



Storage backend

Astra Automation

NetApp
June 28, 2024

目錄

Storage backend	1
Storage backend overview	1
Create a new storage backend	1
List all storage backends	15
Retrieve a storage backend	29
Modify a storage backend	41
Delete a storage backend	54

Storage backend

Storage backend overview

The Storage Backend API provides CRUD (Create-Read-Update-Delete) access to representations of providers of storage services (storage backends) that can be used by managed clusters and applications.

Create a new storage backend

POST /accounts/{account_id}/topology/v1/storageBackends

Indicates desired values for the Storage Backend API resource to be created.

Parameters

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

Request Body

Indicates desired values for the Storage Backend API resource to be created.

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none">"application/astra-storageBackend"
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none">"1.0""1.1""1.2"

Name	Type	Required	Description
backendName	string	False	<p>JSON string containing a user-specified name for the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
backendType	string	True	<p>JSON string containing a value indicating the type of the storage backend being represented. Defined values are:</p> <ul style="list-style-type: none"> • "ontap" - The storage backend represents a NetApp ONTAP system • enum: ["ontap"] • example: ontap
backendVersion	string	False	<p>JSON string containing a value indicating the version of the storage backend being represented. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
backendCredentialsName	string	False	<p>JSON string containing a value indicating the name of one or more credential resources used for the storage backend. Allows for credential rotation where multiple credential objects have the same name. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63

Name	Type	Required	Description
metadata	type_astra_metadata_update	False	<p>Client and service-specified metadata associated with the resource. Defined values are:</p> <ul style="list-style-type: none"> Conforms to the Astra Metadata Schema. If not specified on create, a metadata object will be created with no labels. If not specified on update, the metadata object's labels, creationTimestamp and createdBy, will be preserved without modification.

Example request

```
{
  "type": "application/astra-storageBackend",
  "version": "1.2",
  "backendName": "st1-45",
  "backendType": "ontap",
  "backendCredentialsName": "st1-45-cred"
}
```

Response

Status: 201, Returns the newly created storageBackend resource in the JSON response body.

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

Name	Type	Required	Description
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> • "1.0" • "1.1" • "1.2"
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> • Conforms to the UUIDv4 Schema
backendName	string	True	JSON string containing a user-specified name for the storage backend. Defined values are: <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
backendType	string	True	JSON string containing a value indicating the type of the storage backend being represented. Defined values are: <ul style="list-style-type: none"> • "ontap" - The storage backend represents a NetApp ONTAP system • enum: ["ontap"] • example: ontap
backendVersion	string	True	JSON string containing a value indicating the version of the storage backend being represented. Defined values are: <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63

Name	Type	Required	Description
backendCredentialsName	string	True	<p>JSON string containing a value indicating the name of one or more credential resources used for the storage backend. Allows for credential rotation where multiple credential objects have the same name. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
configVersion	string	False	<p>JSON string containing a value indicating the active configuration to be used by the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
state	string	True	<p>JSON string containing a value indicating the operational state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "discovered" - The storage backend has been discovered from a managed cluster • "running" - The storage backend is running normally • "unknown" - The state of the storage backend cannot be determined • "failed" - The storage backend is in an unavailable state

Name	Type	Required	Description
stateDesired	string	False	<p>JSON string containing a value indicating the desired operational state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "running" - The storage backend will be in a normal running state
stateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why a storage backend is unable to transition to "running", why it has transitioned to "failed" or "unknown", and/or why it is at risk of transitioning to "failed". Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
managedState	string	True	<p>JSON string containing a value indicating the management state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "pending" - The storage backend is scheduled to be discovered or added • "unmanaged" - The storage backend is in a "discovered" state, is not under management, and is eligible for management • "managed" - The storage backend is in a "running" or "unknown" state and is under management

Name	Type	Required	Description
managedStateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why the storage backend is ineligible to be managed. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
healthState	string	False	<p>JSON string containing a value indicating the health state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity) • "normal" - The resource has no known issues and can provide services in accordance with the interface specification • "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification • "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification

Name	Type	Required	Description
healthStateUnready	array[string]	False	<p>JSON array of JSON strings, each indicating a reason why a storage backend is not in a normal health state. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
protectionState	string	True	<p>JSON string containing a value indicating the protection state of the storage backend. "unknown" for ONTAP. Defined values are:</p> <ul style="list-style-type: none"> • "protected" - The storage backend has a protection policy defined and is in conformance with that policy • "partial" - The storage backend has a protection policy defined but is out of conformance with that policy • "none" - The storage backend is not protected • "unknown" - The storage backend protection policy conformance cannot be determined • enum: ["protected", "partial", "none", "unknown"] • example: protected

Name	Type	Required	Description
protectionStateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why a protection policy is out of conformance. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
ontap	ontap	False	<p>JSON object containing specific information related to ONTAP clusters.</p> <ul style="list-style-type: none"> • additionalProperties: false
metadata	type_astra_metadata_update	True	<p>Client and service-specified metadata associated with the resource. Defined values are:</p> <ul style="list-style-type: none"> • Conforms to the Astra Metadata Schema If not specified on create, a metadata object will be created with no labels. If not specified on update, the metadata object's labels, creationTimestamp and createdBy, will be preserved without modification.

Example response

```
{
  "type": "application/astra-storageBackend",
  "version": "1.2",
  "id": "ad238443-2bc7-54f5-bd7f-5d1668377cd7",
  "backendName": "st1-45",
  "backendType": "ontap",
  "backendVersion": "9.8",
  "backendCredentialsName": "st1-45-cred",
  "state": "running",
  "stateUnready": [],
  "managedState": "managed",
  "managedStateUnready": [],
  "protectionState": "unknown",
  "protectionStateUnready": [
    "Waiting for storage backend discovery"
  ],
  "ontap": {
    "backendManagementIP": "10.193.179.105",
    "managementIPs": [
      "10.193.188.110",
      "10.193.179.105",
      "10.193.179.106"
    ]
  },
  "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	False	

Name	Type	Required	Description
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	False	
status	string	True	
correlationID	string	False	
invalidFields	array[invalidFields]	False	List of invalid request body fields

Example response

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

Response

Status: 409, Conflict

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	False	
status	string	True	
correlationID	string	False	
invalidFields	array[invalidFields]	False	List of invalid request body fields

Example response

```
{
  "type": "https://astra.netapp.io/problems/10",
  "title": "JSON resource conflict",
  "detail": "The request body JSON contains a field that conflicts with an idempotent value.",
  "status": "409"
}
```

Response

Status: 403, Forbidden

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

type_astra_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type_astra_metadata_update

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

- Conforms to the Astra Metadata Schema If not specified on create, a metadata object will be created with no labels. If not specified on update, the metadata object's labels, creationTimestamp and createdBy, will be preserved without modification.

Name	Type	Required	Description
labels	array[type_astra_label]	False	
creationTimestamp	string	False	
modificationTimestamp	string	False	
createdBy	string	False	
modifiedBy	string	False	

ontap

JSON object containing specific information related to ONTAP clusters.

Name	Type	Required	Description
backendManagementIP	string	False	JSON string containing the IP address used to connect to this ONTAP cluster.
managementIPs	array[string]	False	JSON array of JSON strings containing the list of all possible management IPs used to connect to this ONTAP cluster. This is used to correlate backends detected through Trident and storage backends in Astra. <ul style="list-style-type: none">• uniqueItems: 1

invalidParams

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

invalidFields

Name	Type	Required	Description
name	string	True	Name of the invalid request body field
reason	string	True	Reason why the request body field is invalid

List all storage backends

GET /accounts/{account_id}/topology/v1/storageBackends

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"> example: <code>{{.Account}}</code>

Name	Type	In	Required	Description
include	string	query	False	<p>Indicates which fields should be returned when listing a collection.</p> <p>URL examples: "include=id", "include=id,name"</p> <p>OpenAPI examples: "id"</p> <ul style="list-style-type: none"> example: id,name,state
limit	string	query	False	<p>Indicates the maximum number of resources to return when listing a collection.</p> <p>URL examples: "limit=2"</p> <p>OpenAPI examples: "2"</p>

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: storageBackend_1.2_get_response_body , array[]]	True	
metadata	type_astra_metadata_list	True	

Example response

```
{
  "type": "application/astra-storageBackends",
  "version": "1.2",
  "items": [
    [
      "d6ee1e51-d65f-415a-a3d4-6d7fa8b64943",
      "st1-45",
      "running"
    ],
    [
      "a5c508b7-aacd-4d19-9455-53c0d183ab4e",
      "st2-67",
      "discovered"
    ]
  ],
  "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	False	
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	False	
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	False	
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	False	
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

ontap

JSON object containing specific information related to ONTAP clusters.

Name	Type	Required	Description
backendManagementIP	string	False	JSON string containing the IP address used to connect to this ONTAP cluster.
managementIPs	array[string]	False	JSON array of JSON strings containing the list of all possible management IPs used to connect to this ONTAP cluster. This is used to correlate backends detected through Trident and storage backends in Astra. <ul style="list-style-type: none">• uniqueItems: 1

type_astra_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type_astra_metadata_update

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

- Conforms to the Astra Metadata Schema If not specified on create, a metadata object will be created with no labels. If not specified on update, the metadata object's labels, creationTimestamp and createdBy, will be preserved without modification.

Name	Type	Required	Description
labels	array[type_astra_label]	False	
creationTimestamp	string	False	
modificationTimestamp	string	False	
createdBy	string	False	
modifiedBy	string	False	

storageBackend_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"> • "application/astra-storageBackend"
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> • "1.0" • "1.1" • "1.2"
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> • Conforms to the UUIDv4 Schema
backendName	string	True	JSON string containing a user-specified name for the storage backend. Defined values are: <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
backendType	string	True	JSON string containing a value indicating the type of the storage backend being represented. Defined values are: <ul style="list-style-type: none"> • "ontap" - The storage backend represents a NetApp ONTAP system • enum: ["ontap"] • example: ontap

Name	Type	Required	Description
backendVersion	string	True	<p>JSON string containing a value indicating the version of the storage backend being represented. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
backendCredentialsName	string	True	<p>JSON string containing a value indicating the name of one or more credential resources used for the storage backend. Allows for credential rotation where multiple credential objects have the same name. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
configVersion	string	False	<p>JSON string containing a value indicating the active configuration to be used by the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63

Name	Type	Required	Description
state	string	True	<p>JSON string containing a value indicating the operational state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "discovered" - The storage backend has been discovered from a managed cluster • "running" - The storage backend is running normally • "unknown" - The state of the storage backend cannot be determined • "failed" - The storage backend is in an unavailable state
stateDesired	string	False	<p>JSON string containing a value indicating the desired operational state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "running" - The storage backend will be in a normal running state
stateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why a storage backend is unable to transition to "running", why it has transitioned to "failed" or "unknown", and/or why it is at risk of transitioning to "failed". Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127

Name	Type	Required	Description
managedState	string	True	<p>JSON string containing a value indicating the management state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "pending" - The storage backend is scheduled to be discovered or added • "unmanaged" - The storage backend is in a "discovered" state, is not under management, and is eligible for management • "managed" - The storage backend is in a "running" or "unknown" state and is under management
managedStateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why the storage backend is ineligible to be managed. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127

Name	Type	Required	Description
healthState	string	False	<p>JSON string containing a value indicating the health state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity) • "normal" - The resource has no known issues and can provide services in accordance with the interface specification • "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification • "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification
healthStateUnready	array[string]	False	<p>JSON array of JSON strings, each indicating a reason why a storage backend is not in a normal health state. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127

Name	Type	Required	Description
protectionState	string	True	<p>JSON string containing a value indicating the protection state of the storage backend. "unknown" for ONTAP. Defined values are:</p> <ul style="list-style-type: none"> • "protected" - The storage backend has a protection policy defined and is in conformance with that policy • "partial" - The storage backend has a protection policy defined but is out of conformance with that policy • "none" - The storage backend is not protected • "unknown" - The storage backend protection policy conformance cannot be determined • enum: ["protected", "partial", "none", "unknown"] • example: protected
protectionStateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why a protection policy is out of conformance. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127

Name	Type	Required	Description
ontap	ontap	False	JSON object containing specific information related to ONTAP clusters. <ul style="list-style-type: none"> additionalProperties: false
metadata	type_astra_metadata_update	True	Client and service-specified metadata associated with the resource. Defined values are: <ul style="list-style-type: none"> Conforms to the Astra Metadata Schema. If not specified on create, a metadata object will be created with no labels. If not specified on update, the metadata object's labels, creationTimestamp and createdBy, will be preserved without modification.

type_astra_metadata_list

Name	Type	Required	Description
continue	string	False	
count	number	False	
labels	array[type_astra_label]	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

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

Retrieve a storage backend

GET /accounts/{account_id}/topology/v1/storageBackends/{storageBackend_id}

Returns the stored Storage Backend 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"> example: <code>{{.Account}}</code>
storageBackend_id	string	path	True	ID of the storageBackend collection to list

Response

Status: 200, Returns the stored Storage Backend 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"> "application/astra-storageBackend"
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> "1.0" "1.1" "1.2"

Name	Type	Required	Description
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> • Conforms to the UUIDv4 Schema
backendName	string	True	JSON string containing a user-specified name for the storage backend. Defined values are: <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
backendType	string	True	JSON string containing a value indicating the type of the storage backend being represented. Defined values are: <ul style="list-style-type: none"> • "ontap" - The storage backend represents a NetApp ONTAP system • enum: ["ontap"] • example: ontap
backendVersion	string	True	JSON string containing a value indicating the version of the storage backend being represented. Defined values are: <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63

Name	Type	Required	Description
backendCredentialsName	string	True	<p>JSON string containing a value indicating the name of one or more credential resources used for the storage backend. Allows for credential rotation where multiple credential objects have the same name. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
configVersion	string	False	<p>JSON string containing a value indicating the active configuration to be used by the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
state	string	True	<p>JSON string containing a value indicating the operational state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "discovered" - The storage backend has been discovered from a managed cluster • "running" - The storage backend is running normally • "unknown" - The state of the storage backend cannot be determined • "failed" - The storage backend is in an unavailable state

Name	Type	Required	Description
stateDesired	string	False	<p>JSON string containing a value indicating the desired operational state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "running" - The storage backend will be in a normal running state
stateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why a storage backend is unable to transition to "running", why it has transitioned to "failed" or "unknown", and/or why it is at risk of transitioning to "failed". Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
managedState	string	True	<p>JSON string containing a value indicating the management state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "pending" - The storage backend is scheduled to be discovered or added • "unmanaged" - The storage backend is in a "discovered" state, is not under management, and is eligible for management • "managed" - The storage backend is in a "running" or "unknown" state and is under management

Name	Type	Required	Description
managedStateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why the storage backend is ineligible to be managed. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
healthState	string	False	<p>JSON string containing a value indicating the health state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity) • "normal" - The resource has no known issues and can provide services in accordance with the interface specification • "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification • "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification

Name	Type	Required	Description
healthStateUnready	array[string]	False	<p>JSON array of JSON strings, each indicating a reason why a storage backend is not in a normal health state. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
protectionState	string	True	<p>JSON string containing a value indicating the protection state of the storage backend. "unknown" for ONTAP. Defined values are:</p> <ul style="list-style-type: none"> • "protected" - The storage backend has a protection policy defined and is in conformance with that policy • "partial" - The storage backend has a protection policy defined but is out of conformance with that policy • "none" - The storage backend is not protected • "unknown" - The storage backend protection policy conformance cannot be determined • enum: ["protected", "partial", "none", "unknown"] • example: protected

Name	Type	Required	Description
protectionStateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why a protection policy is out of conformance. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
ontap	ontap	False	<p>JSON object containing specific information related to ONTAP clusters.</p> <ul style="list-style-type: none"> • additionalProperties: false
metadata	type_astra_metadata_update	True	<p>Client and service-specified metadata associated with the resource. Defined values are:</p> <ul style="list-style-type: none"> • Conforms to the Astra Metadata Schema. If not specified on create, a metadata object will be created with no labels. If not specified on update, the metadata object's labels, creationTimestamp and createdBy, will be preserved without modification.

Example response

```
{
  "type": "application/astra-storageBackend",
  "version": "1.2",
  "id": "ad238443-2bc7-54f5-bd7f-5d1668377cd7",
  "backendName": "st1-45",
  "backendType": "ontap",
  "backendVersion": "9.8",
  "backendCredentialsName": "st1-45-cred",
  "state": "discovered",
  "stateUnready": [],
  "managedState": "unmanaged",
  "managedStateUnready": [],
  "protectionState": "unknown",
  "protectionStateUnready": [
    "Waiting for storage backend discovery"
  ],
  "ontap": {
    "backendManagementIP": "10.193.179.105",
    "managementIPs": [
      "10.193.188.110",
      "10.193.179.105",
      "10.193.179.106"
    ]
  },
  "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	False	

Name	Type	Required	Description
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	False	
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	False	
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	False	
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

ontap

JSON object containing specific information related to ONTAP clusters.

Name	Type	Required	Description
backendManagementIP	string	False	JSON string containing the IP address used to connect to this ONTAP cluster.
managementIPs	array[string]	False	JSON array of JSON strings containing the list of all possible management IPs used to connect to this ONTAP cluster. This is used to correlate backends detected through Trident and storage backends in Astra. • <code>uniqueItems: 1</code>

type_astra_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type_astra_metadata_update

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

- Conforms to the Astra Metadata Schema If not specified on create, a metadata object will be created with no labels. If not specified on update, the metadata object's labels, creationTimestamp and createdBy, will be preserved without modification.

Name	Type	Required	Description
labels	array[type_astra_label]	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

Modify a storage backend

PUT /accounts/{account_id}/topology/v1/storageBackends/{storageBackend_id}

Replaces the entire stored resource with the supplied JSON request body while preserving key values that are not user-modifiable.

Side Effects

- Specifying a configuration version results in storage backend type-specific configuration changes being applied, which can include the initial installation of a storage backend.
- Specifying a configuration version might result in storageClass resources being added, modified, or removed.

Parameters

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

Request Body

Replaces the entire stored resource with the supplied JSON request body while preserving key values that are not user-modifiable.

Side Effects

- Specifying a configuration version results in storage backend type-specific configuration changes being applied, which can include the initial installation of a storage backend.
- Specifying a configuration version might result in storageClass resources being added, modified, or removed.

Name	Type	Required	Description
type	string	True	Media type of the resource. Defined values are: <ul style="list-style-type: none"> • "application/astra-storageBackend"
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> • "1.0" • "1.1" • "1.2"
id	string	False	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> • Conforms to the UUIDv4 Schema
backendName	string	False	JSON string containing a user-specified name for the storage backend. Defined values are: <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
backendType	string	False	JSON string containing a value indicating the type of the storage backend being represented. Defined values are: <ul style="list-style-type: none"> • "ontap" - The storage backend represents a NetApp ONTAP system • enum: ["ontap"] • example: ontap

Name	Type	Required	Description
backendVersion	string	False	<p>JSON string containing a value indicating the version of the storage backend being represented. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
backendCredentialsName	string	False	<p>JSON string containing a value indicating the name of one or more credential resources used for the storage backend. Allows for credential rotation where multiple credential objects have the same name. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63
configVersion	string	False	<p>JSON string containing a value indicating the active configuration to be used by the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63

Name	Type	Required	Description
state	string	False	<p>JSON string containing a value indicating the operational state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "discovered" - The storage backend has been discovered from a managed cluster • "running" - The storage backend is running normally • "unknown" - The state of the storage backend cannot be determined • "failed" - The storage backend is in an unavailable state
stateDesired	string	False	<p>JSON string containing a value indicating the desired operational state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "running" - The storage backend will be in a normal running state
stateUnready	array[string]	False	<p>JSON array of JSON strings, each indicating a reason why a storage backend is unable to transition to "running", why it has transitioned to "failed" or "unknown", and/or why it is at risk of transitioning to "failed". Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127

Name	Type	Required	Description
managedState	string	False	<p>JSON string containing a value indicating the management state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "pending" - The storage backend is scheduled to be discovered or added • "unmanaged" - The storage backend is in a "discovered" state, is not under management, and is eligible for management • "managed" - The storage backend is in a "running" or "unknown" state and is under management
managedStateUnready	array[string]	False	<p>JSON array of JSON strings, each indicating a reason why the storage backend is ineligible to be managed. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127

Name	Type	Required	Description
healthState	string	False	<p>JSON string containing a value indicating the health state of the storage backend. Defined values are:</p> <ul style="list-style-type: none"> • "indeterminate" - The health of the resource cannot be determined (for example, due to lack of connectivity) • "normal" - The resource has no known issues and can provide services in accordance with the interface specification • "warning" - The resource has known issues that do not prevent it providing services in accordance with the interface specification • "critical" - The resource has known issues that prevent it from providing services in accordance with the interface specification
healthStateUnready	array[string]	False	<p>JSON array of JSON strings, each indicating a reason why a storage backend is not in a normal health state. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127

Name	Type	Required	Description
protectionState	string	False	<p>JSON string containing a value indicating the protection state of the storage backend. "unknown" for ONTAP. Defined values are:</p> <ul style="list-style-type: none"> • "protected" - The storage backend has a protection policy defined and is in conformance with that policy • "partial" - The storage backend has a protection policy defined but is out of conformance with that policy • "none" - The storage backend is not protected • "unknown" - The storage backend protection policy conformance cannot be determined • enum: ["protected", "partial", "none", "unknown"] • example: protected
protectionStateUnready	array[string]	False	<p>JSON array of JSON strings, each indicating a reason why a protection policy is out of conformance. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127

Name	Type	Required	Description
ontap	ontap	False	<p>JSON object containing specific information related to ONTAP clusters.</p> <ul style="list-style-type: none"> additionalProperties: false
metadata	type_astra_metadata_update	False	<p>Client and service-specified metadata associated with the resource. Defined values are:</p> <ul style="list-style-type: none"> Conforms to the Astra Metadata Schema. If not specified on create, a metadata object will be created with no labels. If not specified on update, the metadata object's labels, creationTimestamp and createdBy, will be preserved without modification.

Example request

```
{
  "type": "application/astra-storageBackend",
  "version": "1.2",
  "backendName": "st1-46"
}
```

Response

Status: 204, Indicates if the storageBackend resource was updated.

Response

Status: 401, Unauthorized

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	False	
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	False	
status	string	True	
correlationID	string	False	
invalidFields	array[invalidFields]	False	List of invalid request body fields

Example response

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

Response

Status: 409, Conflict

Name	Type	Required	Description
type	string	True	
title	string	True	
detail	string	False	
status	string	True	
correlationID	string	False	
invalidFields	array[invalidFields]	False	List of invalid request body fields

Example response

```
{
  "type": "https://astra.netapp.io/problems/10",
  "title": "JSON resource conflict",
  "detail": "The request body JSON contains a field that conflicts with an idempotent value.",
  "status": "409"
}
```

Response

Status: 403, Forbidden

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

Example error response

```
{
  "type": "https://astra.netapp.io/problems/1",
  "title": "Resource not found",
  "detail": "The resource specified in the request URI wasn't found.",
  "status": "404"
}
```

Definitions

See Definitions

ontap

JSON object containing specific information related to ONTAP clusters.

Name	Type	Required	Description
backendManagementIP	string	False	JSON string containing the IP address used to connect to this ONTAP cluster.
managementIPs	array[string]	False	JSON array of JSON strings containing the list of all possible management IPs used to connect to this ONTAP cluster. This is used to correlate backends detected through Trident and storage backends in Astra. • <code>uniqueItems: 1</code>

type_astra_label

Name	Type	Required	Description
name	string	True	
value	string	True	

type_astra_metadata_update

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

- Conforms to the Astra Metadata Schema If not specified on create, a metadata object will be created with no labels. If not specified on update, the metadata object's labels, creationTimestamp and createdBy, will be preserved without modification.

Name	Type	Required	Description
labels	array[type_astra_label]	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

invalidFields

Name	Type	Required	Description
name	string	True	Name of the invalid request body field
reason	string	True	Reason why the request body field is invalid

Delete a storage backend

DELETE /accounts/{account_id}/topology/v1/storageBackends/{storageBackend_id}

Removes the specified Storage Backend API resource.

Side Effects

- All backendConfig resources associated with the storage backend are removed.
- All backendNode resources associated with the storage backend are removed.
- The storage backend might be removed.

Parameters

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

Response

Status: 204, Indicates if the storageBackend resource was deleted.

Response

Status: 401, Unauthorized

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

Name	Type	Required	Description
status	string	True	
correlationID	string	False	

Example error response

```
{
  "type": "https://astra.netapp.io/problems/1",
  "title": "Resource not found",
  "detail": "The resource specified in the request URI wasn't found.",
  "status": "404"
}
```

Definitions

See Definitions

invalidParams

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

版權資訊

Copyright © 2024 NetApp, Inc. 版權所有。台灣印製。非經版權所有人事先書面同意，不得將本受版權保護文件的任何部分以任何形式或任何方法（圖形、電子或機械）重製，包括影印、錄影、錄音或儲存至電子檢索系統中。

由 NetApp 版權資料衍伸之軟體必須遵守下列授權和免責聲明：

此軟體以 NETAPP「原樣」提供，不含任何明示或暗示的擔保，包括但不限於有關適售性或特定目的適用性之擔保，特此聲明。於任何情況下，就任何已造成或基於任何理論上責任之直接性、間接性、附隨性、特殊性、懲罰性或衍生性損害（包括但不限於替代商品或服務之採購；使用、資料或利潤上的損失；或企業營運中斷），無論是在使用此軟體時以任何方式所產生的契約、嚴格責任或侵權行為（包括疏忽或其他）等方面，NetApp 概不負責，即使已被告知有前述損害存在之可能性亦然。

NetApp 保留隨時變更本文所述之任何產品的權利，恕不另行通知。NetApp 不承擔因使用本文所述之產品而產生的責任或義務，除非明確經過 NetApp 書面同意。使用或購買此產品並不會在依據任何專利權、商標權或任何其他 NetApp 智慧財產權的情況下轉讓授權。

本手冊所述之產品受到一項（含）以上的美國專利、國外專利或申請中專利所保障。

有限權利說明：政府機關的使用、複製或公開揭露須受 DFARS 252.227-7013（2014 年 2 月）和 FAR 52.227-19（2007 年 12 月）中的「技術資料權利 - 非商業項目」條款 (b)(3) 小段所述之限制。

此處所含屬於商業產品和 / 或商業服務（如 FAR 2.101 所定義）的資料均為 NetApp, Inc. 所有。根據本協議提供的所有 NetApp 技術資料和電腦軟體皆屬於商業性質，並且完全由私人出資開發。美國政府對於該資料具有非專屬、非轉讓、非轉授權、全球性、有限且不可撤銷的使用權限，僅限於美國政府為傳輸此資料所訂合約所允許之範圍，並基於履行該合約之目的方可使用。除非本文另有規定，否則未經 NetApp Inc. 事前書面許可，不得逕行使用、揭露、重製、修改、履行或展示該資料。美國政府授予國防部之許可權利，僅適用於 DFARS 條款 252.227-7015(b)（2014 年 2 月）所述權利。

商標資訊

NETAPP、NETAPP 標誌及 <http://www.netapp.com/TM> 所列之標章均為 NetApp, Inc. 的商標。文中所涉及的所有其他公司或產品名稱，均為其各自所有者的商標，不得侵犯。