



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.
- 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\"
```

2. 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\ a b\, \vol\ a, b\
          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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