



Manage network IPspaces

ONTAP 9.13.1 REST API reference

NetApp
April 02, 2024

Table of Contents

- Manage network IPspaces 1
 - Network ipspaces endpoint overview 1
 - Retrieve IPspaces for a cluster 5
 - Create a new domain with unique IP addresses 10
 - Delete an IPspace object 14
 - Retrieve information about an IPspace 15
 - Update an IPspace object 18

Manage network IPspaces

Network ipspaces endpoint overview

Overview

An IPspace is an addressing domain within which each IP address is unique. The same address may appear in a different IPspace, but the matching addresses are considered to be distinct. SVMs and broadcast domains, and therefore IP interfaces and Ethernet ports, are associated with a single IPspace. This endpoint supports the following operations: GET (collection and instance), POST, PATCH, and DELETE.

Retrieving IPspace information

You can use the IPspaces GET API to retrieve all IPspaces configured in the cluster, including built-in and custom IPspaces, and specifically requested IPspaces.

Examples

Retrieving a list of the IPspaces in the cluster

The following example returns the requested list of IPspaces configured in the cluster.

```
# The API:
/api/network/ipspaces

# The call:
curl -X GET "https://<mgmt-ip>/api/network/ipspaces?fields=*" -H "accept:
application/hal+json"

# The response:
{
  "records": [
    {
      "uuid": "dcc7e79c-5acc-11e8-b9de-005056b42b32",
      "name": "Default",
      "_links": {
        "self": {
          "href": "/api/network/ipspaces/dcc7e79c-5acc-11e8-b9de-
005056b42b32"
        }
      }
    },
    {
      "uuid": "dfd3c1b2-5acc-11e8-b9de-005056b42b32",
      "name": "Cluster",
      "_links": {
        "self": {
```

```
    "href": "/api/network/ipspaces/dfd3c1b2-5acc-11e8-b9de-005056b42b32"
  }
}
},
{
  "uuid": "dedec1be-5aec-1eee-beee-0eee56be2b3e",
  "name": "IpSPACE1",
  "_links": {
    "self": {
      "href": "/api/network/ipspaces/dedec1be-5aec-1eee-beee-0eee56be2b3e"
    }
  }
}
],
"num_records": 3,
"_links": {
  "self": {
    "href": "/api/network/ipspaces?fields=*"
  }
}
}
```

Retrieving a specific IPspace in the cluster

The following example returns the specific IPspace requested. The system returns an error if there is no IPspace with the requested UUID.

```
# The API:
/api/network/ipspaces/{uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/network/ipspaces/dfd3c1b2-5acc-11e8-
b9de-005056b42b32?fields=*" -H "accept: application/hal+json"

# The response:
{
  "uuid": "dcc7e79c-5acc-11e8-b9de-005056b42b32",
  "name": "Default",
  "_links": {
    "self": {
      "href": "/api/network/ipspaces/dcc7e79c-5acc-11e8-b9de-005056b42b32"
    }
  }
}
```

Creating IPspaces

You can use the network IPspaces POST API to create IPspaces.

Example

Creating an IPspace

The following output displays the record returned after the creation of an IPspace with the name "ipspace1".

```
# The API:
/api/network/ipspaces

# The call:
curl -X POST "https://<mgmt-ip>/api/network/ipspaces?return_records=true"
-H "accept: application/hal+json" -d '{"name": "ipspace2"}'

# The response:
{
  "num_records": 1,
  "records": [
    {
      "uuid": "4165655e-0528-11e9-bd68-005056bb046a",
      "name": "ipspace2",
      "_links": {
        "self": {
          "href": "/api/network/ipspaces/4165655e-0528-11e9-bd68-005056bb046a"
        }
      }
    }
  ]
}
```

Updating IPspaces

You can use the IPspaces PATCH API to update the attributes of the IPspace.

Example

Updating the name of an IPspace

The following PATCH request is used to update the name of the IPspace from "ipspace2" to "ipspace20".

```
# The API:
/api/network/ipspaces/{uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/network/ipspaces/4165655e-0528-11e9-
bd68-005056bb046a" -H "accept: application/hal+json" -d "{ \"name\":
\"ipspace20\"}"
```

Deleting IPspaces

You can use the IPspaces DELETE API to delete an IPspace.

Example

Deleting an IPspace

The following DELETE request is used to delete an IPspace.

```
# The API:
/api/network/ipspaces/{uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/network/ipspaces/4165655e-0528-11e9-
bd68-005056bb046a" -H "accept: application/hal+json" -H "Content-Type:
application/json"
```

Retrieve IPspaces for a cluster

GET /network/ipspaces

Introduced In: 9.6

Retrieves a collection of IPspaces for the entire cluster.

Related ONTAP commands

- network ipspace show

Parameters

Name	Type	In	Required	Description
name	string	query	False	Filter by name
uuid	string	query	False	Filter by uuid
fields	array[string]	query	False	Specify the fields to return.
max_records	integer	query	False	Limit the number of records returned.
return_records	boolean	query	False	The default is true for GET calls. When set to false, only the number of records is returned. <ul style="list-style-type: none">• Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. <ul style="list-style-type: none">• Default value: 1• Max value: 120• Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
num_records	integer	Number of records
records	array[ipSPACE]	

Example response

```

{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "ipSPACE1",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  }
}

```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
next	href	
self	href	

_links

Name	Type	Description
self	href	

ipospace

Name	Type	Description
_links	_links	
name	string	IPspace name
uuid	string	The UUID that uniquely identifies the IPspace.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

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

Create a new domain with unique IP addresses

POST /network/ipspaces

Introduced In: 9.6

Creates a new domain within which IP addresses are unique. SVMs, ports, and networks are scoped to a single IPspace.

Required properties

- name - Name of the IPspace to create.

Related ONTAP commands

- `network ipspace create`

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. <ul style="list-style-type: none"> • Default value:

Request Body

Name	Type	Description
_links	_links	
name	string	IPspace name
uuid	string	The UUID that uniquely identifies the IPspace.

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourceLink"
    }
  },
  "name": "ipSpace1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
```

Response

Status: 201, Created

Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
1966586	The specified IPspace name is invalid because it is already used by a peered SVM.
1967102	A POST operation might have left the configuration in an inconsistent state. Check the configuration.

ONTAP Error Response Codes

Error Code	Description
9240588	The name is too long.
9240589	Invalid character in name.
9240590	The name is reserved by the system.

Error Code	Description
9240591	The name is not valid. The name is already in use by a cluster node, Vserver, or it is the name of the local cluster.

Name	Type	Description
error	error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

ipspace

Name	Type	Description
_links	_links	
name	string	IPspace name
uuid	string	The UUID that uniquely identifies the IPspace.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

Delete an IPspace object

DELETE /network/ipspaces/{uuid}

Introduced In: 9.6

Deletes an IPspace object.

Related ONTAP commands

- `network ipspace delete`

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	IPspace UUID

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
1966407	Cannot delete an IPspace with an existing broadcast domain.

Name	Type	Description
error	error	

Example error

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

Definitions

See Definitions

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

Retrieve information about an IPspace

GET /network/ipspaces/{uuid}

Introduced In: 9.6

Retrieves information about a specific IPspace.

Related ONTAP commands

- `network ipspace show`

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	IPspace UUID
fields	array[string]	query	False	Specify the fields to return.

Response

Status: 200, Ok

Name	Type	Description
_links	_links	
name	string	IPspace name
uuid	string	The UUID that uniquely identifies the IPspace.

Example response

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "name": "ipspace1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
```

Error

Status: Default, Error

Name	Type	Description
error	error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

Update an IPspace object

PATCH /network/ipspaces/{uuid}

Introduced In: 9.6

Updates an IPspace object.

Related ONTAP commands

- `network ipspace rename`

Parameters

Name	Type	In	Required	Description
uuid	string	path	True	IPspace UUID

Request Body

Name	Type	Description
_links	_links	
name	string	IPspace name
uuid	string	The UUID that uniquely identifies the IPspace.

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resource/link"
    }
  },
  "name": "ipspace1",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
}
```

Response

Status: 200, Ok

Error

Status: Default

ONTAP Error Response Codes

Error Code	Description
1377259	System-defined IPspaces cannot be modified or removed.

Name	Type	Description
error	error	

Example error

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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

ipspace

Name	Type	Description
_links	_links	
name	string	IPspace name
uuid	string	The UUID that uniquely identifies the IPspace.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

error

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

Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.