



Application Snapshot

Astra Automation

NetApp
December 01, 2023

目录

Application Snapshot	1
Application Snapshot overview	1
Create a new application snapshot for an app	1
List the application snapshots for an app	11
Retrieve an application snapshot	21
Delete an application snapshot	28

Application Snapshot

Application Snapshot overview

The Application Snapshot API provides CRUD (Create-Read-Update-Delete) access to appSnap resources to create and view snapshots of a managed application.

Create a new application snapshot for an app

POST /accounts/{account_id}/k8s/v1/apps/{app_id}/appSnaps

Indicates the desired values for the Application Snapshot 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: <code>{{.Account}}</code>
app_id	string	path	True	ID of the containing app resource

Request Body

Indicates the desired values for the Application Snapshot 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-appSnap"
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none">"1.0""1.1"

Name	Type	Required	Description
name	string	False	<p>JSON string containing a user-specified name for the snapshot. If not specified, or when snapshots are initiated by a schedule, the system will assign a name for the snapshot. Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63 • Conforms to the DNS 1123 Label Schema
metadata	type_astra_metadata	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.

Example request

```
{
  "type": "application/astra-appSnap",
  "version": "1.1",
  "name": "app-name-245"
}
```

Response

Status: 201, Returns the newly created appSnap 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-appSnap"
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> • "1.0" • "1.1"
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> • Conforms to the UUIDv4 Schema
name	string	True	JSON string containing a user-specified name for the snapshot. If not specified, or when snapshots are initiated by a schedule, the system will assign a name for the snapshot. Defined values are: <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63 • Conforms to the DNS 1123 Label Schema
scheduleID	string	False	JSON string containing an optional schedule ID that indicates that the snapshot was triggered by a schedule and which schedule triggered the snapshot. Only present for snapshots initiated by a schedule. Defined values are: <ul style="list-style-type: none"> • Conforms to the Astra Identifier Schema

Name	Type	Required	Description
snapshotAppAsset	string	False	<p>JSON string containing the ID of the application asset corresponding to the snapshot. This field will be returned when the state of the application snapshot is "completed". Defined values are:</p> <ul style="list-style-type: none"> • Conforms to the Astra Identifier Schema
state	string	True	<p>JSON string containing a value indicating the operational state of the snapshot. Defined values are:</p> <ul style="list-style-type: none"> • "pending" - The application snapshot is scheduled for discovery • "discovering" - The application snapshot is in the process of being discovered • "running" - The application snapshot is running normally • "completed" - The application snapshot has completed • "failed" - The application snapshot is in a permanent failure state • "removed" - The application snapshot is not currently accessible • "unknown" - The application snapshot state cannot be determined

Name	Type	Required	Description
stateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why an application snapshot is unable to transition to "running", or why it has transitioned to "failed". Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
hookState	string	False	<p>JSON string containing a value indicating the state of any execution hook or hooks running as a part of a snapshot. Defined values are:</p> <ul style="list-style-type: none"> • "failed" - One or more execution hooks have failed • "success" - There were zero or more applicable hooks and all were successful
hookStateDetails	array[type_astra_stateDetails]	False	<p>JSON array of JSON objects which lists additional details about why "hookState" transitioned into "failed". If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> • Minimum items: 0
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"> • Conforms to the Astra Metadata Schema If not specified on create, a metadata object will be created with no labels.

Example response

```
{
  "type": "application/astra-appSnap",
  "version": "1.1",
  "id": "ab41abde-ae1b-5361-ae00-d82deac97bf3",
  "name": "app-name-245",
  "scheduleID": "1fe83650-9b3c-41ef-bb25-a2910c19c33e",
  "state": "pending",
  "stateUnready": [],
  "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	
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	

Name	Type	Required	Description
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

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.

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

type_astra_stateDetails

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

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

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

List the application snapshots for an app

GET /accounts/{account_id}/k8s/v1/apps/{app_id}/appSnaps

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 • example: {{.Account}}
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" • example: id,name,state

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: appSnap_1.1_get_response_body , array[]]	True	
metadata	type_astra_metadata_list	True	

Example response

```
{
  "type": "application/astra-appSnaps",
  "version": "1.1",
  "items": [
    [
      "2b6dafc3-2172-4431-a482-6306b2703130",
      "app-name-245",
      "pending"
    ],
    [
      "6fd9b31a-3924-4c9a-878b-175fa9538b8c",
      "app-name-244",
      "completed"
    ]
  ],
  "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

type_astra_stateDetails

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

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 If not specified on create, a metadata object will be created with no labels.

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

appSnap_1.1_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-appSnap"
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none">• "1.0"• "1.1"

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
name	string	True	JSON string containing a user-specified name for the snapshot. If not specified, or when snapshots are initiated by a schedule, the system will assign a name for the snapshot. Defined values are: <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63 • Conforms to the DNS 1123 Label Schema
scheduleID	string	False	JSON string containing an optional schedule ID that indicates that the snapshot was triggered by a schedule and which schedule triggered the snapshot. Only present for snapshots initiated by a schedule. Defined values are: <ul style="list-style-type: none"> • Conforms to the Astra Identifier Schema
snapshotAppAsset	string	False	JSON string containing the ID of the application asset corresponding to the snapshot. This field will be returned when the state of the application snapshot is "completed". Defined values are: <ul style="list-style-type: none"> • Conforms to the Astra Identifier Schema

Name	Type	Required	Description
state	string	True	<p>JSON string containing a value indicating the operational state of the snapshot. Defined values are:</p> <ul style="list-style-type: none"> • "pending" - The application snapshot is scheduled for discovery • "discovering" - The application snapshot is in the process of being discovered • "running" - The application snapshot is running normally • "completed" - The application snapshot has completed • "failed" - The application snapshot is in a permanent failure state • "removed" - The application snapshot is not currently accessible • "unknown" - The application snapshot state cannot be determined
stateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why an application snapshot is unable to transition to "running", or why it has transitioned to "failed". Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127

Name	Type	Required	Description
hookState	string	False	<p>JSON string containing a value indicating the state of any execution hook or hooks running as a part of a snapshot. Defined values are:</p> <ul style="list-style-type: none"> "failed" - One or more execution hooks have failed "success" - There were zero or more applicable hooks and all were successful
hookStateDetails	array[type_astra_stateDetails]	False	<p>JSON array of JSON objects which lists additional details about why "hookState" transitioned into "failed". If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> Minimum items: 0
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"> Conforms to the Astra Metadata Schema. If not specified on create, a metadata object will be created with no labels.

type_astra_metadata_list

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

Name	Type	Required	Description
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 an application snapshot

GET /accounts/{account_id}/k8s/v1/apps/{app_id}/appSnaps/{appSnap_id}

Returns the stored Application Snapshot API resource in the JSON response body.

Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource • example: {{.Account}}
app_id	string	path	True	ID of the containing app resource
appSnap_id	string	path	True	ID of the appSnap collection to list

Response

Status: 200, Returns the stored Application Snapshot 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-appSnap"
version	string	True	Version of the resource. Defined values are: <ul style="list-style-type: none"> • "1.0" • "1.1"
id	string	True	Globally unique identifier of the resource. Defined values are: <ul style="list-style-type: none"> • Conforms to the UUIDv4 Schema
name	string	True	JSON string containing a user-specified name for the snapshot. If not specified, or when snapshots are initiated by a schedule, the system will assign a name for the snapshot. Defined values are: <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 63 • Conforms to the DNS 1123 Label Schema
scheduleID	string	False	JSON string containing an optional schedule ID that indicates that the snapshot was triggered by a schedule and which schedule triggered the snapshot. Only present for snapshots initiated by a schedule. Defined values are: <ul style="list-style-type: none"> • Conforms to the Astra Identifier Schema

Name	Type	Required	Description
snapshotAppAsset	string	False	<p>JSON string containing the ID of the application asset corresponding to the snapshot. This field will be returned when the state of the application snapshot is "completed". Defined values are:</p> <ul style="list-style-type: none"> • Conforms to the Astra Identifier Schema
state	string	True	<p>JSON string containing a value indicating the operational state of the snapshot. Defined values are:</p> <ul style="list-style-type: none"> • "pending" - The application snapshot is scheduled for discovery • "discovering" - The application snapshot is in the process of being discovered • "running" - The application snapshot is running normally • "completed" - The application snapshot has completed • "failed" - The application snapshot is in a permanent failure state • "removed" - The application snapshot is not currently accessible • "unknown" - The application snapshot state cannot be determined

Name	Type	Required	Description
stateUnready	array[string]	True	<p>JSON array of JSON strings, each indicating a reason why an application snapshot is unable to transition to "running", or why it has transitioned to "failed". Defined values are:</p> <ul style="list-style-type: none"> • Minimum length: 1 • Maximum length: 127
hookState	string	False	<p>JSON string containing a value indicating the state of any execution hook or hooks running as a part of a snapshot. Defined values are:</p> <ul style="list-style-type: none"> • "failed" - One or more execution hooks have failed • "success" - There were zero or more applicable hooks and all were successful
hookStateDetails	array[type_astra_stateDetails]	False	<p>JSON array of JSON objects which lists additional details about why "hookState" transitioned into "failed". If no details are available, this array will be empty.</p> <ul style="list-style-type: none"> • Minimum items: 0
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"> • Conforms to the Astra Metadata Schema If not specified on create, a metadata object will be created with no labels.

Example response

```
{
  "type": "application/astra-appSnap",
  "version": "1.1",
  "id": "ab41abde-ae1b-5361-ae00-d82deac97bf3",
  "name": "app-name-245",
  "scheduleID": "1fe83650-9b3c-41ef-bb25-a2910c19c33e",
  "state": "pending",
  "stateUnready": [],
  "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

type_astra_stateDetails

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

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 If not specified on create, a metadata object will be created with no labels.

Name	Type	Required	Description
labels	array[type_astra_label]	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

Delete an application snapshot

DELETE /accounts/{account_id}/k8s/v1/apps/{app_id}/appSnaps/{appSnap_id}

Removes the specified Application Snapshot API resource.

Side Effects

- If a snapshot is in progress, the snapshot is cancelled.
- If a snapshot is complete, the snapshot data is deleted.

Parameters

Name	Type	In	Required	Description
account_id	string	path	True	ID of the containing account resource • example: {{.Account}}
app_id	string	path	True	ID of the containing app resource
appSnap_id	string	path	True	ID of the appSnap collection to list

Response

Status: 204, Indicates if the appSnap 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"
}
```

Response

Status: 409, Conflict

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/144",
  "title": "Backup in progress",
  "detail": "The snapshot wasn't deleted because it is currently being
  used by a backup.",
  "status": "409"
}
```

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

invalidParams

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

版权信息

版权所有 © 2023 NetApp, Inc.。保留所有权利。中国印刷。未经版权所有者事先书面许可，本档中受版权保护的任何部分不得以任何形式或通过任何手段（图片、电子或机械方式，包括影印、录音、录像或存储在电子检索系统中）进行复制。

从受版权保护的 NetApp 资料派生的软件受以下许可和免责声明的约束：

本软件由 NetApp 按“原样”提供，不含任何明示或暗示担保，包括但不限于适销性以及针对特定用途的适用性的隐含担保，特此声明不承担任何责任。在任何情况下，对于因使用本软件而以任何方式造成的任何直接性、间接性、偶然性、特殊性、惩罚性或后果性损失（包括但不限于购买替代商品或服务；使用、数据或利润方面的损失；或者业务中断），无论原因如何以及基于何种责任理论，无论出于合同、严格责任或侵权行为（包括疏忽或其他行为），NetApp 均不承担责任，即使已被告知存在上述损失的可能性。

NetApp 保留在不另行通知的情况下随时对本文档所述的任何产品进行更改的权利。除非 NetApp 以书面形式明确同意，否则 NetApp 不承担因使用本文档所述产品而产生的任何责任或义务。使用或购买本产品不表示获得 NetApp 的任何专利权、商标权或任何其他知识产权许可。

本手册中描述的产品可能受一项或多项美国专利、外国专利或正在申请的专利的保护。

有限权利说明：政府使用、复制或公开本文档受 DFARS 252.227-7013（2014 年 2 月）和 FAR 52.227-19（2007 年 12 月）中“技术数据权利 — 非商用”条款第 (b)(3) 条规定的限制条件的约束。

本文档中所含数据与商业产品和/或商业服务（定义见 FAR 2.101）相关，属于 NetApp, Inc. 的专有信息。根据本协议提供的所有 NetApp 技术数据和计算机软件具有商业性质，并完全由私人出资开发。美国政府对这些数据的使用权具有非排他性、全球性、受限且不可撤销的许可，该许可既不可转让，也不可再许可，但仅限在与交付数据所依据的美国政府合同有关且受合同支持的情况下使用。除本文档规定的情形外，未经 NetApp, Inc. 事先书面批准，不得使用、披露、复制、修改、操作或显示这些数据。美国政府对国防部的授权仅限于 DFARS 的第 252.227-7015(b)（2014 年 2 月）条款中明确的权利。

商标信息

NetApp、NetApp 标识和 <http://www.netapp.com/TM> 上所列的商标是 NetApp, Inc. 的商标。其他公司和产品名称可能是其各自所有者的商标。