Manage DNS configurations

REST API reference

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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 all 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": "27eff5d8-22b2-11eb-8038-0050568ed32c",
      "name": "clust-1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/179d3c85-7053-11e8-b9b8-005056b41bd1"
        }
      }
    },
    "domains": [
      "domain.example.com"
    ],
    "servers": [
      "44.44.44.44"
    ],
    "timeout":2,
    "attempts":1,
```

```
    "scope": "cluster",
    "_links": {
      "self": {
        "href": "/api/name-services/dns/27eff5d8-22b2-11eb-8038-
0050568ed32c"
      }
    }
  },
  {
    "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"
    ],
    "timeout":2,
    "attempts":1,
    "dynamic_dns": {
      "enabled": false,
      "use_secure": false,
      "time_to_live": "PT1H"
    },
    "scope": "svm",
    "_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"
    ],
    "timeout":2,
    "attempts":2,
    "dynamic_dns": {
      "enabled": true,
      "use_secure": false,
      "time_to_live": "PT3H"
    },
    "scope": "svm",
    "_links": {
      "self": {
        "href": "/api/name-services/dns/19076d35-6e27-11e8-b9b8-
005056b41bd1"
      }
    }
  }
],
"num_records": 3,
"_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"
],
"timeout":2,
"attempts":1,
"tld_query_enabled": true,
"source_address_match": true,
"packet_query_match": true,
"dynamic_dns": {
  "enabled": false,
  "use_secure": false,
  "time_to_live": "P1D"
},
"scope": "svm",
"_links": {
  "self": {
    "href": "/api/name-services/dns/179d3c85-7053-11e8-b9b8-005056b41bd1"
  }
}
}
```

Retrieving the advanced fields "DNS status", "tld_query_enable", "source_address_match", and "packet_query_match" using wildcards **

```
# 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?fileds=**" -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"
],
"timeout":2,
"attempts":1,
"tld_query_enabled": true,
"source_address_match": true,
"packet_query_match": true,
"dynamic_dns": {
  "enabled": false,
  "use_secure": false,
  "time_to_live": "P1D"
},
"scope": "svm",
"status": [
  {
    "name_server": "10.10.10.10",
    "state": "up",
    "message": "Response time (msec): ",
    "code": 0
  }
],
```

```
"_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.

Examples

Specifying only the required fields

```
# 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\" ]}"
```

Specifying the optional fields as well

```
# 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\" ],
\"timeout\":2, \"attempts\":3}"
```

Specifying the scope of the SVM

```
# 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\" ],
\"timeout\":2, \"attempts\":3, \"scope\":\"svm\"}"
```

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\" ]}"
```

Updating the optional fields "timeout", "attempts", and "source_address_match"

```
# 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 "{ \"timeout\":2, \"attempts\":3,
\"source_address_match\":true}"
```

Updating the Dynamic DNS related fields

```
# 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 "{ \"timeout\":2, \"attempts\":3,
\"dynamic_dns.enabled\":\"true\", \"dynamic_dns.time_to_live\":\"20h\"}"
```

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`

Introduced In: 9.6

Retrieves the DNS configurations of all SVMs. Specify 'scope' as 'svm' to retrieve the DNS configuration of all the data SVMs. Specify 'scope' as 'cluster' to retrieve the DNS configuration of the cluster.

Advanced properties

- 'tld_query_enabled'
- 'source_address_match'
- 'packet_query_match'
- 'status' property retrieves the status of each name server of the DNS configuration for an SVM.

Related ONTAP commands

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

Learn more

- DOC /name-services/dns

Parameters

Name	Type	In	Required	Description
domains	string	query	False	Filter by domains • maxLength: 255 • minLength: 1
tld_query_enabled	boolean	query	False	Filter by tld_query_enabled • Introduced in: 9.9
servers	string	query	False	Filter by servers
packet_query_match	boolean	query	False	Filter by packet_query_match • Introduced in: 9.9
dynamic_dns.fqdn	string	query	False	Filter by dynamic_dns.fqdn • Introduced in: 9.9

Name	Type	In	Required	Description
dynamic_dns.use_secure	boolean	query	False	Filter by dynamic_dns.use_secure • Introduced in: 9.9
dynamic_dns.enabled	boolean	query	False	Filter by dynamic_dns.enabled • Introduced in: 9.9
dynamic_dns.time_to_live	string	query	False	Filter by dynamic_dns.time_to_live • Introduced in: 9.9
timeout	integer	query	False	Filter by timeout • Introduced in: 9.9 • Max value: 5 • Min value: 1
attempts	integer	query	False	Filter by attempts • Introduced in: 9.9 • Max value: 4 • Min value: 1
svm.uuid	string	query	False	Filter by svm.uuid
svm.name	string	query	False	Filter by svm.name
status.state	string	query	False	Filter by status.state • Introduced in: 9.9

Name	Type	In	Required	Description
status.name_server	string	query	False	Filter by status.name_server • Introduced in: 9.9
status.code	integer	query	False	Filter by status.code • Introduced in: 9.9
status.message	string	query	False	Filter by status.message • Introduced in: 9.9
source_address_match	boolean	query	False	Filter by source_address_match • Introduced in: 9.9
scope	string	query	False	Filter by scope • Introduced in: 9.9
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. • Default value: 1

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. • Max value: 120 • Min value: 0 • Default value: 1
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


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "domains": [
        "example.com",
        "example2.example3.com"
      ],
      "dynamic_dns": {
        "fqdn": "example.com",
        "time_to_live": "P2D"
      },
      "scope": "string",
      "servers": [
        "10.224.65.20",
        "2001:db08:a0b:12f0::1"
      ],
      "skip_config_validation": null,
      "status": [
        {
          "code": 6684732,
          "message": "string",
          "name_server": "10.10.10.10",
          "state": "up"
        }
      ],
      "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	

dynamic_dns

Name	Type	Description
enabled	boolean	Enable or disable Dynamic DNS (DDNS) updates for the specified SVM.
fqdn	string	Fully Qualified Domain Name (FQDN) to be used for dynamic DNS updates.
skip_fqdn_validation	boolean	Enable or disable FQDN validation.
time_to_live	string	Time to live value for the dynamic DNS updates, in an ISO-8601 duration formatted string. Maximum Time To Live is 720 hours(P30D in ISO-8601 format) and the default is 24 hours(P1D in ISO-8601 format).
use_secure	boolean	Enable or disable secure dynamic DNS updates for the specified SVM.

status

Status of each of the DNS name server configured for the specified SVM.

Name	Type	Description
code	integer	Code corresponding to the status message. Code is 0 when the state is 'up'.
message	string	Detailed description of the validation state if the state is 'down' or the response time of the DNS server if the state is 'up'.
name_server	string	The IP address of the DNS server. The address can be either an IPv4 or an IPv6 address.
state	string	The validation status of the DNS server.

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	
attempts	integer	Number of attempts allowed when querying the DNS name servers.

Name	Type	Description
domains	array[string]	A list of DNS domains. Domain names have the following requirements: • The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_". • 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. • 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. • The top level domain must contain only the following characters: A through Z, a through z. • The system reserves the following names:"all", "local", and "localhost".
dynamic_dns	dynamic_dns	
packet_query_match	boolean	Indicates whether or not the query section of the reply packet is equal to that of the query packet.
scope	string	Set to "svm" for DNS owned by an SVM, otherwise set to "cluster".
servers	array[string]	The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses.
source_address_match	boolean	Indicates whether or not the DNS responses are from a different IP address to the IP address the request was sent to.

Name	Type	Description
status	array[status]	Status of all the DNS name servers configured for the specified SVM.
svm	svm	
timeout	integer	Timeout values for queries to the name servers, in seconds.
tld_query_enabled	boolean	Enable or disable top-level domain (TLD) queries.

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 DNS domain and server configurations

POST `/name-services/dns`

Introduced In: 9.6

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.
    - The DNS server validation can be skipped by setting the property "skip_config_validation" to "true".
    - Scope of the SVM can be specified using the "scope" parameter. "svm" scope refers to data SVMs and "cluster" scope refers to clusters.

The following parameters are optional:

- timeout
- attempts
- source_address_match
- packet_query_match
- tld_query_enabled
- skip_config_validation
- scope

Parameters

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:

Request Body

Name	Type	Description
_links	_links	
attempts	integer	Number of attempts allowed when querying the DNS name servers.

Name	Type	Description
domains	array[string]	A list of DNS domains. Domain names have the following requirements: • The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_". • 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. • 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. • The top level domain must contain only the following characters: A through Z, a through z. • The system reserves the following names:"all", "local", and "localhost".
packet_query_match	boolean	Indicates whether or not the query section of the reply packet is equal to that of the query packet.
scope	string	Set to "svm" for DNS owned by an SVM, otherwise set to "cluster".
servers	array[string]	The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses.
skip_config_validation	boolean	Indicates whether or not the validation for the specified DNS configuration is disabled.
source_address_match	boolean	Indicates whether or not the DNS responses are from a different IP address to the IP address the request was sent to.
svm	svm	

Name	Type	Description
timeout	integer	Timeout values for queries to the name servers, in seconds.
tld_query_enabled	boolean	Enable or disable top-level domain (TLD) queries.

Example request

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

Response

```
Status: 201, Created
```

Name	Type	Description
num_records	integer	Number of DNS domain records.
records	array[dns]	

Example response


```
{
  "num_records": 1,
  "records": [
    {
      "domains": [
        "example.com",
        "example2.example3.com"
      ],
      "scope": "string",
      "servers": [
        "10.224.65.20",
        "2001:db08:a0b:12f0::1"
      ],
      "svm": {
        "name": "svm1",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      }
    }
  ]
}
```


Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

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

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
8847399	One or more of the specified DNS servers do not exist or cannot be reached
8847394	FQDN name violated the limitations
8847403	Scope specified is invalid for the specified SVM
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 is 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

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

dynamic_dns

Name	Type	Description
enabled	boolean	Enable or disable Dynamic DNS (DDNS) updates for the specified SVM.
fqdn	string	Fully Qualified Domain Name (FQDN) to be used for dynamic DNS updates.
skip_fqdn_validation	boolean	Enable or disable FQDN validation.
time_to_live	string	Time to live value for the dynamic DNS updates, in an ISO-8601 duration formatted string. Maximum Time To Live is 720 hours(P30D in ISO-8601 format) and the default is 24 hours(P1D in ISO-8601 format).
use_secure	boolean	Enable or disable secure dynamic DNS updates for the specified SVM.

status

Status of each of the DNS name server configured for the specified SVM.

Name	Type	Description
code	integer	Code corresponding to the status message. Code is 0 when the state is 'up'.
message	string	Detailed description of the validation state if the state is 'down' or the response time of the DNS server if the state is 'up'.

Name	Type	Description
name_server	string	The IP address of the DNS server. The address can be either an IPv4 or an IPv6 address.
state	string	The validation status of the DNS server.

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	
attempts	integer	Number of attempts allowed when querying the DNS name servers.

Name	Type	Description
domains	array[string]	A list of DNS domains. Domain names have the following requirements: • The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_". • 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. • 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. • The top level domain must contain only the following characters: A through Z, a through z. • The system reserves the following names:"all", "local", and "localhost".
packet_query_match	boolean	Indicates whether or not the query section of the reply packet is equal to that of the query packet.
scope	string	Set to "svm" for DNS owned by an SVM, otherwise set to "cluster".
servers	array[string]	The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses.
skip_config_validation	boolean	Indicates whether or not the validation for the specified DNS configuration is disabled.
source_address_match	boolean	Indicates whether or not the DNS responses are from a different IP address to the IP address the request was sent to.

Name	Type	Description
svm	svm	
timeout	integer	Timeout values for queries to the name servers, in seconds.
tld_query_enabled	boolean	Enable or disable top-level domain (TLD) queries.

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 DNS domain configuration

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

Introduced In: 9.6

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}`

Introduced In: 9.6

Retrieves DNS domain and server configuration of an SVM. By default, both DNS domains and servers are displayed.

Advanced properties

- 'tld_query_enabled'
- 'source_address_match'
- 'packet_query_match'
- 'status' property retrieves the status of each name server of the DNS configuration for an SVM.

Related ONTAP commands

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

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	
attempts	integer	Number of attempts allowed when querying the DNS name servers.

Name	Type	Description
domains	array[string]	A list of DNS domains. Domain names have the following requirements: • The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_". • 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. • 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. • The top level domain must contain only the following characters: A through Z, a through z. • The system reserves the following names:"all", "local", and "localhost".
dynamic_dns	dynamic_dns	
packet_query_match	boolean	Indicates whether or not the query section of the reply packet is equal to that of the query packet.
scope	string	Set to "svm" for DNS owned by an SVM, otherwise set to "cluster".
servers	array[string]	The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses.
source_address_match	boolean	Indicates whether or not the DNS responses are from a different IP address to the IP address the request was sent to.
status	array[status]	Status of all the DNS name servers configured for the specified SVM.
svm	svm	

Name	Type	Description
timeout	integer	Timeout values for queries to the name servers, in seconds.
tld_query_enabled	boolean	Enable or disable top-level domain (TLD) queries.

Example response


```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "domains": [
    "example.com",
    "example2.example3.com"
  ],
  "dynamic_dns": {
    "fqdn": "example.com",
    "time_to_live": "P2D"
  },
  "scope": "string",
  "servers": [
    "10.224.65.20",
    "2001:db08:a0b:12f0::1"
  ],
  "skip_config_validation": null,
  "status": [
    {
      "code": 6684732,
      "message": "string",
      "name_server": "10.10.10.10",
      "state": "up"
    }
  ],
  "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
self	href	

dynamic_dns

Name	Type	Description
enabled	boolean	Enable or disable Dynamic DNS (DDNS) updates for the specified SVM.
fqdn	string	Fully Qualified Domain Name (FQDN) to be used for dynamic DNS updates.
skip_fqdn_validation	boolean	Enable or disable FQDN validation.
time_to_live	string	Time to live value for the dynamic DNS updates, in an ISO-8601 duration formatted string. Maximum Time To Live is 720 hours(P30D in ISO-8601 format) and the default is 24 hours(P1D in ISO-8601 format).
use_secure	boolean	Enable or disable secure dynamic DNS updates for the specified SVM.

status

Status of each of the DNS name server configured for the specified SVM.

Name	Type	Description
code	integer	Code corresponding to the status message. Code is 0 when the state is 'up'.

Name	Type	Description
message	string	Detailed description of the validation state if the state is 'down' or the response time of the DNS server if the state is 'up'.
name_server	string	The IP address of the DNS server. The address can be either an IPv4 or an IPv6 address.
state	string	The validation status of the DNS server.

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}`

Introduced In: 9.6

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.
    - The DNS server validation can be skipped by setting the property "skip_config_validation" to "true".
    - Dynamic DNS configuration can be modified.
    - If both DNS and Dynamic DNS parameters are modified, DNS parameters are updated first followed by Dynamic DNS parameters. If updating Dynamic DNS fails, then the updated DNS configuration is not reverted.

The following parameters are optional:

- timeout
- attempts
- source_address_match
- packet_query_match
- tld_query_enabled
- skip_config_validation
- dynamic_dns.enabled
- dynamic_dns.use_secure
- dynamic_dns.time_to_live

Related ONTAP commands

- `vserver services name-service dns modify`
- `vserver services name-service dns dynamic-update modify`

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	
attempts	integer	Number of attempts allowed when querying the DNS name servers.
domains	array[string]	A list of DNS domains. Domain names have the following requirements: • The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_". • 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. • 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. • The top level domain must contain only the following characters: A through Z, a through z. • The system reserves the following names:"all", "local", and "localhost".
dynamic_dns	dynamic_dns	

Name	Type	Description
packet_query_match	boolean	Indicates whether or not the query section of the reply packet is equal to that of the query packet.
servers	array[string]	The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses.
skip_config_validation	boolean	Indicates whether or not the validation for the specified DNS configuration is disabled.
source_address_match	boolean	Indicates whether or not the DNS responses are from a different IP address to the IP address the request was sent to.
svm	svm	
timeout	integer	Timeout values for queries to the name servers, in seconds.
tld_query_enabled	boolean	Enable or disable top-level domain (TLD) queries.

Example request

```
{
  "domains": [
    "example.com",
    "example2.example3.com"
  ],
  "dynamic_dns": {
    "fqdn": "example.com",
    "time_to_live": "P2D"
  },
  "servers": [
    "10.224.65.20",
    "2001:db08:a0b:12f0::1"
  ],
  "svm": {
    "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
8847362	Exceeded the maximum number of name servers allowed. Maximum of three name servers only
8847376	FQDN is mandatory if dynamic DNS update is being enabled.

Error Code	Description
8847380	Secure updates can be enabled only after a CIFS server or an Active Directory account has been created for the SVM.
8847381	A unique FQDN must be specified for each SVM.
8847383	The specified TTL exceeds the maximum supported value of 720 hours.
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
8847404	Dynamic DNS is applicable only for data SVMs
8847405	DNS parameters updated successfully; however the update of Dynamic DNS-related parameters has failed.
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 is 63 characters
9240608	FQDN does not contain a ".". At least one "." is mandatory for an FQDN.
9240607	A label of the FQDN is too long (73 characters). Maximum supported length for each label is 63 characters.
23724130	Cannot use an IPv6 name server address because there are no IPv6 LIFs

Definitions

See Definitions

href

Name	Type	Description
href	string	

_links

dynamic_dns

Name	Type	Description
enabled	boolean	Enable or disable Dynamic DNS (DDNS) updates for the specified SVM.
fqdn	string	Fully Qualified Domain Name (FQDN) to be used for dynamic DNS updates.
skip_fqdn_validation	boolean	Enable or disable FQDN validation.
time_to_live	string	Time to live value for the dynamic DNS updates, in an ISO-8601 duration formatted string. Maximum Time To Live is 720 hours(P30D in ISO-8601 format) and the default is 24 hours(P1D in ISO-8601 format).
use_secure	boolean	Enable or disable secure dynamic DNS updates for the specified SVM.

status

Status of each of the DNS name server configured for the specified SVM.

Name	Type	Description
code	integer	Code corresponding to the status message. Code is 0 when the state is 'up'.
message	string	Detailed description of the validation state if the state is 'down' or the response time of the DNS server if the state is 'up'.

Name	Type	Description
name_server	string	The IP address of the DNS server. The address can be either an IPv4 or an IPv6 address.
state	string	The validation status of the DNS server.

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	
attempts	integer	Number of attempts allowed when querying the DNS name servers.

Name	Type	Description
domains	array[string]	A list of DNS domains. Domain names have the following requirements: • The name must contain only the following characters: A through Z, a through z, 0 through 9, ".", "-" or "_". • 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. • 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. • The top level domain must contain only the following characters: A through Z, a through z. • The system reserves the following names:"all", "local", and "localhost".
dynamic_dns	dynamic_dns	
packet_query_match	boolean	Indicates whether or not the query section of the reply packet is equal to that of the query packet.
servers	array[string]	The list of IP addresses of the DNS servers. Addresses can be either IPv4 or IPv6 addresses.
skip_config_validation	boolean	Indicates whether or not the validation for the specified DNS configuration is disabled.
source_address_match	boolean	Indicates whether or not the DNS responses are from a different IP address to the IP address the request was sent to.
svm	svm	

Name	Type	Description
timeout	integer	Timeout values for queries to the name servers, in seconds.
tld_query_enabled	boolean	Enable or disable top-level domain (TLD) queries.

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.

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