Manage file security permissions and audit policies

ONTAP 9.14.1 REST API reference

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Protocols file-security permissions svm.uuid path endpoint overview

Overview

Using this API, You can manage NTFS file security and audit policies of file or directory without the need of a client. It works similar to what you could do with a cacls in windows client. It will create an NTFS security descriptor(SD) to which you can add access control entries (ACEs) to the discretionary access control list (DACL) and the system access control list (SACL). Generally, an SD contains following information:

- Security identifiers (SIDs) for the owner and primary group of an object. A security identifier (SID) is a unique value of variable length used to identify a trustee. Each account has a unique SID issued by an authority, such as a Windows domain controller, and is stored in a security database.
- A DACL identifies the trustees that are allowed or denied access to a securable object. When a process tries to access a securable object, the system checks the ACEs in the object's DACL to determine whether to grant access to it.
- A SACL enables administrators to log attempts to access a secured object. Each ACE specifies the types of access attempts by a specified trustee that cause the system to generate a record in the security event log. An ACE in a SACL can generate audit records when an access attempt fails, when it succeeds, or both.
- A set of control bits that qualify the meaning of a SD or its individual members.

Currently, in ONTAP CLI, creating and applying NTFS ACLs is a 5-step process:

- Create an SD.
- Add DACLs and SACLs to the NTFS SD. If you want to audit file and directory events, you must configure auditing on the Vserver, in addition, to adding a SACL to the SD.
- Create a file/directory security policy. This step associates the policy with a SVM.
- Create a policy task. A policy task refers to a single operation to apply to a file (or folder) or to a set of files (or folders). Among other things, the task defines which SD to apply to a path.
- Apply a policy to the associated SVM.

This REST API to set the DACL/SACL is similar to the windows GUI. The approach used here has been simplified by combining all steps into a single step. The REST API uses only minimal and mandatory parameters to create access control entries (ACEs), which can be added to the discretionary access control list (DACL) and the system access control list (SACL). Based on information provided, SD is created and applied on the target path.

Beginning with ONTAP 9.10.1, SLAG (Storage-Level Access Guard) ACLs can also be configured through these endpoints. SLAG is designed to be set on a volume or qtree. Storage-level security cannot be revoked from a client, not even by a system (Windows or UNIX) administrator. It is designed to be modified by storage administrators only, which precedes the share/export permission and the Windows ACLs or UNIX mode bits. Similar to configuring file-directory ACLs, configuring SLAG ACLs is also simplified by combining all steps into a single step.

Examples

Creating a new SD

Use this endpoint to apply a fresh set of SACLs and DACLs. A new SD is created based on the input parameters and it replaces the old SD for the given target path:

```
# The API:
POST /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
curl -X POST "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent?return_timeout=0" -H "accept: application/json" -H
"authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type:
application/json" -d "{ \"acls\": [ { \"access\": \"access_allow\",
\"advanced_rights\": { \"append_data\": true, \"delete\": true,
\"delete_child\": true, \"execute_file\": true, \"full_control\": true,
\"read_attr\": true, \"read_data\": true, \"read_ea\": true,
\"read_perm\": true, \"write_attr\": true, \"write_data\": true,
\"write_ea\": true, \"write_owner\": true, \"write_perm\": true },
\"apply_to\": { \"files\": true, \"sub_folders\": true, \"this_folder\":
true }, \"user\": \"administrator\" } ], \"control_flags\": \"32788\",
\"group\": \"S-1-5-21-2233347455-2266964949-1780268902-69700\",
\"ignore_paths\": [ \"/parent/child2\" ], \"owner\": \"S-1-5-21-
2233347455-2266964949-1780268902-69304\", \"propagation_mode\":
\"propagate\"}"

# The response:
{
"job": {
  "uuid": "3015c294-5bbc-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/3015c294-5bbc-11eb-9c4e-0050568e8682"
    }
  }
}
}
```

Configuring a new set of SLAG DACLs and SACLs

Use this endpoint to apply a fresh set of SLAG DACLs and SACLs. A new SD is created based on the input

parameters and it replaces the old SLAG pemissions for the given target path:

```
# The API:
POST /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/file-
security/permissions/9f738ac5-c502-11eb-b82c-
0050568e5902/%2Ftest_vol?return_timeout=0" -H  "accept: application/json"
-H  "Content-Type: application/json" -d "{  \"access_control\": \"slag\",
\"acls\": [    {      \"access\": \"access_allow\",
\"advanced_rights\": {        \"append_data\": true,        \"delete\":
true,        \"delete_child\": true,        \"execute_file\": true,
\"full_control\": true,        \"read_attr\": true,        \"read_data\":
true,        \"read_ea\": true,        \"read_perm\": true,
\"write_attr\": true,        \"write_data\": true,        \"write_ea\":
true,        \"write_owner\": true,        \"write_perm\": true      },
\"apply_to\": {        \"files\": true,        \"sub_folders\": true,
\"this_folder\": true      },      \"user\": \"user1\"    },{
\"access\": \"audit_success\",      \"advanced_rights\": {
\"append_data\": true,        \"delete\": true,        \"delete_child\":
true,        \"execute_file\": true,        \"full_control\": true,
\"read_attr\": true,        \"read_data\": true,        \"read_ea\": true,
\"read_perm\": true,        \"write_attr\": true,        \"write_data\":
true,        \"write_ea\": true,        \"write_owner\": true,
\"write_perm\": true      },      \"apply_to\": {        \"files\": true,
\"sub_folders\": true,        \"this_folder\": true      },      \"user\":
\"user2\"    }  ]}"

# The response:
{
"job": {
  "uuid": "9938d743-d566-11eb-ad60-0050568e5902",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/9938d743-d566-11eb-ad60-0050568e5902"
    }
  }
}
}
```

Retrieving file permissions

Use this endpoint to retrieve all the security and auditing information of a directory or file:

```
# The API:
GET /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
curl -X GET "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-0050568e8682/%2Fparent" -H
"accept: application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE="

# The response:
{
"svm": {
  "uuid": "9479099d-5b9f-11eb-9c4e-0050568e8682",
  "name": "vs1"
},
"path": "/parent",
"owner": "BUILTIN\\Administrators",
"group": "BUILTIN\\Administrators",
"control_flags": "0x8014",
"acls": [
  {
    "user": "BUILTIN\\Administrators",
    "access": "access_allow",
    "apply_to": {
      "files": true,
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
```

```
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "BUILTIN\\Users",
    "access": "access_allow",
    "apply_to": {
      "files": true,
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "CREATOR OWNER",
    "access": "access_allow",
    "apply_to": {
      "files": true,
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
```

```
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "Everyone",
    "access": "access_allow",
    "apply_to": {
      "files": true,
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "NT AUTHORITY\\SYSTEM",
    "access": "access_allow",
    "apply_to": {
      "files": true,
      "sub_folders": true,
```

```
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "file_directory"
  },
  {
    "user": "user1",
    "access": "access_allow",
    "apply_to": {
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "slag"
```

```
  },
  {
    "user": "user1",
    "access": "access_allow",
    "apply_to": {
      "files": true,
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "slag"
  },
  {
    "user": "user2",
    "access": "audit_success",
    "apply_to": {
      "sub_folders": true,
      "this_folder": true
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
```

```
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "slag"
  },
  {
    "user": "user2",
    "access": "audit_success",
    "apply_to": {
      "files": true,
    },
    "advanced_rights": {
      "append_data": true,
      "delete": true,
      "delete_child": true,
      "execute_file": true,
      "full_control": true,
      "read_attr": true,
      "read_data": true,
      "read_ea": true,
      "read_perm": true,
      "write_attr": true,
      "write_data": true,
      "write_ea": true,
      "write_owner": true,
      "synchronize": true,
      "write_perm": true
    },
    "access_control": "slag"
  }
],
"inode": 64,
"security_style": "mixed",
"effective_style": "ntfs",
"dos_attributes": "10",
"text_dos_attr": "----D---",
"user_id": "0",
"group_id": "0",
"mode_bits": 777,
"text_mode_bits": "rwxrwxrwx"
}
```

Updating SD-specific information

Use this end point to update the following information:

- Primary owner of the file/directory.
- Primary group of the file/directory.
- Control flags associated with with SD of the file/directory.

```
# The API:
PATCH /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
curl -X PATCH "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent?return_timeout=0" -H "accept: application/json" -H
"authorization: Basic YWRtaW46bmV0YXBwMSE=" -H "Content-Type:
application/json" -d "{ \"control_flags\": \"32788\", \"group\":
\"everyone\", \"owner\": \"user1\"}"

# The Response:
{
"job": {
  "uuid": "6f89e612-5bbd-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/6f89e612-5bbd-11eb-9c4e-0050568e8682"
    }
  }
}
}
```

Removing all SLAG ACLs

Use this end point to remove all SLAG ACLs.

```
# The API:
DELETE /protocols/file-security/permissions/{svm.uuid}/{path}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/file-
security/permissions/713f569f-d4bc-11eb-b24a-
005056ac6ce1/%2Ftest_vol?access_control=slag"
```

Adding a single file-directory DACL/SACL ACE

Use this endpoint to add a single SACL/DACL ACE for a new user or for an existing user with a different access type (allow or deny). The given ACE is merged with an existing SACL/DACL and based on the type of “propagation-mode”, it is reflected to the child object:

```
# The API:
POST /protocols/file-security/permissions/{svm.uuid}/{path}/acl

# The call:
curl -X POST "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent/acl?return_timeout=0&return_records=false" -H
"accept: application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE="
-H "Content-Type: application/json" -d "{ \"access\": \"access_allow\",
\"apply_to\": { \"files\": true, \"sub_folders\": true, \"this_folder\":
true }, \"ignore_paths\": [ \"/parent/child2\" ], \"propagation_mode\":
\"propagate\", \"rights\": \"read\", \"user\": \"himanshu\"}"

# The Response:
{
"job": {
  "uuid": "26185a2f-5bbe-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/26185a2f-5bbe-11eb-9c4e-0050568e8682"
    }
  }
}
}
```

Adding a single SLAG DACL/SACL ACE

Use this endpoint to add a single SLAG SACL/DACL ACE to an existing set of ACLs for a user or for an existing user with a different access type (allow or deny).

```
# The API:
POST /protocols/file-security/permissions/{svm.uuid}/{path}/acl

# The call:
curl -X POST "https://<mgmt-ip>/api/protocols/file-
security/permissions/713f569f-d4bc-11eb-b24a-
005056ac6ce1/%2Ftest_vol/acl?return_timeout=0&return_records=false" -H
"accept: application/json" -H  "authorization: Basic YWRtaW46bmV0YXBwMSE="
-H  "Content-Type: application/json" -d "{  \"access\": \"access_allow\",
\"access_control\": \"slag\",  \"advanced_rights\": {    \"append_data\":
true,    \"delete\": true,    \"delete_child\": true,    \"execute_file\":
true,    \"full_control\": true,    \"read_attr\": true,    \"read_data\":
true,    \"read_ea\": true,    \"read_perm\": true,    \"write_attr\":
true,    \"write_data\": true,    \"write_ea\": true,    \"write_owner\":
true,    \"write_perm\": true  },  \"apply_to\": {    \"files\": true,
\"sub_folders\": true,    \"this_folder\": true  },  \"user\": \"user1\"}"

# The Response:
{
"job": {
  "uuid": "7fa5f53f-d570-11eb-b24a-005056ac6ce1",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/7fa5f53f-d570-11eb-b24a-005056ac6ce1"
    }
  }
}
}
```

Updating existing SACL/DACL ACE

Use this endpoint to update the rights/advanced rights for an existing user, for a specified path. You cannot update the access type using this end point. Based on the type of “propagation-mode”, it is reflected to the child object:

```
# The API:
PATCH /protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}
The Call:
curl -X PATCH "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent/acl/himanshu?return_timeout=0" -H "accept:
application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE=" -H
"Content-Type: application/json" -d "{ \"access\": \"access_allow\",
\"advanced_rights\": { \"append_data\": true, \"delete\": true,
\"delete_child\": true, \"execute_file\": true, \"full_control\": true,
\"read_attr\": false, \"read_data\": false, \"read_ea\": false,
\"read_perm\": false, \"write_attr\": true, \"write_data\": true,
\"write_ea\": true, \"write_owner\": true, \"write_perm\": true },
\"apply_to\": { \"files\": true, \"sub_folders\": true, \"this_folder\":
true }, \"ignore_paths\": [ \"/parent/child2\" ], \"propagation_mode\":
\"propagate\"}"
The Response:
{
"job": {
  "uuid": "72067401-5bbf-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/72067401-5bbf-11eb-9c4e-0050568e8682"
    }
  }
}
}
```

Updating an existing SLG SACL/DACL ACE

Use this endpoint to update the SLAG rights/advanced rights for an existing user, for a specified path. You cannot update the access type using this end point.

```
# The API:
PATCH /protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}
The Call:
curl -X PATCH "https://<mgmt-ip>/api/protocols/file-
security/permissions/713f569f-d4bc-11eb-b24a-
005056ac6ce1/%2Ftest_vol/acl/user1?return_records=false&return_timeout=0"
-H  "accept: application/json" -H  "authorization: Basic
YWRtaW46bmV0YXBwMSE=" -H  "Content-Type: application/json" -d "{
\"access\": \"access_allow\",  \"access_control\": \"slag\",
\"apply_to\": {    \"files\": true,    \"sub_folders\": true,
\"this_folder\": true  },  \"rights\": \"read\"}"
The Response:
{
"job": {
  "uuid": "3d21abcd-d571-11eb-b24a-005056ac6ce1",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/3d21abcd-d571-11eb-b24a-005056ac6ce1"
    }
  }
}
}
```

Deleting an existing SACL/DACL ACE

Use this endpoint to delete any of the existing rights/advanced_rights for a user. Based on the type of “propagation-mode”, it is reflected to the child object:

```
# The API:
DELETE /protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}

# The call:
curl -X DELETE "https://10.140.101.39/api/protocols/file-
security/permissions/9479099d-5b9f-11eb-9c4e-
0050568e8682/%2Fparent/acl/himanshu?return_timeout=0" -H "accept:
application/json" -H "authorization: Basic YWRtaW46bmV0YXBwMSE=" -H
"Content-Type: application/json" -d "{ \"access\": \"access_allow\",
\"apply_to\": { \"files\": true, \"sub_folders\": true, \"this_folder\":
true }, \"ignore_paths\": [ \"/parent/child2\" ], \"propagation_mode\":
\"propagate\"}"

# The response:
{
"job": {
  "uuid": "e5683b61-5bbf-11eb-9c4e-0050568e8682",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/e5683b61-5bbf-11eb-9c4e-0050568e8682"
    }
  }
}
}
```

Deleting an existing SLAG SACL/DACL ACE

Use this endpoint to delete any SLAG ACE for a user.

```
# The API:
DELETE /protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}

# The call:
curl -X DELETE "https://<mgmt-ip>/api/protocols/file-
security/permissions/713f569f-d4bc-11eb-b24a-
005056ac6ce1/%2Ftest_vol/acl/user1?return_records=false&return_timeout=0"
-H  "accept: application/json" -H  "authorization: Basic
YWRtaW46bmV0YXBwMSE=" -H  "Content-Type: application/json" -d "{
\"access\": \"access_allow\",  \"access_control\": \"slag\",
\"apply_to\": {    \"files\": true,    \"sub_folders\": true,
\"this_folder\": true  }}"

# The response:
{
"job": {
  "uuid": "10c29534-d572-11eb-b24a-005056ac6ce1",
  "_links": {
    "self": {
      "href": "/api/cluster/jobs/10c29534-d572-11eb-b24a-005056ac6ce1"
    }
  }
}
}
```

Remove all SLAG ACLs for a path

DELETE `/protocols/file-security/permissions/{svm.uuid}/{path}`

Introduced In: 9.10

Remove all SLAG ACLs for specified path. Bulk deletion is supported only for SLAG You must keep the following points in mind while using these endpoints:

- Do not pass additional arguments that are not required.

Related ONTAP Commands

- `vserver security file-directory remove-slag`

Parameters

Name	Type	In	Required	Description
path	string	path	True	target path
access_control	string	query	False	Remove all SLAG ACLs. Currently bulk deletion of file-directory ACLs is not supported. • enum: ["slag"]
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Response

```
Status: 200, Ok
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655865	The specified file or directory does not exist.
10485811	Access is a required field.
1260882	Specified SVM not found.
6691623	User is not authorized.

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

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
message	string	Error message
target	string	The target parameter that caused the error.

Retrieve file permissions

GET `/protocols/file-security/permissions/{svm.uuid}/{path}`

Introduced In: 9.9

Retrieves file permissions

Related ONTAP commands

- `vserver security file-directory show`

Parameters

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

Response

```
Status: 200, Ok
```

Name	Type	Description
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
acls	array[acl]	A discretionary access security list (DACL) identifies the trustees that are allowed or denied access to a securable object. When a process tries to access a securable object, the system checks the access control entries (ACEs) in the object's DACL to determine whether to grant access to it.

Name	Type	Description
control_flags	string	Specifies the control flags in the SD. It is a Hexadecimal Value.
dos_attributes	string	Specifies the file attributes on this file or directory.
effective_style	string	Specifies the effective style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style
group	string	Specifies the owner's primary group. You can specify the owner group using either a group name or SID.
group_id	string	Specifies group ID on this file or directory.
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.
inode	integer	Specifies the File Inode number.
mode_bits	integer	Specifies the mode bits on this file or directory.
owner	string	Specifies the owner of the SD. You can specify the owner using either a user name or security identifier (SID). The owner of the SD can modify the permissions on the file (or folder) or files (or folders) to which the SD is applied and can give other users the right to take ownership of the object or objects to which the SD is applied.

Name	Type	Description
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • ignore - ignore inheritable permissions • replace - replace existing permissions on all subfolders and files with inheritable permissions
security_style	string	Specifies the security style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style
text_dos_attr	string	Specifies the textual format of file attributes on this file or directory.
text_mode_bits	string	Specifies the textual format of mode bits on this file or directory.
user_id	string	Specifies user ID of this file or directory.

Example response


```
{
  "access_control": "file_directory",
  "acls": {
    "access": "access_allow",
    "access_control": "file_directory",
    "inherited": 1,
    "rights": "full_control",
    "user": "S-1-5-21-2233347455-2266964949-1780268902-69304"
  },
  "control_flags": "8014",
  "dos_attributes": "10",
  "effective_style": "mixed",
  "group": "S-1-5-21-2233347455-2266964949-1780268902-69700",
  "group_id": "2",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "inode": 64,
  "mode_bits": 777,
  "owner": "S-1-5-21-2233347455-2266964949-1780268902-69304",
  "propagation_mode": "propagate",
  "security_style": "ntfs",
  "text_dos_attr": "---A----",
  "text_mode_bits": "rwxrwxrwx",
  "user_id": "10"
}
```


Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655865	The specified file or directory does not exist.
1260882	Specified SVM not found.
6691623	User is not authorized.
4849676	The specified Windows user or group does not exist.

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

advanced_rights

Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.

Name	Type	Description
append_data	boolean	Append DAta
delete	boolean	Delete
delete_child	boolean	Delete Child
execute_file	boolean	Execute File
full_control	boolean	Full Control
read_attr	boolean	Read Attributes
read_data	boolean	Read Data
read_ea	boolean	Read Extended Attributes
read_perm	boolean	Read Permissions
synchronize	boolean	Synchronize
write_attr	boolean	Write Attributes
write_data	boolean	Write Data
write_ea	boolean	Write Extended Attributes
write_owner	boolean	Write Owner
write_perm	boolean	Write Permission

apply_to

Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.

Name	Type	Description
files	boolean	Apply to Files

Name	Type	Description
sub_folders	boolean	Apply to all sub-folders
this_folder	boolean	Apply only to this folder

acl

An ACE is an element in an access control list (ACL). An ACL can have zero or more ACEs. Each ACE controls or monitors access to an object by a specified trustee.

Name	Type	Description
access	string	Specifies whether the ACL is for DACL or SACL. The available values are: • access_allow - DACL for allow access • access_deny - DACL for deny access • access_allowed_callback - CALLBACK for allowed access • access_denied_callback - CALLBACK for denied access • access_allowed_callback_object - CALLBACK OBJECT for allowed access • access_denied_callback_object - CALLBACK OBJECT for denied access • system_audit_callback - SYSTEM Audit Callback ace • system_audit_callback_object - SYSTEM Audit Callback Object ace • system_resource_attribute - SYSTEM Resource Attribute • system_scoped_policy_id - SYSTEM Scope Policy ID • audit_success - SACL for success access • audit_failure - SACL for failure access • audit_success_and_failure - SACL for both success and failure access

Name	Type	Description
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
advanced_rights	advanced_rights	Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.
apply_to	apply_to	Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.
inherited	boolean	Indicates whether or not the ACE flag is inherited.
rights	string	Specifies the access rights controlled by the ACE for the account specified. The "rights" parameter is mutually exclusive with the "advanced_rights" parameter. If you specify the "rights" parameter, you can specify one of the following "rights" values ("-" or "_" is accepted as the delimiter).
user	string	Specifies the account to which the ACE applies. You can specify either name or SID.

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
message	string	Error message
target	string	The target parameter that caused the error.

Update the SD information

PATCH `/protocols/file-security/permissions/{svm.uuid}/{path}`

Introduced In: 9.9

Updates SD specific Information. For example, owner, group and control-flags. SD specific information of SLAG ACLs is not modifiable.

Related ONTAP commands

- `vserver security file-directory ntfs modify`

Parameters

Name	Type	In	Required	Description
path	string	path	True	target path

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
acls	array[acl]	A discretionary access security list (DACL) identifies the trustees that are allowed or denied access to a securable object. When a process tries to access a securable object, the system checks the access control entries (ACEs) in the object's DACL to determine whether to grant access to it.
control_flags	string	Specifies the control flags in the SD. It is a Hexadecimal Value.
dos_attributes	string	Specifies the file attributes on this file or directory.
effective_style	string	Specifies the effective style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style
group	string	Specifies the owner's primary group. You can specify the owner group using either a group name or SID.
group_id	string	Specifies group ID on this file or directory.

Name	Type	Description
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.
inode	integer	Specifies the File Inode number.
mode_bits	integer	Specifies the mode bits on this file or directory.
owner	string	Specifies the owner of the SD. You can specify the owner using either a user name or security identifier (SID). The owner of the SD can modify the permissions on the file (or folder) or files (or folders) to which the SD is applied and can give other users the right to take ownership of the object or objects to which the SD is applied.
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • ignore - ignore inheritable permissions • replace - replace existing permissions on all subfolders and files with inheritable permissions
security_style	string	Specifies the security style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style

Name	Type	Description
text_dos_attr	string	Specifies the textual format of file attributes on this file or directory.
text_mode_bits	string	Specifies the textual format of mode bits on this file or directory.
user_id	string	Specifies user ID of this file or directory.

Example request

```
{
  "access_control": "file_directory",
  "acls": {
    "access": "access_allow",
    "access_control": "file_directory",
    "inherited": 1,
    "rights": "full_control",
    "user": "S-1-5-21-2233347455-2266964949-1780268902-69304"
  },
  "control_flags": "8014",
  "dos_attributes": "10",
  "effective_style": "mixed",
  "group": "S-1-5-21-2233347455-2266964949-1780268902-69700",
  "group_id": "2",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "inode": 64,
  "mode_bits": 777,
  "owner": "S-1-5-21-2233347455-2266964949-1780268902-69304",
  "propagation_mode": "propagate",
  "security_style": "ntfs",
  "text_dos_attr": "---A----",
  "text_mode_bits": "rwxrwxrwx",
  "user_id": "10"
}
```

Response

```
Status: 200, Ok
```

Name	Type	Description
job	job_link	

Example response


```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```


Response

```
Status: 202, Accepted
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655865	The specified file or directory does not exist.
1260882	Specified SVM not found.
6691623	User is not authorized.
4849676	The specified Windows user or group does not exist.
10485814	The value provided for field control_flags is invalid.

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

advanced_rights

Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.

Name	Type	Description
append_data	boolean	Append DAta
delete	boolean	Delete
delete_child	boolean	Delete Child
execute_file	boolean	Execute File
full_control	boolean	Full Control
read_attr	boolean	Read Attributes
read_data	boolean	Read Data
read_ea	boolean	Read Extended Attributes
read_perm	boolean	Read Permissions
synchronize	boolean	Synchronize
write_attr	boolean	Write Attributes
write_data	boolean	Write Data
write_ea	boolean	Write Extended Attributes
write_owner	boolean	Write Owner
write_perm	boolean	Write Permission

apply_to

Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.

Name	Type	Description
files	boolean	Apply to Files

Name	Type	Description
sub_folders	boolean	Apply to all sub-folders
this_folder	boolean	Apply only to this folder

acl

An ACE is an element in an access control list (ACL). An ACL can have zero or more ACEs. Each ACE controls or monitors access to an object by a specified trustee.

Name	Type	Description
access	string	Specifies whether the ACL is for DACL or SACL. The available values are: • access_allow - DACL for allow access • access_deny - DACL for deny access • access_allowed_callback - CALLBACK for allowed access • access_denied_callback - CALLBACK for denied access • access_allowed_callback_object - CALLBACK OBJECT for allowed access • access_denied_callback_object - CALLBACK OBJECT for denied access • system_audit_callback - SYSTEM Audit Callback ace • system_audit_callback_object - SYSTEM Audit Callback Object ace • system_resource_attribute - SYSTEM Resource Attribute • system_scoped_policy_id - SYSTEM Scope Policy ID • audit_success - SACL for success access • audit_failure - SACL for failure access • audit_success_and_failure - SACL for both success and failure access

Name	Type	Description
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
advanced_rights	advanced_rights	Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.
apply_to	apply_to	Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.
inherited	boolean	Indicates whether or not the ACE flag is inherited.
rights	string	Specifies the access rights controlled by the ACE for the account specified. The "rights" parameter is mutually exclusive with the "advanced_rights" parameter. If you specify the "rights" parameter, you can specify one of the following "rights" values ("-" or "_" is accepted as the delimiter).
user	string	Specifies the account to which the ACE applies. You can specify either name or SID.

file_directory_security

Manages New Technology File System (NTFS) security and NTFS audit policies.

Name	Type	Description
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
acls	array[acl]	A discretionary access security list (DACL) identifies the trustees that are allowed or denied access to a securable object. When a process tries to access a securable object, the system checks the access control entries (ACEs) in the object's DACL to determine whether to grant access to it.
control_flags	string	Specifies the control flags in the SD. It is a Hexadecimal Value.
dos_attributes	string	Specifies the file attributes on this file or directory.
effective_style	string	Specifies the effective style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style
group	string	Specifies the owner's primary group. You can specify the owner group using either a group name or SID.

Name	Type	Description
group_id	string	Specifies group ID on this file or directory.
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.
inode	integer	Specifies the File Inode number.
mode_bits	integer	Specifies the mode bits on this file or directory.
owner	string	Specifies the owner of the SD. You can specify the owner using either a user name or security identifier (SID). The owner of the SD can modify the permissions on the file (or folder) or files (or folders) to which the SD is applied and can give other users the right to take ownership of the object or objects to which the SD is applied.
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • ignore - ignore inheritable permissions • replace - replace existing permissions on all subfolders and files with inheritable permissions

Name	Type	Description
security_style	string	Specifies the security style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style
text_dos_attr	string	Specifies the textual format of file attributes on this file or directory.
text_mode_bits	string	Specifies the textual format of mode bits on this file or directory.
user_id	string	Specifies user ID of this file or directory.

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

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
message	string	Error message
target	string	The target parameter that caused the error.

Apply an SD to a path

POST `/protocols/file-security/permissions/{svm.uuid}/{path}`

Introduced In: 9.9

Applies an SD to the given path. You must keep the following points in mind while using these endpoints:

- Either SLAG ACL/s or file-directory ACL/s can be configured in one API call. Both cannot be configured in the same API call.
- SLAG applies to all files and/or directories in a volume hence, inheritance is not required to be propagated.
- Set access_control field to slag while configuring SLAG ACLs.
- Set access_control field to file_directory while configuring file-directory ACLs. By Default access_control field is set to file_directory.
- For SLAG, valid apply_to combinations are "this-folder, sub-folders", "files", "this-folder, sub-folders, files".

Related ONTAP commands

- `vserver security file-directory ntfs create`
- `vserver security file-directory ntfs dacl add`
- `vserver security file-directory ntfs sacl add`
- `vserver security file-directory policy create`
- `vserver security file-directory policy task add`
- `vserver security file-directory apply`

Parameters

Name	Type	In	Required	Description
path	string	path	True	target path

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
acls	array[acl]	A discretionary access security list (DACL) identifies the trustees that are allowed or denied access to a securable object. When a process tries to access a securable object, the system checks the access control entries (ACEs) in the object's DACL to determine whether to grant access to it.
control_flags	string	Specifies the control flags in the SD. It is a Hexadecimal Value.
dos_attributes	string	Specifies the file attributes on this file or directory.
effective_style	string	Specifies the effective style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style
group	string	Specifies the owner's primary group. You can specify the owner group using either a group name or SID.
group_id	string	Specifies group ID on this file or directory.

Name	Type	Description
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.
inode	integer	Specifies the File Inode number.
mode_bits	integer	Specifies the mode bits on this file or directory.
owner	string	Specifies the owner of the SD. You can specify the owner using either a user name or security identifier (SID). The owner of the SD can modify the permissions on the file (or folder) or files (or folders) to which the SD is applied and can give other users the right to take ownership of the object or objects to which the SD is applied.
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • ignore - ignore inheritable permissions • replace - replace existing permissions on all subfolders and files with inheritable permissions
security_style	string	Specifies the security style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style

Name	Type	Description
text_dos_attr	string	Specifies the textual format of file attributes on this file or directory.
text_mode_bits	string	Specifies the textual format of mode bits on this file or directory.
user_id	string	Specifies user ID of this file or directory.

Example request

```
{
  "access_control": "file_directory",
  "acls": {
    "access": "access_allow",
    "access_control": "file_directory",
    "inherited": 1,
    "rights": "full_control",
    "user": "S-1-5-21-2233347455-2266964949-1780268902-69304"
  },
  "control_flags": "8014",
  "dos_attributes": "10",
  "effective_style": "mixed",
  "group": "S-1-5-21-2233347455-2266964949-1780268902-69700",
  "group_id": "2",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "inode": 64,
  "mode_bits": 777,
  "owner": "S-1-5-21-2233347455-2266964949-1780268902-69304",
  "propagation_mode": "propagate",
  "security_style": "ntfs",
  "text_dos_attr": "---A----",
  "text_mode_bits": "rwxrwxrwx",
  "user_id": "10"
}
```

Response

```
Status: 202, Accepted
```

Name	Type	Description
job	job_link	

Example response


```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```


Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

Response

```
Status: 201, Created
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655865	The specified file or directory does not exist.
10485813	All values corresponding to rights cannot be false.
10485815	The field "acls.access_control" is not allowed with POST method.

Error Code	Description
10485810	User is a required field.
1260882	Specified SVM not found.
6691623	User is not authorized.
4849676	The specified Windows user or group does not exist.
4849677	Failed to convert SID to a Windows name. Reason: "SecD Error: object not found".
10485814	The value provided for field control_flags is invalid.

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

advanced_rights

Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.

Name	Type	Description
append_data	boolean	Append DAta
delete	boolean	Delete
delete_child	boolean	Delete Child
execute_file	boolean	Execute File
full_control	boolean	Full Control
read_attr	boolean	Read Attributes
read_data	boolean	Read Data
read_ea	boolean	Read Extended Attributes
read_perm	boolean	Read Permissions
synchronize	boolean	Synchronize
write_attr	boolean	Write Attributes
write_data	boolean	Write Data
write_ea	boolean	Write Extended Attributes
write_owner	boolean	Write Owner
write_perm	boolean	Write Permission

apply_to

Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.

Name	Type	Description
files	boolean	Apply to Files

Name	Type	Description
sub_folders	boolean	Apply to all sub-folders
this_folder	boolean	Apply only to this folder

acl

An ACE is an element in an access control list (ACL). An ACL can have zero or more ACEs. Each ACE controls or monitors access to an object by a specified trustee.

Name	Type	Description
access	string	Specifies whether the ACL is for DACL or SACL. The available values are: • access_allow - DACL for allow access • access_deny - DACL for deny access • access_allowed_callback - CALLBACK for allowed access • access_denied_callback - CALLBACK for denied access • access_allowed_callback_object - CALLBACK OBJECT for allowed access • access_denied_callback_object - CALLBACK OBJECT for denied access • system_audit_callback - SYSTEM Audit Callback ace • system_audit_callback_object - SYSTEM Audit Callback Object ace • system_resource_attribute - SYSTEM Resource Attribute • system_scoped_policy_id - SYSTEM Scope Policy ID • audit_success - SACL for success access • audit_failure - SACL for failure access • audit_success_and_failure - SACL for both success and failure access

Name	Type	Description
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
advanced_rights	advanced_rights	Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.
apply_to	apply_to	Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.
inherited	boolean	Indicates whether or not the ACE flag is inherited.
rights	string	Specifies the access rights controlled by the ACE for the account specified. The "rights" parameter is mutually exclusive with the "advanced_rights" parameter. If you specify the "rights" parameter, you can specify one of the following "rights" values ("-" or "_" is accepted as the delimiter).
user	string	Specifies the account to which the ACE applies. You can specify either name or SID.

file_directory_security

Manages New Technology File System (NTFS) security and NTFS audit policies.

Name	Type	Description
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
acls	array[acl]	A discretionary access security list (DACL) identifies the trustees that are allowed or denied access to a securable object. When a process tries to access a securable object, the system checks the access control entries (ACEs) in the object's DACL to determine whether to grant access to it.
control_flags	string	Specifies the control flags in the SD. It is a Hexadecimal Value.
dos_attributes	string	Specifies the file attributes on this file or directory.
effective_style	string	Specifies the effective style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style
group	string	Specifies the owner's primary group. You can specify the owner group using either a group name or SID.

Name	Type	Description
group_id	string	Specifies group ID on this file or directory.
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.
inode	integer	Specifies the File Inode number.
mode_bits	integer	Specifies the mode bits on this file or directory.
owner	string	Specifies the owner of the SD. You can specify the owner using either a user name or security identifier (SID). The owner of the SD can modify the permissions on the file (or folder) or files (or folders) to which the SD is applied and can give other users the right to take ownership of the object or objects to which the SD is applied.
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • ignore - ignore inheritable permissions • replace - replace existing permissions on all subfolders and files with inheritable permissions

Name	Type	Description
security_style	string	Specifies the security style of the SD. The following values are supported: • unix - UNIX style • ntfs - NTFS style • mixed - Mixed style • unified - Unified style
text_dos_attr	string	Specifies the textual format of file attributes on this file or directory.
text_mode_bits	string	Specifies the textual format of mode bits on this file or directory.
user_id	string	Specifies user ID of this file or directory.

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

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
message	string	Error message
target	string	The target parameter that caused the error.

Add a new SACL or DACL ACE

POST `/protocols/file-security/permissions/{svm.uuid}/{path}/acl`

Introduced In: 9.9

Adds the new SACL/DACL ACE. You must keep the following points in mind while using these endpoints:

- SLAG applies to all files and/or directories in a volume hence, inheritance is not required to be propagated.
- Set access_control field to slag while adding SLAG ACE.
- Set access_control field to file_directory while adding file-directory ACE. By Default access_control field is set to file_directory.
- For SLAG, valid apply_to combinations are "this-folder, sub-folders", "files", "this-folder, sub-folders, files".

Related ONTAP commands

- `vserver security file-directory ntfs dacl add`
- `vserver security file-directory ntfs sacl add`

Parameters

Name	Type	In	Required	Description
path	string	path	True	path

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
access	string	Specifies whether the ACL is for DACL or SACL. The available values are: • access_allow - DACL for allow access • access_deny - DACL for deny access • audit_success - SACL for success access • audit_failure - SACL for failure access
access_control	string	Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
advanced_rights	advanced_rights	Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.
apply_to	apply_to	Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.

Name	Type	Description
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • ignore - ignore inheritable permissions • replace - replace existing permissions on all subfolders and files with inheritable permissions
rights	string	Specifies the access rights controlled by the ACE for the account specified. The "rights" parameter is mutually exclusive with the "advanced_rights" parameter. If you specify the "rights" parameter, you can specify one of the following "rights" values ("-" or "_" is accepted as the delimiter).
user	string	Specifies the account to which the ACE applies. You can specify either name or SID.

Example request

```
{
  "access": "access_allow",
  "access_control": "file_directory",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "propagation_mode": "propagate",
  "rights": "full_control",
  "user": "S-1-5-21-2233347455-2266964949-1780268902-69304"
}
```

Response

```
Status: 202, Accepted
```

Name	Type	Description
job	job_link	

Example response

```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```

Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

Response

```
Status: 201, Created
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655865	The specified file or directory does not exist.
10485811	Access is a required field.
1260882	Specified SVM not found.
6691623	User is not authorized.
4849676	The specified Windows user or group does not exist.

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

advanced_rights

Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.

Name	Type	Description
append_data	boolean	Append DAta
delete	boolean	Delete
delete_child	boolean	Delete Child
execute_file	boolean	Execute File
full_control	boolean	Full Control
read_attr	boolean	Read Attributes
read_data	boolean	Read Data
read_ea	boolean	Read Extended Attributes
read_perm	boolean	Read Permissions
synchronize	boolean	Synchronize
write_attr	boolean	Write Attributes
write_data	boolean	Write Data
write_ea	boolean	Write Extended Attributes
write_owner	boolean	Write Owner
write_perm	boolean	Write Permission

apply_to

Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.

Name	Type	Description
files	boolean	Apply to Files

Name	Type	Description
sub_folders	boolean	Apply to all sub-folders
this_folder	boolean	Apply only to this folder

file_directory_security_acl

Manages the DACLS or SACLS.

Name	Type	Description
access	string	Specifies whether the ACL is for DACL or SACL. The available values are: • access_allow - DACL for allow access • access_deny - DACL for deny access • audit_success - SACL for success access • audit_failure - SACL for failure access
access_control	string	Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
advanced_rights	advanced_rights	Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.

Name	Type	Description
apply_to	apply_to	Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • ignore - ignore inheritable permissions • replace - replace existing permissions on all subfolders and files with inheritable permissions
rights	string	Specifies the access rights controlled by the ACE for the account specified. The "rights" parameter is mutually exclusive with the "advanced_rights" parameter. If you specify the "rights" parameter, you can specify one of the following "rights" values ("-" or "_" is accepted as the delimiter).
user	string	Specifies the account to which the ACE applies. You can specify either name or SID.

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

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
message	string	Error message
target	string	The target parameter that caused the error.

Delete a SACL or DACL ACL

DELETE `/protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}`

Introduced In: 9.9

Deletes the SACL/DACL ACL You must keep the following points in mind while using these endpoints:

- SLAG applies to all files and/or directories in a volume hence, inheritance is not required to be propagated.
- Set access_control field to slag while deleting SLAG ACE.
- Set access_control field to file_directory while deleting file-directory ACE. By Default access_control field is

set to file_directory.

- For SLAG, valid apply_to combinations are "this-folder, sub-folders", "files", "this-folder, sub-folders, files".

Related ONTAP commands

- `vserver security file-directory ntfs dacl remove`
- `vserver security file-directory ntfs sacl remove`

Parameters

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

Name	Type	In	Required	Description
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
access	string	Specifies whether the ACL is for DACL or SACL. The available values are: • access_allow - DACL for allow access • access_deny - DACL for deny access • audit_success - SACL for success access • audit_failure - SACL for failure access
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
apply_to	apply_to	Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.

Name	Type	Description
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • replace - replace existing permissions on all subfolders and files with inheritable permissions

Example request

```
{
  "access": "access_allow",
  "access_control": "file_directory",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "propagation_mode": "propagate"
}
```

Response

```
Status: 200, Ok
```

Name	Type	Description
job	job_link	

Example response


```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```


Response

```
Status: 202, Accepted
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655865	The specified file or directory does not exist.
10485811	Access is a required field.
1260882	Specified SVM not found.
6691623	User is not authorized.
4849676	The specified Windows user or group does not exist.

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

apply_to

Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.

Name	Type	Description
files	boolean	Apply to Files
sub_folders	boolean	Apply to all sub-folders
this_folder	boolean	Apply only to this folder

acl_delete

Manages the DACLS or SACLS.

Name	Type	Description
access	string	Specifies whether the ACL is for DACL or SACL. The available values are: • access_allow - DACL for allow access • access_deny - DACL for deny access • audit_success - SACL for success access • audit_failure - SACL for failure access
access_control	string	An Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).

Name	Type	Description
apply_to	apply_to	Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • replace - replace existing permissions on all subfolders and files with inheritable permissions

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

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
message	string	Error message
target	string	The target parameter that caused the error.

Update SACLs or DACLs

PATCH `/protocols/file-security/permissions/{svm.uuid}/{path}/acl/{user}`

Introduced In: 9.9

Updates the SACLs/DACLs You must keep the following points in mind while using these endpoints:

- SLAG applies to all files and/or directories in a volume hence, inheritance is not required to be propagated.
- Set access_control field to slag while updating SLAG ACE.
- Set access_control field to file_directory while updating file-directory ACE. By Default access_control field is set to file_directory.
- For SLAG, valid apply_to combinations are "this-folder, sub-folders", "files", "this-folder, sub-folders, files".

Related ONTAP commands

- `vserver security file-directory ntfs dacl modify`
- `vserver security file-directory ntfs sacl modify`

Parameters

Name	Type	In	Required	Description
path	string	path	True	path
user	string	path	True	User Name

Name	Type	In	Required	Description
return_records	boolean	query	False	The default is false. If set to true, the records are returned. • Default value:
return_timeout	integer	query	False	The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202. • Default value: 1 • Max value: 120 • Min value: 0
svm.uuid	string	path	True	UUID of the SVM to which this object belongs.

Request Body

Name	Type	Description
access	string	Specifies whether the ACL is for DACL or SACL. The available values are: • access_allow - DACL for allow access • access_deny - DACL for deny access • audit_success - SACL for success access • audit_failure - SACL for failure access
access_control	string	Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
advanced_rights	advanced_rights	Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.
apply_to	apply_to	Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.

Name	Type	Description
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • ignore - ignore inheritable permissions • replace - replace existing permissions on all subfolders and files with inheritable permissions
rights	string	Specifies the access rights controlled by the ACE for the account specified. The "rights" parameter is mutually exclusive with the "advanced_rights" parameter. If you specify the "rights" parameter, you can specify one of the following "rights" values ("-" or "_" is accepted as the delimiter).
user	string	Specifies the account to which the ACE applies. You can specify either name or SID.

Example request

```
{
  "access": "access_allow",
  "access_control": "file_directory",
  "ignore_paths": [
    "/dir1/dir2/",
    "/parent/dir3"
  ],
  "propagation_mode": "propagate",
  "rights": "full_control",
  "user": "S-1-5-21-2233347455-2266964949-1780268902-69304"
}
```

Response

```
Status: 200, Ok
```

Name	Type	Description
job	job_link	

Example response

```
{
  "job": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "uuid": "string"
  }
}
```

Response

```
Status: 202, Accepted
```

Error

```
Status: Default
```

ONTAP Error Response Codes

Error Code	Description
655865	The specified file or directory does not exist.
10485811	Access is a required field.
1260882	Specified SVM not found.
6691623	User is not authorized.
4849676	The specified Windows user or group does not exist.

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

advanced_rights

Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.

Name	Type	Description
append_data	boolean	Append DAta
delete	boolean	Delete
delete_child	boolean	Delete Child
execute_file	boolean	Execute File
full_control	boolean	Full Control
read_attr	boolean	Read Attributes
read_data	boolean	Read Data
read_ea	boolean	Read Extended Attributes
read_perm	boolean	Read Permissions
synchronize	boolean	Synchronize
write_attr	boolean	Write Attributes
write_data	boolean	Write Data
write_ea	boolean	Write Extended Attributes
write_owner	boolean	Write Owner
write_perm	boolean	Write Permission

apply_to

Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.

Name	Type	Description
files	boolean	Apply to Files

Name	Type	Description
sub_folders	boolean	Apply to all sub-folders
this_folder	boolean	Apply only to this folder

file_directory_security_acl

Manages the DACLS or SACLS.

Name	Type	Description
access	string	Specifies whether the ACL is for DACL or SACL. The available values are: • access_allow - DACL for allow access • access_deny - DACL for deny access • audit_success - SACL for success access • audit_failure - SACL for failure access
access_control	string	Access Control Level specifies the access control of the task to be applied. Valid values are "file-directory" or "Storage-Level Access Guard (SLAG)". SLAG is used to apply the specified security descriptors with the task for the volume or qtree. Otherwise, the security descriptors are applied on files and directories at the specified path. The value SLAG is not supported on FlexGroups volumes. The default value is "file-directory" ('-' and '_' are interchangeable).
advanced_rights	advanced_rights	Specifies the advanced access right controlled by the ACE for the account specified. You can specify more than one "advanced-rights" value by using a comma-delimited list.

Name	Type	Description
apply_to	apply_to	Specifies where to apply the DACL or SACL entries. You can specify more than one value by using a comma-delimited list.
ignore_paths	array[string]	Specifies that permissions on this file or directory cannot be replaced.
propagation_mode	string	Specifies how to propagate security settings to child subfolders and files. This setting determines how child files/folders contained within a parent folder inherit access control and audit information from the parent folder. The available values are: • propagate - propagate inheritable permissions to all subfolders and files • ignore - ignore inheritable permissions • replace - replace existing permissions on all subfolders and files with inheritable permissions
rights	string	Specifies the access rights controlled by the ACE for the account specified. The "rights" parameter is mutually exclusive with the "advanced_rights" parameter. If you specify the "rights" parameter, you can specify one of the following "rights" values ("-" or "_" is accepted as the delimiter).
user	string	Specifies the account to which the ACE applies. You can specify either name or SID.

href

Name	Type	Description
href	string	

_links

Name	Type	Description
self	href	

job_link

Name	Type	Description
_links	_links	
uuid	string	The UUID of the asynchronous job that is triggered by a POST, PATCH, or DELETE operation.

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
message	string	Error message
target	string	The target parameter that caused the error.

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