Manage role privilege details

ONTAP 9.15.1 REST API reference

NetApp
September 11, 2024

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Security roles owner.uuid name privileges endpoint overview

Overview

This API is used to configure the role privileges (tuples of REST URI paths or command/command directory paths, their access levels and optional queries, where the tuples refer to command/command directory paths). It also retrieves all of the privilege tuples for a role and can add a tuple to an existing role or creates a new role with the provided tuple. The "path" attribute can be a resource-qualified endpoint. Currently, the only supported resource-qualified endpoints are the following:

Snapshots APIs

– /api/storage/volumes/{volume.uuid}/snapshots

File System Analytics APIs

– /api/storage/volumes/{volume.uuid}/files

– /api/storage/volumes/{volume.uuid}/top-metrics/clients

– /api/storage/volumes/{volume.uuid}/top-metrics/directories

– /api/storage/volumes/{volume.uuid}/top-metrics/files

– /api/storage/volumes/{volume.uuid}/top-metrics/users

– /api/svm/svms/{svm.uuid}/top-metrics/clients

– /api/svm/svms/{svm.uuid}/top-metrics/directories

– /api/svm/svms/{svm.uuid}/top-metrics/files

– /api/svm/svms/{svm.uuid}/top-metrics/users

Ontap S3 APIs

– /api/protocols/s3/services/{svm.uuid}/users

In the above APIs, wildcard character * could be used in place of *{volume.uuid}* or *{svm.uuid}* to denote *all* volumes or *all* SVMs, depending upon whether the REST endpoint references volumes or SVMs. The *{volume.uuid}* refers to the *-instance-uuid* field value in the "volume show" command output at diagnostic privilege level. It can also be fetched through REST endpoint */api/storage/volumes*.

The role can be SVM-scoped or cluster-scoped.

Specify the owner UUID and the role name in the URI path. The owner UUID corresponds to the UUID of the SVM for which the role has been created and can be obtained from the response body of a GET request performed on one of the following APIs:

- */api/security/roles* for all the roles

- */api/security/roles/?scope=svm* for SVM-scoped roles
- /api/security/roles/?owner.name=<svm-name></i> for roles in a specific SVM This API response contains the complete URI for each role and can be used after suffixing it with _"privileges".</svm-name>_

The pre-defined roles can be retrieved but cannot be updated.

Examples

Adding a privilege tuple for a REST URI/endpoint to an existing custom role

```
# The API:
POST "/security/roles/{owner.uuid}/{name}/privileges"

# The call:
curl -X POST "https://<mgmt-ip>/api/security/roles/aaef7c38-4bd3-11e9-
b238-0050568e2e25/svm_role1/privileges" -d
'{"access":"readonly","path":"/api/protocols"}'
```

Adding a privilege tuple for a command or command directory to an existing custom role

```
# The API:
POST "/security/roles/{owner.uuid}/{name}/privileges"

# The call:
curl -X POST "https://<mgmt-ip>/api/security/roles/aaef7c38-4bd3-11e9-
b238-0050568e2e25/svm_role1/privileges" -d
'{"access":"all","path":"statistics volume show","query":"-vserver
vs1&#124;vs2 -aggregate aggr1&#124;aggr2"}'
```

Retrieving all the privilege tuples for a REST role

```
# The API:
GET "/api/security/roles/{owner.uuid}/{name}/privileges"

# The call:
curl -X GET "https://<mgmt-ip>/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges"

# The response:
{
"records": [
  {
    "path": "/api/application",
```

```
    "access": "all",
    "_links": {
      "self": {
        "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges/%2Fapi%2Fapplication"
      }
    }
  },
  {
    "path": "/api/protocols",
    "access": "readonly",
    "_links": {
      "self": {
        "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges/%2Fapi%2Fprotocols"
      }
    }
  },
  {
    "path": "/api/storage/volumes/1385d680-74fc-4adb-a348-
9a740e83702a/snapshots",
    "access": "all",
    "_links": {
      "self": {
        "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges/%2Fapi%2Fstorage%2Fvolumes%2F1385d680-
74fc-4adb-a348-9a740e83702a%2Fsnapshots"
      }
    }
  },
  {
    "path": "/api/storage/volumes/*/top-metrics/users",
    "access": "read_create_modify",
    "_links": {
      "self": {
        "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges/%2Fapi%2Fstorage%2Fvolumes%2F%2A%2Ftop-
metrics%2Fusers"
      }
    }
  }
],
"num_records": 4,
"_links": {
  "self": {
    "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
```

```
0050568e2e25/svm_role1/privileges"
  }
}
}
```

Retrieving all the privilege tuples for a custom legacy role

```
# The API:
GET "/api/security/roles/{owner.uuid}/{name}/privileges"

# The call:
curl -X GET "https://<mgmt-ip>/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges"

# The response:
{
"records": [
  {
    "path": "network interface",
    "access": "readonly",
    "_links": {
      "self": {
        "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges/network%20interface"
      }
    }
  },
  {
    "path": "security",
    "access": "readonly",
    "_links": {
      "self": {
        "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges/security"
      }
    }
  },
  {
    "path": "security certificate"
    "access": "all",
    "_links": {
      "self": {
        "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges/security%20certificate"
      }
```

```
    }
  },
  {
    "path": "security password"
    "access": "all",
    "_links": {
      "self": {
        "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges/security%20password"
      }
    }
  }
],
"num_records": 4,
"_links": {
  "self": {
    "href": "/api/security/roles/aaef7c38-4bd3-11e9-b238-
0050568e2e25/svm_role1/privileges"
  }
}
}
```


Retrieve privilege details of the specified role

GET `/security/roles/{owner.uuid}/{name}/privileges`

Introduced In: 9.6

Retrieves privilege details of the specified role.

Related ONTAP commands

- `security login rest-role show`
- `security login role show`

Learn more

- DOC /security/roles/{owner.uuid}/{name}/privileges
- DOC /security/roles

Parameters

Name	Type	In	Required	Description
owner.uuid	string	path	True	Role owner UUID

Name	Type	In	Required	Description
name	string	path	True	Role 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. • Default value: 1
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached. • Default value: 1 • Max value: 120 • Min value: 0
order_by	array[string]	query	False	Order results by specified fields and optional [asc

Response

```
Status: 200, Ok
```

Name	Type	Description
_links	_links	

Name	Type	Description
num_records	integer	Number of records
records	array[role_privilege]	

Example response


```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "_links": {
        "self": {
          "href": "/api/resourcelink"
        }
      },
      "access": "all",
      "path": "volume move start",
      "query": "-vserver vs1|vs2|vs3 -destination-aggregate
aggr1|aggr2"
    }
  ]
}
```


Error

```
Status: Default, Error
```

Name	Type	Description
error	returned_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	

role_privilege

A tuple containing a REST endpoint or a command/command directory path and the access level assigned to that endpoint or command/command directory. If the "path" attribute refers to a command/command directory path, the tuple could additionally contain an optional query. The REST endpoint can be a resource-qualified endpoint. At present, the only supported resource-qualified endpoints are the following

Snapshots APIs

- */api/storage/volumes/{volume.uuid}/snapshots*

File System Analytics APIs

- */api/storage/volumes/{volume.uuid}/files*
- */api/storage/volumes/{volume.uuid}/top-metrics/clients*
- */api/storage/volumes/{volume.uuid}/top-metrics/directories*
- */api/storage/volumes/{volume.uuid}/top-metrics/files*
- */api/storage/volumes/{volume.uuid}/top-metrics/users*
- */api/svm/svms/{svm.uuid}/top-metrics/clients*
- */api/svm/svms/{svm.uuid}/top-metrics/directories*
- */api/svm/svms/{svm.uuid}/top-metrics/files*
- */api/svm/svms/{svm.uuid}/top-metrics/users*
- */api/protocols/s3/services/{svm.uuid}/users*

In the above APIs, wildcard character * could be used in place of *{volume.uuid}* or *{svm.uuid}* to denote *all* volumes or *all* SVMs, depending upon whether the REST endpoint references volumes or SVMs. The *{volume.uuid}* refers to the *-instance-uuid* field value in the "volume show" command output at diagnostic privilege level. It can also be fetched through REST endpoint */api/storage/volumes*.

Name	Type	Description
_links	_links	
access	string	Access level for the REST endpoint or command/command directory path. If it denotes the access level for a command/command directory path, the only supported enum values are 'none','readonly' and 'all'.
path	string	Either of REST URI/endpoint OR command/command directory path.
query	string	Optional attribute that can be specified only if the "path" attribute refers to a command/command directory path. The privilege tuple implicitly defines a set of objects the role can or cannot access at the specified access level. The query further reduces this set of objects to a subset of objects that the role is allowed to access. The query attribute must be applicable to the command/command directory specified by the "path" attribute. It is defined using one or more parameters of the command/command directory path specified by the "path" attribute.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_error

Name	Type	Description
arguments	array[error_arguments]	Message arguments

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

Add a privilege tuple to an existing role

POST `/security/roles/{owner.uuid}/{name}/privileges`

Introduced In: 9.6

Adds a privilege tuple (of REST URI or command/command directory path, its access level and an optional query, if the "path" refers to a command/command directory path) to an existing role or creates a new role with the provided tuple.

Required parameters

- `owner.uuid` - UUID of the SVM that houses this role.
- `name` - Name of the role to be updated.
- `path` - REST URI path (example: */api/storage/volumes*) or command/command directory path (example: *snaplock compliance-clock*). Can be a resource-qualified endpoint (example: */api/storage/volumes/43256a71-be02-474d-a2a9-9642e12a6a2c/snapshots*). Currently, resource-qualified endpoints are limited to the following:

Snapshots APIs

– /api/storage/volumes/{volume.uuid}/snapshots

File System Analytics APIs

– /api/storage/volumes/{volume.uuid}/files

– /api/storage/volumes/{volume.uuid}/top-metrics/clients

– /api/storage/volumes/{volume.uuid}/top-metrics/directories

– /api/storage/volumes/{volume.uuid}/top-metrics/files

– /api/storage/volumes/{volume.uuid}/top-metrics/users

– /api/svm/svms/{svm.uuid}/top-metrics/clients

– /api/svm/svms/{svm.uuid}/top-metrics/directories

– /api/svm/svms/{svm.uuid}/top-metrics/files

– /api/svm/svms/{svm.uuid}/top-metrics/users

In the above APIs, wildcard character * could be used in place of *{volume.uuid}* or *{svm.uuid}* to denote *all* volumes or *all* SVMs, depending upon whether the REST endpoint references volumes or SVMs. The *{volume.uuid}* refers to the *-instance-uuid* field value in the "volume show" command output at diagnostic privilege level. It can also be fetched through REST endpoint */api/storage/volumes*.

- `access` - Desired access level for the REST URI path or command/command directory.

Related ONTAP commands

- `security login rest-role create`
- `security login role create`

Learn more

- DOC /security/roles/{owner.uuid}/{name}/privileges
- DOC /security/roles

Parameters

Name	Type	In	Required	Description
owner.uuid	string	path	True	Role owner UUID
name	string	path	True	Role name
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	
access	string	Access level for the REST endpoint or command/command directory path. If it denotes the access level for a command/command directory path, the only supported enum values are 'none','readonly' and 'all'.

Name	Type	Description
path	string	Either of REST URI/endpoint OR command/command directory path.
query	string	Optional attribute that can be specified only if the "path" attribute refers to a command/command directory path. The privilege tuple implicitly defines a set of objects the role can or cannot access at the specified access level. The query further reduces this set of objects to a subset of objects that the role is allowed to access. The query attribute must be applicable to the command/command directory specified by the "path" attribute. It is defined using one or more parameters of the command/command directory path specified by the "path" attribute.

Example request

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "access": "all",
  "path": "volume move start",
  "query": "-vserver vs1|vs2|vs3 -destination-aggregate aggr1|aggr2"
}
```

Response

```
Status: 201, Created
```

Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
1263347	Cannot modify pre-defined roles.
5636129	A role with given name has not been defined.
5636143	A Vserver admin cannot use the API with this access level.
5636144	The value specified for the access level is not valid.
5636168	This role is mapped to a rest-role and cannot be modified directly. Modifications must be done with rest-role.
5636169	A character in the URI is not valid.
5636170	The URI does not exist.
5636173	This feature requires an effective cluster version of 9.6 or later.
5636175	Vserver admin cannot have access to given API.
5636184	The expanded REST roles for granular resource control feature is currently disabled.
5636185	The specified UUID was not found.
5636186	Expanded REST roles for granular resource control requires an effective cluster version of 9.10.1 or later.
5636192	The query parameter cannot be specified for the privileges tuple with API endpoint entries.
5636200	The specified value of the access parameter is invalid, if a command or command directory is specified in the path parameter.
13434890	Vserver-ID failed for Vserver roles.
13434891	UUID LookUp failed for Vserver roles.
13434892	Roles is a required field.
13434893	The SVM does not exist.

Also see the table of common errors in the Response body overview section of this documentation.

Name	Type	Description
error	returned_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	

role_privilege

A tuple containing a REST endpoint or a command/command directory path and the access level assigned to that endpoint or command/command directory. If the "path" attribute refers to a command/command directory path, the tuple could additionally contain an optional query. The REST endpoint can be a resource-qualified endpoint. At present, the only supported resource-qualified endpoints are the following

Snapshots APIs

- */api/storage/volumes/{volume.uuid}/snapshots*

File System Analytics APIs

- */api/storage/volumes/{volume.uuid}/files*
- */api/storage/volumes/{volume.uuid}/top-metrics/clients*
- */api/storage/volumes/{volume.uuid}/top-metrics/directories*
- */api/storage/volumes/{volume.uuid}/top-metrics/files*
- */api/storage/volumes/{volume.uuid}/top-metrics/users*
- */api/svm/svms/{svm.uuid}/top-metrics/clients*
- */api/svm/svms/{svm.uuid}/top-metrics/directories*
- */api/svm/svms/{svm.uuid}/top-metrics/files*
- */api/svm/svms/{svm.uuid}/top-metrics/users*
- */api/protocols/s3/services/{svm.uuid}/users*

In the above APIs, wildcard character * could be used in place of *{volume.uuid}* or *{svm.uuid}* to denote *all* volumes or *all* SVMs, depending upon whether the REST endpoint references volumes or SVMs. The *{volume.uuid}* refers to the *-instance-uuid* field value in the "volume show" command output at diagnostic privilege level. It can also be fetched through REST endpoint */api/storage/volumes*.

Name	Type	Description
_links	_links	

Name	Type	Description
access	string	Access level for the REST endpoint or command/command directory path. If it denotes the access level for a command/command directory path, the only supported enum values are 'none','readonly' and 'all'.
path	string	Either of REST URI/endpoint OR command/command directory path.
query	string	Optional attribute that can be specified only if the "path" attribute refers to a command/command directory path. The privilege tuple implicitly defines a set of objects the role can or cannot access at the specified access level. The query further reduces this set of objects to a subset of objects that the role is allowed to access. The query attribute must be applicable to the command/command directory specified by the "path" attribute. It is defined using one or more parameters of the command/command directory path specified by the "path" attribute.

error_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned_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.

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