_astra\_metadata

Client and service-specified metadata associated with the resource. Defined values are:

- Conforms to the Astra Metadata Schema

Name	Type	Required	Description
labels	array[ <a href="#">type_astra_label</a> ]	True	
creationTimestamp	string	True	
modificationTimestamp	string	True	
createdBy	string	True	
modifiedBy	string	False	

invalidParams

Name	Type	Required	Description
name	string	True	Name of the invalid query parameter
reason	string	True	Reason why the query parameter is invalid

# List the volumes for a storage backend

GET

/accounts/{account\_id}/topology/v1/storageBackends/{storageBackend\_id}/volumes

Returns a JSON array of all matching resources in the collection. If individual fields are specified in the request, the items JSON array will contain the fields requested for each matching resource in the order specified.

## Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource <ul style="list-style-type: none"><li>example: {{.Account}}</li></ul>
storageBackend_id	string	path	True	ID of the containing storageBackend resource
include	string	query	False	Indicates which fields should be returned when listing a collection.  URL examples: "include=id", "include=id,name"  OpenAPI examples: "id" <ul style="list-style-type: none"><li>example: id,name</li></ul>
limit	string	query	False	Indicates the maximum number of resources to return when listing a collection.  URL examples: "limit=2"  OpenAPI examples: "2"

## Response

Status: 200, Returns a JSON array of all matching resources in the collection. If individual fields are specified in the request, the items JSON array will contain the fields requested for each matching resource in the order specified.

Name	Type	Required	Description
items	array[Any of: <a href="#">volume_1.2_get_response_body</a> , array[]]	True	
metadata	<a href="#">type_astra_metadata_list</a>	True	

### Example response

```
{
  "type": "application/astra-volumes",
  "version": "1.2",
  "items": [
    [
      "24fe6e79-bf8d-45c9-96af-ef1d11fbd4a0",
      "myVolume"
    ],
    [
      "20a370f4-957f-446a-9126-08853d01933a",
      "secondVol"
    ],
    [
      "48e349a2-5bcd-4c59-896c-12b8240e634b",
      "smallVol"
    ]
  ],
  "metadata": {
    "labels": [],
    "creationTimestamp": "2022-10-06T20:58:16.305662Z",
    "modificationTimestamp": "2022-10-06T20:58:16.305662Z",
    "createdBy": "8f84cf09-8036-51e4-b579-bd30cb07b269"
  }
}
```

## Response

Status: 401, Unauthorized

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/3",
  "title": "Missing bearer token",
  "detail": "The request is missing the required bearer token.",
  "status": "401"
}
```

### Response

Status: 400, Bad request

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	
invalidParams	array[invalidParams]	False	List of invalid query parameters

### Example response

```
{
  "type": "https://astra.netapp.io/problems/5",
  "title": "Invalid query parameters",
  "detail": "The supplied query parameters are invalid.",
  "status": "400"
}
```

### Response

Status: 403, Forbidden

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/11",
  "title": "Operation not permitted",
  "detail": "The requested operation isn't permitted.",
  "status": "403"
}
```

### Error

Status: 404, Not found

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	

Name	Type	Required	Description
status	string	True	
correlationID	string	False	

### Example error response

```
{
  "type": "https://astra.netapp.io/problems/2",
  "title": "Collection not found",
  "detail": "The collection specified in the request URI wasn't
found.",
  "status": "404"
}
```

### Definitions

## See Definitions

additionalDetails

type\_astra\_stateDetail

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
additionalDetails	<a href="#">additionalDetails</a>	False	

type\_astra\_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type\_astra\_metadata

Client and service-specified metadata associated with the resource. Defined values are:

- Conforms to the Astra Metadata Schema

Name	Type	Required	Description
labels	array[ <a href="#">type_astra_label</a> ]	True	
creationTimestamp	string	True	
modificationTimestamp	string	True	
createdBy	string	True	
modifiedBy	string	False	

volume\_1.2\_get\_response\_body

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none"><li>• "application/astra-volume"</li></ul>



Name	Type	Required	Description
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> <li>• "1.0"</li> <li>• "1.1"</li> <li>• "1.2"</li> </ul>
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> <li>• Conforms to the UUIDv4 Schema</li> </ul>
name	string	True	JSON string containing the name of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
state	string	False	JSON string containing a value indicating the operational state of the volume.
size	string	False	JSON string containing the size of the volume.
used	number	False	JSON number containing the number of bytes of quota used by the provisioned volume.
usedPercentage	number	False	JSON number containing the percentage of volume used.
total	number	False	JSON number containing the total bytes of volumes provisioned.

Name	Type	Required	Description
creationToken	string	False	<p>JSON string containing the creation token of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
snapshotPossible	string	False	<p>JSON string indicating whether the driver can perform a snapshot of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• "true" - Driver can take a snapshot of the volume</li> <li>• "false" - Driver cannot take a snapshot of the volume</li> </ul>
storageClass	string	False	<p>JSON string containing the storage class for the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
pvcName	string	False	<p>JSON string containing the PersistentVolumeClaim (PVC) name of the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>

Name	Type	Required	Description
internalName	string	False	<p>JSON string containing the internal name of the volume on the target storage cluster, if available. This name is obtained from the Kubernetes CSI driver.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
appsUsing	array[string]	True	<p>JSON array of JSON strings, each containing the ID of an application that is using the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
storageBackendID	string	False	<p>JSON string containing the ID of the storage backend that provides the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>

Name	Type	Required	Description
orchestrator	string	False	<p>JSON string containing the orchestrator for this volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "trident" - Trident has provisioned this volume</li> <li>• "vasa" - NetApp VASA Provider has provisioned this volume</li> <li>• "other" - The volume has been provisioned manually or the orchestrator is not known</li> </ul>
serviceLevel	string	False	<p>JSON string containing the quality of service (QoS) policy defined for this volume at the storage backend level. This will be defined for Astra Data Store volumes.</p>
exportPolicy	string	False	<p>JSON string containing the export policy associated with this volume. This will be defined for Astra Data Store volumes.</p>
nodeId	string	False	<p>JSON string containing the node ID serving the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>

Name	Type	Required	Description
healthState	string	False	<p>JSON string containing a value indicating the health state of the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity)</li> <li>• "normal" - The resource has no known issues and can provide services in accordance with the interface specification</li> <li>• "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification</li> <li>• "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification</li> </ul>
healthStateDetails	array[type_astra_stateDetail]	True	<p>JSON array of JSON objects that lists additional details about the current health. If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> <li>• Minimum Items: 0</li> </ul>

Name	Type	Required	Description
metadata	<a href="#">type_astra_metadata</a>	True	Client and service-specified metadata associated with the resource. Defined values are: <ul style="list-style-type: none"> <li>Conforms to the Astra Metadata Schema</li> </ul>

#### type\_astra\_metadata\_list

Name	Type	Required	Description
continue	string	False	
count	number	False	
labels	array[ <a href="#">type_astra_label</a> ]	False	
creationTimestamp	string	False	
modificationTimestamp	string	False	
createdBy	string	False	
modifiedBy	string	False	

#### invalidParams

Name	Type	Required	Description
name	string	True	Name of the invalid query parameter
reason	string	True	Reason why the query parameter is invalid

## Retrieve a volume for a storage backend

GET

/accounts/{account\_id}/topology/v1/storageBackends/{storageBackend\_id}/volumes/{volume\_id}

Returns the stored Volume API resource in the JSON response body.

### Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource <ul style="list-style-type: none"> <li>example: <code>{{.Account}}</code></li> </ul>
storageBackend_id	string	path	True	ID of the containing storageBackend resource
volume_id	string	path	True	ID of the volume collection to list

## Response

Status: 200, Returns the stored Volume API resource in the JSON response body.

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none"> <li>"application/astra-volume"</li> </ul>
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> <li>"1.0"</li> <li>"1.1"</li> <li>"1.2"</li> </ul>
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> <li>Conforms to the UUIDv4 Schema</li> </ul>

Name	Type	Required	Description
name	string	True	JSON string containing the name of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
state	string	False	JSON string containing a value indicating the operational state of the volume.
size	string	False	JSON string containing the size of the volume.
used	number	False	JSON number containing the number of bytes of quota used by the provisioned volume.
usedPercentage	number	False	JSON number containing the percentage of volume used.
total	number	False	JSON number containing the total bytes of volumes provisioned.
creationToken	string	False	JSON string containing the creation token of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>



Name	Type	Required	Description
snapshotPossible	string	False	<p>JSON string indicating whether the driver can perform a snapshot of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• "true" - Driver can take a snapshot of the volume</li> <li>• "false" - Driver cannot take a snapshot of the volume</li> </ul>
storageClass	string	False	<p>JSON string containing the storage class for the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
pvcName	string	False	<p>JSON string containing the PersistentVolumeClaim (PVC) name of the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
internalName	string	False	<p>JSON string containing the internal name of the volume on the target storage cluster, if available. This name is obtained from the Kubernetes CSI driver.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>

Name	Type	Required	Description
appsUsing	array[string]	True	<p>JSON array of JSON strings, each containing the ID of an application that is using the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
storageBackendID	string	False	<p>JSON string containing the ID of the storage backend that provides the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
orchestrator	string	False	<p>JSON string containing the orchestrator for this volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "trident" - Trident has provisioned this volume</li> <li>• "vasa" - NetApp VASA Provider has provisioned this volume</li> <li>• "other" - The volume has been provisioned manually or the orchestrator is not known</li> </ul>
serviceLevel	string	False	<p>JSON string containing the quality of service (QoS) policy defined for this volume at the storage backend level. This will be defined for Astra Data Store volumes.</p>

Name	Type	Required	Description
exportPolicy	string	False	JSON string containing the export policy associated with this volume. This will be defined for Astra Data Store volumes.
nodeId	string	False	<p>JSON string containing the node ID serving the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
healthState	string	False	<p>JSON string containing a value indicating the health state of the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity)</li> <li>• "normal" - The resource has no known issues and can provide services in accordance with the interface specification</li> <li>• "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification</li> <li>• "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification</li> </ul>

Name	Type	Required	Description
healthStateDetails	array[ <a href="#">type_astra_stateDetail</a> ]	True	<p>JSON array of JSON objects that lists additional details about the current health. If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> <li>• Minimum Items: 0</li> </ul>
metadata	<a href="#">type_astra_metadata</a>	True	<p>Client and service-specified metadata associated with the resource. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Metadata Schema</li> </ul>

## Example response

```
{
  "type": "application/astra-volume",
  "version": "1.2",
  "id": "ab5c9fb8-ddba-526f-8bd3-8d5b72cf4f7f",
  "name": "myVolume",
  "state": "ready",
  "size": "512 GiB",
  "used": 10000000000,
  "usedPercentage": 10,
  "total": 10000000000,
  "creationToken": "ba7d4e0c-6ae3-4b6e-859d-9463e7ca4b4e",
  "snapshotPossible": "true",
  "storageClass": "gold",
  "pvcName": "myVolume",
  "internalName": "trident_sd234234_23424_897d_876sd65w",
  "appsUsing": [],
  "orchestrator": "trident",
  "serviceLevel": "gold",
  "exportPolicy": "astra-vp-default",
  "nodeId": "94d16dd2-9beb-4edb-ab58-1a00e9a90052",
  "healthState": "normal",
  "healthStateDetails": [],
  "metadata": {
    "labels": [],
    "creationTimestamp": "2022-10-06T20:58:16.305662Z",
    "modificationTimestamp": "2022-10-06T20:58:16.305662Z",
    "createdBy": "8f84cf09-8036-51e4-b579-bd30cb07b269"
  }
}
```

## Response

Status: 401, Unauthorized

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	

Name	Type	Required	Description
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/3",
  "title": "Missing bearer token",
  "detail": "The request is missing the required bearer token.",
  "status": "401"
}
```

### Response

Status: 400, Bad request

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	
invalidParams	array[invalidParams]	False	List of invalid query parameters

### Example response

```
{
  "type": "https://astra.netapp.io/problems/5",
  "title": "Invalid query parameters",
  "detail": "The supplied query parameters are invalid.",
  "status": "400"
}
```

### Response

Status: 403, Forbidden

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/11",
  "title": "Operation not permitted",
  "detail": "The requested operation isn't permitted.",
  "status": "403"
}
```

### Error

Status: 404, Not found

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

## Example error response

```
{
  "type": "https://astra.netapp.io/problems/2",
  "title": "Collection not found",
  "detail": "The collection specified in the request URI wasn't
found.",
  "status": "404"
}
```

## Definitions



## See Definitions

additionalDetails

type\_astra\_stateDetail

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
additionalDetails	<a href="#">additionalDetails</a>	False	

type\_astra\_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type\_astra\_metadata

Client and service-specified metadata associated with the resource. Defined values are:

- Conforms to the Astra Metadata Schema

Name	Type	Required	Description
labels	array[ <a href="#">type_astra_label</a> ]	True	
creationTimestamp	string	True	
modificationTimestamp	string	True	
createdBy	string	True	
modifiedBy	string	False	

invalidParams

Name	Type	Required	Description
name	string	True	Name of the invalid query parameter
reason	string	True	Reason why the query parameter is invalid

# List all volumes

GET /accounts/{account\_id}/topology/v1/volumes

Returns a JSON array of all matching resources in the collection. If individual fields are specified in the request, the items JSON array will contain the fields requested for each matching resource in the order specified.

## Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource <ul style="list-style-type: none"><li>example: {{.Account}}</li></ul>
include	string	query	False	Indicates which fields should be returned when listing a collection.  URL examples: "include=id", "include=id,name"  OpenAPI examples: "id" <ul style="list-style-type: none"><li>example: id,name</li></ul>
limit	string	query	False	Indicates the maximum number of resources to return when listing a collection.  URL examples: "limit=2"  OpenAPI examples: "2"

## Response

Status: 200, Returns a JSON array of all matching resources in the collection. If individual fields are specified in the request, the items JSON array will contain the fields requested for each matching resource in the order specified.

Name	Type	Required	Description
items	array[Any of: <a href="#">volume_1.2_get_response_body</a> , array[]]	True	
metadata	<a href="#">type_astra_metadata_list</a>	True	

### Example response

```
{
  "type": "application/astra-volumes",
  "version": "1.2",
  "items": [
    [
      "24fe6e79-bf8d-45c9-96af-ef1d11fbd4a0",
      "myVolume"
    ],
    [
      "20a370f4-957f-446a-9126-08853d01933a",
      "secondVol"
    ],
    [
      "48e349a2-5bcd-4c59-896c-12b8240e634b",
      "smallVol"
    ]
  ],
  "metadata": {
    "labels": [],
    "creationTimestamp": "2022-10-06T20:58:16.305662Z",
    "modificationTimestamp": "2022-10-06T20:58:16.305662Z",
    "createdBy": "8f84cf09-8036-51e4-b579-bd30cb07b269"
  }
}
```

### Response

Status: 401, Unauthorized

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/3",
  "title": "Missing bearer token",
  "detail": "The request is missing the required bearer token.",
  "status": "401"
}
```

### Response

Status: 400, Bad request

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	
invalidParams	array[invalidParams]	False	List of invalid query parameters

## Example response

```
{
  "type": "https://astra.netapp.io/problems/5",
  "title": "Invalid query parameters",
  "detail": "The supplied query parameters are invalid.",
  "status": "400"
}
```

## Response

Status: 403, Forbidden

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

## Example response

```
{
  "type": "https://astra.netapp.io/problems/11",
  "title": "Operation not permitted",
  "detail": "The requested operation isn't permitted.",
  "status": "403"
}
```

## Error

Status: 404, Not found

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	

Name	Type	Required	Description
status	string	True	
correlationID	string	False	

### Example error response

```
{
  "type": "https://astra.netapp.io/problems/2",
  "title": "Collection not found",
  "detail": "The collection specified in the request URI wasn't
found.",
  "status": "404"
}
```

### Definitions

## See Definitions

additionalDetails

type\_astra\_stateDetail

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
additionalDetails	<a href="#">additionalDetails</a>	False	

type\_astra\_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type\_astra\_metadata

Client and service-specified metadata associated with the resource. Defined values are:

- Conforms to the Astra Metadata Schema

Name	Type	Required	Description
labels	array[ <a href="#">type_astra_label</a> ]	True	
creationTimestamp	string	True	
modificationTimestamp	string	True	
createdBy	string	True	
modifiedBy	string	False	

volume\_1.2\_get\_response\_body

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none"><li>• "application/astra-volume"</li></ul>

Name	Type	Required	Description
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> <li>• "1.0"</li> <li>• "1.1"</li> <li>• "1.2"</li> </ul>
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> <li>• Conforms to the UUIDv4 Schema</li> </ul>
name	string	True	JSON string containing the name of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
state	string	False	JSON string containing a value indicating the operational state of the volume.
size	string	False	JSON string containing the size of the volume.
used	number	False	JSON number containing the number of bytes of quota used by the provisioned volume.
usedPercentage	number	False	JSON number containing the percentage of volume used.
total	number	False	JSON number containing the total bytes of volumes provisioned.



Name	Type	Required	Description
creationToken	string	False	<p>JSON string containing the creation token of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
snapshotPossible	string	False	<p>JSON string indicating whether the driver can perform a snapshot of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• "true" - Driver can take a snapshot of the volume</li> <li>• "false" - Driver cannot take a snapshot of the volume</li> </ul>
storageClass	string	False	<p>JSON string containing the storage class for the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
pvcName	string	False	<p>JSON string containing the PersistentVolumeClaim (PVC) name of the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>

Name	Type	Required	Description
internalName	string	False	<p>JSON string containing the internal name of the volume on the target storage cluster, if available. This name is obtained from the Kubernetes CSI driver.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
appsUsing	array[string]	True	<p>JSON array of JSON strings, each containing the ID of an application that is using the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
storageBackendID	string	False	<p>JSON string containing the ID of the storage backend that provides the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>

Name	Type	Required	Description
orchestrator	string	False	<p>JSON string containing the orchestrator for this volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "trident" - Trident has provisioned this volume</li> <li>• "vasa" - NetApp VASA Provider has provisioned this volume</li> <li>• "other" - The volume has been provisioned manually or the orchestrator is not known</li> </ul>
serviceLevel	string	False	<p>JSON string containing the quality of service (QoS) policy defined for this volume at the storage backend level. This will be defined for Astra Data Store volumes.</p>
exportPolicy	string	False	<p>JSON string containing the export policy associated with this volume. This will be defined for Astra Data Store volumes.</p>
nodeId	string	False	<p>JSON string containing the node ID serving the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>

Name	Type	Required	Description
healthState	string	False	<p>JSON string containing a value indicating the health state of the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity)</li> <li>• "normal" - The resource has no known issues and can provide services in accordance with the interface specification</li> <li>• "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification</li> <li>• "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification</li> </ul>
healthStateDetails	array[type_astra_stateDetail]	True	<p>JSON array of JSON objects that lists additional details about the current health. If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> <li>• Minimum Items: 0</li> </ul>

Name	Type	Required	Description
metadata	<a href="#">type_astra_metadata</a>	True	Client and service-specified metadata associated with the resource. Defined values are: <ul style="list-style-type: none"> <li>Conforms to the Astra Metadata Schema</li> </ul>

#### type\_astra\_metadata\_list

Name	Type	Required	Description
continue	string	False	
count	number	False	
labels	array[ <a href="#">type_astra_label</a> ]	False	
creationTimestamp	string	False	
modificationTimestamp	string	False	
createdBy	string	False	
modifiedBy	string	False	

#### invalidParams

Name	Type	Required	Description
name	string	True	Name of the invalid query parameter
reason	string	True	Reason why the query parameter is invalid

## Retrieve a volume

GET /accounts/{account\_id}/topology/v1/volumes/{volume\_id}

Returns the stored Volume API resource in the JSON response body.

### Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource <ul style="list-style-type: none"> <li>example: <code>{{.Account}}</code></li> </ul>
volume_id	string	path	True	ID of the volume collection to list

## Response

Status: 200, Returns the stored Volume API resource in the JSON response body.

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none"> <li>"application/astra-volume"</li> </ul>
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> <li>"1.0"</li> <li>"1.1"</li> <li>"1.2"</li> </ul>
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> <li>Conforms to the UUIDv4 Schema</li> </ul>
name	string	True	JSON string containing the name of the volume. Defined values are: <ul style="list-style-type: none"> <li>Minimum length: 1</li> <li>Maximum length: 255</li> </ul>

Name	Type	Required	Description
state	string	False	JSON string containing a value indicating the operational state of the volume.
size	string	False	JSON string containing the size of the volume.
used	number	False	JSON number containing the number of bytes of quota used by the provisioned volume.
usedPercentage	number	False	JSON number containing the percentage of volume used.
total	number	False	JSON number containing the total bytes of volumes provisioned.
creationToken	string	False	JSON string containing the creation token of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
snapshotPossible	string	False	JSON string indicating whether the driver can perform a snapshot of the volume. Defined values are: <ul style="list-style-type: none"> <li>• "true" - Driver can take a snapshot of the volume</li> <li>• "false" - Driver cannot take a snapshot of the volume</li> </ul>

Name	Type	Required	Description
storageClass	string	False	<p>JSON string containing the storage class for the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
pvcName	string	False	<p>JSON string containing the PersistentVolumeClaim (PVC) name of the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
internalName	string	False	<p>JSON string containing the internal name of the volume on the target storage cluster, if available. This name is obtained from the Kubernetes CSI driver.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
appsUsing	array[string]	True	<p>JSON array of JSON strings, each containing the ID of an application that is using the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
storageBackendID	string	False	<p>JSON string containing the ID of the storage backend that provides the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>



Name	Type	Required	Description
orchestrator	string	False	<p>JSON string containing the orchestrator for this volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "trident" - Trident has provisioned this volume</li> <li>• "vasa" - NetApp VASA Provider has provisioned this volume</li> <li>• "other" - The volume has been provisioned manually or the orchestrator is not known</li> </ul>
serviceLevel	string	False	<p>JSON string containing the quality of service (QoS) policy defined for this volume at the storage backend level. This will be defined for Astra Data Store volumes.</p>
exportPolicy	string	False	<p>JSON string containing the export policy associated with this volume. This will be defined for Astra Data Store volumes.</p>
nodeId	string	False	<p>JSON string containing the node ID serving the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>

Name	Type	Required	Description
healthState	string	False	<p>JSON string containing a value indicating the health state of the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity)</li> <li>• "normal" - The resource has no known issues and can provide services in accordance with the interface specification</li> <li>• "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification</li> <li>• "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification</li> </ul>
healthStateDetails	array[type_astra_stateDetail]	True	<p>JSON array of JSON objects that lists additional details about the current health. If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> <li>• Minimum Items: 0</li> </ul>

Name	Type	Required	Description
metadata	<a href="#">type_astra_metadata</a>	True	<p>Client and service-specified metadata associated with the resource. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Metadata Schema</li> </ul>

### Example response

```
{
  "type": "application/astra-volume",
  "version": "1.2",
  "id": "ab5c9fb8-ddba-526f-8bd3-8d5b72cf4f7f",
  "name": "myVolume",
  "state": "ready",
  "size": "512 GiB",
  "used": 10000000000,
  "usedPercentage": 10,
  "total": 10000000000,
  "creationToken": "ba7d4e0c-6ae3-4b6e-859d-9463e7ca4b4e",
  "snapshotPossible": "true",
  "storageClass": "gold",
  "pvcName": "myVolume",
  "internalName": "trident_sd234234_23424_897d_876sd65w",
  "appsUsing": [],
  "orchestrator": "trident",
  "serviceLevel": "gold",
  "exportPolicy": "astra-vp-default",
  "nodeId": "94d16dd2-9beb-4edb-ab58-1a00e9a90052",
  "healthState": "normal",
  "healthStateDetails": [],
  "metadata": {
    "labels": [],
    "creationTimestamp": "2022-10-06T20:58:16.305662Z",
    "modificationTimestamp": "2022-10-06T20:58:16.305662Z",
    "createdBy": "8f84cf09-8036-51e4-b579-bd30cb07b269"
  }
}
```

## Response

Status: 401, Unauthorized

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/3",
  "title": "Missing bearer token",
  "detail": "The request is missing the required bearer token.",
  "status": "401"
}
```

## Response

Status: 400, Bad request

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	
invalidParams	array[invalidParams]	False	List of invalid query parameters

## Example response

```
{
  "type": "https://astra.netapp.io/problems/5",
  "title": "Invalid query parameters",
  "detail": "The supplied query parameters are invalid.",
  "status": "400"
}
```

## Response

Status: 403, Forbidden

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

## Example response

```
{
  "type": "https://astra.netapp.io/problems/11",
  "title": "Operation not permitted",
  "detail": "The requested operation isn't permitted.",
  "status": "403"
}
```

## Error

Status: 404, Not found

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	

Name	Type	Required	Description
status	string	True	
correlationID	string	False	

### Example error response

```
{
  "type": "https://astra.netapp.io/problems/2",
  "title": "Collection not found",
  "detail": "The collection specified in the request URI wasn't
found.",
  "status": "404"
}
```

### Definitions

## See Definitions

additionalDetails

type\_astra\_stateDetail

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
additionalDetails	<a href="#">additionalDetails</a>	False	

type\_astra\_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type\_astra\_metadata

Client and service-specified metadata associated with the resource. Defined values are:

- Conforms to the Astra Metadata Schema

Name	Type	Required	Description
labels	array[ <a href="#">type_astra_label</a> ]	True	
creationTimestamp	string	True	
modificationTimestamp	string	True	
createdBy	string	True	
modifiedBy	string	False	

invalidParams

Name	Type	Required	Description
name	string	True	Name of the invalid query parameter
reason	string	True	Reason why the query parameter is invalid

# List the volumes for an app

GET /accounts/{account\_id}/k8s/v1/apps/{app\_id}/volumes

Returns a JSON array of all matching resources in the collection. If individual fields are specified in the request, the items JSON array will contain the fields requested for each matching resource in the order specified.

## Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource <ul style="list-style-type: none"><li>example: {{.Account}}</li></ul>
app_id	string	path	True	ID of the containing app resource
include	string	query	False	Indicates which fields should be returned when listing a collection.  URL examples: "include=id", "include=id,name"  OpenAPI examples: "id" <ul style="list-style-type: none"><li>example: id,name</li></ul>
limit	string	query	False	Indicates the maximum number of resources to return when listing a collection.  URL examples: "limit=2"  OpenAPI examples: "2"

## Response



Status: 200, Returns a JSON array of all matching resources in the collection. If individual fields are specified in the request, the items JSON array will contain the fields requested for each matching resource in the order specified.

Name	Type	Required	Description
items	array[Any of: <a href="#">volume_1.2_get_response_body</a> , array[]]	True	
metadata	<a href="#">type_astra_metadata_list</a>	True	

### Example response

```
{
  "type": "application/astra-volumes",
  "version": "1.2",
  "items": [
    [
      "24fe6e79-bf8d-45c9-96af-ef1d11fbd4a0",
      "myVolume"
    ],
    [
      "20a370f4-957f-446a-9126-08853d01933a",
      "secondVol"
    ],
    [
      "48e349a2-5bcd-4c59-896c-12b8240e634b",
      "smallVol"
    ]
  ],
  "metadata": {
    "labels": [],
    "creationTimestamp": "2022-10-06T20:58:16.305662Z",
    "modificationTimestamp": "2022-10-06T20:58:16.305662Z",
    "createdBy": "8f84cf09-8036-51e4-b579-bd30cb07b269"
  }
}
```

### Response

Status: 401, Unauthorized

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/3",
  "title": "Missing bearer token",
  "detail": "The request is missing the required bearer token.",
  "status": "401"
}
```

### Response

Status: 400, Bad request

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	
invalidParams	array[invalidParams]	False	List of invalid query parameters

### Example response

```
{
  "type": "https://astra.netapp.io/problems/5",
  "title": "Invalid query parameters",
  "detail": "The supplied query parameters are invalid.",
  "status": "400"
}
```

### Response

Status: 403, Forbidden

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/11",
  "title": "Operation not permitted",
  "detail": "The requested operation isn't permitted.",
  "status": "403"
}
```

### Error

Status: 404, Not found

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	

Name	Type	Required	Description
status	string	True	
correlationID	string	False	

### Example error response

```
{
  "type": "https://astra.netapp.io/problems/2",
  "title": "Collection not found",
  "detail": "The collection specified in the request URI wasn't
found.",
  "status": "404"
}
```

### Definitions

## See Definitions

additionalDetails

type\_astra\_stateDetail

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
additionalDetails	<a href="#">additionalDetails</a>	False	

type\_astra\_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type\_astra\_metadata

Client and service-specified metadata associated with the resource. Defined values are:

- Conforms to the Astra Metadata Schema

Name	Type	Required	Description
labels	array[ <a href="#">type_astra_label</a> ]	True	
creationTimestamp	string	True	
modificationTimestamp	string	True	
createdBy	string	True	
modifiedBy	string	False	

volume\_1.2\_get\_response\_body

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none"><li>• "application/astra-volume"</li></ul>

Name	Type	Required	Description
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> <li>• "1.0"</li> <li>• "1.1"</li> <li>• "1.2"</li> </ul>
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> <li>• Conforms to the UUIDv4 Schema</li> </ul>
name	string	True	JSON string containing the name of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
state	string	False	JSON string containing a value indicating the operational state of the volume.
size	string	False	JSON string containing the size of the volume.
used	number	False	JSON number containing the number of bytes of quota used by the provisioned volume.
usedPercentage	number	False	JSON number containing the percentage of volume used.
total	number	False	JSON number containing the total bytes of volumes provisioned.

Name	Type	Required	Description
creationToken	string	False	<p>JSON string containing the creation token of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
snapshotPossible	string	False	<p>JSON string indicating whether the driver can perform a snapshot of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• "true" - Driver can take a snapshot of the volume</li> <li>• "false" - Driver cannot take a snapshot of the volume</li> </ul>
storageClass	string	False	<p>JSON string containing the storage class for the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
pvcName	string	False	<p>JSON string containing the PersistentVolumeClaim (PVC) name of the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>

Name	Type	Required	Description
internalName	string	False	<p>JSON string containing the internal name of the volume on the target storage cluster, if available. This name is obtained from the Kubernetes CSI driver.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
appsUsing	array[string]	True	<p>JSON array of JSON strings, each containing the ID of an application that is using the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
storageBackendID	string	False	<p>JSON string containing the ID of the storage backend that provides the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>



Name	Type	Required	Description
orchestrator	string	False	<p>JSON string containing the orchestrator for this volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "trident" - Trident has provisioned this volume</li> <li>• "vasa" - NetApp VASA Provider has provisioned this volume</li> <li>• "other" - The volume has been provisioned manually or the orchestrator is not known</li> </ul>
serviceLevel	string	False	<p>JSON string containing the quality of service (QoS) policy defined for this volume at the storage backend level. This will be defined for Astra Data Store volumes.</p>
exportPolicy	string	False	<p>JSON string containing the export policy associated with this volume. This will be defined for Astra Data Store volumes.</p>
nodeId	string	False	<p>JSON string containing the node ID serving the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>

Name	Type	Required	Description
healthState	string	False	<p>JSON string containing a value indicating the health state of the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity)</li> <li>• "normal" - The resource has no known issues and can provide services in accordance with the interface specification</li> <li>• "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification</li> <li>• "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification</li> </ul>
healthStateDetails	array[type_astra_stateDetail]	True	<p>JSON array of JSON objects that lists additional details about the current health. If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> <li>• Minimum Items: 0</li> </ul>

Name	Type	Required	Description
metadata	<a href="#">type_astra_metadata</a>	True	Client and service-specified metadata associated with the resource. Defined values are: <ul style="list-style-type: none"> <li>Conforms to the Astra Metadata Schema</li> </ul>

#### type\_astra\_metadata\_list

Name	Type	Required	Description
continue	string	False	
count	number	False	
labels	array[ <a href="#">type_astra_label</a> ]	False	
creationTimestamp	string	False	
modificationTimestamp	string	False	
createdBy	string	False	
modifiedBy	string	False	

#### invalidParams

Name	Type	Required	Description
name	string	True	Name of the invalid query parameter
reason	string	True	Reason why the query parameter is invalid

## Retrieve a volume for an app

GET /accounts/{account\_id}/k8s/v1/apps/{app\_id}/volumes/{volume\_id}

Returns the stored Volume API resource in the JSON response body.

### Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource <ul style="list-style-type: none"> <li>example: <code>{{.Account}}</code></li> </ul>
app_id	string	path	True	ID of the containing app resource
volume_id	string	path	True	ID of the volume collection to list

## Response

Status: 200, Returns the stored Volume API resource in the JSON response body.

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none"> <li>"application/astra-volume"</li> </ul>
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> <li>"1.0"</li> <li>"1.1"</li> <li>"1.2"</li> </ul>
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> <li>Conforms to the UUIDv4 Schema</li> </ul>

Name	Type	Required	Description
name	string	True	JSON string containing the name of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
state	string	False	JSON string containing a value indicating the operational state of the volume.
size	string	False	JSON string containing the size of the volume.
used	number	False	JSON number containing the number of bytes of quota used by the provisioned volume.
usedPercentage	number	False	JSON number containing the percentage of volume used.
total	number	False	JSON number containing the total bytes of volumes provisioned.
creationToken	string	False	JSON string containing the creation token of the volume. Defined values are: <ul style="list-style-type: none"> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>

Name	Type	Required	Description
snapshotPossible	string	False	<p>JSON string indicating whether the driver can perform a snapshot of the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• "true" - Driver can take a snapshot of the volume</li> <li>• "false" - Driver cannot take a snapshot of the volume</li> </ul>
storageClass	string	False	<p>JSON string containing the storage class for the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
pvcName	string	False	<p>JSON string containing the PersistentVolumeClaim (PVC) name of the volume.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>
internalName	string	False	<p>JSON string containing the internal name of the volume on the target storage cluster, if available. This name is obtained from the Kubernetes CSI driver.</p> <ul style="list-style-type: none"> <li>• Defined values are:</li> <li>• Minimum length: 1</li> <li>• Maximum length: 255</li> </ul>

Name	Type	Required	Description
appsUsing	array[string]	True	<p>JSON array of JSON strings, each containing the ID of an application that is using the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
storageBackendID	string	False	<p>JSON string containing the ID of the storage backend that provides the volume. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
orchestrator	string	False	<p>JSON string containing the orchestrator for this volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "trident" - Trident has provisioned this volume</li> <li>• "vasa" - NetApp VASA Provider has provisioned this volume</li> <li>• "other" - The volume has been provisioned manually or the orchestrator is not known</li> </ul>
serviceLevel	string	False	<p>JSON string containing the quality of service (QoS) policy defined for this volume at the storage backend level. This will be defined for Astra Data Store volumes.</p>

Name	Type	Required	Description
exportPolicy	string	False	JSON string containing the export policy associated with this volume. This will be defined for Astra Data Store volumes.
nodeId	string	False	<p>JSON string containing the node ID serving the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Identifier Schema</li> </ul>
healthState	string	False	<p>JSON string containing a value indicating the health state of the volume. This will be defined for Astra Data Store volumes. Defined values are:</p> <ul style="list-style-type: none"> <li>• "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity)</li> <li>• "normal" - The resource has no known issues and can provide services in accordance with the interface specification</li> <li>• "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification</li> <li>• "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification</li> </ul>



Name	Type	Required	Description
healthStateDetails	array[ <a href="#">type_astra_stateDetail</a> ]	True	<p>JSON array of JSON objects that lists additional details about the current health. If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> <li>• Minimum Items: 0</li> </ul>
metadata	<a href="#">type_astra_metadata</a>	True	<p>Client and service-specified metadata associated with the resource. Defined values are:</p> <ul style="list-style-type: none"> <li>• Conforms to the Astra Metadata Schema</li> </ul>

## Example response

```
{
  "type": "application/astra-volume",
  "version": "1.2",
  "id": "ab5c9fb8-ddba-526f-8bd3-8d5b72cf4f7f",
  "name": "myVolume",
  "state": "ready",
  "size": "512 GiB",
  "used": 10000000000,
  "usedPercentage": 10,
  "total": 10000000000,
  "creationToken": "ba7d4e0c-6ae3-4b6e-859d-9463e7ca4b4e",
  "snapshotPossible": "true",
  "storageClass": "gold",
  "pvcName": "myVolume",
  "internalName": "trident_sd234234_23424_897d_876sd65w",
  "appsUsing": [],
  "orchestrator": "trident",
  "serviceLevel": "gold",
  "exportPolicy": "astra-vp-default",
  "nodeId": "94d16dd2-9beb-4edb-ab58-1a00e9a90052",
  "healthState": "normal",
  "healthStateDetails": [],
  "metadata": {
    "labels": [],
    "creationTimestamp": "2022-10-06T20:58:16.305662Z",
    "modificationTimestamp": "2022-10-06T20:58:16.305662Z",
    "createdBy": "8f84cf09-8036-51e4-b579-bd30cb07b269"
  }
}
```

## Response

Status: 401, Unauthorized

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	

Name	Type	Required	Description
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/3",
  "title": "Missing bearer token",
  "detail": "The request is missing the required bearer token.",
  "status": "401"
}
```

### Response

Status: 400, Bad request

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	
invalidParams	array[invalidParams]	False	List of invalid query parameters

### Example response

```
{
  "type": "https://astra.netapp.io/problems/5",
  "title": "Invalid query parameters",
  "detail": "The supplied query parameters are invalid.",
  "status": "400"
}
```

### Response

Status: 403, Forbidden

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

### Example response

```
{
  "type": "https://astra.netapp.io/problems/11",
  "title": "Operation not permitted",
  "detail": "The requested operation isn't permitted.",
  "status": "403"
}
```

### Error

Status: 404, Not found

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
status	string	True	
correlationID	string	False	

## Example error response

```
{
  "type": "https://astra.netapp.io/problems/2",
  "title": "Collection not found",
  "detail": "The collection specified in the request URI wasn't
found.",
  "status": "404"
}
```

## Definitions

## See Definitions

additionalDetails

type\_astra\_stateDetail

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	True	
additionalDetails	<a href="#">additionalDetails</a>	False	

type\_astra\_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type\_astra\_metadata

Client and service-specified metadata associated with the resource. Defined values are:

- Conforms to the Astra Metadata Schema

Name	Type	Required	Description
labels	array[ <a href="#">type_astra_label</a> ]	True	
creationTimestamp	string	True	
modificationTimestamp	string	True	
createdBy	string	True	
modifiedBy	string	False	

invalidParams

Name	Type	Required	Description
name	string	True	Name of the invalid query parameter
reason	string	True	Reason why the query parameter is invalid

## Información de copyright

Copyright © 2024 NetApp, Inc. Todos los derechos reservados. Imprimido en EE. UU. No se puede reproducir este documento protegido por copyright ni parte del mismo de ninguna forma ni por ningún medio (gráfico, electrónico o mecánico, incluidas fotocopias, grabaciones o almacenamiento en un sistema de recuperación electrónico) sin la autorización previa y por escrito del propietario del copyright.

El software derivado del material de NetApp con copyright está sujeto a la siguiente licencia y exención de responsabilidad:

ESTE SOFTWARE LO PROPORCIONA NETAPP «TAL CUAL» Y SIN NINGUNA GARANTÍA EXPRESA O IMPLÍCITA, INCLUYENDO, SIN LIMITAR, LAS GARANTÍAS IMPLÍCITAS DE COMERCIALIZACIÓN O IDONEIDAD PARA UN FIN CONCRETO, CUYA RESPONSABILIDAD QUEDA EXIMIDA POR EL PRESENTE DOCUMENTO. EN NINGÚN CASO NETAPP SERÁ RESPONSABLE DE NINGÚN DAÑO DIRECTO, INDIRECTO, ESPECIAL, EJEMPLAR O RESULTANTE (INCLUYENDO, ENTRE OTROS, LA OBTENCIÓN DE BIENES O SERVICIOS SUSTITUTIVOS, PÉRDIDA DE USO, DE DATOS O DE BENEFICIOS, O INTERRUPCIÓN DE LA ACTIVIDAD EMPRESARIAL) CUALQUIERA SEA EL MODO EN EL QUE SE PRODUJERON Y LA TEORÍA DE RESPONSABILIDAD QUE SE APLIQUE, YA SEA EN CONTRATO, RESPONSABILIDAD OBJETIVA O AGRAVIO (INCLUIDA LA NEGLIGENCIA U OTRO TIPO), QUE SURJAN DE ALGÚN MODO DEL USO DE ESTE SOFTWARE, INCLUSO SI HUBIEREN SIDO ADVERTIDOS DE LA POSIBILIDAD DE TALES DAÑOS.

NetApp se reserva el derecho de modificar cualquiera de los productos aquí descritos en cualquier momento y sin aviso previo. NetApp no asume ningún tipo de responsabilidad que surja del uso de los productos aquí descritos, excepto aquello expresamente acordado por escrito por parte de NetApp. El uso o adquisición de este producto no lleva implícita ninguna licencia con derechos de patente, de marcas comerciales o cualquier otro derecho de propiedad intelectual de NetApp.

Es posible que el producto que se describe en este manual esté protegido por una o más patentes de EE. UU., patentes extranjeras o solicitudes pendientes.

LEYENDA DE DERECHOS LIMITADOS: el uso, la copia o la divulgación por parte del gobierno están sujetos a las restricciones establecidas en el subpárrafo (b)(3) de los derechos de datos técnicos y productos no comerciales de DFARS 252.227-7013 (FEB de 2014) y FAR 52.227-19 (DIC de 2007).

Los datos aquí contenidos pertenecen a un producto comercial o servicio comercial (como se define en FAR 2.101) y son propiedad de NetApp, Inc. Todos los datos técnicos y el software informático de NetApp que se proporcionan en este Acuerdo tienen una naturaleza comercial y se han desarrollado exclusivamente con fondos privados. El Gobierno de EE. UU. tiene una licencia limitada, irrevocable, no exclusiva, no transferible, no sublicenciable y de alcance mundial para utilizar los Datos en relación con el contrato del Gobierno de los Estados Unidos bajo el cual se proporcionaron los Datos. Excepto que aquí se disponga lo contrario, los Datos no se pueden utilizar, desvelar, reproducir, modificar, interpretar o mostrar sin la previa aprobación por escrito de NetApp, Inc. Los derechos de licencia del Gobierno de los Estados Unidos de América y su Departamento de Defensa se limitan a los derechos identificados en la cláusula 252.227-7015(b) de la sección DFARS (FEB de 2014).

## Información de la marca comercial

NETAPP, el logotipo de NETAPP y las marcas que constan en <http://www.netapp.com/TM> son marcas comerciales de NetApp, Inc. El resto de nombres de empresa y de producto pueden ser marcas comerciales de sus respectivos propietarios.