



# **Secure NFS access using export policies**

## **ONTAP 9**

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# Secure NFS access using export policies

## Secure NFS access using export policies

You can use export policies to restrict NFS access to volumes or qtrees to clients that match specific parameters. When provisioning new storage, you can use an existing policy and rules, add rules to an existing policy, or create a new policy and rules. You can also check the configuration of export policies



Beginning with ONTAP 9.3, you can enable export policy configuration checking as a background job that records any rules violations in an error rule list. The `vserver export-policy config-checker` commands invoke the checker and display results, which you can use to verify your configuration and delete erroneous rules from the policy. The commands only validate export configuration for host names, netgroups, and anonymous users.

## Manage the processing order of export rules

You can use the `vserver export-policy rule setindex` command to manually set an existing export rule's index number. This enables you to specify the precedence by which ONTAP applies export rules to client requests.

### About this task

If the new index number is already in use, the command inserts the rule at the specified spot and reorders the list accordingly.

### Step

1. Modify the index number of a specified export rule:

```
vserver export-policy rule setindex -vserver virtual_server_name -policyname  
policy_name -ruleindex integer -newruleindex integer
```

### Example

The following command changes the index number of an export rule at index number 3 to index number 2 in an export policy named rs1 on the SVM named vs1:

```
vs1::> vserver export-policy rule setindex -vserver vs1  
-policyname rs1 -ruleindex 3 -newruleindex 2
```

## Assign an export policy to a volume

Each volume contained in the SVM must be associated with an export policy that contains export rules for clients to access data in the volume.

### About this task

You can associate an export policy to a volume when you create the volume or at any time after you create the

volume. You can associate one export policy to the volume, although one policy can be associated to many volumes.

### Steps

1. If an export policy was not specified when the volume was created, assign an export policy to the volume:

```
volume modify -vserver vs1 -volume volume_name -policy
export_policy_name
```

2. Verify that the policy was assigned to the volume:

```
volume show -volume volume_name -fields policy
```

### Example

The following commands assign the export policy `nfs_policy` to the volume `vol1` on the SVM `vs1` and verify the assignment:

```
cluster::> volume modify -vserver vs1 -volume vol1 -policy nfs_policy

cluster::>volume show -volume vol -fields policy
vserver volume      policy
-----
vs1      vol1      nfs_policy
```

## Assign an export policy to a qtree

Instead of exporting an entire volume, you can also export a specific qtree on a volume to make it directly accessible to clients. You can export a qtree by assigning an export policy to it. You can assign the export policy either when you create a new qtree or by modifying an existing qtree.

### What you'll need

The export policy must exist.

### About this task

By default, qtrees inherit the parent export policy of the containing volume if not otherwise specified at the time of creation.

You can associate an export policy to a qtree when you create the qtree or at any time after you create the qtree. You can associate one export policy to the qtree, although one policy can be associated with many qtrees.

### Steps

1. If an export policy was not specified when the qtree was created, assign an export policy to the qtree:

```
volume qtree modify -vserver vs1 -qtree-path
/vol/volume_name/qtree_name -export-policy export_policy_name
```

2. Verify that the policy was assigned to the qtree:

```
volume qtree show -qtree qtree_name -fields export-policy
```

### Example

The following commands assign the export policy `nfs_policy` to the qtree `qt1` on the SVM `vs1` and verify the assignment:

```
cluster::> volume modify -vlserver vs1 -qtree-path /vol/vol1/qt1 -policy  
nfs_policy
```

```
cluster::>volume qtree show -volume vol1 -fields export-policy  
vserver volume qtree export-policy
```

```
-----  
vs1      data1  qt01  nfs_policy
```

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