



# Manage multi-admin-verify rules

ONTAP 9.11.1 REST API reference

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# Manage multi-admin-verify rules

## Security multi-admin-verify rules endpoint overview

### Overview

Rules define the ONTAP commands (operations) that should be protected by multi-admin approval. While the feature is turned on, any ONTAP operation that is defined with a rule will be enforced with multi-admin approval to execute the command (operation).

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### Examples

#### Creating a multi-admin-verify rule

Creates a rule for the specified ONTAP operation.

---

```
# The API:
/api/security/multi-admin-verify/rules

# The call:
curl -X POST "https://<mgmt-ip>/api/security/multi-admin-verify/rules?return_records=true" -H "accept: application/hal+json" -d '{"owner.uuid": "c109634f-7011-11ec-a23d-005056a78fd5", "operation": "volume delete", "query": "-vserver vs0", "required_approvers": 1}'

# The response:
{
  "num_records": 1,
  "records": [
    {
      "owner": {
        "uuid": "c109634f-7011-11ec-a23d-005056a78fd5",
        "_links": {
          "self": {
            "href": "/api/svm/svms/c109634f-7011-11ec-a23d-005056a78fd5"
          }
        }
      },
      "operation": "volume delete",
      "auto_request_create": true,
      "query": "-vserver vs0",
      "required_approvers": 1,
      "create_time": "2022-01-07T22:14:03-05:00",
      "system_defined": false,
      "_links": {
        "self": {
          "href": "/api/security/multi-admin-verify/rules/c109634f-7011-11ec-a23d-005056a78fd5/volume%20delete"
        }
      }
    }
  ]
}
```

---

## Retrieving multi-admin-verify rules

Displays information about multi admin verification rules.

---

```

# The API:
/api/security/multi-admin-verify/rules

# The call:
curl -X GET "https://<cluster-ip>/api/security/multi-admin-verify/rules"

# The response:
{
"records": [
  {
    "owner": {
      "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
      "name": "cluster1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
        }
      }
    },
    "operation": "security login password",
    "_links": {
      "self": {
        "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20login%20password"
      }
    }
  },
  {
    "owner": {
      "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
      "name": "cluster1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
        }
      }
    },
    "operation": "security login unlock",
    "_links": {
      "self": {
        "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20login%20unlock"
      }
    }
  },
  {

```

```
"owner": {
  "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
  "name": "cluster1",
  "_links": {
    "self": {
      "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
    }
  }
},
"operation": "security multi-admin-verify approval-group create",
"_links": {
  "self": {
    "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20multi-admin-verify%20approval-group%20create"
  }
}
},
{
  "owner": {
    "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
    "name": "cluster1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
      }
    }
  },
  "operation": "security multi-admin-verify approval-group delete",
  "_links": {
    "self": {
      "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20multi-admin-verify%20approval-group%20delete"
    }
  }
}
},
{
  "owner": {
    "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
    "name": "cluster1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
      }
    }
  }
}
```

```

    },
    "operation": "security multi-admin-verify approval-group modify",
    "_links": {
      "self": {
        "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20multi-admin-verify%20approval-group%20modify"
      }
    }
  },
  {
    "owner": {
      "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
      "name": "cluster1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
        }
      }
    },
    "operation": "security multi-admin-verify approval-group replace",
    "_links": {
      "self": {
        "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20multi-admin-verify%20approval-group%20replace"
      }
    }
  },
  {
    "owner": {
      "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
      "name": "cluster1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
        }
      }
    },
    "operation": "security multi-admin-verify modify",
    "_links": {
      "self": {
        "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20multi-admin-verify%20modify"
      }
    }
  }
}

```

```

},
{
  "owner": {
    "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
    "name": "cluster1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
      }
    }
  },
  "operation": "security multi-admin-verify rule create",
  "_links": {
    "self": {
      "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20multi-admin-verify%20rule%20create"
    }
  }
},
{
  "owner": {
    "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
    "name": "cluster1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
      }
    }
  },
  "operation": "security multi-admin-verify rule delete",
  "_links": {
    "self": {
      "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20multi-admin-verify%20rule%20delete"
    }
  }
},
{
  "owner": {
    "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
    "name": "cluster1",
    "_links": {
      "self": {
        "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
      }
    }
  }
}

```



```

    },
    "operation": "security multi-admin-verify rule modify",
    "_links": {
      "self": {
        "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/security%20multi-admin-verify%20rule%20modify"
      }
    }
  },
  {
    "owner": {
      "uuid": "52b75787-7011-11ec-a23d-005056a78fd5",
      "name": "cluster1",
      "_links": {
        "self": {
          "href": "/api/svm/svms/52b75787-7011-11ec-a23d-005056a78fd5"
        }
      }
    },
    "operation": "volume delete",
    "_links": {
      "self": {
        "href": "/api/security/multi-admin-verify/rules/52b75787-7011-11ec-a23d-005056a78fd5/volume%20delete"
      }
    }
  }
],
"num_records": 11,
"_links": {
  "self": {
    "href": "/api/security/multi-admin-verify/rules"
  }
}
}
}

```

## Retrieve multi-admin-verify rules

GET /security/multi-admin-verify/rules

**Introduced In:** 9.11

Retrieves multi-admin-verify rules.

## Parameters

Name	Type	In	Required	Description
system_defined	boolean	query	False	Filter by system_defined
query	string	query	False	Filter by query
approval_groups.name	string	query	False	Filter by approval_groups.name
approval_expiry	string	query	False	Filter by approval_expiry
required_approvers	integer	query	False	Filter by required_approvers
execution_expiry	string	query	False	Filter by execution_expiry
operation	string	query	False	Filter by operation
create_time	string	query	False	Filter by create_time
auto_request_create	boolean	query	False	Filter by auto_request_create
owner.uuid	string	query	False	Filter by owner.uuid
owner.name	string	query	False	Filter by owner.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. <ul style="list-style-type: none"><li>• Default value: 1</li></ul>

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>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.</p> <ul style="list-style-type: none"> <li>• Default value: 1</li> <li>• Max value: 120</li> <li>• Min value: 0</li> </ul>
order_by	array[string]	query	False	Order results by specified fields and optional [asc

## Response

Status: 200, Ok

Name	Type	Description
_links	<a href="#">_links</a>	
num_records	integer	Number of records
records	array[ <a href="#">multi_admin_verify_rule</a> ]	

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "approval_expiry": "string",
      "approval_groups": [
        {
          "name": "string"
        }
      ],
      "create_time": "string",
      "execution_expiry": "string",
      "operation": "string",
      "owner": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svml",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "query": "string"
    }
  ]
}
```

## Error

Status: Default, Error

Name	Type	Description
error	<a href="#">error</a>	

## 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	<a href="#">href</a>	
self	<a href="#">href</a>	

approval\_groups

Name	Type	Description
name	string	Name of the approval group.

\_links

Name	Type	Description
self	<a href="#">href</a>	

owner

The owner of the rule. The only valid owner is currently the cluster.

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

multi\_admin\_verify\_rule

Name	Type	Description
approval_expiry	string	Time for requests to be approved, in ISO-8601 duration format. If not set, the global setting is used.
approval_groups	array[ <a href="#">approval_groups</a> ]	List of approval groups that are allowed to approve requests for rules that don't have approval groups.

Name	Type	Description
auto_request_create	boolean	When true, ONTAP automatically creates a request for any failed operation where there is no matching pending request. <ul style="list-style-type: none"> <li>• Default value:</li> <li>• Introduced in: 9.11</li> </ul>
create_time	string	
execution_expiry	string	Time for requests to be executed once approved, in ISO-8601 duration format. If not set, the global setting is used.
operation	string	Command that requires one or more approvals.
owner	<a href="#">owner</a>	The owner of the rule. The only valid owner is currently the cluster.
query	string	When specified, this property limits the entries that require approvals to those that match the specified query.
required_approvers	integer	The number of required approvers, excluding the user that made the request.
system_defined	boolean	Specifies whether the rule is system-defined or user-defined.

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments

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

## Create a multi-admin-verify rule

POST /security/multi-admin-verify/rules

**Introduced In:** 9.11

Creates a multi-admin-verify rule.

### Parameters

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

### Request Body

Name	Type	Description
approval_expiry	string	Time for requests to be approved, in ISO-8601 duration format. If not set, the global setting is used.
approval_groups	array[approval_groups]	List of approval groups that are allowed to approve requests for rules that don't have approval groups.



Name	Type	Description
auto_request_create	boolean	When true, ONTAP automatically creates a request for any failed operation where there is no matching pending request. <ul style="list-style-type: none"> <li>• Default value: 1</li> <li>• Introduced in: 9.11</li> </ul>
create_time	string	
execution_expiry	string	Time for requests to be executed once approved, in ISO-8601 duration format. If not set, the global setting is used.
operation	string	Command that requires one or more approvals.
owner	<a href="#">owner</a>	The owner of the rule. The only valid owner is currently the cluster.
query	string	When specified, this property limits the entries that require approvals to those that match the specified query.
required_approvers	integer	The number of required approvers, excluding the user that made the request.
system_defined	boolean	Specifies whether the rule is system-defined or user-defined.

## Example request

```
{
  "approval_expiry": "string",
  "approval_groups": [
    {
      "name": "string"
    }
  ],
  "create_time": "string",
  "execution_expiry": "string",
  "operation": "string",
  "owner": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "query": "string"
}
```

## Response

Status: 201, Created

Name	Type	Description
<a href="#">_links</a>	<a href="#">_links</a>	
num_records	integer	Number of records
records	array[ <a href="#">multi_admin_verify_rule</a> ]	

## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "records": [
    {
      "approval_expiry": "string",
      "approval_groups": [
        {
          "name": "string"
        }
      ],
      "create_time": "string",
      "execution_expiry": "string",
      "operation": "string",
      "owner": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "svml",
        "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
      },
      "query": "string"
    }
  ]
}
```

## Error

Status: Default

## ONTAP Error Response Codes

Error Code	Description
262148	The specified command is not recognized.
262308	The specified command is not supported by this feature.
262309	The feature must be enabled first.
262311	Value must be greater than zero.
262312	Number of required approvers must be less than the total number of unique approvers in the approval-groups.
262313	Number of unique approvers in the approval-groups must be greater than the number of required approvers.
262314	Some approval-groups were not found.
262316	Value must be in the range one second to two weeks.
262326	Failed to parse query.
262335	The query string must be contained in either the "operation" or "query" parameters but not in both.

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

approval\_groups

Name	Type	Description
name	string	Name of the approval group.

href

Name	Type	Description
href	string	

\_links

Name	Type	Description
self	<a href="#">href</a>	

owner

The owner of the rule. The only valid owner is currently the cluster.

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	The name of the SVM.
uuid	string	The unique identifier of the SVM.

multi\_admin\_verify\_rule

Name	Type	Description
approval_expiry	string	Time for requests to be approved, in ISO-8601 duration format. If not set, the global setting is used.
approval_groups	array[ <a href="#">approval_groups</a> ]	List of approval groups that are allowed to approve requests for rules that don't have approval groups.

Name	Type	Description
auto_request_create	boolean	When true, ONTAP automatically creates a request for any failed operation where there is no matching pending request. <ul style="list-style-type: none"> <li>• Default value: 1</li> <li>• Introduced in: 9.11</li> </ul>
create_time	string	
execution_expiry	string	Time for requests to be executed once approved, in ISO-8601 duration format. If not set, the global setting is used.
operation	string	Command that requires one or more approvals.
owner	<a href="#">owner</a>	The owner of the rule. The only valid owner is currently the cluster.
query	string	When specified, this property limits the entries that require approvals to those that match the specified query.
required_approvers	integer	The number of required approvers, excluding the user that made the request.
system_defined	boolean	Specifies whether the rule is system-defined or user-defined.

#### \_links

Name	Type	Description
next	<a href="#">href</a>	
self	<a href="#">href</a>	

#### error\_arguments

Name	Type	Description
code	string	Argument code

Name	Type	Description
message	string	Message argument

error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

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