# NetApp

# Name-services

ONTAP 9.7 REST API reference

NetApp
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# Name-services

## Name-services overview

### Overview

ONTAP uses name-services to obtain information about users and clients. This information is used to authenticate users accessing data on or administering the storage system, and to map user credentials in a mixed environment. If the user database is stored in NIS or LDAP servers, NIS and LDAP name services need to be configured in ONTAP. DNS is used for resolving the hostnames. ns-switch is used to configure the SVMs with sources to search for network information and the order in which to search them.

# Manage DNS configurations

## Name-services dns endpoint overview

### Overview

Displays DNS information and controls the DNS subsytem. DNS domain name and DNS servers are required parameters.

### Retrieving DNS information

The DNS GET endpoint retrieves all of the DNS configurations for data SVMs. DNS configuration for the cluster is retrieved via /api/cluster .

### Examples

**Retrieving all of the fields for all of the DNS configurations**

```
# The API:
/api/name-services/dns

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

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
      "name": "vs1"
      "_links": {
        "self": {
          "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
        }
```

```
      }
    },
    "domains": [
      "domainA.example.com"
    ],
    "servers": [
      "10.10.10.10"
    ]
    "_links": {
      "self": {
        "href": "/api/name-services/dns/179d3c85-7053-11e8-b9b8-
005056b41bd1"
      }
    }
  },
  {
    "svm": {
      "uuid": "19076d35-6e27-11e8-b9b8-005056b41bd1",
      "name": "vs2"
      "_links": {
        "self": {
          "href": "/api/svm/svms/19076d35-6e27-11e8-b9b8-005056b41bd1"
        }
      }
    },
    "domains": [
      "sample.example.com"
    ],
    "servers": [
      "11.11.11.11",
      "22.22.22.22",
      "33.33.33.33"
    ]
    "_links": {
      "self": {
        "href": "/api/name-services/dns/19076d35-6e27-11e8-b9b8-
005056b41bd1"
      }
    }
  }
],
"num_records": 2
"_links": {
  "self": {
    "href": "/api/name-services/dns?fields=*"
  }
```

```
}
}
```

**Retrieving all DNS configurations whose domain name starts with** *dom\**.

```
# The API:
/api/name-services/dns

# The call:
curl -X GET "https://<mgmt-ip>/api/name-services/dns?domains=dom*" -H
"accept: application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
      "name": "vs1"
      "_links": {
        "self": {
          "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
        }
      }
    },
    "domains": [
      "domainA.example.com"
    ]
    "_links": {
      "self": {
        "href": "/api/name-services/dns/179d3c85-7053-11e8-b9b8-
005056b41bd1"
      }
    }
  }
],
"num_records": 1
"_links": {
  "self": {
    "href": "/api/name-services/dns?domains=dom*"
  }
}
}
```

**Retrieving the DNS configuration for a specific SVM**

```
# The API:
/api/name-services/dns/{svm.uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/name-services/dns/179d3c85-7053-11e8-
b9b8-005056b41bd1" -H "accept: application/hal+json"

# The response:
{
"svm": {
   "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
   "name": "vs1"
   "_links": {
     "self": {
       "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
     }
   }
},
"domains": [
   "domainA.example.com"
],
"servers": [
   "10.10.10.10"
]
"_links": {
   "self": {
     "href": "/api/name-services/dns/179d3c85-7053-11e8-b9b8-005056b41bd1"
   }
}
}
```

## Creating a DNS configuration

The DNS POST endpoint creates a DNS configuration for the specified SVM.

### Example

The following example shows a POST operation:

```
# The API:
/api/name-services/dns

# The call:
    curl -X POST "https://<mgmt-ip>/api/name-services/dns" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{ \"svm\": {
\"uuid\": \"179d3c85-7053-11e8-b9b8-005056b41bd1\" }, \"domains\": [
\"domainA.example.com\" ], \"servers\": [ \"10.10.10.10\" ]}"
```

**Updating a DNS configuration**

The DNS PATCH endpoint updates the DNS configuration for the specified SVM.

**Examples**

**Updating both the DNS domains and servers**

```
# The API:
/api/name-services/dns/{svm.uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/name-services/dns/179d3c85-7053-11e8-
b9b8-005056b41bd1" -H "accept: application/hal+json" -H "Content-Type:
application/json" -d "{ \"domains\": [ \"domainA.example.com\",
\"domainB.example.com\" ], \"servers\": [ \"10.10.10.10\", \"10.10.10.11\"
]}"
```

**Updating the DNS servers only**

```
# The API:
/api/name-services/dns/{svm.uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/name-services/dns/179d3c85-7053-11e8-
b9b8-005056b41bd1" -H "accept: application/hal+json" -H "Content-Type:
application/json" -d "{ \"servers\": [ \"10.10.10.10\" ]}"
```

**Deleting a DNS configuration**

The DNS DELETE endpoint deletes the DNS configuration for the specified SVM.

**Example**

The following example shows a DELETE operation.

```
# The API:
/api/name-services/dns/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/name-services/dns/179d3c85-7053-
11e8-b9b8-005056b41bd1" -H "accept: application/hal+json"
```

## Retrieve DNS configurations for all SVMs

GET `/name-services/dns`

Retrieves the DNS configurations of all data SVMs. DNS configuration for the cluster is retrieved and managed via [/api/cluster](#) .

### Related ONTAP commands

- `vserver services name-service dns show`
- `vserver services name-service dns check`

### Learn more

- [DOC /name-services/dns](#)

### Parameters

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| domains | string | query | False | Filter by domains |
| servers | string | query | False | Filter by servers |
| svm.uuid | string | query | False | Filter by svm.uuid |
| svm.name | string | query | False | Filter by svm.name |
| 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. |

| Name | Type | In | Required | Description |
|---|---|---|---|---|
| return_timeout | integer | query | False | The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. |
| 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 DNS domain records |
| records | array[dns] | |

**Example response**

```json
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "domains": [
      "example.com",
      "example2.example3.com"
    ],
    "servers": [
      "10.224.65.20",
      "2001:db08:a0b:12f0::1"
    ],
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}
```

**Error**

```
Status: Default, Error
```

| Name | Type | Description |
|------|------|-------------|
| error | error | |

**Example error**

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

**Definitions**

**See Definitions**

href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|------|-------------|
| next | href | |
| self | href | |

_links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

svm

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

dns

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |

| Name | Type | Description |
|------|------|-------------|
| domains | array[string] | A list of DNS domains. Domain names have the following requirements:<br><br>• The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_".<br><br>• The first character of each label, delimited by ".", must be one of the following characters: A through Z or a through z or 0 through 9.<br><br>• The last character of each label, delimited by ".", must be one of the following characters: A through Z, a through z, or 0 through 9.<br><br>• The top level domain must contain only the following characters: A through Z, a through z.<br><br>• The system reserves the following names:"all", "local", and "localhost". |
| servers | array[string] | The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses. |
| svm | svm | |

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 |

| Name | Type | Description |
|---|---|---|
| message | string | Error message |
| target | string | The target parameter that caused the error. |

## Create DNS domain and server configurations

POST `/name-services/dns`

Creates DNS domain and server configurations for an SVM.

**Important notes**

- Each SVM can have only one DNS configuration.
- The domain name and the servers fields cannot be empty.
- IPv6 must be enabled if IPv6 family addresses are specified in the `servers` field.
- Configuring more than one DNS server is recommended to avoid a single point of failure.
- The DNS server specified using the `servers` field is validated during this operation.

The validation fails in the following scenarios:

1. The server is not a DNS server.
2. The server does not exist.
3. The server is unreachable.

**Learn more**

- DOC /name-services/dns

**Parameters**

| Name | Type | In | Required | Description |
|---|---|---|---|---|
| return_records | boolean | query | False | The default is false. If set to true, the records are returned. |

**Request Body**

| Name | Type | Description |
|---|---|---|
| _links | _links | |

| Name | Type | Description |
|------|------|-------------|
| domains | array[string] | A list of DNS domains. Domain names have the following requirements:<br><br>• The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_".<br><br>• The first character of each label, delimited by ".", must be one of the following characters: A through Z or a through z or 0 through 9.<br><br>• The last character of each label, delimited by ".", must be one of the following characters: A through Z, a through z, or 0 through 9.<br><br>• The top level domain must contain only the following characters: A through Z, a through z.<br><br>• The system reserves the following names:"all", "local", and "localhost". |
| servers | array[string] | The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses. |
| svm | svm | |

**Example request**

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "domains": [
    "example.com",
    "example2.example3.com"
  ],
  "servers": [
    "10.224.65.20",
    "2001:db08:a0b:12f0::1"
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Response**

```
Status: 201, Created
```

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| num_records | integer | Number of DNS domain records |
| records | array[dns] | |

**Example response**

```json
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "domains": [
      "example.com",
      "example2.example3.com"
    ],
    "servers": [
      "10.224.65.20",
      "2001:db08:a0b:12f0::1"
    ],
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}
```

**Error**

```
Status: Default
```

ONTAP Error Response Codes

| Error Code | Description |
| --- | --- |
| 2621706 | The specified SVM UUID is incorrect for the specified SVM name |
| 8847360 | Only admin or data SVMs allowed |
| 8847361 | Exceeded the maximum number of domains allowed. Maximum of six domains only |
| 8847362 | Exceeded the maximum number of name servers allowed. Maximum of three name servers only |
| 8847392 | Domain name cannot be an IP address |
| 8847393 | Top level domain name is invalid |
| 8847399 | One or more of the specified DNS servers do not exist or cannot be reached |
| 8847394 | FQDN name violated the limitations |
| 9240587 | FQDN name cannot be empty |
| 9240588 | FQDN name is too long. Maximum supported length: 255 characters |
| 9240590 | FQDN name is reserved. Following names are reserved: "all", "local" and "localhost" |
| 9240607 | One of the FQDN labels is too long. Maximum supported length: 63 characters |
| 13434916 | The SVM is in the process of being created. Wait a few minutes, and then try the command again. |
| 23724130 | Cannot use an IPv6 name server address because there are no IPv6 LIFs |

| Name | Type | Description |
| --- | --- | --- |
| error | error | |

**Example error**

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

**Definitions**

**See Definitions**

href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

svm

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

dns

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |

| Name | Type | Description |
|------|------|-------------|
| domains | array[string] | A list of DNS domains. Domain names have the following requirements:<br><br>• The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_".<br><br>• The first character of each label, delimited by ".", must be one of the following characters: A through Z or a through z or 0 through 9.<br><br>• The last character of each label, delimited by ".", must be one of the following characters: A through Z, a through z, or 0 through 9.<br><br>• The top level domain must contain only the following characters: A through Z, a through z.<br><br>• The system reserves the following names:"all", "local", and "localhost". |
| servers | array[string] | The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses. |
| svm | svm | |

_links

| Name | Type | Description |
|------|------|-------------|
| next | href | |
| 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. |

## Delete a DNS domain configuration

DELETE /name-services/dns/{svm.uuid}

Deletes DNS domain configuration of the specified SVM.

**Related ONTAP commands**

- `vserver services name-service dns delete`

**Learn more**

- DOC /name-services/dns

**Parameters**

| Name | Type | In | Required | Description |
|---|---|---|---|---|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |

**Response**

```
Status: 200, Ok
```

**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**

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 DNS domain and server configurations

GET `/name-services/dns/{svm.uuid}`

Retrieves DNS domain and server configuration of an SVM. By default, both DNS domains and servers are displayed. DNS configuration for the cluster is retrieved and managed via /api/cluster .

## Related ONTAP commands

- `vserver services name-service dns show`

- `vserver services name-service dns check`

## Learn more

- [DOC /name-services/dns](#)

## Parameters

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |
| fields | array[string] | query | False | Specify the fields to return. |

## Response

```
Status: 200, Ok
```

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |

| Name | Type | Description |
|------|------|-------------|
| domains | array[string] | A list of DNS domains. Domain names have the following requirements:<br><br>• The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_".<br><br>• The first character of each label, delimited by ".", must be one of the following characters: A through Z or a through z or 0 through 9.<br><br>• The last character of each label, delimited by ".", must be one of the following characters: A through Z, a through z, or 0 through 9.<br><br>• The top level domain must contain only the following characters: A through Z, a through z.<br><br>• The system reserves the following names:"all", "local", and "localhost". |
| servers | array[string] | The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses. |
| svm | svm | |

**Example response**

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "domains": [
    "example.com",
    "example2.example3.com"
  ],
  "servers": [
    "10.224.65.20",
    "2001:db08:a0b:12f0::1"
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Error**

```
Status: Default, Error
```

| Name | Type | Description |
|------|------|-------------|
| error | error | |

**Example error**

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

**Definitions**

**See Definitions**

href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

svm

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

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 DNS domain and server configurations

PATCH /name-services/dns/{svm.uuid}

Updates DNS domain and server configurations of an SVM.

**Important notes**

- Both DNS domains and servers can be modified.
- The domains and servers fields cannot be empty.
- IPv6 must be enabled if IPv6 family addresses are specified for the `servers` field.
- The DNS server specified using the `servers` field is validated during this operation.

The validation fails in the following scenarios:

1. The server is not a DNS server.
2. The server does not exist.
3. The server is unreachable.

**Learn more**

- DOC /name-services/dns

**Parameters**

| Name | Type | In | Required | Description |
| --- | --- | --- | --- | --- |
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |

**Request Body**

| Name | Type | Description |
| --- | --- | --- |
| _links | _links | |

| Name | Type | Description |
|---|---|---|
| domains | array[string] | A list of DNS domains. Domain names have the following requirements:<br><br>• The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_".<br><br>• The first character of each label, delimited by ".", must be one of the following characters: A through Z or a through z or 0 through 9.<br><br>• The last character of each label, delimited by ".", must be one of the following characters: A through Z, a through z, or 0 through 9.<br><br>• The top level domain must contain only the following characters: A through Z, a through z.<br><br>• The system reserves the following names:"all", "local", and "localhost". |
| servers | array[string] | The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses. |
| svm | svm | |

**Example request**

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "domains": [
    "example.com",
    "example2.example3.com"
  ],
  "servers": [
    "10.224.65.20",
    "2001:db08:a0b:12f0::1"
  ],
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Response**

```
Status: 200, Ok
```

**Error**

```
Status: Default
```

ONTAP Error Response Codes

| Error Code | Description |
| --- | --- |
| 8847360 | Only admin or data SVMs allowed |
| 8847361 | Exceeded the maximum number of domains allowed. Maximum of six domains only |

| Error Code | Description |
|---|---|
| 8847362 | Exceeded the maximum number of name servers allowed. Maximum of three name servers only |
| 8847392 | Domain name cannot be an IP address |
| 8847393 | Top level domain name is invalid |
| 8847394 | FQDN name voilated the limitations |
| 8847399 | One or more of the specified DNS servers do not exist or cannot be reached |
| 9240587 | FQDN name cannot be empty |
| 9240588 | FQDN name is too long. Maximum supported length: 255 characters |
| 9240590 | FQDN name is reserved. Following names are reserved: "all", "local" and "localhost" |
| 9240607 | One of the FQDN labels is too long. Maximum supported length: 63 characters |
| 23724130 | Cannot use an IPv6 name server address because there are no IPv6 LIFs |

| 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 | |

svm

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

dns

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |

| Name | Type | Description |
|---|---|---|
| domains | array[string] | A list of DNS domains. Domain names have the following requirements:<br><br>• The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_".<br><br>• The first character of each label, delimited by ".", must be one of the following characters: A through Z or a through z or 0 through 9.<br><br>• The last character of each label, delimited by ".", must be one of the following characters: A through Z, a through z, or 0 through 9.<br><br>• The top level domain must contain only the following characters: A through Z, a through z.<br><br>• The system reserves the following names:"all", "local", and "localhost". |
| servers | array[string] | The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses. |
| svm | svm | |

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 |

| Name | Type | Description |
|------|------|-------------|
| message | string | Error message |
| target | string | The target parameter that caused the error. |

# Manage LDAP server configurations

## Name-services LDAP endpoint overview

### Overview

LDAP servers are used to centrally maintain user information. LDAP configurations must be set up to lookup information stored in the LDAP directory on the external LDAP servers. This API is used to retrieve and manage LDAP server configurations.

### Retrieving LDAP information

The LDAP GET endpoint retrieves all of the LDAP configurations in the cluster.

### Examples

**Retrieving all of the fields for all LDAP configurations**

```
# The API:
/api/name-services/ldap

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

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
      "name": "vs1"
      "_links": {
        "self": {
          "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
        }
      }
    },
```

```
    "servers": [
      "10.10.10.10",
      "domainB.example.com"
    ],
    "schema": "ad_idmu",
    "port": 389,
    "min_bind_level": "anonymous",
    "bind_dn": "cn=Administrators,cn=users,dc=domainA,dc=example,dc=com",
    "base_dn": "dc=domainA,dc=example,dc=com",
    "base_scope": "subtree",
    "use_start_tls": true,
    "session_security": "none",
    "_links": {
      "self": {
        "href": "/api/name-services/ldap/179d3c85-7053-11e8-b9b8-
005056b41bd1"
      }
    }
  },
  {
    "svm": {
      "uuid": "6a52023b-7066-11e8-b9b8-005056b41bd1",
      "name": "vs2"
      "_links": {
        "self": {
          "href": "/api/svm/svms/6a52023b-7066-11e8-b9b8-005056b41bd1"
        }
      }
    },
    "servers": [
      "11.11.11.11"
    ],
    "schema": "rfc_2307",
    "port": 389,
    "min_bind_level": "simple",
    "bind_dn": "cn=Administrators,cn=users,dc=domainB,dc=example,dc=com",
    "base_dn": "dc=domainB,dc=example,dc=com",
    "base_scope": "subtree",
    "use_start_tls": true,
    "session_security": "sign",
    "_links": {
      "self": {
        "href": "/api/name-services/ldap/6a52023b-7066-11e8-b9b8-
005056b41bd1"
      }
    }
```

```
    }
  ],
  "num_records": 2,
  "_links": {
    "self": {
      "href": "/api/name-services/ldap?fields=*"
    }
  }
}
```

**Retrieving all of the LDAP configurations that have the** *use_start_tls* **set to** *true*

```
# The API:
/api/name-services/ldap

# The call:
curl -X GET "https://<mgmt-ip>/api/name-services/ldap?use_start_tls=true"
-H "accept: application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "6a52023b-7066-11e8-b9b8-005056b41bd1",
      "name": "vs2"
      "_links": {
        "self": {
          "href": "/api/svm/svms/6a52023b-7066-11e8-b9b8-005056b41bd1"
        }
      }
    },
    "use_start_tls": true,
    "_links": {
      "self": {
        "href": "/api/name-services/ldap/6a52023b-7066-11e8-b9b8-
005056b41bd1"
      }
    }
  }
],
"num_records": 1,
"_links": {
  "self": {
    "href": "/api/name-services/ldap?use_start_tls=true"
  }
}
}
```

**Retrieving the LDAP configuration of a specific SVM**

```
# The API:
/api/name-services/ldap/{svm.uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/name-services/ldap/179d3c85-7053-11e8-
b9b8-005056b41bd1" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
  "name": "vs1"
  "_links": {
    "self": {
      "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
    }
  }
},
"servers": [
  "10.10.10.10",
  "domainB.example.com"
],
"schema": "ad_idmu",
"port": 389,
"min_bind_level": "anonymous",
"bind_dn": "cn=Administrators,cn=users,dc=domainA,dc=example,dc=com",
"base_dn": "dc=domainA,dc=example,dc=com",
"base_scope": "subtree",
"use_start_tls": true,
"session_security": "none",
"_links": {
  "self": {
    "href": "/api/name-services/ldap/179d3c85-7053-11e8-b9b8-005056b41bd1"
  }
}
}
```

**Creating an LDAP configuration**

The LDAP POST endpoint creates an LDAP configuration for the specified SVM.

**Examples**

**Creating an LDAP configuration with all the fields specified**

```
# The API:
/api/name-services/ldap

# The call:
curl -X POST "https://<mgmt-ip>/api/name-services/ldap" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{ \"svm\": {
\"uuid\": \"179d3c85-7053-11e8-b9b8-005056b41bd1\" }, \"servers\": [
\"10.10.10.10\"\, \"domainB.example.com\" ], \"schema\": \"ad_idmu\",
\"port\": 389, \"min_bind_level\": \"anonymous\", \"bind_dn\":
\"cn=Administrators,cn=users,dc=domainA,dc=example,dc=com\",
\"bind_password\": \"abc\", \"base_dn\": \"dc=domainA,dc=example,dc=com\",
\"base_scope\": \"subtree\", \"use_start_tls\": false,
\"session_security\": \"none\"}"
```

**Creating an LDAP configuration with Active Directory domain and preferred Active Directory servers specified**

```
# The API:
/api/name-services/ldap

# The call:
curl -X POST "https://<mgmt-ip>/api/name-services/ldap" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{ \"svm\": {
\"name\": \"vs2\" }, \"ad_domain\": \"domainA.example.com\",
\"preferred_ad_servers\": [ \"11.11.11.11\" ], \"port\": 389, \"bind_dn\":
\"cn=Administrators,cn=users,dc=domainA,dc=example,dc=com\",
\"bind_password\": \"abc\", \"base_dn\": \"dc=domainA,dc=example,dc=com\",
\"session_security\": \"none\"}"
```

**Creating an LDAP configuration with a number of optional fields not specified**

```
# The API:
/api/name-services/ldap

# The call:
curl -X POST "https://<mgmt-ip>/api/name-services/ldap" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{ \"svm\": {
\"name\": \"vs2\" }, \"servers\": [ \"11.11.11.11\" ], \"port\": 389,
\"bind_dn\": \"cn=Administrators,cn=users,dc=domainA,dc=example,dc=com\",
\"bind_password\": \"abc\", \"base_dn\": \"dc=domainA,dc=example,dc=com\",
\"session_security\": \"none\"}"
```

**Updating an LDAP configuration**

The LDAP PATCH endpoint updates the LDAP configuration for the specified SVM. The following example shows a PATCH operation:

```
# The API:
/api/name-services/ldap/{svm.uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/name-services/ldap/179d3c85-7053-
11e8-b9b8-005056b41bd1" -H "accept: application/json" -H "Content-Type:
application/json" -d "{ \"servers\": [ \"55.55.55.55\" ], \"schema\":
\"ad_idmu\", \"port\": 636, \"use_start_tls\": false }"
```

**Deleting an LDAP configuration**

The LDAP DELETE endpoint deletes the LDAP configuration for the specified SVM. The following example shows a DELETE operation:

```
# The API:
/api/name-services/ldap/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/name-services/ldap/179d3c85-7053-
11e8-b9b8-005056b41bd1" -H "accept: application/hal+json"
```

# Retrieve an LDAP configuration for all SVMs

GET `/name-services/ldap`

Retrieves the LDAP configurations for all SVMs.

**Learn more**

- [DOC /name-services/ldap](#)

**Parameters**

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| use_start_tls | boolean | query | False | Filter by use_start_tls |
| schema | string | query | False | Filter by schema |
| port | integer | query | False | Filter by port |
| ad_domain | string | query | False | Filter by ad_domain |
| session_security | string | query | False | Filter by session_security |
| min_bind_level | string | query | False | Filter by min_bind_level |
| servers | string | query | False | Filter by servers |
| bind_dn | string | query | False | Filter by bind_dn |
| preferred_ad_servers | string | query | False | Filter by preferred_ad_servers |
| base_scope | string | query | False | Filter by base_scope |
| base_dn | string | query | False | Filter by base_dn |
| svm.uuid | string | query | False | Filter by svm.uuid |
| svm.name | string | query | False | Filter by svm.name |
| fields | array[string] | query | False | Specify the fields to return. |

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| 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. |
| 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. |
| 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 LDAP records. |
| records | array[ldap_service] | |

**Example response**

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "base_scope": "base",
    "min_bind_level": "anonymous",
    "port": 389,
    "preferred_ad_servers": {
    },
    "servers": {
    },
    "session_security": "none",
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}
```

**Error**

```
Status: Default, Error
```

| Name | Type | Description |
|------|------|-------------|
| error | error | |

**Example error**

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

**Definitions**

**See Definitions**

href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|------|-------------|
| next | href | |
| self | href | |

_links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

svm

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

ldap_service

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| ad_domain | string | This parameter specifies the name of the Active Directory domain used to discover LDAP servers for use by this client. This is mutually exclusive with `servers` during POST and PATCH. |
| base_dn | string | Specifies the default base DN for all searches. |

| Name | Type | Description |
|------|------|-------------|
| base_scope | string | Specifies the default search scope for LDAP queries:<br><br>• base - search the named entry only<br><br>• onelevel - search all entries immediately below the DN<br><br>• subtree - search the named DN entry and the entire subtree below the DN |
| bind_dn | string | Specifies the user that binds to the LDAP servers. |
| bind_password | string | Specifies the bind password for the LDAP servers. |
| min_bind_level | string | The minimum bind authentication level. Possible values are:<br><br>• anonymous - anonymous bind<br><br>• simple - simple bind<br><br>• sasl - Simple Authentication and Security Layer (SASL) bind |
| port | integer | The port used to connect to the LDAP Servers. |
| preferred_ad_servers | array[string] | |
| schema | string | The name of the schema template used by the SVM.<br><br>• AD-IDMU - Active Directory Identity Management for UNIX<br><br>• AD-SFU - Active Directory Services for UNIX<br><br>• MS-AD-BIS - Active Directory Identity Management for UNIX<br><br>• RFC-2307 - Schema based on RFC 2307<br><br>• Custom schema |

| Name | Type | Description |
|------|------|-------------|
| servers | array[string] | |
| session_security | string | Specifies the level of security to be used for LDAP communications:<br><br>• none - no signing or sealing<br><br>• sign - sign LDAP traffic<br><br>• seal - seal and sign LDAP traffic |
| svm | svm | |
| use_start_tls | boolean | Specifies whether or not to use Start TLS over LDAP connections. |

error_arguments

| Name | Type | Description |
|------|------|-------------|
| code | string | Argument code |
| message | string | Message argument |

error

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

# Create an LDAP configuration for an SVM

POST `/name-services/ldap`

Creates an LDAP configuration for an SVM.

**Important notes**

- Each SVM can have one LDAP configuration.

- The LDAP servers and Active Directory domain are mutually exclusive fields. These fields cannot be empty. At any point in time, either the LDAP servers or Active Directory domain must be populated.

- LDAP configuration with Active Directory domain cannot be created on an admin SVM.

- IPv6 must be enabled if IPv6 family addresses are specified.

**The following parameters are optional:**

- preferred AD servers

- schema

- port

- min_bind_level

- bind_password

- base_scope

- use_start_tls

- session_security

Configuring more than one LDAP server is recommended to avoid a single point of failure. Both FQDNs and IP addresses are supported for the "servers" field. The Acitve Directory domain or LDAP servers are validated as part of this operation.

LDAP validation fails in the following scenarios:

1. The server does not have LDAP installed.

2. The server or Active Directory domain is invalid.

3. The server or Active Directory domain is unreachable.

**Learn more**

- DOC /name-services/ldap

**Parameters**

| Name | Type | In | Required | Description |
|------|------|----|----------|-------------|
| return_records | boolean | query | False | The default is false. If set to true, the records are returned. |

**Request Body**

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |

| Name | Type | Description |
|---|---|---|
| ad_domain | string | This parameter specifies the name of the Active Directory domain used to discover LDAP servers for use by this client. This is mutually exclusive with `servers` during POST and PATCH. |
| base_dn | string | Specifies the default base DN for all searches. |
| base_scope | string | Specifies the default search scope for LDAP queries:<br><br>• base - search the named entry only<br><br>• onelevel - search all entries immediately below the DN<br><br>• subtree - search the named DN entry and the entire subtree below the DN |
| bind_dn | string | Specifies the user that binds to the LDAP servers. |
| bind_password | string | Specifies the bind password for the LDAP servers. |
| min_bind_level | string | The minimum bind authentication level. Possible values are:<br><br>• anonymous - anonymous bind<br><br>• simple - simple bind<br><br>• sasl - Simple Authentication and Security Layer (SASL) bind |
| port | integer | The port used to connect to the LDAP Servers. |
| preferred_ad_servers | array[string] | |

| Name | Type | Description |
|------|------|-------------|
| schema | string | The name of the schema template used by the SVM. <br><br> • AD-IDMU - Active Directory Identity Management for UNIX <br><br> • AD-SFU - Active Directory Services for UNIX <br><br> • MS-AD-BIS - Active Directory Identity Management for UNIX <br><br> • RFC-2307 - Schema based on RFC 2307 <br><br> • Custom schema |
| servers | array[string] | |
| session_security | string | Specifies the level of security to be used for LDAP communications: <br><br> • none - no signing or sealing <br><br> • sign - sign LDAP traffic <br><br> • seal - seal and sign LDAP traffic |
| svm | svm | |
| use_start_tls | boolean | Specifies whether or not to use Start TLS over LDAP connections. |

**Example request**

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "base_scope": "base",
  "min_bind_level": "anonymous",
  "port": 389,
  "preferred_ad_servers": {
  },
  "servers": {
  },
  "session_security": "none",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Response**

```
Status: 201, Created
```

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| num_records | integer | Number of LDAP records. |
| records | array[ldap_service] | |

**Example response**

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "base_scope": "base",
    "min_bind_level": "anonymous",
    "port": 389,
    "preferred_ad_servers": {
    },
    "servers": {
    },
    "session_security": "none",
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}
```

**Error**

```
Status: Default
```

ONTAP Error Response Codes

| Error Code | Description |
|---|---|
| 262186 | LDAP Servers cannot be used with Active Directory domain and/or preferred Acti Directory servers |
| 2621488 | Invalid SVM context |
| 2621706 | The specified SVM UUID is incorrect for the specified SVM name |
| 4915203 | The specified LDAP schema does not exist |
| 4915207 | The specified LDAP servers or preferred Active Directory servers contain duplicate server entries |
| 4915229 | DNS resolution failed due to an internal error. Contact technical support if this issue persists |
| 4915231 | DNS resolution failed for one or more of the specified LDAP servers. Verify that a valid DNS server is configured |
| 23724132 | DNS resolution failed for all the specified LDAP servers. Verify that a valid DNS server is configured |
| 4915234 | The specified LDAP server or preferred Active Directory server is not supported because it is one of the following: multicast, loopback, 0.0.0.0, or broadcast |
| 4915248 | LDAP servers cannot be empty or "-". Specified Active Directory domain is invalid because it is empty or "-" or it contains either the special characters or "-" at the start or end of the domain) |
| 4915251 | STARTTLS and LDAPS cannot be used together |
| 4915257 | The LDAP configuration is invalid. Verify that bind-dn and bind password are correct |
| 4915258 | The LDAP configuration is invalid. Verify that the Active Directory domain or servers are reachable and that the network configuration is correct |
| 4915259 | LDAP configurations with Active Directory domains are not supported on admin SVM. |
| 13434916 | The SVM is in the process of being created. Wait a few minutes, and then try the command again. |
| 23724130 | Cannot use an IPv6 name server address because there are no IPv6 LIFs |

| Name | Type | Description |
|---|---|---|
| error | error | |

**Example error**

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

**Definitions**

**See Definitions**

### href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

### _links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

### svm

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

### ldap_service

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| ad_domain | string | This parameter specifies the name of the Active Directory domain used to discover LDAP servers for use by this client. This is mutually exclusive with `servers` during POST and PATCH. |
| base_dn | string | Specifies the default base DN for all searches. |
| base_scope | string | Specifies the default search scope for LDAP queries:<br><br>• base - search the named entry only<br><br>• onelevel - search all entries immediately below the DN<br><br>• subtree - search the named DN entry and the entire subtree below the DN |

| Name | Type | Description |
|------|------|-------------|
| bind_dn | string | Specifies the user that binds to the LDAP servers. |
| bind_password | string | Specifies the bind password for the LDAP servers. |
| min_bind_level | string | The minimum bind authentication level. Possible values are:<br><br>• anonymous - anonymous bind<br>• simple - simple bind<br>• sasl - Simple Authentication and Security Layer (SASL) bind |
| port | integer | The port used to connect to the LDAP Servers. |
| preferred_ad_servers | array[string] | |
| schema | string | The name of the schema template used by the SVM.<br><br>• AD-IDMU - Active Directory Identity Management for UNIX<br>• AD-SFU - Active Directory Services for UNIX<br>• MS-AD-BIS - Active Directory Identity Management for UNIX<br>• RFC-2307 - Schema based on RFC 2307<br>• Custom schema |
| servers | array[string] | |
| session_security | string | Specifies the level of security to be used for LDAP communications:<br><br>• none - no signing or sealing<br>• sign - sign LDAP traffic<br>• seal - seal and sign LDAP traffic |

| Name | Type | Description |
|------|------|-------------|
| svm | svm | |
| use_start_tls | boolean | Specifies whether or not to use Start TLS over LDAP connections. |

_links

| Name | Type | Description |
|------|------|-------------|
| next | href | |
| 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. |

## Delete the LDAP configuration for an SVM

DELETE /name-services/ldap/{svm.uuid}

Deletes the LDAP configuration of the specified SVM. LDAP can be removed as a source from the ns-switch if LDAP is not used as a source for lookups.

**Learn more**

- DOC /name-services/ldap

## Parameters

| Name | Type | In | Required | Description |
| --- | --- | --- | --- | --- |
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |

## Response

```
Status: 200, Ok
```

## 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**

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 the LDAP configuration for an SVM

GET `/name-services/ldap/{svm.uuid}`

Retrieves LDAP configuration for an SVM. All parameters for the LDAP configuration are displayed by default.

**Learn more**

- DOC /name-services/ldap

**Parameters**

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |
| fields | array[string] | query | False | Specify the fields to return. |

**Response**

```
Status: 200, Ok
```

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| ad_domain | string | This parameter specifies the name of the Active Directory domain used to discover LDAP servers for use by this client. This is mutually exclusive with `servers` during POST and PATCH. |
| base_dn | string | Specifies the default base DN for all searches. |
| base_scope | string | Specifies the default search scope for LDAP queries:<br><br>• base - search the named entry only<br><br>• onelevel - search all entries immediately below the DN<br><br>• subtree - search the named DN entry and the entire subtree below the DN |
| bind_dn | string | Specifies the user that binds to the LDAP servers. |
| bind_password | string | Specifies the bind password for the LDAP servers. |
| min_bind_level | string | The minimum bind authentication level. Possible values are:<br><br>• anonymous - anonymous bind<br><br>• simple - simple bind<br><br>• sasl - Simple Authentication and Security Layer (SASL) bind |
| port | integer | The port used to connect to the LDAP Servers. |
| preferred_ad_servers | array[string] | |

| Name | Type | Description |
|---|---|---|
| schema | string | The name of the schema template used by the SVM. <br><br> • AD-IDMU - Active Directory Identity Management for UNIX <br><br> • AD-SFU - Active Directory Services for UNIX <br><br> • MS-AD-BIS - Active Directory Identity Management for UNIX <br><br> • RFC-2307 - Schema based on RFC 2307 <br><br> • Custom schema |
| servers | array[string] | |
| session_security | string | Specifies the level of security to be used for LDAP communications: <br><br> • none - no signing or sealing <br><br> • sign - sign LDAP traffic <br><br> • seal - seal and sign LDAP traffic |
| svm | svm | |
| use_start_tls | boolean | Specifies whether or not to use Start TLS over LDAP connections. |

**Example response**

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "base_scope": "base",
  "min_bind_level": "anonymous",
  "port": 389,
  "preferred_ad_servers": {
  },
  "servers": {
  },
  "session_security": "none",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Error**

```
Status: Default, Error
```

| Name | Type | Description |
|------|------|-------------|
| error | error | |

**Example error**

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

**Definitions**

### href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

### _links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

### svm

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

### 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 the LDAP configuration for an SVM

PATCH `/name-services/ldap/{svm.uuid}`

Updates an LDAP configuration of an SVM.

**Important notes**

- Both mandatory and optional parameters of the LDAP configuration can be updated.
- The LDAP servers and Active Directory domain are mutually exclusive fields. These fields cannot be empty. At any point in time, either the LDAP servers or Active Directory domain must be populated.
- IPv6 must be enabled if IPv6 family addresses are specified.

Configuring more than one LDAP server is recommended to avoid a sinlge point of failure. Both FQDNs and IP addresses are supported for the "servers" field. The Active Directory domain or LDAP servers are validated as part of this operation.

LDAP validation fails in the following scenarios:

1. The server does not have LDAP installed.
2. The server or Active Directory domain is invalid.
3. The server or Active Directory domain is unreachable

**Learn more**

- DOC /name-services/ldap

**Parameters**

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |

**Request Body**

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| ad_domain | string | This parameter specifies the name of the Active Directory domain used to discover LDAP servers for use by this client. This is mutually exclusive with `servers` during POST and PATCH. |
| base_dn | string | Specifies the default base DN for all searches. |

| Name | Type | Description |
|---|---|---|
| base_scope | string | Specifies the default search scope for LDAP queries:<br><br>• base - search the named entry only<br><br>• onelevel - search all entries immediately below the DN<br><br>• subtree - search the named DN entry and the entire subtree below the DN |
| bind_dn | string | Specifies the user that binds to the LDAP servers. |
| bind_password | string | Specifies the bind password for the LDAP servers. |
| min_bind_level | string | The minimum bind authentication level. Possible values are:<br><br>• anonymous - anonymous bind<br><br>• simple - simple bind<br><br>• sasl - Simple Authentication and Security Layer (SASL) bind |
| port | integer | The port used to connect to the LDAP Servers. |
| preferred_ad_servers | array[string] | |
| schema | string | The name of the schema template used by the SVM.<br><br>• AD-IDMU - Active Directory Identity Management for UNIX<br><br>• AD-SFU - Active Directory Services for UNIX<br><br>• MS-AD-BIS - Active Directory Identity Management for UNIX<br><br>• RFC-2307 - Schema based on RFC 2307<br><br>• Custom schema |
| servers | array[string] | |

| Name | Type | Description |
|---|---|---|
| session_security | string | Specifies the level of security to be used for LDAP communications:<br><br>• none - no signing or sealing<br><br>• sign - sign LDAP traffic<br><br>• seal - seal and sign LDAP traffic |
| svm | svm | |
| use_start_tls | boolean | Specifies whether or not to use Start TLS over LDAP connections. |

**Example request**

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "base_scope": "base",
  "min_bind_level": "anonymous",
  "port": 389,
  "preferred_ad_servers": {
  },
  "servers": {
  },
  "session_security": "none",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Response**

```
Status: 200, Ok
```

**Error**

```
Status: Default
```

ONTAP Error Response Codes

| Error Code | Description |
|---|---|
| 262186 | LDAP Servers cannot be used with Active Directory domain and/or preferred Active Directory servers |
| 2621488 | Invalid SVM context |
| 2621706 | The specified SVM UUID is incorrect for the specified SVM name |
| 4915203 | The specified LDAP schema does not exist |
| 4915208 | The specified LDAP servers or preferred Active Directory servers contain duplicate server entries |
| 4915229 | DNS resolution failed due to an internal error. Contact technical support if this issue persists |
| 4915231 | DNS resolution failed for one or more of the specified LDAP servers. Verify that a valid DNS server is configured |
| 23724132 | DNS resolution failed for all the specified LDAP servers. Verify that a valid DNS server is configured |
| 4915234 | The specified LDAP server or preferred Active Directory server is not supported because it is one of the following: multicast, loopback, 0.0.0.0, or broadcast |
| 4915248 | LDAP servers cannot be empty or "-". Specified Active Directory domain is invalid because it is empty or "-" or it contains either the special characters or "-" at the start or end of the domain. |
| 4915251 | STARTTLS and LDAPS cannot be used together |
| 4915257 | The LDAP configuration is invalid. Verify that the distinguished names and bind password are correct |
| 4915258 | The LDAP configuration is invalid. Verify that the Active Directory domain or servers are reachable and that the network configuration is correct |
| 4915259 | LDAP configurations with Active Directory domains are not supported on admin SVM. |

| Error Code | Description |
|---|---|
| 23724130 | Cannot use an IPv6 name server address because there are no IPv6 LIFs |

| 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 | |

### svm

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

### ldap_service

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| ad_domain | string | This parameter specifies the name of the Active Directory domain used to discover LDAP servers for use by this client. This is mutually exclusive with `servers` during POST and PATCH. |
| base_dn | string | Specifies the default base DN for all searches. |
| base_scope | string | Specifies the default search scope for LDAP queries:<br><br>• base - search the named entry only<br><br>• onelevel - search all entries immediately below the DN<br><br>• subtree - search the named DN entry and the entire subtree below the DN |

| Name | Type | Description |
|------|------|-------------|
| bind_dn | string | Specifies the user that binds to the LDAP servers. |
| bind_password | string | Specifies the bind password for the LDAP servers. |
| min_bind_level | string | The minimum bind authentication level. Possible values are: <ul><li>anonymous - anonymous bind</li><li>simple - simple bind</li><li>sasl - Simple Authentication and Security Layer (SASL) bind</li></ul> |
| port | integer | The port used to connect to the LDAP Servers. |
| preferred_ad_servers | array[string] | |
| schema | string | The name of the schema template used by the SVM. <ul><li>AD-IDMU - Active Directory Identity Management for UNIX</li><li>AD-SFU - Active Directory Services for UNIX</li><li>MS-AD-BIS - Active Directory Identity Management for UNIX</li><li>RFC-2307 - Schema based on RFC 2307</li><li>Custom schema</li></ul> |
| servers | array[string] | |
| session_security | string | Specifies the level of security to be used for LDAP communications: <ul><li>none - no signing or sealing</li><li>sign - sign LDAP traffic</li><li>seal - seal and sign LDAP traffic</li></ul> |

| Name | Type | Description |
|------|------|-------------|
| svm | svm | |
| use_start_tls | boolean | Specifies whether or not to use Start TLS over LDAP connections. |

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. |

# Manage name mappings for SVMs

## Name-services name-mappings endpoint overview

### Overview

Name mapping is used to map CIFS identities to UNIX identities, Kerberos identities to UNIX identities, and UNIX identities to CIFS identities. It needs this information to obtain user credentials and provide proper file access regardless of whether they are connecting from an NFS client or a CIFS client.

The system keeps a set of conversion rules for each Storage Virtual Machine (SVM). Each rule consists of two pieces: a pattern and a replacement. Conversions start at the beginning of the appropriate list and perform a substitution based on the first matching rule. The pattern is a UNIX-style regular expression. The replacement is a string containing escape sequences representing subexpressions from the pattern, as in the UNIX sed program.

Name mappings are applied in the order in which they occur in the priority list; for example, a name mapping that occurs at position 2 in the priority list is applied before a name mapping that occurs at position 3. Each mapping direction (Kerberos-to-UNIX, Windows-to-UNIX, and UNIX-to-Windows) has its own priority list. You are prevented from creating two name mappings with the same pattern.

## Examples

**Creating a name-mapping with client_match as the ip-address**

Use the following API to create a name-mapping. Note the *return_records=true* query parameter is used to obtain the newly created entry in the response.

```
# The API:
POST /api//name-services/name-mappings

# The call:
curl -X POST "https://<mgmt-ip>/api/name-services/name-
mappings?return_records=true" -H "accept: application/json" -H "Content-
Type: application/json" -d "{ \"client_match\": \"10.254.101.111/28\",
\"direction\": \"win_unix\", \"index\": 1, \"pattern\":
\"ENGCIFS_AD_USER\", \"replacement\": \"unix_user1\", \"svm\": { \"name\":
\"vs1\", \"uuid\": \"f71d3640-0226-11e9-8526-000c290a8c4b\" }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "uuid": "f71d3640-0226-11e9-8526-000c290a8c4b",
      "name": "vs1"
    },
    "direction": "win_unix",
    "index": 1,
    "pattern": "ENGCIFS_AD_USER",
    "replacement": "unix_user1",
    "client_match": "10.254.101.111/28"
  }
]
}
```

**Creating a name-mapping with client_match as the hostname**

Use the following API to create a name-mapping. Note the *return_records=true* query parameter is used to obtain the newly created entry in the response.

```
# The API:
POST /api//name-services/name-mappings

# The call:
curl -X POST "https://<mgmt-ip>/api/name-services/name-
mappings?return_records=true" -H "accept: application/json" -H "Content-
Type: applicatio/json" -d "{ \"client_match\": \"google.com\",
\"direction\": \"win_unix\", \"index\": 2, \"pattern\":
\"ENGCIFS_AD_USER\", \"replacement\": \"unix_user1\", \"svm\": { \"name\":
\"vs1\", \"uuid\": \"f71d3640-0226-11e9-8526-000c290a8c4b\" }}"

# The response:
{
"num_records": 1,
"records": [
  {
    "svm": {
      "uuid": "f71d3640-0226-11e9-8526-000c290a8c4b",
      "name": "vs1"
    },
    "direction": "win_unix",
    "index": 2,
    "pattern": "ENGCIFS_AD_USER",
    "replacement": "unix_user1",
    "client_match": "google.com"
  }
]
}
```

**Retrieving all name-mapping configurations for all SVMs in the cluster**

```
# The API:
GET /api/name-services/name-mappings

# The call:
curl -X GET "https://<mgmt-ip>/api/name-services/name-
mappings?fields=*&return_records=true&return_timeout=15" -H "accept:
application/json"

# The response:
{
"records": [
  {
    "svm": {
       "uuid": "f71d3640-0226-11e9-8526-000c290a8c4b",
       "name": "vs1"
    },
    "direction": "win_unix",
    "index": 1,
    "pattern": "ENGCIFS_AD_USER",
    "replacement": "unix_user1",
    "client_match": "10.254.101.111/28"
  },
  {
    "svm": {
       "uuid": "f71d3640-0226-11e9-8526-000c290a8c4b",
       "name": "vs1"
    },
    "direction": "win_unix",
    "index": 2,
    "pattern": "ENGCIFS_AD_USER",
    "replacement": "unix_user1",
    "client_match": "google.com"
  }
],
"num_records": 2
}
```

**Retrieving a name-mapping configuration for a specific SVM, and for the specified direction and index**

```
# The API:
GET /api/name-services/name-mappings/{svm.uuid}/{direction}/{index}

# The call:
curl -X GET "https://<mgmt-ip>/api/name-services/name-mappings/f71d3640-
0226-11e9-8526-000c290a8c4b/win_unix/1" -H "accept: application/json"

# The response:
{
"svm": {
  "uuid": "f71d3640-0226-11e9-8526-000c290a8c4b",
  "name": "vs1"
},
"direction": "win_unix",
"index": 1,
"pattern": "ENGCIFS_AD_USER",
"replacement": "unix_user1",
"client_match": "10.254.101.111/28"
}
```

**Updating a specific name-mapping configuration**

```
# The API:
PATCH /api//name-services/name-mappings/{svm.uuid}/{direction}/{index}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/name-services/name-mappings/f71d3640-
0226-11e9-8526-000c290a8c4b/win_unix/1" -H "accept: application/json" -H
"Content-Type: application/json" -d "{ \"client_match\":
\"10.254.101.222/28\", \"pattern\": \"ENGCIFS_LOCAL_USER\",
\"replacement\": \"pcuser\"}"

# swapping a specified namemapping entry by index
curl -X PATCH "https://<mgmt-ip>/api/name-services/name-mappings/f71d3640-
0226-11e9-8526-000c290a8c4b/win-unix/3?new_index=1" -H "accept:
application/json" -H "Content-Type: application/json" -d "{  \"pattern\":
\"ENGCIFS_AD_USER\", \"replacement\": \"unix_user1\"}"
```

**Removing a specific name-mapping configuration**

```
# The API:
DELETE /api/name-services/name-mappings/{svm.uuid}/{direction}/{index}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/name-services/name-
mappings/f71d3640-0226-11e9-8526-000c290a8c4b/win_unix/1" -H "accept:
application/json"
```

# Retrieve hostname mapping for all SVMs

GET `/name-services/name-mappings`

Retrieves the name mapping configuration for all SVMs.

**Related ONTAP commands**

* `vserver name-mapping show`

**Learn more**

* DOC /name-services/name-mappings

**Parameters**

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| pattern | string | query | False | Filter by pattern |
| client_match | string | query | False | Filter by client_match |
| svm.uuid | string | query | False | Filter by svm.uuid |
| svm.name | string | query | False | Filter by svm.name |
| replacement | string | query | False | Filter by replacement |
| direction | string | query | False | Filter by direction |
| index | integer | query | False | Filter by index |

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| 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. |
| 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. |
| 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[name_mapping] | |

**Example response**

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "client_match": "10.254.101.111/28",
    "direction": "win_unix",
    "index": 1,
    "pattern": "ENGCIFS_AD_USER",
    "replacement": "unix_user1",
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}
```

**Error**

```
Status: Default, Error
```

| Name | Type | Description |
|------|------|-------------|
| error | error | |

**Example error**

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

**Definitions**

**See Definitions**

href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|------|-------------|
| next | href | |
| self | href | |

_links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

svm

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

name_mapping

Name mapping is used to map CIFS identities to UNIX identities, Kerberos identities to UNIX identities, and UNIX identities to CIFS identities. It needs this information to obtain user credentials and provide proper file access regardless of whether they are connecting from an NFS client or a CIFS client.

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |

| Name | Type | Description |
|------|------|-------------|
| client_match | string | Client workstation IP Address which is matched when searching for the pattern. You can specify the value in any of the following formats:<br><br>• As an IPv4 address with a subnet mask expressed as a number of bits; for instance, 10.1.12.0/24<br>• As an IPv6 address with a subnet mask expressed as a number of bits; for instance, fd20:8b1e:b255:4071::/64<br>• As an IPv4 address with a network mask; for instance, 10.1.16.0/255.255.255.0<br>• As a hostname |
| direction | string | Direction in which the name mapping is applied. The possible values are:<br><br>• krb_unix - Kerberos principal name to UNIX user name<br>• win_unix - Windows user name to UNIX user name<br>• unix_win - UNIX user name to Windows user name mapping |
| index | integer | Position in the list of name mappings. |
| pattern | string | Pattern used to match the name while searching for a name that can be used as a replacement. The pattern is a UNIX-style regular expression. Regular expressions are case-insensitive when mapping from Windows to UNIX, and they are case-sensitive for mappings from Kerberos to UNIX and UNIX to Windows. |

| Name | Type | Description |
|---|---|---|
| replacement | string | The name that is used as a replacement, if the pattern associated with this entry matches. |
| svm | svm | |

error_arguments

| Name | Type | Description |
|---|---|---|
| code | string | Argument code |
| message | string | Message argument |

error

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

## Create the hostname mappings for an SVM

POST /name-services/name-mappings

Creates name mappings for an SVM.

**Required properties**

- `svm.uuid` or `svm.name` - Existing SVM in which to create the name mapping.
- `index` - Name mapping's position in the priority list.
- `direction` - Direction of the name mapping.
- `pattern` - Pattern to match to. Maximum length is 256 characters.
- `replacement` - Replacement pattern to match to. Maximum length is 256 characters.

**Recommended optional properties**

* `client_match` - Hostname or IP address added to match the pattern to the client's workstation IP address.

**Related ONTAP commands**

* `vserver name-mapping create`
* `vserver name-mapping insert`

**Learn more**

* DOC /name-services/name-mappings

**Parameters**

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| return_records | boolean | query | False | The default is false. If set to true, the records are returned. |

**Request Body**

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| client_match | string | Client workstation IP Address which is matched when searching for the pattern. You can specify the value in any of the following formats:<br><br>• As an IPv4 address with a subnet mask expressed as a number of bits; for instance, 10.1.12.0/24<br><br>• As an IPv6 address with a subnet mask expressed as a number of bits; for instance, fd20:8b1e:b255:4071::/64<br><br>• As an IPv4 address with a network mask; for instance, 10.1.16.0/255.255.255.0<br><br>• As a hostname |

| Name | Type | Description |
|------|------|-------------|
| direction | string | Direction in which the name mapping is applied. The possible values are:<br><br>• krb_unix - Kerberos principal name to UNIX user name<br><br>• win_unix - Windows user name to UNIX user name<br><br>• unix_win - UNIX user name to Windows user name mapping |
| index | integer | Position in the list of name mappings. |
| pattern | string | Pattern used to match the name while searching for a name that can be used as a replacement. The pattern is a UNIX-style regular expression. Regular expressions are case-insensitive when mapping from Windows to UNIX, and they are case-sensitive for mappings from Kerberos to UNIX and UNIX to Windows. |
| replacement | string | The name that is used as a replacement, if the pattern associated with this entry matches. |
| svm | svm | |

**Example request**

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "client_match": "10.254.101.111/28",
  "direction": "win_unix",
  "index": 1,
  "pattern": "ENGCIFS_AD_USER",
  "replacement": "unix_user1",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Response**

```
Status: 201, Created
```

| Name | Type | Description |
|---|---|---|
| _links | _links | |
| num_records | integer | Number of records |
| records | array[name_mapping] | |

**Example response**

```json
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "client_match": "10.254.101.111/28",
    "direction": "win_unix",
    "index": 1,
    "pattern": "ENGCIFS_AD_USER",
    "replacement": "unix_user1",
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}
```

**Error**

```
Status: Default
```

ONTAP Error Response Codes

| Error Code | Description |
|------------|-------------|
| 65798185 | Failed to resolve the specified hostname |

| Error Code | Description |
|---|---|
| 65798149 | Invalid index for the name mapping entry |
| 2621706 | The specified svm.uuid and svm.name refer to different SVMs |

| 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 | |

svm

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

name_mapping

Name mapping is used to map CIFS identities to UNIX identities, Kerberos identities to UNIX identities, and UNIX identities to CIFS identities. It needs this information to obtain user credentials and provide proper file access regardless of whether they are connecting from an NFS client or a CIFS client.

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |

| Name | Type | Description |
|---|---|---|
| client_match | string | Client workstation IP Address which is matched when searching for the pattern. You can specify the value in any of the following formats:<br><br>• As an IPv4 address with a subnet mask expressed as a number of bits; for instance, 10.1.12.0/24<br><br>• As an IPv6 address with a subnet mask expressed as a number of bits; for instance, fd20:8b1e:b255:4071::/64<br><br>• As an IPv4 address with a network mask; for instance, 10.1.16.0/255.255.255.0<br><br>• As a hostname |
| direction | string | Direction in which the name mapping is applied. The possible values are:<br><br>• krb_unix - Kerberos principal name to UNIX user name<br><br>• win_unix - Windows user name to UNIX user name<br><br>• unix_win - UNIX user name to Windows user name mapping |
| index | integer | Position in the list of name mappings. |
| pattern | string | Pattern used to match the name while searching for a name that can be used as a replacement. The pattern is a UNIX-style regular expression. Regular expressions are case-insensitive when mapping from Windows to UNIX, and they are case-sensitive for mappings from Kerberos to UNIX and UNIX to Windows. |

| Name | Type | Description |
|---|---|---|
| replacement | string | The name that is used as a replacement, if the pattern associated with this entry matches. |
| svm | svm | |

_links

| Name | Type | Description |
|---|---|---|
| next | href | |
| 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. |

## Delete the name mapping configuration

DELETE /name-services/name-mappings/{svm.uuid}/{direction}/{index}

Deletes the name mapping configuration.

**Related ONTAP commands**

- `vserver name-mapping delete`

## Learn more

- DOC /name-services/name-mappings

## Parameters

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |
| direction | string | path | True | Direction |
| index | integer | path | True | Position of the entry in the list |

## Response

```
Status: 200, Ok
```

## 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**

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 the name mapping configuration for an SVM

GET `/name-services/name-mappings/{svm.uuid}/{direction}/{index}`

Retrieves the name mapping configuration of an SVM.

**Related ONTAP commands**

- `vserver name-mapping show`

**Learn more**

- DOC /name-services/name-mappings

**Parameters**

| Name | Type | In | Required | Description |
|------|------|----|----------|-------------|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |
| direction | string | path | True | Direction |

| Name | Type | In | Required | Description |
|---|---|---|---|---|
| index | integer | path | True | Position of the entry in the list |
| fields | array[string] | query | False | Specify the fields to return. |

**Response**

```
Status: 200, Ok
```

| Name | Type | Description |
|---|---|---|
| _links | _links | |
| client_match | string | Client workstation IP Address which is matched when searching for the pattern. You can specify the value in any of the following formats:<br><br>• As an IPv4 address with a subnet mask expressed as a number of bits; for instance, 10.1.12.0/24<br><br>• As an IPv6 address with a subnet mask expressed as a number of bits; for instance, fd20:8b1e:b255:4071::/64<br><br>• As an IPv4 address with a network mask; for instance, 10.1.16.0/255.255.255.0<br><br>• As a hostname |
| direction | string | Direction in which the name mapping is applied. The possible values are:<br><br>• krb_unix - Kerberos principal name to UNIX user name<br><br>• win_unix - Windows user name to UNIX user name<br><br>• unix_win - UNIX user name to Windows user name mapping |
| index | integer | Position in the list of name mappings. |

| Name | Type | Description |
|------|------|-------------|
| pattern | string | Pattern used to match the name while searching for a name that can be used as a replacement. The pattern is a UNIX-style regular expression. Regular expressions are case-insensitive when mapping from Windows to UNIX, and they are case-sensitive for mappings from Kerberos to UNIX and UNIX to Windows. |
| replacement | string | The name that is used as a replacement, if the pattern associated with this entry matches. |
| svm | svm | |

**Example response**

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "client_match": "10.254.101.111/28",
  "direction": "win_unix",
  "index": 1,
  "pattern": "ENGCIFS_AD_USER",
  "replacement": "unix_user1",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Error**

```
Status: Default, Error
```

| Name | Type | Description |
|------|------|-------------|
| error | error | |

**Example error**

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

**Definitions**

## See Definitions

### href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

### _links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

### svm

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

### 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 the name mapping configuration for an SVM

PATCH /name-services/name-mappings/{svm.uuid}/{direction}/{index}

Updates the name mapping configuration of an SVM. The positions can be swapped by providing the `new_index` property. Swapping is not allowed for entries that have `client_match` property configured.

**Related ONTAP commands**

- `vserver name-mapping insert`

- `vserver name-mapping modify`

- `vserver name-mapping swap`

**Learn more**

- DOC /name-services/name-mappings

**Parameters**

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |
| direction | string | path | True | Direction |
| index | integer | path | True | Position of the entry in the list |
| new_index | integer | query | False | New position of the Index after a swap is completed. |

**Request Body**

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |

| Name | Type | Description |
|------|------|-------------|
| client_match | string | Client workstation IP Address which is matched when searching for the pattern. You can specify the value in any of the following formats:<br><br>• As an IPv4 address with a subnet mask expressed as a number of bits; for instance, 10.1.12.0/24<br><br>• As an IPv6 address with a subnet mask expressed as a number of bits; for instance, fd20:8b1e:b255:4071::/64<br><br>• As an IPv4 address with a network mask; for instance, 10.1.16.0/255.255.255.0<br><br>• As a hostname |
| direction | string | Direction in which the name mapping is applied. The possible values are:<br><br>• krb_unix - Kerberos principal name to UNIX user name<br><br>• win_unix - Windows user name to UNIX user name<br><br>• unix_win - UNIX user name to Windows user name mapping |
| index | integer | Position in the list of name mappings. |
| pattern | string | Pattern used to match the name while searching for a name that can be used as a replacement. The pattern is a UNIX-style regular expression. Regular expressions are case-insensitive when mapping from Windows to UNIX, and they are case-sensitive for mappings from Kerberos to UNIX and UNIX to Windows. |
| replacement | string | The name that is used as a replacement, if the pattern associated with this entry matches. |

| Name | Type | Description |
|------|------|-------------|
| svm | svm | |

**Example request**

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "client_match": "10.254.101.111/28",
  "direction": "win_unix",
  "index": 1,
  "pattern": "ENGCIFS_AD_USER",
  "replacement": "unix_user1",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Response**

```
Status: 200, Ok
```

**Error**

```
Status: Default
```

ONTAP Error Response Codes

| Error Code | Description |
|------------|-------------|
| 65798185 | Failed to resolve the specified hostname |
| 65798179 | Cannot swap entries because one or both entries have hostname or address configured. |

| Error Code | Description |
| --- | --- |
| | Delete and recreate the new entry at the specified position. |

schema: $ref: "#/definitions/error_response"

**Definitions**

### href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

### _links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

### svm

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

### name_mapping

Name mapping is used to map CIFS identities to UNIX identities, Kerberos identities to UNIX identities, and UNIX identities to CIFS identities. It needs this information to obtain user credentials and provide proper file access regardless of whether they are connecting from an NFS client or a CIFS client.

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |

| Name | Type | Description |
|------|------|-------------|
| client_match | string | Client workstation IP Address which is matched when searching for the pattern. You can specify the value in any of the following formats:<br><br>• As an IPv4 address with a subnet mask expressed as a number of bits; for instance, 10.1.12.0/24<br>• As an IPv6 address with a subnet mask expressed as a number of bits; for instance, fd20:8b1e:b255:4071::/64<br>• As an IPv4 address with a network mask; for instance, 10.1.16.0/255.255.255.0<br>• As a hostname |
| direction | string | Direction in which the name mapping is applied. The possible values are:<br><br>• krb_unix - Kerberos principal name to UNIX user name<br>• win_unix - Windows user name to UNIX user name<br>• unix_win - UNIX user name to Windows user name mapping |
| index | integer | Position in the list of name mappings. |
| pattern | string | Pattern used to match the name while searching for a name that can be used as a replacement. The pattern is a UNIX-style regular expression. Regular expressions are case-insensitive when mapping from Windows to UNIX, and they are case-sensitive for mappings from Kerberos to UNIX and UNIX to Windows. |

| Name | Type | Description |
|------|------|-------------|
| replacement | string | The name that is used as a replacement, if the pattern associated with this entry matches. |
| svm | svm | |

# Manage NIS server configurations

## Name-services NIS endpoint overview

### Overview

NIS servers are used to authenticate user and client computers. NIS domain name and NIS server information is required to configure NIS. It is important to note that this API is used to retrieve and manage NIS server configurations for data SVMs only. NIS configuration for the cluster is managed via /api/security/authentication/cluster/nis .

### Retrieving NIS Information

The NIS GET endpoint retrieves all of the NIS configurations for data SVMs.

### Examples

**Retrieving all fields for all NIS configurations**

---

```
# The API:
/api/name-services/nis

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

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
      "name": "vs1"
      "_links": {
        "self": {
          "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
        }
```

```
      }
    },
    "domain": "domainA.example.com",
    "servers": [
      "10.10.10.10",
      "example.com"
    ]
    "bound-servers": [
      "10.10.10.10"
    ]
    "_links": {
      "self": {
        "href": "/api/name-services/nis/179d3c85-7053-11e8-b9b8-
005056b41bd1"
      }
    }
  },
  {
    "svm": {
      "uuid": "6a52023b-7066-11e8-b9b8-005056b41bd1",
      "name": "vs2"
      "_links": {
        "self": {
          "href": "/api/svm/svms/6a52023b-7066-11e8-b9b8-005056b41bd1"
        }
      }
    },
    "domain": "domainB.example.com",
    "servers": [
      "2.2.2.2",
      "3.3.3.3"
      "4.4.4.4"
    ]
    "bound-servers": [],
    "_links": {
      "self": {
        "href": "/api/name-services/nis/6a52023b-7066-11e8-b9b8-
005056b41bd1"
      }
    }
  }
],
"num_records": 2,
"_links": {
  "self": {
    "href": "/api/name-services/nis?fields=*"
```

```
        }
    }
}
```

**Retrieving all NIS configurations whose bound servers start with** *10*

```
# The API:
/api/name-services/nis

# The call:
curl -X GET "https://<mgmt-ip/api/name-services/nis?bound_servers=10*" -H
"accept: application/hal+json"

# The response:
{
"records": [
  {
    "svm": {
      "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
      "name": "vs1"
      "_links": {
        "self": {
          "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
        }
      }
    },
    "bound-servers": [
      "10.10.10.10"
    ]
    "_links": {
      "self": {
        "href": "/api/name-services/nis/6a52023b-7066-11e8-b9b8-
005056b41bd1"
      }
    }
  }
],
"num_records": 1,
"_links": {
  "self": {
    "href": "/api/name-services/nis?bound_servers=10*"
  }
}
}
```

**Retrieving the NIS configuration of a specific SVM**

```
# The API:
/api/name-services/nis/{svm.uuid}

# The call:
curl -X GET "https://<mgmt-ip>/api/name-services/nis/179d3c85-7053-11e8-
b9b8-005056b41bd1" -H "accept: application/hal+json"

# The response:
{
"svm": {
  "uuid": "179d3c85-7053-11e8-b9b8-005056b41bd1",
  "name": "vs1"
},
"domain": "domainA.example.com",
"servers": [
  "10.10.10.10",
  "example.com"
]
"bound_servers": [
  "10.10.10.10"
]
}
```

### Creating a NIS configuration

The NIS POST endpoint creates a NIS configuration for the specified SVM.

### Example

The following example shows a POST operation:

```
# The API:
/api/name-services/nis

# The call:
curl -X POST "https://<mgmt-ip>/api/name-services/nis" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"svm\": {
\"uuid\": \"179d3c85-7053-11e8-b9b8-005056b41bd1\" }, \"domain\":
\"domainA.example.com\", \"servers\": [ \"10.10.10.10\",\"example.com\"
]}"
```

**Updating the NIS configuration**

The NIS PATCH endpoint updates the NIS configuration for the specified NIS server.

**Examples**

**Updating the domain**

```
# The API:
/api/name-services/nis/{svm.uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/name-services/nis/179d3c85-7053-11e8-
b9b8-005056b41bd1" -H "accept: application/json" -H "Content-Type:
application/json" -d "{ \"domain\": \"domainC.example.com\", \"servers\":
[ \"13.13.13.13\" ]}"
```

**Updating the server**

```
# The API:
/api/name-services/nis/{svm.uuid}

# The call:
curl -X PATCH "https://<mgmt-ip>/api/name-services/nis/179d3c85-7053-11e8-
b9b8-005056b41bd1" -H "accept: application/json" -H "Content-Type:
application/json" -d "{ \"servers\": [ \"14.14.14.14\" ]}"
```

**Deleting a NIS configuration**

The NIS DELETE endpoint deletes the NIS configuration for the specified SVM.

**Example**

The following example shows a DELETE operation:

```
# The API:
/api/name-services/nis/{svm.uuid}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/name-services/nis/179d3c85-7053-
11e8-b9b8-005056b41bd1" -H "accept: application/hal+json"
```

## Retrieve NIS domain configurations of all SVMs

GET /name-services/nis

Retrieves NIS domain configurations of all the SVMs. The bound_servers field indicates the successfully
bound NIS servers. Lookups and authentications fail if there are no bound servers.

### Related ONTAP commands

- `vserver services name-service nis-domain show`
- `vserver services name-service nis-domain show-bound`

### Learn more

- DOC /name-services/nis

### Parameters

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| bound_servers | string | query | False | Filter by bound_servers |
| svm.uuid | string | query | False | Filter by svm.uuid |
| svm.name | string | query | False | Filter by svm.name |
| servers | string | query | False | Filter by servers |
| domain | string | query | False | Filter by domain |
| fields | array[string] | query | False | Specify the fields to return. |
| max_records | integer | query | False | Limit the number of records returned. |

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| return_records | boolean | query | False | The default is true for GET calls. When set to false, only the number of records is returned. |
| 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. |
| 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 NIS domain records. |
| records | array[nis_service] | |

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "bound_servers": {
    },
    "servers": {
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}
```

## Error

```
Status: Default, Error
```

| Name | Type | Description |
|------|------|-------------|
| error | error | |

**Example error**

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

**Definitions**

**See Definitions**

href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

_links

| Name | Type | Description |
|------|------|-------------|
| next | href | |
| self | href | |

_links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

svm

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

nis_service

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| bound_servers | array[string] | |
| domain | string | The NIS domain to which this configuration belongs. |
| servers | array[string] | A list of hostnames or IP addresses of NIS servers used by the NIS domain configuration. |
| svm | svm | |

error_arguments

| Name | Type | Description |
|------|------|-------------|
| code | string | Argument code |
| message | string | Message argument |

error

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

## Create the NIS domain and server configuration for a data SVM

POST `/name-services/nis`

Creates an NIS domain and server confguration for a data SVM. NIS configuration for the cluster is managed via [/api/security/authentication/cluster/nis](#) .

**Important notes**

- Each SVM can have one NIS domain configuration.
- Multiple SVMs can be configured with the same NIS domain. Specify the NIS domain and NIS servers as input.Domain name and servers fields cannot be empty.
- Both FQDNs and IP addresses are supported for the servers field.
- IPv6 must be enabled if IPv6 family addresses are specified in the servers field.
- A maximum of ten NIS servers are supported.

**Required properties**

- `svm.uuid` or `svm.name` - Existing SVM in which to create the NIS configuration.
- `domain` - NIS domain to which the configuration belongs.
- `servers` - List of NIS server IP addresses.

**Related ONTAP commands**

- `vserver services name-service nis-domain create`

## Learn more

- DOC /name-services/nis

## Parameters

| Name | Type | In | Required | Description |
|---|---|---|---|---|
| return_records | boolean | query | False | The default is false. If set to true, the records are returned. |

## Request Body

| Name | Type | Description |
|---|---|---|
| _links | _links | |
| bound_servers | array[string] | |
| domain | string | The NIS domain to which this configuration belongs. |
| servers | array[string] | A list of hostnames or IP addresses of NIS servers used by the NIS domain configuration. |
| svm | svm | |

**Example request**

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "bound_servers": {
  },
  "servers": {
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Response**

```
Status: 201, Created
```

| Name | Type | Description |
|---|---|---|
| _links | _links | |
| num_records | integer | Number of NIS domain records. |
| records | array[nis_service] | |

**Example response**

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "bound_servers": {
    },
    "servers": {
    },
    "svm": {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "name": "svm1",
      "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
    }
  }
}
```

**Error**

```
Status: Default
```

ONTAP Error Response Codes

| Error Code | Description |
|------------|-------------|
| 1966253 | IPv6 is not enabled in the cluster |
| 2621488 | Invalid SVM context |

| Error Code | Description |
|---|---|
| 2621706 | The specified SVM UUID is incorrect for the specified SVM name |
| 3276964 | NIS domain name or NIS server domain is too long. The maximum supported for domain name is 64 characters and the maximum supported for NIS server domain is 255 characters |
| 3276933 | A maximum of 10 NIS servers can be configured per SVM |
| 13434916 | The SVM is in the process of being created. Wait a few minutes, and then try the command again. |
| 23724109 | DNS resolution failed for one or more specified servers |
| 23724112 | DNS resolution failed due to an internal error. Contact technical support if this issue persists |
| 23724132 | DNS resolution failed for all the specified servers |
| 23724130 | Cannot use an IPv6 name server address because there are no IPv6 LIFs |

| 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 | |

svm

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

nis_service

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| bound_servers | array[string] | |
| domain | string | The NIS domain to which this configuration belongs. |
| servers | array[string] | A list of hostnames or IP addresses of NIS servers used by the NIS domain configuration. |
| svm | svm | |

_links

| Name | Type | Description |
|------|------|-------------|
| next | href | |
| 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. |

## Delete the NIS domain configuration for an SVM

DELETE /name-services/nis/{svm.uuid}

Deletes the NIS domain configuration of an SVM. NIS can be removed as a source from ns-switch if NIS is not used for lookups.

### Related ONTAP commands

- `vserver services name-service nis-domain delete`

### Learn more

- DOC /name-services/nis

### Parameters

| Name | Type | In | Required | Description |
|------|------|----|----------|-------------|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |

### Response

```
Status: 200, Ok
```

## 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**

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 the NIS domain and server configurations for an SVM

GET `/name-services/nis/{svm.uuid}`

Retrieves NIS domain and server configurations of an SVM. Both NIS domain and servers are displayed by default. The bound_servers field indicates the successfully bound NIS servers.

**Related ONTAP commands**

- `vserver services name-service nis-domain show`
- `vserver services name-service nis-domain show-bound`

**Learn more**

- DOC /name-services/nis

**Parameters**

| Name | Type | In | Required | Description |
|------|------|-----|----------|-------------|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |

| Name | Type | In | Required | Description |
|------|------|------|----------|-------------|
| fields | array[string] | query | False | Specify the fields to return. |

## Response

```
Status: 200, Ok
```

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| bound_servers | array[string] | |
| domain | string | The NIS domain to which this configuration belongs. |
| servers | array[string] | A list of hostnames or IP addresses of NIS servers used by the NIS domain configuration. |
| svm | svm | |

**Example response**

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "bound_servers": {
  },
  "servers": {
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Error**

```
Status: Default, Error
```

| Name | Type | Description |
|------|------|-------------|
| error | error | |

**Example error**

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

**Definitions**

## See Definitions

### href

| Name | Type | Description |
|------|------|-------------|
| href | string | |

### _links

| Name | Type | Description |
|------|------|-------------|
| self | href | |

### svm

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

### 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 the NIS domain and server configuration for an SVM

PATCH /name-services/nis/{svm.uuid}

Updates NIS domain and server configuration of an SVM.

**Important notes**

- Both NIS domain and servers can be modified.
- Domains and servers cannot be empty.
- Both FQDNs and IP addresses are supported for the servers field.
- If the domain is modified, NIS servers must also be specified.
- IPv6 must be enabled if IPv6 family addresses are specified for the servers field.

**Related ONTAP commands**

- `vserver services name-service nis-domain modify`

**Learn more**

- DOC /name-services/nis

**Parameters**

| Name | Type | In | Required | Description |
|------|------|----|----------|-------------|
| svm.uuid | string | path | True | UUID of the SVM to which this object belongs. |

**Request Body**

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| bound_servers | array[string] | |
| domain | string | The NIS domain to which this configuration belongs. |
| servers | array[string] | A list of hostnames or IP addresses of NIS servers used by the NIS domain configuration. |
| svm | svm | |

**Example request**

```json
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "bound_servers": {
  },
  "servers": {
  },
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  }
}
```

**Response**

```
Status: 200, Ok
```

**Error**

```
Status: Default
```

ONTAP Error Response Codes

| Error Code | Description |
| --- | --- |
| 1966253 | IPv6 is not enabled in the cluster |
| 2621488 | Invalid SVM context |
| 2621706 | The specified SVM UUID is incorrect for the specified SVM name |

| Error Code | Description |
|---|---|
| 3276964 | NIS domain name or NIS server domain is too long. The maximum supported for domain name is 64 characters and the maximum supported for NIS server domain is 255 characters |
| 3276933 | A maximum of 10 NIS servers can be configured per SVM |
| 23724109 | DNS resolution failed for one or more specified servers |
| 23724112 | DNS resolution failed due to an internal error. Contact technical support if this issue persists |
| 23724132 | DNS resolution failed for all the specified servers |
| 23724130 | Cannot use an IPv6 name server address because there are no IPv6 LIFs |

| 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 | |

### svm

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

### nis_service

| Name | Type | Description |
|------|------|-------------|
| _links | _links | |
| bound_servers | array[string] | |
| domain | string | The NIS domain to which this configuration belongs. |
| servers | array[string] | A list of hostnames or IP addresses of NIS servers used by the NIS domain configuration. |
| svm | svm | |

### 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. |

| Name | Type | Description |
|------|------|-------------|
| arguments | array[error_arguments] | |