



# **Display information about file security and audit policies**

**ONTAP 9**

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# Display information about file security and audit policies

## Display information about file security and audit policies overview

You can display information about file security on files and directories contained within volumes on storage virtual machines (SVMs). You can display information about audit policies on FlexVol volumes. If configured, you can display information about Storage-Level Access Guard and Dynamic Access Control security settings on FlexVol volumes.

### Displaying information about file security

You can display information about file security applied to data contained within volumes and qtrees (for FlexVol volumes) with the following security styles:

- NTFS
- UNIX
- Mixed

### Displaying information about audit policies

You can display information about audit policies for auditing access events on FlexVol volumes over the following NAS protocols:

- SMB (all versions)
- NFSv4.x

### Displaying information about Storage-Level Access Guard (SLAG) security

Storage-Level Access Guard security can be applied on FlexVol volumes and qtree objects with the following security styles:

- NTFS
- Mixed
- UNIX (if a CIFS server is configured on the SVM that contains the volume)

### Displaying information about Dynamic Access Control (DAC) security

Dynamic Access Control security can be applied on an object within a FlexVol volume with the following security styles:

- NTFS
- Mixed (if the object has NTFS effective security)

#### Related information

[Securing file access by using Storage-Level Access Guard](#)

# Display information about file security on NTFS security-style volumes

You can display information about file and directory security on NTFS security-style volumes, including what the security style and effective security styles are, what permissions are applied, and information about DOS attributes. You can use the results to validate your security configuration or to troubleshoot file access issues.

## About this task

You must supply the name of the storage virtual machine (SVM) and the path to the data whose file or folder security information you want to display. You can display the output in summary form or as a detailed list.

- Because NTFS security-style volumes and qtrees use only NTFS file permissions and Windows users and groups when determining file access rights, UNIX-related output fields contain display-only UNIX file permission information.
- ACL output is displayed for file and folders with NTFS security.
- Because Storage-Level Access Guard security can be configured on the volume root or qtree, output for a volume or qtree path where Storage-Level Access Guard is configured might display both regular file ACLs and Storage-Level Access Guard ACLs.
- The output also displays information about Dynamic Access Control ACEs if Dynamic Access Control is configured for the given file or directory path.

## Step

1. Display file and directory security settings with the desired level of detail:

| If you want to display information... | Enter the following command...   |
|---------------------------------------|--|
| In summary form                       | <code>vserver security file-directory show<br/>-vserver <i>vserver_name</i> -path <i>path</i></code>                       |
| With expanded detail                  | <code>vserver security file-directory show<br/>-vserver <i>vserver_name</i> -path <i>path</i><br/>-expand-mask true</code> |

## Examples

The following example displays the security information about the path `/vol14` in SVM `vs1`:

```
cluster::> vserver security file-directory show -vserver vs1 -path /vol4
```

```

        Vserver: vs1
        File Path: /vol4
    File Inode Number: 64
        Security Style: ntfs
        Effective Style: ntfs
        DOS Attributes: 10
    DOS Attributes in Text: ----D---
Expanded Dos Attributes: -
        Unix User Id: 0
        Unix Group Id: 0
        Unix Mode Bits: 777
    Unix Mode Bits in Text: rwxrwxrwx
        ACLs: NTFS Security Descriptor
            Control:0x8004
            Owner:BUILTIN\Administrators
            Group:BUILTIN\Administrators
            DACL - ACEs
            ALLOW-Everyone-0x1f01ff
            ALLOW-Everyone-0x10000000-
```

OI|CI|IO

The following example displays the security information with expanded masks about the path /data/engineering in SVM vs1:

```
cluster::> vserver security file-directory show -vserver vs1 -path -path
/data/engineering -expand-mask true
```

```

        Vserver: vs1
        File Path: /data/engineering
    File Inode Number: 5544
        Security Style: ntfs
        Effective Style: ntfs
        DOS Attributes: 10
    DOS Attributes in Text: ----D---
Expanded Dos Attributes: 0x10
    ...0 .... = Offline
    .... ..0. .... = Sparse
    .... .... 0... .... = Normal
    .... .... ..0. .... = Archive
    .... .... ...1 .... = Directory
    .... .... .... .0.. = System
    .... .... .... ..0. = Hidden
    .... .... .... ...0 = Read Only
```

```

    Unix User Id: 0
    Unix Group Id: 0
    Unix Mode Bits: 777
Unix Mode Bits in Text: rwxrwxrwx
    ACLs: NTFS Security Descriptor
    Control:0x8004

```

```

1... .. = Self Relative
.0.. .. = RM Control Valid
..0. .. = SACL Protected
...0 .. = DACL Protected
.... 0... .. = SACL Inherited
.... .0.. .. = DACL Inherited
.... ..0. .. = SACL Inherit Required
.... ...0 .. = DACL Inherit Required
.... ....0. .. = SACL Defaulted
.... ....0 .. = SACL Present
.... .... 0... = DACL Defaulted
.... .... .1.. = DACL Present
.... .... ..0. = Group Defaulted
.... .... ...0 = Owner Defaulted

```

```

Owner:BUILTIN\Administrators
Group:BUILTIN\Administrators
DACL - ACEs

```

```

ALLOW-Everyone-0x1f01ff

```

|                 |                       |
|-----------------|-----------------------|
|                 | 0... .. =             |
| Generic Read    |                       |
|                 | .0.. .. =             |
| Generic Write   |                       |
|                 | ..0. .. =             |
| Generic Execute |                       |
|                 | ...0 .. =             |
| Generic All     |                       |
|                 | .... ..0 .. =         |
| System Security |                       |
|                 | .... ....1 .. =       |
| Synchronize     |                       |
|                 | .... .... 1... .. =   |
| Write Owner     |                       |
|                 | .... .... .1.. .. =   |
| Write DAC       |                       |
|                 | .... .... ..1. .... = |
| Read Control    |                       |
|                 | .... .... ...1 .. =   |
| Delete          |                       |

|                  |                                    |
|------------------|------------------------------------|
|                  | .....1..... =                      |
| Write Attributes |                                    |
|                  | .....1.... =                       |
| Read Attributes  |                                    |
|                  | .....1... =                        |
| Delete Child     |                                    |
|                  | .....1. .... =                     |
| Execute          |                                    |
|                  | .....1 .... =                      |
| Write EA         |                                    |
|                  | .....1... =                        |
| Read EA          |                                    |
|                  | .....1... =                        |
| Append           |                                    |
|                  | .....1. .... =                     |
| Write            |                                    |
|                  | .....1 =                           |
| Read             |                                    |
|                  |                                    |
|                  | ALLOW-Everyone-0x10000000-OI CI IO |
|                  | 0.... .... =                       |
| Generic Read     |                                    |
|                  | .0... .... =                       |
| Generic Write    |                                    |
|                  | ..0. .... =                        |
| Generic Execute  |                                    |
|                  | ...1 .... =                        |
| Generic All      |                                    |
|                  | .....0 .... =                      |
| System Security  |                                    |
|                  | .....0 .... =                      |
| Synchronize      |                                    |
|                  | .....0.... =                       |
| Write Owner      |                                    |
|                  | .....0... =                        |
| Write DAC        |                                    |
|                  | .....0. .... =                     |
| Read Control     |                                    |
|                  | .....0 .... =                      |
| Delete           |                                    |
|                  | .....0 .... =                      |
| Write Attributes |                                    |
|                  | .....0.... =                       |
| Read Attributes  |                                    |
|                  | .....0... =                        |
| Delete Child     |                                    |

|          |               |
|----------|---------------|
| Execute  | .....0..... = |
| Write EA | .....0..... = |
| Read EA  | .....0... =   |
| Append   | .....0.. =    |
| Write    | .....0. =     |
| Read     | .....0 =      |

The following example displays security information, including Storage-Level Access Guard security information, for the volume with the path /datavol1 in SVM vs1:



```
cluster::> vserver security file-directory show -vserver vs1 -path
/datavol1
```

```

    Vserver: vs1
    File Path: /datavol1
    File Inode Number: 77
    Security Style: ntfs
    Effective Style: ntfs
    DOS Attributes: 10
    DOS Attributes in Text: ----D---
    Expanded Dos Attributes: -
    Unix User Id: 0
    Unix Group Id: 0
    Unix Mode Bits: 777
    Unix Mode Bits in Text: rwxrwxrwx
    ACLs: NTFS Security Descriptor
          Control:0x8004
          Owner:BUILTIN\Administrators
          Group:BUILTIN\Administrators
          DACL - ACEs
                ALLOW-Everyone-0x1f01ff
                ALLOW-Everyone-0x10000000-OI|CI|IO

    Storage-Level Access Guard security
    SACL (Applies to Directories):
          AUDIT-EXAMPLE\Domain Users-0x120089-FA
          AUDIT-EXAMPLE\engineering-0x1f01ff-SA
    DACL (Applies to Directories):
          ALLOW-EXAMPLE\Domain Users-0x120089
          ALLOW-EXAMPLE\engineering-0x1f01ff
          ALLOW-NT AUTHORITY\SYSTEM-0x1f01ff
    SACL (Applies to Files):
          AUDIT-EXAMPLE\Domain Users-0x120089-FA
          AUDIT-EXAMPLE\engineering-0x1f01ff-SA
    DACL (Applies to Files):
          ALLOW-EXAMPLE\Domain Users-0x120089
          ALLOW-EXAMPLE\engineering-0x1f01ff
          ALLOW-NT AUTHORITY\SYSTEM-0x1f01ff
```

## Related information

[Displaying information about file security on mixed security-style volumes](#)

[Displaying information about file security on UNIX security-style volumes](#)

# Display information about file security on mixed security-style volumes

You can display information about file and directory security on mixed security-style volumes, including what the security style and effective security styles are, what permissions are applied, and information about UNIX owners and groups. You can use the results to validate your security configuration or to troubleshoot file access issues.

### About this task

You must supply the name of the storage virtual machine (SVM) and the path to the data whose file or folder security information you want to display. You can display the output in summary form or as a detailed list.

- Mixed security-style volumes and qtrees can contain some files and folders that use UNIX file permissions, either mode bits or NFSv4 ACLs, and some files and directories that use NTFS file permissions.
- The top level of a mixed security-style volume can have either UNIX or NTFS effective security.
- ACL output is displayed only for file and folders with NTFS or NFSv4 security.

This field is empty for files and directories using UNIX security that have only mode bit permissions applied (no NFSv4 ACLs).

- The owner and group output fields in the ACL output apply only in the case of NTFS security descriptors.
- Because Storage-Level Access Guard security can be configured on a mixed security-style volume or qtree even if the effective security style of the volume root or qtree is UNIX, output for a volume or qtree path where Storage-Level Access Guard is configured might display both UNIX file permissions and Storage-Level Access Guard ACLs.
- If the path entered in the command is to data with NTFS effective security, the output also displays information about Dynamic Access Control ACEs if Dynamic Access Control is configured for the given file or directory path.

### Step

1. Display file and directory security settings with the desired level of detail:

| If you want to display information... | Enter the following command...   |
|---------------------------------------|--|
| In summary form                       | <code>vserver security file-directory show -vserver vserver_name -path path</code>                   |
| With expanded detail                  | <code>vserver security file-directory show -vserver vserver_name -path path -expand-mask true</code> |

### Examples

The following example displays the security information about the path `/projects` in SVM `vs1` in expanded-mask form. This mixed security-style path has UNIX effective security.

```
cluster1::> vserver security file-directory show -vserver vs1 -path
/projects -expand-mask true
```

```

        Vserver: vs1
        File Path: /projects
    File Inode Number: 78
        Security Style: mixed
    Effective Style: unix
        DOS Attributes: 10
DOS Attributes in Text: ----D---
Expanded Dos Attributes: 0x10
    ...0 .... = Offline
    .... ..0. .... = Sparse
    .... .... 0... .... = Normal
    .... .... ..0. .... = Archive
    .... .... ...1 .... = Directory
    .... .... .... .0.. = System
    .... .... .... ..0. = Hidden
    .... .... .... ...0 = Read Only
        Unix User Id: 0
        Unix Group Id: 1
        Unix Mode Bits: 700
Unix Mode Bits in Text: rwx-----
        ACLs: -
```

The following example displays the security information about the path /data in SVM vs1. This mixed security-style path has an NTFS effective security.

```
cluster1::> vserver security file-directory show -vserver vs1 -path /data
```

```

        Vserver: vs1
        File Path: /data
    File Inode Number: 544
        Security Style: mixed
        Effective Style: ntfs
        DOS Attributes: 10
    DOS Attributes in Text: ----D---
Expanded Dos Attributes: -
        Unix User Id: 0
        Unix Group Id: 0
        Unix Mode Bits: 777
    Unix Mode Bits in Text: rwxrwxrwx
        ACLs: NTFS Security Descriptor
            Control:0x8004
            Owner:BUILTIN\Administrators
            Group:BUILTIN\Administrators
            DACL - ACEs
                ALLOW-Everyone-0x1f01ff
                ALLOW-Everyone-0x10000000-
```

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The following example displays the security information about the volume at the path /datavol5 in SVM vs1. The top level of this mixed security-style volume has UNIX effective security. The volume has Storage-Level Access Guard security.

```
cluster1::> vserver security file-directory show -vserver vs1 -path /datavol5
```

```
      Vserver: vs1
      File Path: /datavol5
File Inode Number: 3374
      Security Style: mixed
      Effective Style: unix
      DOS Attributes: 10
DOS Attributes in Text: ----D---
Expanded Dos Attributes: -
      Unix User Id: 0
      Unix Group Id: 0
      Unix Mode Bits: 755
Unix Mode Bits in Text: rwxr-xr-x
      ACLs: Storage-Level Access Guard security
      SACL (Applies to Directories):
          AUDIT-EXAMPLE\Domain Users-0x120089-FA
          AUDIT-EXAMPLE\engineering-0x1f01ff-SA
          AUDIT-EXAMPLE\market-0x1f01ff-SA
      DACL (Applies to Directories):
          ALLOW-BUILTIN\Administrators-0x1f01ff
          ALLOW-CREATOR OWNER-0x1f01ff
          ALLOW-EXAMPLE\Domain Users-0x120089
          ALLOW-EXAMPLE\engineering-0x1f01ff
          ALLOW-EXAMPLE\market-0x1f01ff
      SACL (Applies to Files):
          AUDIT-EXAMPLE\Domain Users-0x120089-FA
          AUDIT-EXAMPLE\engineering-0x1f01ff-SA
          AUDIT-EXAMPLE\market-0x1f01ff-SA
      DACL (Applies to Files):
          ALLOW-BUILTIN\Administrators-0x1f01ff
          ALLOW-CREATOR OWNER-0x1f01ff
          ALLOW-EXAMPLE\Domain Users-0x120089
          ALLOW-EXAMPLE\engineering-0x1f01ff
          ALLOW-EXAMPLE\market-0x1f01ff
```

#### Related information

[Displaying information about file security on NTFS security-style volumes](#)

[Displaying information about file security on UNIX security-style volumes](#)

## Display information about file security on UNIX security-style volumes

You can display information about file and directory security on UNIX security-style

volumes, including what the security styles and effective security styles are, what permissions are applied, and information about UNIX owners and groups. You can use the results to validate your security configuration or to troubleshoot file access issues.

**About this task**

You must supply the name of the storage virtual machine (SVM) and the path to the data whose file or directory security information you want to display. You can display the output in summary form or as a detailed list.

- UNIX security-style volumes and qtrees use only UNIX file permissions, either mode bits or NFSv4 ACLs when determining file access rights.
- ACL output is displayed only for file and folders with NFSv4 security.

This field is empty for files and directories using UNIX security that have only mode bit permissions applied (no NFSv4 ACLs).

- The owner and group output fields in the ACL output does not apply in the case of NFSv4 security descriptors.

They are only meaningful for NTFS security descriptors.

- Because Storage-Level Access Guard security is supported on a UNIX volume or qtree if a CIFS server is configured on the SVM, the output might contain information about Storage-Level Access Guard security applied to the volume or qtree specified in the `-path` parameter.

**Step**

1. Display file and directory security settings with the desired level of detail:

| If you want to display information... | Enter the following command...   |
|---------------------------------------|--|
| In summary form                       | <code>vserver security file-directory show<br/>-vserver vserver_name -path path</code>                       |
| With expanded detail                  | <code>vserver security file-directory show<br/>-vserver vserver_name -path path<br/>-expand-mask true</code> |

**Examples**

The following example displays the security information about the path `/home` in SVM `vs1`:

```
cluster1::> vserver security file-directory show -vserver vs1 -path /home
```

```

        Vserver: vs1
        File Path: /home
    File Inode Number: 9590
        Security Style: unix
        Effective Style: unix
        DOS Attributes: 10
    DOS Attributes in Text: ----D---
Expanded Dos Attributes: -
        Unix User Id: 0
        Unix Group Id: 1
        Unix Mode Bits: 700
    Unix Mode Bits in Text: rwx-----
        ACLs: -
```

The following example displays the security information about the path /home in SVM vs1 in expanded-mask form:

```
cluster1::> vserver security file-directory show -vserver vs1 -path /home
-expand-mask true
```

```

        Vserver: vs1
        File Path: /home
    File Inode Number: 9590
        Security Style: unix
        Effective Style: unix
        DOS Attributes: 10
    DOS Attributes in Text: ----D---
Expanded Dos Attributes: 0x10
    ...0 .... = Offline
    .... ..0. .... = Sparse
    .... .... 0... .... = Normal
    .... .... ..0. .... = Archive
    .... .... ...1 .... = Directory
    .... .... .... .0.. = System
    .... .... .... ..0. = Hidden
    .... .... .... ...0 = Read Only
        Unix User Id: 0
        Unix Group Id: 1
        Unix Mode Bits: 700
    Unix Mode Bits in Text: rwx-----
        ACLs: -
```

## Related information

[Displaying information about file security on NTFS security-style volumes](#)

[Displaying information about file security on mixed security-style volumes](#)

# Display information about NTFS audit policies on FlexVol volumes using the CLI

You can display information about NTFS audit policies on FlexVol volumes, including what the security styles and effective security styles are, what permissions are applied, and information about system access control lists. You can use the results to validate your security configuration or to troubleshoot auditing issues.

## About this task

You must provide the name of the storage virtual machine (SVM) and the path to the files or folders whose audit information you want to display. You can display the output in summary form or as a detailed list.

- NTFS security-style volumes and qtrees use only NTFS system access control lists (SACLs) for audit policies.
- Files and folders in a mixed security-style volume with NTFS effective security can have NTFS audit policies applied to them.

Mixed security-style volumes and qtrees can contain some files and directories that use UNIX file permissions, either mode bits or NFSv4 ACLs, and some files and directories that use NTFS file permissions.

- The top level of a mixed security-style volume can have either UNIX or NTFS effective security and might or might not contain NTFS SACLs.
- Because Storage-Level Access Guard security can be configured on a mixed security-style volume or qtree even if the effective security style of the volume root or qtree is UNIX, the output for a volume or qtree path where Storage-Level Access Guard is configured might display both regular file and folder NFSv4 SACLs and Storage-Level Access Guard NTFS SACLs.
- If the path that is entered in the command is to data with NTFS effective security, the output also displays information about Dynamic Access Control ACEs if Dynamic Access Control is configured for the given file or directory path.
- When displaying security information about files and folders with NTFS effective security, UNIX-related output fields contain display-only UNIX file permission information.

NTFS security-style files and folders use only NTFS file permissions and Windows users and groups when determining file access rights.

- ACL output is displayed only for files and folders with NTFS or NFSv4 security.

This field is empty for files and folders using UNIX security that have only mode bit permissions applied (no NFSv4 ACLs).

- The owner and group output fields in the ACL output apply only in the case of NTFS security descriptors.

## Step

1. Display file and directory audit policy settings with the desired level of detail:



| If you want to display information... | Enter the following command...   |
|---------------------------------------|--|
| In summary form                       | <code>vserver security file-directory show<br/>-vserver vserver_name -path path</code>                       |
| As a detailed list                    | <code>vserver security file-directory show<br/>-vserver vserver_name -path path<br/>-expand-mask true</code> |

## Examples

The following example displays the audit policy information for the path `/corp` in SVM `vs1`. The path has NTFS effective security. The NTFS security descriptor contains both a SUCCESS and a SUCCESS/FAIL SACL entry.

```
cluster::> vserver security file-directory show -vserver vs1 -path /corp
      Vserver: vs1
      File Path: /corp
      File Inode Number: 357
      Security Style: ntfs
      Effective Style: ntfs
      DOS Attributes: 10
      DOS Attributes in Text: ----D---
      Expanded Dos Attributes: -
      Unix User Id: 0
      Unix Group Id: 0
      Unix Mode Bits: 777
      Unix Mode Bits in Text: rwxrwxrwx
      ACLs: NTFS Security Descriptor
      Control:0x8014
      Owner:DOMAIN\Administrator
      Group:BUILTIN\Administrators
      SACL - ACEs
        ALL-DOMAIN\Administrator-0x100081-OI|CI|SA|FA
        SUCCESSFUL-DOMAIN\user1-0x100116-OI|CI|SA
      DACL - ACEs
        ALLOW-BUILTIN\Administrators-0x1f01ff-OI|CI
        ALLOW-BUILTIN\Users-0x1f01ff-OI|CI
        ALLOW-CREATOR OWNER-0x1f01ff-OI|CI
        ALLOW-NT AUTHORITY\SYSTEM-0x1f01ff-OI|CI
```

The following example displays the audit policy information for the path `/datavol1` in SVM `vs1`. The path contains both regular file and folder SACLs and Storage-Level Access Guard SACLs.

```
cluster::> vserver security file-directory show -vserver vs1 -path
/datavol1
```

```

    Vserver: vs1
    File Path: /datavol1
    File Inode Number: 77
    Security Style: ntfs
    Effective Style: ntfs
    DOS Attributes: 10
    DOS Attributes in Text: ----D---
    Expanded Dos Attributes: -
        Unix User Id: 0
        Unix Group Id: 0
        Unix Mode Bits: 777
    Unix Mode Bits in Text: rwxrwxrwx
        ACLs: NTFS Security Descriptor
            Control:0xaa14
            Owner: BUILTIN\Administrators
            Group: BUILTIN\Administrators
            SACL - ACEs
                AUDIT-EXAMPLE\marketing-0xf01ff-OI|CI|FA
            DACL - ACEs
                ALLOW-EXAMPLE\Domain Admins-0x1f01ff-OI|CI
                ALLOW-EXAMPLE\marketing-0x1200a9-OI|CI

    Storage-Level Access Guard security
    SACL (Applies to Directories):
        AUDIT-EXAMPLE\Domain Users-0x120089-FA
        AUDIT-EXAMPLE\engineering-0x1f01ff-SA
    DACL (Applies to Directories):
        ALLOW-EXAMPLE\Domain Users-0x120089
        ALLOW-EXAMPLE\engineering-0x1f01ff
        ALLOW-NT AUTHORITY\SYSTEM-0x1f01ff
    SACL (Applies to Files):
        AUDIT-EXAMPLE\Domain Users-0x120089-FA
        AUDIT-EXAMPLE\engineering-0x1f01ff-SA
    DACL (Applies to Files):
        ALLOW-EXAMPLE\Domain Users-0x120089
        ALLOW-EXAMPLE\engineering-0x1f01ff
        ALLOW-NT AUTHORITY\SYSTEM-0x1f01ff
```

# Display information about NFSv4 audit policies on FlexVol volumes using the CLI

You can display information about NFSv4 audit policies on FlexVol volumes using the ONTAP CLI, including what the security styles and effective security styles are, what permissions are applied, and information about system access control lists (SACLs). You can use the results to validate your security configuration or to troubleshoot auditing issues.

## About this task

You must supply the name of the storage virtual machine (SVM) and the path to the files or directories whose audit information you want to display. You can display the output in summary form or as a detailed list.

- UNIX security-style volumes and qtrees use only NFSv4 SACLs for audit policies.
- Files and directories in a mixed security-style volume that are of UNIX security style can have NFSv4 audit policies applied to them.

Mixed security-style volumes and qtrees can contain some files and directories that use UNIX file permissions, either mode bits or NFSv4 ACLs, and some files and directories that use NTFS file permissions.

- The top level of a mixed security-style volume can have either UNIX or NTFS effective security and might or might not contain NFSv4 SACLs.
- ACL output is displayed only for file and folders with NTFS or NFSv4 security.

This field is empty for files and folders using UNIX security that have only mode bit permissions applied (no NFSv4 ACLs).

- The owner and group output fields in the ACL output apply only in the case of NTFS security descriptors.
- Because Storage-Level Access Guard security can be configured on a mixed security-style volume or qtree even if the effective security style of the volume root or qtree is UNIX, output for a volume or qtree path where Storage-Level Access Guard is configured might display both regular NFSv4 file and directory SACLs and Storage-Level Access Guard NTFS SACLs.
- Because Storage-Level Access Guard security is supported on a UNIX volume or qtree if a CIFS server is configured on the SVM, the output might contain information about Storage-Level Access Guard security applied to the volume or qtree specified in the `-path` parameter.

## Steps

1. Display file and directory security settings with the desired level of detail:

| If you want to display information... | Enter the following command...   |
|---------------------------------------|--|
| In summary form                       | <pre>vserver security file-directory show -vserver vserver_name -path path</pre>                   |
| With expanded detail                  | <pre>vserver security file-directory show -vserver vserver_name -path path -expand-mask true</pre> |

## Examples

The following example displays the security information about the path /lab in SVM vs1. This UNIX security-style path has an NFSv4 SACL.

```
cluster::> vserver security file-directory show -vserver vs1 -path /lab

      Vserver: vs1
      File Path: /lab
      File Inode Number: 288
      Security Style: unix
      Effective Style: unix
      DOS Attributes: 11
      DOS Attributes in Text: ----D--R
      Expanded Dos Attributes: -
      Unix User Id: 0
      Unix Group Id: 0
      Unix Mode Bits: 0
      Unix Mode Bits in Text: -----
      ACLs: NFSV4 Security Descriptor
            Control:0x8014
            SACL - ACEs
                  SUCCESSFUL-S-1-520-0-0xf01ff-SA
                  FAILED-S-1-520-0-0xf01ff-FA
            DACL - ACEs
                  ALLOW-S-1-520-1-0xf01ff
```

## Ways to display information about file security and audit policies

You can use the wildcard character (\*) to display information about file security and audit policies of all files and directories under a given path or a root volume.

The wildcard character ( ) **can be used as the last subcomponent of a given directory path below which you want to display information of all files and directories. If you want to display information of a particular file or directory named as “”, then you need to provide the complete path inside double quotes (“”).**

### Example

The following command with the wildcard character displays the information about all files and directories below the path /1/ of SVM vs1:

```

cluster::> vserver security file-directory show -vserver vs1 -path /1/*

      Vserver: vs1
      File Path: /1/1
      Security Style: mixed
      Effective Style: ntfs
      DOS Attributes: 10
      DOS Attributes in Text: ----D---
      Expanded Dos Attributes: -
      Unix User Id: 0
      Unix Group Id: 0
      Unix Mode Bits: 777
      Unix Mode Bits in Text: rwxrwxrwx
      ACLs: NTFS Security Descriptor
            Control:0x8514
            Owner:BUILTIN\Administrators
            Group:BUILTIN\Administrators
            DACL - ACEs
            ALLOW-Everyone-0x1f01ff-OI|CI (Inherited)

      Vserver: vs1
      File Path: /1/1/abc
      Security Style: mixed
      Effective Style: ntfs
      DOS Attributes: 10
      DOS Attributes in Text: ----D---
      Expanded Dos Attributes: -
      Unix User Id: 0
      Unix Group Id: 0
      Unix Mode Bits: 777
      Unix Mode Bits in Text: rwxrwxrwx
      ACLs: NTFS Security Descriptor
            Control:0x8404
            Owner:BUILTIN\Administrators
            Group:BUILTIN\Administrators
            DACL - ACEs
            ALLOW-Everyone-0x1f01ff-OI|CI (Inherited)

```

The following command displays the information of a file named as "\*" under the path /vol1/a of SVM vs1. The path is enclosed within double quotes (" ").

```
cluster::> vserver security file-directory show -vserver vs1 -path  
"/vol1/a/*"
```

```
      Vserver: vs1  
      File Path: "/vol1/a/*"  
      Security Style: mixed  
      Effective Style: unix  
      DOS Attributes: 10  
      DOS Attributes in Text: ----D---  
Expanded Dos Attributes: -  
      Unix User Id: 1002  
      Unix Group Id: 65533  
      Unix Mode Bits: 755  
      Unix Mode Bits in Text: rwxr-xr-x  
      ACLs: NFSV4 Security Descriptor  
            Control:0x8014  
            SACL - ACEs  
                  AUDIT-EVERYONE@-0x1f01bf-FI|DI|SA|FA  
            DACL - ACEs  
                  ALLOW-EVERYONE@-0x1f00a9-FI|DI  
                  ALLOW-OWNER@-0x1f01ff-FI|DI  
                  ALLOW-GROUP@-0x1200a9-IG
```

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