



# **Configure on-access scanning**

## ONTAP 9

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# Configure on-access scanning

## Create ONTAP Vscan on-access policies

An on-access policy defines the scope of an on-access scan. You can create an on-access policy for an individual SVM or for all the SVMs in a cluster. If you created an on-access policy for all the SVMs in a cluster, you must enable the policy on each SVM individually.

### About this task

- You can specify the maximum file size to scan, file extensions and paths to include in the scan, and file extensions and paths to exclude from the scan.
- You can set the `scan-mandatory` option to `off` to specify that file access is allowed when no Vscan servers are available for virus scanning.
- By default, ONTAP creates an on-access policy named "default\_CIFS" and enables it for all the SVMs in a cluster.
- Any file that qualifies for scan exclusion based on the `paths-to-exclude`, `file-ext-to-exclude`, or `max-file-size` parameters is not considered for scanning, even if the `scan-mandatory` option is set to `on`. (Check this [troubleshooting](#) section for connectivity issues related to the `scan-mandatory` option.)
- By default, only read-write volumes are scanned. You can specify filters that enable scanning of read-only volumes or that restrict scanning to files opened with execute access.
- Virus scanning is not performed on an SMB share for which the `continuously-available` parameter is set to `Yes`.
- See the [Antivirus architecture](#) section for details about the *Vscan file-operations profile*.
- You can create a maximum of ten (10) on-access policies per SVM. However, you can enable only one on-access policy at a time.
  - You can exclude a maximum of one hundred (100) paths and file extensions from virus scanning in an on-access policy.
- Some file exclusion recommendations:
  - Consider excluding large files (file size can be specified) from virus scanning because they can result in a slow response or scan request timeouts for CIFS users. The default file size for exclusion is 2GB.
  - Consider excluding file extensions such as `.vhd` and `.tmp` because files with these extensions might not be appropriate for scanning.
  - Consider excluding file paths such as the quarantine directory or paths in which only virtual hard drives or databases are stored.
  - Verify that all exclusions are specified in the same policy, because only one policy can be enabled at a time. NetApp highly recommends having the same set of exclusions specified in the antivirus engine.
  - Beginning with ONTAP 9.14.1, you can use wildcards to specify on-access paths to exclude.
- An on-access policy is required for an [on-demand scan](#). To avoid on-access scanning for, you should set `-scan-files-with-no-ext` to `false` and `-file-ext-to-exclude` to `*` to exclude all extensions.

### Steps

1. Create an on-access policy:

```
vserver vscan on-access-policy create -vserver data_SVM|cluster_admin_SVM
-policy-name policy_name -protocol CIFS -max-file-size
max_size_of_files_to_scan -filters [scan-ro-volume,][scan-execute-access]
-file-ext-to-include extensions_of_files_to_include -file-ext-to-exclude
extensions_of_files_to_exclude -scan-files-with-no-ext true|false -paths-to
-exclude paths_of_files_to_exclude -scan-mandatory on|off
```

- Specify a data SVM for a policy defined for an individual SVM, a cluster admin SVM for a policy defined for all the SVMs in a cluster.
- The `-file-ext-to-exclude` setting overrides the `-file-ext-to-include` setting.
- Set `-scan-files-with-no-ext` to true to scan files without extensions. The following command creates an on-access policy named `Policy1` on the `vs1` SVM:

```
cluster1::> vserver vscan on-access-policy create -vserver vs1 -policy
-name Policy1 -protocol CIFS -filters scan-ro-volume -max-file-size 3GB
-file-ext-to-include "mp*","tx*" -file-ext-to-exclude "mp3","txt" -scan
-files-with-no-ext false -paths-to-exclude "\vol\ab\", "\vol\ab\"
```

- Verify that the on-access policy has been created: `vserver vscan on-access-policy show -instance data_SVM|cluster_admin_SVM -policy-name name`

Learn more about `vserver vscan on-access-policy` in the [ONTAP command reference](#).

The following command displays the details for the `Policy1` policy:

```
cluster1::> vserver vscan on-access-policy show -instance vs1 -policy
-name Policy1

          Vserver: vs1
          Policy: Policy1
          Policy Status: off
          Policy Config Owner: vserver
          File-Access Protocol: CIFS
          Filters: scan-ro-volume
          Mandatory Scan: on
          Max File Size Allowed for Scanning: 3GB
          File Paths Not to Scan: \vol\ab\, \vol\ab\
          File Extensions Not to Scan: mp3, txt
          File Extensions to Scan: mp*, tx*
          Scan Files with No Extension: false
```

## Enable ONTAP Vscan on-access policies

An on-access policy defines the scope of an on-access scan. You must enable an on-access policy on an SVM before its files can be scanned.

If you created an on-access policy for all the SVMs in a cluster, you must enable the policy on each SVM individually. You can enable only one on-access policy on an SVM at a time.

## Steps

1. Enable an on-access policy:

```
vserver vscan on-access-policy enable -vserver data_SVM -policy-name  
policy_name
```

The following command enables an on-access policy named `Policy1` on the `vs1` SVM:

```
cluster1::> vserver vscan on-access-policy enable -vserver vs1 -policy  
-name Policy1
```

2. Verify that the on-access policy is enabled:

```
vserver vscan on-access-policy show -instance data_SVM -policy-name  
policy_name
```

Learn more about `vserver vscan on-access-policy show` in the [ONTAP command reference](#).

The following command displays the details for the `Policy1` on-access policy:

```
cluster1::> vserver vscan on-access-policy show -instance vs1 -policy  
-name Policy1

          Vserver: vs1
          Policy: Policy1
          Policy Status: on
          Policy Config Owner: vserver
          File-Access Protocol: CIFS
          Filters: scan-ro-volume
          Mandatory Scan: on
          Max File Size Allowed for Scanning: 3GB
          File Paths Not to Scan: \vol\ab\, \vol\ab\
          File Extensions Not to Scan: mp3, txt
          File Extensions to Scan: mp*, tx*
          Scan Files with No Extension: false
```

## Modify the ONTAP Vscan file-operations profile for SMB shares

The `Vscan file-operations profile` for an SMB share defines the operations on the share that can trigger scanning. By default, the parameter is set to `standard`. You can adjust the parameter as necessary when you create or modify an SMB share.

See the [Antivirus architecture](#) section for details about the *Vscan file-operations profile*.



Virus scanning is not performed on an SMB share that has the `continuously-available` parameter set to Yes.

## Step

1. Modify the value of the Vscan file-operations profile for an SMB share:

```
vserver cifs share modify -vserver data_SVM -share-name share -path share_path  
-vscan-fileop-profile no-scan|standard|strict|writes-only
```

Learn more about `vserver cifs share modify` in the [ONTAP command reference](#).

The following command changes the Vscan file operations profile for an SMB share to strict:

```
cluster1::> vserver cifs share modify -vserver vs1 -share-name  
SALES_SHARE -path /sales -vscan-fileop-profile strict
```

## ONTAP Vscan commands for managing on-access policies

You can modify, disable, or delete an on-access policy. You can view a summary and details for the policy.

If you want to...	Enter the following command...
Create an on-access policy	<code>vserver vscan on-access-policy create</code>
Modify an on-access policy	<code>vserver vscan on-access-policy modify</code>
Enable an on-access policy	<code>vserver vscan on-access-policy enable</code>
Disable an on-access policy	<code>vserver vscan on-access-policy disable</code>
Delete an on-access policy	<code>vserver vscan on-access-policy delete</code>
View summary and details for an on-access policy	<code>vserver vscan on-access-policy show</code>
Add to the list of paths to exclude	<code>vserver vscan on-access-policy paths-to-exclude add</code>
Delete from the list of paths to exclude	<code>vserver vscan on-access-policy paths-to-exclude remove</code>

View the list of paths to exclude	vserver vscan on-access-policy paths-to-exclude show
Add to the list of file extensions to exclude	vserver vscan on-access-policy file-ext-to-exclude add
Delete from the list of file extensions to exclude	vserver vscan on-access-policy file-ext-to-exclude remove
View the list of file extensions to exclude	vserver vscan on-access-policy file-ext-to-exclude show
Add to the list of file extensions to include	vserver vscan on-access-policy file-ext-to-include add
Delete from the list of file extensions to include	vserver vscan on-access-policy file-ext-to-include remove
View the list of file extensions to include	vserver vscan on-access-policy file-ext-to-include show

Learn more about the commands described in this procedure in the [ONTAP command reference](#).

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