



# **SMB command reference**

XCP

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# SMB command reference

## help

The SMB `help` command displays a list of commands, command parameters, and a brief description of each. This command is very useful for beginners who are new to XCP.

### Syntax

```
xcp --help
```

### Show example

```
C:\Users\Administrator\Desktop\xcp>xcp --help
usage: xcp [-h] [-version]

{scan,show,listen,configure,copy,sync,verify,license,activate,help}
    ...
optional arguments:
  -h, --help            show this help message and exit
  -version              show program's version number and exit

XCP commands:
  {scan,show,listen,configure,copy,sync,verify,license,activate,help}
  scan                  Read all the files in a file tree
  show                  Request information from host about SMB shares
  listen                Run xcp service
  configure              Configure xcp.ini file
  copy                  Recursively copy everything from source to target
  sync                  Sync target with source
  verify                Verify that the target is the same as the source
  license                Show xcp license info
  activate              Activate a license on the current host
  help                  Show help for commands
```

## help <command>

Use <command> with `help` to display examples and option details for the specified <command>.

### Syntax

```
xcp help <command>
```

The following example output shows the details, usage, arguments, and optional arguments for the `sync` command.

Show example



```

C:\Users\Administrator\Desktop\xcp>xcp help sync
usage: xcp sync [-h] [-v] [-parallel <n>] [-match <filter>] [-preserve-
atime]
[-noatime] [-noctime] [-nomtime] [-noattrs]
[-noownership] [-atimewindow <float>] [-ctimewindow <float>]
[-mtimewindow <float>] [-acl] [-fallback-user FALLBACK_USER]
[-fallback-group FALLBACK_GROUP] [-l]
source target
Note: ONTAP does not let a SMB client modify COMPRESSED or ENCRYPTED
attributes.
XCP sync will ignore these file attributes.
positional arguments:
source
target
optional arguments:
-h, --help            show this help message and exit
-v                    increase debug verbosity
-parallel <n>         number of concurrent processes (default: <cpu-
count>)
-match <filter>      only process files and directories that match the
filter
                    see `xcp help -match` for details)
-preserve-atime       restore last accessed date on source
-noatime              do not check file access time
-noctime              do not check file creation time
-nomtime              do not check file modification time
-noattrs              do not check attributes
-noownership          do not check ownership
-atimewindow <float> acceptable access time difference in seconds
-ctimewindow <float> acceptable creation time difference in seconds
-mtimewindow <float> acceptable modification time difference in
seconds
-acl                  copy security information
-fallback-user FALLBACK_USER
                    a user on the target machine to receive the
permissions of local
(nondomain)source machine users (eg. domain\administrator)
-fallback-group      FALLBACK_GROUP
                    a group on the target machine to receive the
permissions of local
(non-domain) source machine groups (eg. domain\administrators)
-l                    increase output
-root                sync acl for root directory
C:\Users\Administrator\Desktop\xcp>

```

# show

The SMB `show` command queries the RPC services and NFS exports of one or more storage servers. The command also lists the available services and exports with the used and free capacity of each export, followed by the attributes of the root of each export.

## Syntax

The `show` command requires the host name or IP address of the NFSv3 exported system:

```
xcp show \\<IP address or hostname of SMB server>
```

## Show example

```
C:\Users\Administrator\Desktop\xcp>xcp show \\<IP address or hostname
of SMB server>
Shares Errors Server
7 0 <IP address or hostname of SMB server>
== SMB Shares ==
Space Space Current
Free Used Connections Share Path Folder Path
0 0 N/A \\<IP address or hostname of SMB server>\IPC$ N/A
533GiB 4.72GiB 0 \\<IP address or hostname of SMB server>\ETC$ C:\etc
533GiB 4.72GiB 0 \\<IP address or hostname of SMB server>\HOME
C:\vol\vol0\home
533GiB 4.72GiB 0 \\<IP address or hostname of SMB server>\C$ C:\
972MiB 376KiB 0 \\<IP address or hostname of SMB
server>\testsecureC:\vol\testsecure
12 XCP SMB v1.6 User Guide © 2020 NetApp, Inc. All rights reserved.
47.8GiB 167MiB 1 \\<IP address or hostname of SMB server>\volxcp
C:\vol\volxcp
9.50GiB 512KiB 1 \\<IP address or hostname of SMB server>\j1 C:\vol\j1
== Attributes of SMB Shares ==
Share Types Remark
IPC$ PRINTQ,IPC,SPECIAL,DEVICE Remote IPC
ETC$ SPECIAL Remote Administration
HOME DISKTREE Default Share
C$ SPECIAL Remote Administration
testsecure DISKTREE for secure copy
volxcp DISKTREE for xcpSMB
j1 DISKTREE
== Permissions of SMB Shares ==
Share Entity Type
IPC$ Everyone Allow/Full Control
ETC$ Administrators Allow/FullControl
HOME Everyone Allow/Full Control
C$ Administrators Allow/Full Control

xcp show \\<IP address or hostname of SMB server>
0 errors
Total Time : 0s
STATUS : PASSED
```

The following table lists the show parameters and their description.



Parameter	Description
show -v	Prints verbose details about SMB servers using the IP address or host name.
show -h, --help	Displays detailed information about how to use the command.

## license

The SMB `license` command displays XCP license information.

### Syntax

```
xcp license
```

### Show example

```
C:\Users\Administrator\Desktop\xcp>xcp license
xcp license
XCP <version>; (c) yyyy NetApp, Inc.; Licensed to XXX [NetApp Inc]
until Mon Dec 31 00:00:00 yyyy
License type: SANDBOX
License status: ACTIVE
Customer name: N/A
Project number: N/A
Offline Host: Yes
Send statistics: No
Host activation date: N/A
License management URL: https://xcp.netapp.com
```

## activate

The SMB `activate` command activates the XCP license. Before running this command, verify that the license file is downloaded and copied on the C:\NetApp\XCP directory on the XCP host or client machine. The license can be activated on any number of hosts.

### Syntax

```
xcp activate
```

## Show example

```
C:\Users\Administrator\Desktop\xcp>xcp activate
XCP activated
```

## scan

The SMB `scan` command recursively scans the entire SMB share and lists all the files by the end of the `scan` command.

### Syntax

```
xcp scan \\<SMB share path>
```

## Show example

```
C:\Users\Administrator\Desktop\xcp>xcp scan \\<IP address or hostname
of SMB server>\volxcp
c:\netapp\xcp\xcp scan \\<IP address of SMB destination
server>\source_share
volxcp\3333.txt
volxcp\SMB.txt
volxcp\SMB1.txt
volxcp\com.txt
volxcp\commands.txt
volxcp\console.txt
volxcp\linux.txt
volxcp\net use.txt
volxcp\newcom.txt
volxcp\notepad.txt
c:\netapp\xcp\xcp scan \\<IP address of SMB destination
server>\source_share
60,345 scanned, 0 matched, 0 errors
Total Time : 8s
STATUS : PASSED
C:\Users\Administrator\Desktop\xcp>Parameters
```

The following table lists the `scan` parameters and their description.

Parameter	Description
<code>scan -h, --help</code>	Displays detailed information about how to use the scan command.
<code>scan -v</code>	Increases debug verbosity.
<code>scan -parallel &lt;n&gt;</code>	Specifies the number of concurrent processes (default: <cpu-count>).
<code>scan -match &lt;filter&gt;</code>	Only processes files and directories that match the filter.
<code>scan -exclude &lt;filter&gt;</code>	Only excludes files and directories in the filter.
<code>scan -preserve-atime</code>	Restores the last accessed date on source.
<code>scan -depth &lt;n&gt;</code>	Limits the search depth to n levels.
<code>scan -stats</code>	Lists files in the tree statistic report format.
<code>scan -html</code>	Lists files in the tree statistic HTML report format.
<code>scan -csv</code>	Lists files in the tree statistic CSV report format.
<code>scan -l</code>	Lists files in the long listing output format.
<code>scan -ownership</code>	Retrieves ownership information of files and directories on the source system.
<code>scan -du</code>	Summarizes space usage of each directory including subdirectories.
<code>scan -fmt &lt;expression&gt;</code>	Formats file listing according to the Python expression (see <code>xcp help -fmt</code> for details).
<code>scan -ads</code>	Recursively scans the entire SMB share and lists all files and any associated alternate data streams.

## scan -h, --help

Use the `-h` and `--help` parameters with the `scan` command to display detailed information about how to use the scan command.

### Syntax

```
xcp scan --help
```

## Show example

```
C:\netapp\xcp>xcp scan --help

usage: xcp scan [-h] [-v] [-parallel <n>] [-match <filter>] [-exclude
<filter>] [-preserve-atime] [-depth
<n>] [-loglevel <name>] [-stats] [-l] [-ownership] [-du]
                [-fmt <expression>] [-html] [-csv] [-edupe] [-bs <n>]
[-ads]
                source
positional arguments:
  source
optional arguments:
  -h, --help            show this help message and exit
  -v                    increase debug verbosity
  -parallel <n>         number of concurrent processes (default: <cpu-
count>)
  -match <filter>       only process files and directories that match
the filter (see `xcp help -match` for details)
  -exclude <filter>    Exclude files and directories that match the
filter (see `xcp help -exclude` for details)
  -preserve-atime       restore last accessed date on source
  -depth <n>           limit the search depth
  -loglevel <name>     option to set log level filter (default:INFO)
  -stats                print tree statistics report
  -l                    detailed file listing output
  -ownership            retrieve ownership information
  -du                   summarize space usage of each directory
including subdirectories
  -fmt <expression>    format file listing according to the python
expression (see `xcp help -fmt` for details)
  -html                 Save HTML statistics report
  -csv                  Save CSV statistics report
  -edupe                Include dedupe and sparse data estimate in
reports (see documentation for details)
  -bs <n>               read/write block size for scans which read data
with -edupe (default: 64k)
  -ads                  scan NTFS alternate data stream
```

## scan -v

Use the `-v` parameter with the `scan` command to provide detailed logging information to troubleshoot or debug when an error or warning is reported.

## Syntax

```
xcp scan -v \\<IP address or hostname of SMB server>\source_share
```

## Show example

```
c:\netapp\xcp>xcp scan -v \\<IP address or hostname of SMB
server>\source_share
xcp scan -v \\<IP address or hostname of SMB server>\source_share
---Truncated output---
source_share\ASUP.pm
source_share\ASUP_REST.pm
source_share\Allflavors_v2.pm
source_share\Armadillo.pm
source_share\AsupExtractor.pm
source_share\BTS_Config.pm
source_share\Backup.pm
source_share\Aggregate.pm
source_share\Burt.pm
source_share\CConfig.pm
source_share\CIFS.pm
source_share\CR.pm
source_share\CRC.pm
source_share\CSHM.pm
source_share\CSM.pm
source_share\agnostic\SFXOD.pm
source_share\agnostic\Snapmirror.pm
source_share\agnostic\VolEfficiency.pm
source_share\agnostic\flatfile.txt
source_share\agnostic
source_share
xcp scan \\<IP address or hostname of SMB server>\source_share
317 scanned, 0 matched, 0 errors
Total Time : 0s
STATUS : PASSED
```

## scan -parallel <n>

Use the `-parallel <n>` parameter with the `scan` command to set a higher or lower number of XCP concurrent processes.



The maximum value for `n` is 61.

## Syntax

```
xcp scan -parallel <n> \\<IP address or hostname of SMB  
server>\source_share
```

## Show example

```
c:\netapp\xcp>xcp scan -parallel 8 \\<IP address or hostname of SMB
server>\cifs_share
xcp scan -parallel 8 \\<IP address or hostname of SMB
server>\cifs_share

cifs_share\ASUP.pm
cifs_share\ASUP_REST.pm
cifs_share\Allflavors_v2.pm
cifs_share\Armadillo.pm
cifs_share\AsupExtractor.pm
cifs_share\BTS_Config.pm
cifs_share\Backup.pm
cifs_share\Aggregate.pm
cifs_share\agnostic\CifsAccess.pm
cifs_share\agnostic\DU_Cmode.pm
cifs_share\agnostic\Flexclone.pm
cifs_share\agnostic\HyA_Clone_Utils.pm
cifs_share\agnostic\Fileclone.pm
cifs_share\agnostic\Jobs.pm
cifs_share\agnostic\License.pm
cifs_share\agnostic\Panamax_Clone_Utils.pm
cifs_share\agnostic\LunCmds.pm
cifs_share\agnostic\ProtocolAccess.pm
cifs_share\agnostic\Qtree.pm
cifs_share\agnostic\Quota.pm
cifs_share\agnostic\RbacCmdFetcher.pm
cifs_share\agnostic\RbacCmdFetcher_ReadMe
cifs_share\agnostic\SFXOD.pm
cifs_share\agnostic\Snapmirror.pm
cifs_share\agnostic\VolEfficiency.pm
cifs_share\agnostic\flatfile.txt
cifs_share\agnostic
cifs_share
xcp scan -parallel 8 \\<IP address or hostname of SMB
server>\cifs_share
317 scanned, 0 matched, 0 errors
Total Time : 0s
STATUS : PASSED
```

## scan -match <filter>

Use the `-match <filter>` parameter with the `scan` command to only process files and directories that match the filter.

## Syntax

```
xcp scan -match <filter> \\<IP address or hostname of SMB
server>\source_share
```

In the following example, `scan -match` scans all files that have changed between one month and one year and prints a line to the console for each file found. The ISO format of its last modification time, a human-readable size of the file, its type, and its relative path are returned for each file.

## Show example

```
c:\netapp\xcp>xcp scan -match "1*month < modified < 1*year" -fmt
"'{:>15} {:>7}{}
{}'.format(iso(mtime), humanize_size(size), type, relpath)" \\<IP
address or hostname of SMB server>\source_share
xcp scan -match "1*month < modified < 1*year" -fmt "'{:>15} {:>7} {}
{}'.format(iso(mtime), humanize_size(size), type, relpath)" \\<IP
address or hostname of SMB server>\source_share

xcp scan -match 1*month < modified < 1*year -fmt '{:>15} {:>7} {}
{}'.format(iso(mtime), humanize_size(size), type, relpath) \\<IP
address or hostname of SMB server>\source_share
317 scanned, 0 matched, 0 errors
Total Time : 0s
STATUS : PASSED
```

In the following example, `scan -match` lists the files that have not been modified for more than 3 months and have a size bigger than 4MB.



## Show example

```
c:\netapp\xcp>xcp scan -match "modified > 3*month and size > 4194304"
-fmt "'{},{},{{},
{{}'.format(iso(mtime), humanize_size(size), relpath)" \\<IP address or
hostname of SMB
server>\source_share
xcp scan -match "modified > 3*month and size > 4194304" -fmt "'{},{}, {{},
{{}'.format(iso(mtime), humanize_size(size), relpath)" \\<IP address or
hostname of SMB server>\source_share

xcp scan -match modified > 3*month and size > 4194304 -fmt '{},{}, {{},
{{}'.format(iso(mtime), humanize_size(size), relpath) \\<IP address or
hostname of SMB server>\source_share
317 scanned, 0 matched, 0 errors
Total Time : 0s
STATUS : PASSED
```

The first of the following two examples only matches the directories and the formatting adds a comma between the variables "mtime", "relative path", and "depth".

The second example redirects the same output to "name.csv".

## Show example

```
c:\netapp\xcp>xcp scan -match "type is directory" -fmt
"','.join(map(str, [iso(mtime), relpath, depth]))" \\<IP address or
hostname of SMB server>\source_share
xcp scan -match "type is directory" -fmt "','.join(map(str,
[iso(mtime), relpath, depth]))" \\<IP address or hostname of SMB
server>\source_share

2013-03-07_15:41:40.376072,source_share\agnostic,1
2020-03-05_04:15:07.769268,source_share,0

xcp scan -match type is directory -fmt "','.join(map(str, [iso(mtime),
relpath, depth]))" \\<IP address or hostname of SMB server>\source_share
317 scanned, 2 matched, 0 errors
Total Time : 0s
STATUS : PASSED
```

## Show example

```
c:\netapp\xcp>xcp scan -match "type is directory" -fmt
"','.join(map(str, [iso(mtime), relpath, depth]))" "\\<IP address or
hostname of SMB server>\source_share > name.csv
xcp scan -match "type is directory" -fmt "','.join(map(str,
[iso(mtime), relpath, depth]))" "\\<IP address or hostname of SMB
server>\source_share > name.csv
```

The following example prints the full path and the raw `mtime` value of all the files that are not directories. The `mtime` value is padded with 70 characters to facilitate a readable console report.

## Show example

```
c:\netapp\xcp>xcp scan -match "type is not directory" -fmt
"'{}{:>70}'.format(abspath, mtime)" "\\<IP address or hostname of SMB
server>\source_share
xcp scan -match "type is not directory" -fmt "'{}
{:>70}'.format(abspath, mtime)" "\\<IP address or hostname of SMB
server>\source_share

--truncated output--
\\<IP address or hostname of SMB server>\source_share\ASUP.pm
1362688899.238098
\\<IP address or hostname of SMB server>\source_share\ASUP_REST.pm
1362688899.264073
\\<IP address or hostname of SMB server>\source_share\Allflavors_v2.pm
1362688899.394938
\\<IP address or hostname of SMB server>\source_share\Armadillo.pm
1362688899.402936
\\<IP address or hostname of SMB server>\source_share\AsupExtractor.pm
1362688899.410922
\\<IP address or hostname of SMB server>\source_share\BTS_Config.pm
1362688899.443902
\\<IP address or hostname of SMB server>\source_share\Backup.pm
1362688899.444905
\\<IP address or hostname of SMB server>\source_share\Aggregate.pm
1362688899.322019
\\<IP address or hostname of SMB server>\source_share\Burt.pm
1362688899.446889
\\<IP address or hostname of SMB server>\source_share\CConfig.pm
1362688899.4479
\\<IP address or hostname of SMB server>\source_share\CIFS.pm
1362688899.562795
\\<IP address or hostname of SMB
server>\source_share\agnostic\ProtocolAccess.pm
1362688900.358093
\\<IP address or hostname of SMB server>\source_share\agnostic\Qtree.pm
1362688900.359095
\\<IP address or hostname of SMB server>\source_share\agnostic\Quota.pm
1362688900.360094
\\<IP address or hostname of SMB
server>\source_share\agnostic\RbacCmdFetcher.pm
1362688900.3611
\\<IP address or hostname of SMB
server>\source_share\agnostic\RbacCmdFetcher_ReadMe
1362688900.362094
\\<IP address or hostname of SMB server>\source_share\agnostic\SFXOD.pm
```

```

1362688900.363094
\\<IP address or hostname of SMB
server>\source_share\agnostic\Snapmirror.pm
1362688900.364092
\\<IP address or hostname of SMB
server>\source_share\agnostic\VolEfficiency.pm
1362688900.375077
\\<IP address or hostname of SMB
server>\source_share\agnostic\flatfile.txt
1362688900.376076

xcp scan -match type is not directory -fmt '{} {:>70}'.format(abspath,
mtime) \\<IP address or hostname of SMB server>\source_share
317 scanned, 315 matched, 0 errors
Total Time : 0s
STATUS : PASSED

```

## scan -exclude <filter>

Use the `-exclude <filter>` with the `scan` command to exclude directories and files based on the pattern in the filter.

### Syntax

```

xcp scan -exclude <filter> \\<IP address or hostname of SMB
server>\source_share

```

In the following example, `scan -exclude` excludes any file that has changed between one month and one year, and prints a line to the console for each file that is not excluded. The details printed for each file are the ISO format of its last modification time, a human-readable size of the file, its type, and its relative path.

## Show example

```
c:\netapp\xcp>xcp scan -exclude "1*month < modified < 1*year" -fmt
"'{:>15} {:>7}{}
{}'.format(iso(mtime), humanize_size(size), type, relpath)" \\<IP
address or hostname ofSMB server>\localtest\arch\win32\agnostic
xcp scan -exclude "1*month < modified < 1*year" -fmt "'{:>15} {:>7}
{}{}'.format(iso(mtime), humanize_size(size), type, relpath)" \\<IP
address or hostname of SMB server>\localtest\arch\win32\agnostic
2013-03-07_15:39:22.852698 46 regular agnostic\P4ENV
2013-03-07_15:40:27.093887 8.40KiB regular agnostic\Client_outage.thpl
2013-03-07_15:40:38.381870 23.0KiB regular
agnostic\IPv6_RA_Configuration_Of_LLA_In_SK_BSD.thpl
2013-03-07_15:40:38.382876 12.0KiB regular
agnostic\IPv6_RA_Default_Route_changes.thpl
2013-03-07_15:40:38.383870 25.8KiB regular
agnostic\IPv6_RA_Port_Role_Change.thpl
2013-03-07_15:40:38.385863 28.6KiB regular
agnostic\IPv6_RA_processing_And_Default_Route_Installation.thpl
2013-03-07_15:40:38.386865 21.8KiB regular
agnostic\IPv6_RA_processing_large_No_Prefix.thpl
2013-03-07_15:40:40.323163          225 regular agnostic\Makefile
2013-03-07_15:40:40.324160          165 regular
agnostic\Makefile.template
----truncated output ----
2013-03-07_15:45:36.668516          0 directory
agnostic\tools\limits_finder\vendor\symfony\src
2013-03-07_15:45:36.668514          0 directory
agnostic\tools\limits_finder\vendor\symfony
2013-03-07_15:45:40.782881          0 directory
agnostic\tools\limits_finder\vendor
2013-03-07_15:45:40.992685          0 directory
agnostic\tools\limits_finder
2013-03-07_15:45:53.242817          0 directory agnostic\tools
2013-03-07_15:46:11.334815          0 directory agnostic

xcp scan -exclude 1*month < modified < 1*year -fmt '{:>15} {:>7} {}
{}'.format(iso(mtime), humanize_size(size), type, relpath) \\<IP
address or hostname of SMB server>\localtest\arch\win32\agnostic
140,856 scanned, 1 excluded, 0 errors
Total Time : 46s
STATUS : PASSED
```

In the following example, `scan -exclude` lists the not excluded files that have not been modified for more

than three months and have a size greater than 5.5 KB. The details that are printed for each file are the ISO format of its last modification time, a human-readable size of the file, its type, and its relative path.

### Show example

```
c:\netapp\xcp>xcp scan -exclude "modified > 3*month and size > 5650"
-fmt "'{ }, { }, {'}.format(iso(mtime), humanize_size(size), relpath)"
\\<IP address or hostname of SMB
server>\localtest\arch\win32\agnostic\snapmirror
xcp scan -exclude "modified > 3*month and size > 5650" -fmt "'{ }, { },
{'}.format(iso(mtime), humanize_size(size) relpath)" \\<IP address or
hostname of SMB server>\localtest\arch\win32\agnostic\snapmirror

2013-03-07_15:44:53.713279, 4.31KiB, snapmirror\rsm_abort.thpl
2013-03-07_15:44:53.714269, 3.80KiB, snapmirror\rsm_break.thpl
2013-03-07_15:44:53.715270, 3.99KiB, snapmirror\rsm_init.thpl
2013-03-07_15:44:53.716268, 2.41KiB, snapmirror\rsm_quiesce.thpl
2013-03-07_15:44:53.717263, 2.70KiB, snapmirror\rsm_release.thpl
2013-03-07_15:44:53.718260, 4.06KiB, snapmirror\rsm_resume.thpl
2013-03-07_15:44:53.720256, 4.77KiB, snapmirror\rsm_resync.thpl
2013-03-07_15:44:53.721258, 3.83KiB, snapmirror\rsm_update.thpl
2013-03-07_15:44:53.724256, 4.74KiB, snapmirror\sm_quiesce.thpl
2013-03-07_15:44:53.725254, 4.03KiB, snapmirror\sm_resync.thpl
2013-03-07_15:44:53.727249, 4.30KiB, snapmirror\sm_store_complete.thpl
2013-03-07_15:44:53.729250, 0, snapmirror

xcp scan -exclude modified > 3*month and size > 5650 -fmt '{ }, { },
{'}.format(iso(mtime), humanize_size(size), relpath) \\<IP address or
hostname of SMB server>\localtest\arch\win32\agnostic\snapmirror
18 scanned, 6 excluded, 0 errors Total Time : 0s
STATUS : PASSED
```

This following example excludes directories. It lists the not excluded files with formatting that adds a comma between the variables mtime, relpath, and depth.

## Show example

```
c:\netapp\xcp>xcp scan -exclude "type is directory" -fmt
"','.join(map(str, [iso(mtime), relpath, depth]))" \\<IP address or
hostname of SMB server>\localtest\arch\win32\agnostic\snapmirror
xcp scan -exclude "type is directory" -fmt "','.join(map(str,
[iso(mtime), relpath,depth]))"
\\<IP address or hostname of
SMBserver>\localtest\arch\win32\agnostic\snapmirror
2013-03-07_15:44:53.712271,snapmirror\SMutils.pm,1
2013-03-07_15:44:53.713279,snapmirror\rsm_abort.pm,1
2013-03-07_15:44:53.714269,snapmirror\rsm_break.pm,1
2013-03-07_15:44:53.715270,snapmirror\rsm_init.thpl,1
2013-03-07_15:44:53.716268,snapmirror\rsm_quiesce.thpl,1
2013-03-07_15:44:53.717263,snapmirror\rsm_release.thpl,1
2013-03-07_15:44:53.718260,snapmirror\rsm_resume.thpl,1
2013-03-07_15:44:53.720256,snapmirror\rsm_resync.thpl,1
2013-03-07_15:44:53.721258,snapmirror\rsm_update.thpl,1
2013-03-07_15:44:53.722261,snapmirror\sm_init.thpl,1
2013-03-07_15:44:53.723257,snapmirror\sm_init_complete.thpl,1
2013-03-07_15:44:53.724256,snapmirror\sm_quiesce.thpl,1
2013-03-07_15:44:53.725254,snapmirror\sm_resync.thpl,1
2013-03-07_15:44:53.726250,snapmirror\sm_retrieve_complete.thpl,1
2013-03-07_15:44:53.727249,snapmirror\sm_store_complete.thpl,1
2013-03-07_15:44:53.728256,snapmirror\sm_update.thpl,1
2013-03-07_15:44:53.729260,snapmirror\sm_update_start.thpl,1

xcp scan -exclude type is directory -fmt ','.join(map(str, [iso(mtime),
relpath, depth])) \\<IP address or hostname of SMB
server>\localtest\arch\win32\agnostic\snapmirror
18 scanned, 1 excluded, 0 errors
Total Time : 0s
STATUS : PASSED
```

This following example prints the complete file path and the raw `mtimevalue` of all files that are not directories. The `mtimevalue` is padded with 70 characters to facilitate a readable console report.

## Show example

```
c:\netapp\xcp>xcp scan -exclude "type is not directory" -fmt "'{}
{:>70}'.format(abspath, mtime)" \\<IP address or hostname of
SMBserver>\source_share

xcp scan -exclude type is not directory -fmt '{}'
{:>70}'.format(abspath, mtime) \\<IP address or hostname of SMB
server>\source_share
18 scanned, 17 excluded, 0errors
Total Time : 0s
STATUS : PASSED
```

## scan -preserve-ctime

Use the `-preserve-ctime` parameter with the `scan` command to restore the last accessed date of all the files on the source and reset the `ctime` to the original value before XCP read the file.

When you scan an SMB share, the access time is modified on the files (if the storage system is configured to modify `ctime` on read) because XCP is reading the files one by one. XCP never changes the `ctime`, it just reads the file, which triggers an update on `ctime`.

## Syntax

```
xcp scan -preserve-ctime \\<IP address or hostname of SMB
server>\source_share
```



## Show example

```
c:\netapp\xcp>xcp scan -preserve-atime \\<IP address or hostname of SMB
server>\source_share
xcp scan -preserve-atime \\<IP address or hostname of SMB
server>\source_share

source_share\ASUP.pm
source_share\ASUP_REST.pm
source_share\Allflavors_v2.pm
source_share\Armadillo.pm
source_share\AsupExtractor.pm
source_share\BTS_Config.pm
source_share\Backup.pm
source_share\Aggregate.pm
source_share\Burt.pm
source_share\CConfig.pm
source_share\agnostic\ProtocolAccess.pm
source_share\agnostic\Qtree.pm
source_share\agnostic\Quota.pm
source_share\agnostic\RbacCmdFetcher.pm
source_share\agnostic\RbacCmdFetcher_ReadMe
source_share\agnostic\SFXOD.pm
source_share\agnostic\Snapmirror.pm
source_share\agnostic\VolEfficiency.pm
source_share\agnostic\flatfile.txt
source_share\agnostic
source_share

xcp scan -preserve-atime \\<IP address or hostname of
SMBserver>\source_share
317 scanned, 0 matched, 0 errors
Total Time : 1s
STATUS : PASSED
```

## scan -depth <n>

Use the `-depth <n>` parameter with the `scan` command to limit the search depth of directories inside an SMB share.



The `-depth` option specifies how deep XCP can scan the files into the subdirectories.

## Syntax

```
xcp scan -depth <2> \\<IP address or hostname of SMB server>\source_share
```

## Show example

```
c:\netapp\xcp>xcp scan -depth 2 \\<IP address or hostname of SMB
server>\source_share
xcp scan -depth 2 \\<IP address or hostname of SMB server>\source_share

source_share\ASUP.pm
source_share\ASUP_REST.pm
source_share\Allflavors_v2.pm
source_share\Armadillo.pm
source_share\AsupExtractor.pm
source_share\BTS_Config.pm
source_share\Backup.pm
source_share\Aggregate.pm
source_share\Burt.pm
source_share\CConfig.pm
source_share\CIFS.pm
source_share\CR.pm
source_share\CRC.pm
source_share\CSHM.pm
source_share\agnostic\Fileclone.pm
source_share\agnostic\Jobs.pm
source_share\agnostic\License.pm
source_share\agnostic\Panamax_Clone_Utills.pm
source_share\agnostic\LunCmds.pm
source_share\agnostic\ProtocolAccess.pm
source_share\agnostic\Qtree.pm
source_share\agnostic\Quota.pm
source_share\agnostic\RbacCmdFetcher.pm
source_share\agnostic\RbacCmdFetcher_ReadMe
source_share\agnostic\SFXOD.pm
source_share\agnostic\Snapmirror.pm
source_share\agnostic\VolEfficiency.pm
source_share\agnostic\flatfile.txt
source_share\agnostic
source_share

xcp scan -depth 2 \\<IP address or hostname of SMB server>\source_share
317 scanned, 0 matched, 0 errors
Total Time : 0s
STATUS : PASSED
```

## scan -stats

Use the `-stats` parameter with the `scan` command to list files in a tree statistics report format.

### Syntax

```
xcp scan -stats \\<IP address or hostname of SMB server>\source_share
```

## Show example

```
C:\netapp\xcp>xcp scan -stats \\<IP address or hostname of SMB
server>\cifs_share

== Maximum Values ==
      Size      Depth      Namelen      Dirsize
  88.2MiB         3         108         20

== Average Values ==
      Size      Depth      Namelen      Dirsize
   4.74MiB         2         21          9

== Top File Extensions ==
no extension  .PDF      .exe      .html     .whl     .py
other
  22          2          2          2          2          1
9
 20.0KiB     1.54MiB   88.4MiB   124KiB    1.47MiB  1.62KiB
98.3MiB

== Number of files ==
empty  <8KiB   8-64KiB   64KiB-1MiB  1-10MiB   10-100MiB
>100MiB
  2      24          2          7          2          3

== Space used ==
empty  <8KiB   8-64KiB   64KiB-1MiB  1-10MiB   10-100MiB
>100MiB
  0 24.0KiB   124KiB    2.87MiB   2.91MiB   184MiB
0

== Directory entries ==
empty   1-10    10-100      100-1K    1K-10K    >10K
         4          1

== Depth ==
  0-5    6-10    11-15      16-20    21-100    >100
  45

== Modified ==
>1 year  9-12 months  6-9 months  3-6 months  1-3 months  1-31 days  1-
24 hrs  <1
hour    <15 mins    future      <1970      invalid
                                             44
1
                                             190MiB
```

```

== Created ==
>1 year  9-12 months  6-9 months  3-6 months  1-3 months  1-31 days  1-
24 hrs  <1
hour      <15 mins      future      <1970      invalid
                                                45
                                                190MiB

Total count: 45
Directories: 5
Regular files: 40
Symbolic links:
Junctions:
Special files:
Total space for regular files: 190MiB
Total space for directories: 0
Total space used: 190MiB
Dedupe estimate: N/A
Sparse data: N/A
xcp scan -stats \\<IP address or hostname of SMB server>\cifs_share
45 scanned, 0 matched, 0 errors
Total Time : 0s
STATUS : PASSED

```

## scan -html

Use the `-html` parameter with the `scan` command to list files in a HTML statistics report.



XCP reports (.csv, .html) are saved in the same location as the XCP binary. The file name is in the format `<xcp_process_id>_<time_stamp>.html`. When XCP cannot map security identifiers (SIDs) to owner names, it uses the last few digits after the final “-” in the SID to represent the owner. For example, when XCP is unable to map the SID S-1-5-21-1896871423-3211229150-3383017265-4854184 to its owner, it represents the owner by using 4854184.

## Syntax

```
xcp scan -stats -html -preserve-atime -ownership \\<IP address or hostname
of SMB server>\source_share
```

## Show example

```
Z:\scripts\xcp\windows>xcp scan -stats -html -preserve-atime -ownership
\\<IP address or hostname of SMB server>\source_share
1,972 scanned, 0 matched, 0 errors, 7s
4,768 scanned, 0 matched, 0 errors,12s
7,963 scanned, 0 matched, 0 errors,17s
10,532 scanned, 0 matched, 0 errors,22s
12,866 scanned, 0 matched, 0 errors,27s
15,770 scanned, 0 matched, 0 errors,32s
17,676 scanned, 0 matched, 0 errors,37s

== Maximum Values ==
      Size      Depth      Namelen      Dirsize
535KiB         16         33         45

== Average Values ==
      Size      Depth      Namelen      Dirsize
10.3KiB         7         11         6

== Top File SIDs ==
S-1-5-21-1896871423-3211229150-3383017265-4854184 S-1-5-32-544 S-1-5-
21-1896871423-3211229150-3383017265-3403389
      9318         8470         1

== Top Space SIDs ==
S-1-5-21-1896871423-3211229150-3383017265-4854184 S-1-5-32-544 S-1-5-
21-1896871423-3211229150-3383017265-3403389
      76.8MiB      69.8MiB         0

== Top File Extensions ==
      py      .rst      .html      no      extension      .txt
.png      other
      5418      3738      1974      1197      630      336
1344

== Number of files ==
      empty      <8KiB      8-64KiB      64KiB-1MiB      1-10MiB      10-100MiB
>100MiB
      168      11466      2709      294

== Space used ==
      empty      <8KiB      8-64KiB      64KiB-1MiB      1-10MiB      10-100MiB
>100MiB
      0      24.4MiB      55.3MiB      66.9MiB
```

```

== Directory entries ==
  empty      1-10      10-100      100-1K      1K-10K      >10K
    42       2690       420

```

Category	1-10	10-100	100-1K	1K-10K	>10K
empty	42	2690	420		

```

== Depth ==
  0-5      6-10      11-15      16-20      21-100
>100
  3832     12527     1424

```

Category	0-5	6-10	11-15	16-20	21-100
>100	3832	12527	1424	6	

```

== Modified ==
  >1 year    >1 month    1-31 days    1-24 hrs    <1 hour
<15 mins    future      invalid
  11718     2961

```

Category	>1 year	>1 month	1-31 days	1-24 hrs	<1 hour
<15 mins	11718	2961			3110

```

== Created ==
  >1 year    >1 month    1-31 days    1-24 hrs    <1 hour    <15
mins        future      invalid

```

Category	>1 year	>1 month	1-31 days	1-24 hrs	<1 hour	<15 mins
				1	17788	

```

== Accessed ==
  >1 year    >1 month    1-31 days    1-24 hrs    <1 hour    <15
mins        future      invalid

```

Category	>1 year	>1 month	1-31 days	1-24 hrs	<1 hour	<15 mins
					14624	3165

Total count: 17789  
Directories: 3152  
Regular files: 14637  
Symbolic links:  
Junctions:  
Special files:  
Total space for regular files:147MiB  
Total space for directories: 0  
Total space used: 147MiB  
Dedupe estimate: N/A  
Sparse data: N/A  
xcp scan -stats -html -preserve-atime -ownership \\<IP address or  
hostname ofSMB  
server>\source\_share  
17,789 scanned, 0 matched, 0errors  
Total Time : 39s  
STATUS : PASSED

## scan -csv

Use the `-csv` parameter with the `scan` command to list files in a CSV tree statistics report.



## Syntax

```
xcp scan -stats -csv -preserve-atime -ownership \\<IP address or hostname  
of SMB server>\source_share
```

## Show example

```
Z:\scripts\xcp\windows>xcp scan -stats -csv -preserve-atime -ownership  
\\<IP address or hostname of SMB server>\source_share
```

```
1,761 scanned, 0 matched, 0 errors, 6s  
4,949 scanned, 0 matched, 0 errors, 11s  
7,500 scanned, 0 matched, 0 errors, 16s  
10,175 scanned, 0 matched, 0 errors, 21s  
12,371 scanned, 0 matched, 0 errors, 26s  
15,330 scanned, 0 matched, 0 errors, 31s  
17,501 scanned, 0 matched, 0 errors, 36s
```

```
== Maximum Values ==
```

Size	Depth	Namelen	Dirsize
535KiB	16	33	45

```
== Average Values ==
```

Size	Depth	Namelen	Dirsize
10.3KiB	7	11	6

```
== Top File SIDs ==
```

```
S-1-5-21-1896871423-3211229150-3383017265-4854184 S-1-5-32-544 S-1-5-  
21-1896871423-3211229150- 3383017265-3403389  
9318 8470 1
```

```
== Top Space SIDs ==
```

```
S-1-5-21-1896871423-3211229150-3383017265-4854184 S-1-5-32-544 S-1-5-  
21-1896871423-3211229150- 3383017265-3403389  
76.8MiB 69.8MiB 0
```

```
== Top File Extensions ==
```

.py	.rst	.html	no extension	.txt	.png
5418	3738	1974	1197	630	336
1344					

```
== Number of files ==
```

empty	<8KiB	8-64KiB	64KiB-1MiB	1-10MiB	10-100MiB	>100MiB
168	11466	2709	294			

```
== Space used ==
```

empty	<8KiB	8-64KiB	64KiB-1MiB	1-10MiB	10-100MiB	>100MiB
0	24.4MiB	55.3MiB	66.9MiB	0	0	

```

0

== Directory entries ==
  empty      1-10    10-100    100-1K    1K-10K    >10K
    42        2690     420
== Depth ==
  0-5        6-10     11-15     16-20     21-100    >100
 3832       12527    1424      6
== Modified ==
 >1 year >1 month  1-31 days  1-24 hrs  <1 hour  <15 mins
future  invalid
 11718     2961      3110
== Created ==
 >1 year >1 month  1-31 days  1-24 hrs  <1 hour  <15 mins
future  invalid
                                17789
== Accessed ==
 >1 year >1 month  1-31 days  1-24 hrs  <1 hour  <15 mins
future  invalid
                                15754    2035

Total count: 17789
Directories: 3152
Regular files: 14637 Symbolic links:
Junctions:
Special files:
Total space for regular files: 147MiB Total space for directories: 0
Total space used: 147MiB
Dedupe estimate: N/A Sparse data: N/A
xcp scan -stats -csv -preserve-ctime -ownership \\<IP address or
hostname of SMB server>\source_share
17,789 scanned, 0 matched, 0 errors Total Time : 40s
STATUS : PASSED

```

## scan -l

Use the `-l` parameter with the `scan` command to list files in the long listing output format.

### Syntax

```
xcp scan -l \\<IP address or hostname of SMB server>\source_share
```

## Show example

```
c:\netapp\xcp>xcp scan -l \\<IP address or hostname of SMB
server>\source_share xcp scan -l \\<IP address or hostname of SMB
server>\source_share

f    195KiB    7y0d source_share\ASUP.pm
f    34.7KiB    7y0d source_share\ASUP_REST.pm
f    4.11KiB    7y0d source_share\Allflavors_v2.pm
f    38.1KiB    7y0d source_share\Armadillo.pm
f    3.83KiB    7y0d source_share\AsupExtractor.pm
f    70.1KiB    7y0d source_share\BTS_Config.pm
f    2.65KiB    7y0d source_share\Backup.pm
f    60.3KiB    7y0d source_share\Aggregate.pm
f    36.9KiB    7y0d source_share\Burt.pm
f    8.98KiB    7y0d source_share\CConfig.pm
f    19.3KiB    7y0d source_share\CIFS.pm
f    20.7KiB    7y0d source_share\CR.pm
f    2.28KiB    7y0d source_share\CRC.pm
f    18.7KiB    7y0d source_share\CSHM.pm
f    43.0KiB    7y0d source_share\CSM.pm
f    19.7KiB    7y0d source_share\ChangeModel.pm
f    33.3KiB    7y0d source_share\Checker.pm
f    3.47KiB    7y0d source_share\Class.pm
f    37.8KiB    7y0d source_share\Client.pm
f    188KiB    7y0d source_share\agnostic\Flexclone.pm
f    15.9KiB    7y0d source_share\agnostic\HyA_Clone_Utils.pm
f    13.4KiB    7y0d source_share\agnostic\Fileclone.pm
f    41.8KiB    7y0d source_share\agnostic\Jobs.pm
f    24.0KiB    7y0d source_share\agnostic\License.pm
f    34.8KiB    7y0d source_share\agnostic\Panamax_Clone_Utils.pm
f    30.2KiB    7y0d source_share\agnostic\LunCmds.pm
f    40.9KiB    7y0d source_share\agnostic\ProtocolAccess.pm
f    15.7KiB    7y0d source_share\agnostic\Qtree.pm
f    29.3KiB    7y0d source_share\agnostic\Quota.pm
f    13.7KiB    7y0d source_share\agnostic\RbacCmdFetcher.pm
f    5.55KiB    7y0d source_share\agnostic\RbacCmdFetcher_ReadMe
f    3.92KiB    7y0d source_share\agnostic\SFXOD.pm
f    35.8KiB    7y0d source_share\agnostic\Snapmirror.pm
f    40.4KiB    7y0d source_share\agnostic\VolEfficiency.pm
f    6.22KiB    7y0d source_share\agnostic\flatfile.txt
d         0    7y0d source_share\agnostic
d         0 19h17m source_share

xcp scan -l \\<IP address or hostname of SMB server>\source_share
317 scanned, 0 matched, 0 errors
```

```
Total Time : 0s  
STATUS : PASSED
```

## scan -ownership

Use the `-ownership` parameter with the `scan` command to retrieve ownership information for files.



You can only use `-ownership` with the `-l`, `-match`, `-fmt`, or `-stats` parameters.

### Syntax

```
xcp scan -l -ownership \\<IP address or hostname of SMB  
server>\source_share
```

## Show example

```
c:\netapp\xcp>xcp scan -l -ownership \\<IP address or hostname of SMB
server>\source_share xcp scan -l -ownership \\<IP address or hostname
of SMB server>\source_share

f   BUILTIN\Administrators  195KiB  7y0d   source_share\ASUP.pm
f   BUILTIN\Administrators  34.7KiB 7y0d   source_share\ASUP_REST.pm
f   BUILTIN\Administrators  4.11KiB 7y0d   source_share\Allflavors_v2.pm
f   BUILTIN\Administrators  38.1KiB 7y0d   source_share\Armadillo.pm
f   BUILTIN\Administrators  3.83KiB 7y0d   source_share\AsupExtractor.pm
f   BUILTIN\Administrators  70.1KiB 7y0d   source_share\BTS_Config.pm
f   BUILTIN\Administrators  2.65KiB 7y0d   source_share\Backup.pm
f   BUILTIN\Administrators  60.3KiB 7y0d   source_share\Aggregate.pm
f   BUILTIN\Administrators  36.9KiB 7y0d   source_share\Burt.pm
f   BUILTIN\Administrators  8.98KiB 7y0d   source_share\CConfig.pm
f   BUILTIN\Administrators  19.3KiB 7y0d   source_share\CIFS.pm
f   BUILTIN\Administrators  20.7KiB 7y0d   source_share\CR.pm
f   BUILTIN\Administrators  2.28KiB 7y0d   source_share\CRC.pm
f   BUILTIN\Administrators  18.7KiB 7y0d   source_share\CSHM.pm
f   BUILTIN\Administrators  43.0KiB 7y0d   source_share\CSM.pm
f   BUILTIN\Administrators  19.7KiB 7y0d   source_share\ChangeModel.pm
f   BUILTIN\Administrators  33.3KiB 7y0d   source_share\Checker.pm
f   BUILTIN\Administrators  3.47KiB 7y0d   source_share\Class.pm
f   BUILTIN\Administrators  37.8KiB 7y0d   source_share\Client.pm
f   BUILTIN\Administrators  2.44KiB 7y0d   source_share\ClientInfo.pm
f   BUILTIN\Administrators  37.2KiB 7y0d   source_share\ClientMgr.pm
f   BUILTIN\Administrators  17.1KiB 7y0d   source_share\ClientRPC.pm
f   BUILTIN\Administrators  9.21KiB 7y0d   source_share\ClusterAgent.pm
f   BUILTIN\Administrators  15.7KiB 7y0d   source_share\agnostic\Qtree.pm
f   BUILTIN\Administrators  29.3KiB 7y0d   source_share\agnostic\Quota.pm
f   BUILTIN\Administrators  13.7KiB 7y0d   source_share\agnostic\RbacCmdFetcher.pm
f   BUILTIN\Administrators  5.55KiB 7y0d   source_share\agnostic\RbacCmdFetcher_ReadMe
f   BUILTIN\Administrators  3.92KiB 7y0d   source_share\agnostic\SFXOD.pm
f   BUILTIN\Administrators  35.8KiB 7y0d   source_share\agnostic\Snapmirror.pm
f   BUILTIN\Administrators  40.4KiB 7y0d   source_share\agnostic\VolEfficiency.pm
f   BUILTIN\Administrators  6.22KiB 7y0d   source_share\agnostic\flatfile.txt
d   BUILTIN\Administrators  7y0d   source_share\agnostic
```

```
d BUILTIN\Administrators

xcp scan -l -ownership \\<IP address or hostname of SMB
server>\source_share
317 scanned, 0 matched, 0 errors Total Time : 1s
STATUS : PASSED
```

## scan -du

Use the `-du` parameter with the `scan` command to summarize the space usage of each directory, including subdirectories.

### Syntax

```
xcp scan -du \\<IP address or hostname of SMB server>\source_share
```

### Show example

```
c:\netapp\xcp>xcp scan -du \\<IP address or hostname of SMB
server>\source_share xcp scan -du \\<IP address or hostname of SMB
server>\source_share

569KiB source_share\agnostic
19.8MiB source_share

xcp scan -du \\<IP address or hostname of SMB server>\source_share
317 scanned, 0 matched, 0 errors
Total Time : 0s
STATUS : PASSED
```

## scan -fmt <expression>

Use the `-fmt <expression>` parameter with the `scan` command to format a file listing according to a defined expression.

### Syntax

```
xcp scan -fmt "'", '.join(map(str, [relpath, name, size, depth]))'
\\<IPaddress or hostname of SMB server>\source_share
```

## Show example

```
c:\netapp\xcp>xcp scan -fmt "'", '.join(map(str, [relpath, name, size,
depth]))" \\<IP address or hostname of SMB server>\source_share
xcp scan -fmt "'", '.join(map(str, [relpath, name, size, depth]))"
\\<IP address or hostname of SMB server>\source_share

source_share\ASUP.pm, ASUP.pm, 199239, 1
source_share\ASUP_REST.pm, ASUP_REST.pm, 35506, 1
source_share\Allflavors_v2.pm, Allflavors_v2.pm, 4204, 1
source_share\Armadillo.pm, Armadillo.pm, 39024, 1
source_share\AsupExtractor.pm, AsupExtractor.pm, 3924, 1
source_share\BTS_Config.pm, BTS_Config.pm, 71777, 1
source_share\Backup.pm, Backup.pm, 2714, 1
source_share\Aggregate.pm, Aggregate.pm, 61699, 1
source_share\Burt.pm, Burt.pm, 37780, 1
source_share\CConfig.pm, CConfig.pm, 9195, 1
source_share\CIFS.pm, CIFS.pm, 19779, 1
source_share\CR.pm, CR.pm, 21215, 1
source_share\CRC.pm, CRC.pm, 2337, 1
source_share\agnostic\LunCmds.pm, LunCmds.pm, 30962, 2
source_share\agnostic\ProtocolAccess.pm, ProtocolAccess.pm, 41868, 2
source_share\agnostic\Qtree.pm, Qtree.pm, 16057,2
source_share\agnostic\Quota.pm, Quota.pm, 30018,2
source_share\agnostic\RbacCmdFetcher.pm, RbacCmdFetcher.pm, 14067, 2
source_share\agnostic\RbacCmdFetcher_ReadMe, RbacCmdFetcher_ReadMe,
5685, 2
source_share\agnostic\SFXOD.pm, SFXOD.pm, 4019, 2
source_share\agnostic\Snapmirror.pm, Snapmirror.pm, 36624, 2
source_share\agnostic\VolEfficiency.pm, VolEfficiency.pm, 41344, 2
source_share\agnostic\flatfile.txt, flatfile.txt, 6366, 2
source_share\agnostic, agnostic, 0, 1
source_share, , 0, 0
xcp scan -fmt "'", '.join(map(str, [relpath, name, size, depth])) \\<IP
address or hostname of SMB server>\source_share
317 scanned, 0 matched, 0 errors
Total Time : 0s
STATUS : PASSED
```

## scan -ads

Use the `-ads` flag parameter with the `scan` command with to recursively scan the entire SMB share and list all files and any associated alternate data streams.



## Syntax

```
xcp scan -ads \\<source_ip_address>\source_share\src
```

## Show example

```
C:\netapp\xcp>xcp scan -ads \\<source_ip_address>\source_share\src

src\file1.txt:ads1
src\file1.txt:ads_file1.txt_1697037934.4154522.txt
src\file1.txt
src\file2.txt:ads1
src\file2.txt:ads_file2.txt_1697037934.5873265.txt
src\file2.txt
src\test1.txt:ads_test1.txt_1697037934.7435765.txt
src\test1.txt
src\dir1\dfile1.txt:ads1
src\dir1\dfile1.txt:ads_dfile1.txt_1697037934.1185782.txt
src\dir1\dfile1.txt:ads_xcp.exe
src\dir1\dfile1.txt:ads_tar
src\dir1\dfile1.txt:java_exe
src\dir1\dfile1.txt:cmdzip
src\dir1\dfile1.txt:ads1_2GB
src\dir1\dfile1.txt
src\dir1:ads1
src\dir1:ads_dir1_1697038504.087317.txt
src\dir1
src:ads_src_1697038504.7123322.txt
src

xcp scan -ads \\<source_ip_address>\source_share\src
6 scanned, 0 matched, 0 errors, 15 ads scanned
Total Time : 2s
STATUS : PASSED
```

## copy

The `copy` command scans and copies the entire source directory structure to a destination SMB share. The `copy` command requires source and destination paths as variables. The scanned and copied files, throughput/speed, and elapsed time details are printed to the console once every five seconds.



- The run-time log file is stored under "C:\NetApp\XCP".
- This `copy` command copies data without an access control list (ACL).

## Syntax

```
xcp copy \\<IP address or hostname of SMB server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp copy \\<IP address or hostname of SMB server>\source_share \\<IP address of SMB destination server>\dest_share

xcp copy \\<IP address or hostname of SMB server>\source_share \\<IP address of SMB destination server>\dest_share
317 scanned, 0 matched, 316 copied, 0 errors
Total Time : 2s
STATUS : PASSED
```

The following table lists the `copy` parameters and their description.

Parameter	Description
<code>copy -h, --help</code>	Displays detailed information about the <code>copy</code> command.
<code>copy -v</code>	Increase debug verbosity.
<code>copy -parallel &lt;n&gt;</code>	Specifies the number of concurrent processes (default: <code>&lt;cpu-count&gt;</code> ).
<code>copy -match &lt;filter&gt;</code>	Only processes files and directories that match the filter (see <code>xcp help - match</code> for details).
<code>copy -exclude &lt;filter&gt;</code>	Only excludes files and directories in the filter
<code>copy -preserve-atime</code>	Restores last accessed date on source.
<code>copy -acl</code>	Copies security information.
<code>copy -fallback-user &lt;fallback_user&gt;</code>	Specifies the Active Directory user or local (non-domain) user on the target machine that receives the permissions of local (non-domain) source machine users. For example, <code>domain\administrator</code> .
<code>copy -fallback-group &lt;fallback_group&gt;</code>	Specifies the Active Directory group or local (non-domain) group on the target machine that receives the permissions of local (non-domain) source machine groups. For example, <code>domain\administrators</code> .

Parameter	Description
<code>copy -root</code>	Copies the ACLs for a root directory.
<code>copy -aclverify {yes,no}</code>	Provides an option to skip or include ACL verification during the <code>copy -acl</code> operation.
<code>copy -noownership</code>	Does not copy ownership.
<code>copy -bs &lt;n&gt;</code>	Read/Write blocksize (default:1M)
<code>copy -ads</code>	Copies NTFS alternate data streams from the source SMB share to the destination SMB share.

## copy -h, --help

Use the `-h` and `--help` parameters with the `copy` command to display detailed information about the `copy` command

### Syntax

```
xcp copy -help
```

## Show example

```
C:\netapp\xcp>xcp copy -help
```

```
usage: xcp copy [-h] [-v] [-parallel <n>] [-match <filter>] [-exclude  
<filter>] [-preserve- atime] [-acl] [-fallback-user FALLBACK_USER]  
[-fallback-group FALLBACK_GROUP] [-loglevel <name>] [-root] [-  
noownership] [- aclverify {yes,no}] [-bs <n>] [-ads]  
        source target
```

positional arguments:

```
    source  
    target
```

optional arguments:

```
-h, --help            show this help message and exit  
-v                    increase debug verbosity  
-parallel <n>        number of concurrent processes (default: <cpu-  
count>)  
-match <filter>      only process files and directories that match the  
filter (see `xcp help -match` for details)  
-exclude <filter>    Exclude files and directories that match the  
filter (see `xcp help - exclude` for details)  
-preserve-atime      restore last accessed date on source  
-acl                 copy security information  
-fallback-user FALLBACK_USER  
                    the name of the user on the target machine to  
receive the permissions of local (non-domain) source machine users (eg.  
domain\administrator)  
-fallback-group FALLBACK_GROUP  
                    the name of the group on the target machine to  
receive the permissions of local (non-domain) source machine groups  
(eg. domain\administrators)  
-loglevel <name>    option to set log level filter (default:INFO)  
-root               copy acl for root directory  
-noownership        do not copy ownership  
-aclverify {yes,no} choose whether you need to skip acl verification  
-bs <n>             read/write block size for copy (default: 1M)  
-ads                copy NTFS alternate data streams.
```

## copy -v

Use the `-v` parameter with the `copy` command to provide detailed debug information.

## Syntax

```
xcp copy -v \\<IP address or hostname of SMB server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp copy -v \\<IP address of SMB destination server>\src
\\<IP address of SMB destination server>\dest\d1

failed to set attributes for "d1": (5, 'CreateDirectory', 'Access is
denied.')
failed to copy "f1.txt": (5, 'CreateFile', 'Access is denied.')
failed to set attributes for "": (5, 'SetFileAttributesW', 'Access is
denied.') error setting timestamps on "": errno (code: 5) Access is
denied.
H:\p 4\xcp_latest\xcp_cifs\xcp\ main .py copy -v \\<IP address of SMB
destination server>\src \\<IP address of SMB destination
server>\dest\d1
3 scanned, 0 matched, 0 skipped, 1 copied, 0 (0/s), 3 errors
Total Time : 3s
STATUS : FAILED
```

## copy -parallel <n>

Use the `-parallel <n>` parameter with the `copy` command to set a higher or lower number of XCP concurrent processes. The default value for `-parallel` is equal to the CPU count.



The maximum value for `n` is 61.

## Syntax

```
xcp copy -parallel <n> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp copy -parallel 7 \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp copy -parallel 7 \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
317 scanned, 0 matched, 316 copied, 0 errors
Total Time : 2s
STATUS : PASSED
```

## copy -match <filter>

Use the `-match <filter>` parameter with the `copy` command to copy only the data that matches the argument passed.

### Syntax

```
xcp copy -match <filter> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp copy -match "'gx' in name" \\<IP address or hostname
of SMB server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp copy -match 'gx' in name \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
317 scanned, 5 matched, 4 copied, 0 errors
Total Time : 1s
STATUS : PASSED
```

## copy -exclude <filter>

Use the `-exclude <filter>` parameter with the `copy` command to only copy excluded data.

## Syntax

```
xcp copy -exclude <filter> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

In the following example, the files and directories that have the string "resync" in their name have been excluded for copy.

## Show example

```
c:\netapp\xcp>xcp copy -exclude "'resync' in name" \\<IP address or
hostname of SMB server>\source_share \\<IP address or hostname of SMB
server>\dest_share

xcp copy -exclude 'resync' in name \\<IP address or hostname of SMB
server>\source_share \\<IP address or hostname of SMB
server>\dest_share
18 scanned, 2 excluded, 0 skipped, 15 copied, 122KiB (50.5KiB/s), 0
errors
Total Time : 2s
STATUS : PASSED
```

## copy -preserve-atime

Use the `-preserve-atime` parameter with the `copy` command to reset the "atime" to the original value before XCP read the file.

## Syntax

```
xcp copy -preserve-atime \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp copy -preserve-atime \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp copy -preserve-atime \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
317 scanned, 0 matched, 316 copied, 0 errors
Total Time : 2s
STATUS : PASSED
```

## copy -acl -fallback-user <fallback\_user> -fallback-group <fallback\_group>

Use the `-acl` parameter with the `copy` command to activate the transfer of the security descriptors (ACLs).

Use the `-acl` parameter with the `-fallback-user` and `-fallback-group` options to specify a user and a group on the target machine or from Active Directory to receive the permissions of local (non-domain) source machine users or groups. This does not refer to unmatched users from an Active Directory.

### Syntax

```
xcp copy -acl -fallback-user <fallback_user> -fallback-group
<fallback_group> \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
```

## copy -aclverify {yes,no}

Use the `-aclverify {yes,no}` parameter with the `copy` command to provide an option to skip or include ACL verification during an ACL copy operation.

You must use the `-aclverify {yes,no}` parameter with the `copy -acl` command. By default, the ACL copy operation verifies the ACLs. If you set the `-aclverify` option to `no`, you can skip ACL verification and the `fallback-user` and `fallback-group` options are not required. If you set `-aclverify` to `yes`, it requires the `fallback-user` and `fallback-group` options, as shown in the following example.

### Syntax

```
xcp copy -acl -aclverify yes -fallback-user <fallback_user> -fallback
-group <fallback_group> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```



## Show example

```
C:\NetApp\xcp>xcp copy -acl -aclverify yes -fallback-user "DOMAIN\User"
-fallback-group "DOMAIN\Group"
\\<source_IP_address>\source_share
\\<destination_IP_address>\dest_share

12 scanned, 0 matched, 0 skipped, 0 copied, 0 (0/s), 0 errors, 5s, 0
acls copied
12 scanned, 0 matched, 0 skipped, 0 copied, 0 (0/s), 0 errors, 10s, 0
acls copied
12 scanned, 0 matched, 0 skipped, 0 copied, 0 (0/s), 0 errors, 15s, 0
acls copied xcp copy -acl -aclverify yes -fallback-user "DOMAIN\User"
-fallback-group "DOMAIN\Group" \\<source_IP_address>\source_share
\\<destination_IP_address>\dest_share
12 scanned, 0 matched, 0 skipped, 11 copied, 10KiB (634/s), 0 errors,
11 acls copied
Total Time : 16s
STATUS : PASSED

C:\NetApp\xcp>xcp copy -acl -aclverify no
\\<source_IP_address>\source_share
\\<destination_IP_address>\dest_share

xcp copy -acl -aclverify no \\<source_IP_address>\source_share
\\<destination_IP_address>\dest_share
12 scanned, 0 matched, 0 skipped, 11 copied, 10KiB (5.61KiB/s), 0
errors, 11 acls copied
Total Time : 1s
STATUS : PASSED
```

## copy -root

Use the `-root` parameter with the `copy` command to copy the ACLs for the root directory.

### Syntax

```
xcp copy -acl -root -fallback-user "DOMAIN\User" -fallback-group
"DOMAIN\Group" \\<IP address or hostname of SMB server>\source_share \\<IP
address of SMB destination server>\dest_share
```

## Show example

```
C:\NetApp\XCP>xcp copy -acl -root -fallback-user "DOMAIN\User"
-fallback-group "DOMAIN\Group" \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp copy -acl -root -fallback-user "DOMAIN\User" -fallback-group
"DOMAIN\Group" \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
6 scanned, 0 matched, 0 skipped, 5 copied, 200 (108/s), 0 errors, 6
acls copied
Total Time : 1s
STATUS : PASSED
```

## copy -noownership

Use the `-noownership` parameter with the `copy` command to specify not to copy the ownership from the source to the destination. You must use `-noownership` with the `-acl` option and it requires `fallback-user` and `fallback-group` as mandatory parameters.

### Syntax

```
xcp.exe copy -acl -noownership -fallback-user <fallback_user> -fallback
-group <fallback_group> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
C:\Netapp\xcp>xcp.exe copy -acl -noownership -fallback-user
"DOMAIN\User" -fallback-group "DOMAIN\Group"
\\<source_IP_address>\source_share
\\<destination_IP_address>\dest_share

568 scanned, 0 matched, 0 skipped, 0 copied, 0 (0/s), 0 errors, 5s, 0
acls copied
568 scanned, 0 matched, 0 skipped, 0 copied, 0 (0/s), 0 errors, 10s, 0
acls copied
568 scanned, 0 matched, 0 skipped, 135 copied, 4.26MiB (872KiB/s), 0
errors, 15s, 137 acls copied xcp.exe copy -acl -noownership -fallback
-user "DOMAIN\User" -fallback-group "DOMAIN\Group"
\\<source_IP_address>\source_share
\\<destination_IP_address>\dest_share
568 scanned, 0 matched, 0 skipped, 567 copied, 17.7MiB (1.01MiB/s), 0
errors, 567 acls copied
Total Time : 17s
STATUS : PASSED
```

## copy -bs <n>

Use the `-bs <n>` parameter with the `copy` command to provide a read/write block size. The default value is 1M.

### Syntax

```
xcp.exe copy -bs <n> \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\Netapp\xcp>xcp.exe copy -bs 32k \\<source_IP_address>\source_share
\\<destination_IP_address>\dest_share

xcp.exe copy -bs 32k \\<source_IP_address>\source_share
\\<destination_IP_address>\dest_share
568 scanned, 0 matched, 0 skipped, 567 copied, 17.7MiB (6.75MiB/s), 0
errors
Total Time : 2s
STATUS : PASSED
```

## copy -ads

Use the `-ads` parameter with the `copy` command to copy NTFS alternate data streams from the source SMB share to destination SMB share.

### Syntax

```
xcp copy -ads \\<IP address or hostname of SMB server>\source_share \\<IP address of SMB destination server>\dest_share
```

### Show example

```
c:\netapp\xcp>xcp copy -ads \\<source_IP_address>\source_share\src
\\<dest_IP_address>\dest_share

6 scanned, 0 matched, 0 skipped, 3 copied, 13 (2.41/s), 0 errors, 5s,
10 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 10s, 11 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 15s, 12 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 20s, 13 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 25s, 13 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 30s, 13 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 35s, 13 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 40s, 13 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 45s, 13 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 2m15s, 13 ads copied
6 scanned, 0 matched, 0 skipped, 3 copied, 13 (0/s),
0 errors, 3m5s, 13 ads copied
xcp copy -ads \\<source_IP_address>\source_share\src
\\<desination_IP_address>\dest_share
6 scanned, 0 matched, 0 skipped, 5 copied, 26 (0.137/s), 0 errors, 14
ads copied
Total Time : 3m9s
STATUS : PASSED
```

# sync

The `sync` command scans for changes and modifications in the source and target shares in parallel and applies the appropriate actions to the target to make sure that the target is identical to the source. The `sync` command compares data content, time stamps, file attributes, ownership, and security information.

## Syntax

```
xcp sync \\<source SMB share> \\<IP address of SMB destination server>
```

## Show example

```
c:\netapp\xcp>xcp sync \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync \\<IP address or hostname of SMB server>\source_share \\<IP
address of SMB destination server>\dest_share
xcp sync \\<IP address or hostname of SMB server>\source_share \\<IP
address of SMB destination server>\dest_share
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors
Total Time : 3s
STATUS : PASSED
```

The following table lists the `sync` parameters and their description.

Parameter	Description
<code>sync -h, --help</code>	Show this help message and exit.
<code>sync -v</code>	Increase debug verbosity.
<code>sync -parallel &lt;n&gt;</code>	Number of concurrent processes (default: <cpu-count>).
<code>sync -match &lt;filter&gt;</code>	Only process files and directories that match the filter (see <code>xcp help - match</code> for details).
<code>sync -exclude &lt;filter&gt;</code>	Only exclude files and directories in the filter.
<code>sync -preserve-atime</code>	Restore last accessed date on source.
<code>sync -noatime</code>	Do not check file access time.
<code>sync -noctime</code>	Do not check file creation time.
<code>sync -nomtime</code>	Do not check file modification time. (This option is deprecated. Sync will continue to run without this option.)
<code>sync -noattrs</code>	Do not check attributes.

Parameter	Description
<code>sync -noownership</code>	Do not check ownership.
<code>sync -atimewindow &lt;float&gt;</code>	Acceptable access time difference, in seconds.
<code>sync -ctimewindow &lt;float&gt;</code>	Acceptable creation time difference, in seconds.
<code>sync -mtimewindow &lt;float&gt;</code>	Acceptable modification time difference, in seconds.
<code>sync -acl</code>	Copy security information.
<code>sync -fallback-user &lt;fallback_user&gt;</code>	Active Directory user or local(non-domain) user on the target machine to receive the permissions of local (non-domain) source machine users (example: domain\administrator).
<code>sync -fallback-group &lt;fallback_group&gt;</code>	Active Directory group or local(non-domain) group on the target machine to receive the permissions of local(non-domain) source machine groups (example: domain\administrators).
<code>sync -l</code>	Increases output detail.
<code>sync -root</code>	Sync ACLs for the root directory.
<code>sync -onlyacl</code>	Copy only the security information.
<code>sync -aclverify{yes,no}</code>	Provide an option to include or skip ACL verification during the ACL sync operation.
<code>sync -bs &lt;n&gt;</code>	Read/Write blocksize (default:1M).
<code>sync -ads</code>	Use the <code>sync</code> command with the <code>-ads</code> flag to scan for changes and modifications of alternate data streams in the source and target SMB share. If there are changes, it applies the change to the target to make sure that the target is identical to the source.

## sync -h, --help

Use the `-h` and `--help` parameters with the `sync` command to display detailed information about the `sync` command

### Syntax

```
xcp sync --help
```

## Show example

```
C:\Netapp\xcp>xcp sync --help
usage: xcp sync [-h] [-v] [-parallel <n>] [-match <filter>] [-exclude
<filter>] [-preserve-atime] [-noatime] [-noctime] [-nomtime] [-noattrs]
[-atimewindow <float>]
[-ctimewindow <float>] [-mtimewindow <float>] [-acl] [-fallback-user
FALLBACK_USER] [-fallback-group FALLBACK_GROUP] [-loglevel <name>] [-l]
[-root]
[-noownership] [-onlyacl] [-aclverify {yes,no}] [-bs <n>] [-ads] source
target
```

Note: ONTAP does not let a SMB client modify COMPRESSED or ENCRYPTED attributes. XCP sync will ignore these file attributes.

positional arguments:

- source
- target

optional arguments:

- h, --help show this help message and exit
- v increase debug verbosity
- parallel <n> number of concurrent processes (default: <cpu-count>)
- match <filter> only process files and directories that match the filter (see `xcp help -match` for details)
- exclude <filter> Exclude files and directories that match the filter (see `xcp help -exclude` for details)
- preserve-atime restore last accessed date on source
- noatime do not check file access time
- noctime do not check file creation time
- nomtime do not check file modification time
- noattrs do not check attributes
- atimewindow <float> acceptable access time difference in seconds
- ctimewindow <float> acceptable creation time difference in seconds
- mtimewindow <float> acceptable modification time difference in seconds
- acl copy security information
- fallback-user FALLBACK\_USER the name of the user on the target machine to receive the permissions of local (non-domain) source machine users (eg. domain\administrator)
- fallback-group FALLBACK\_GROUP the name of the group on the target machine to receive the permissions of local (non-domain) source machine groups

(eg. domain\administrators)

-loglevel <name>	option to set log levelfilter
-l	increase output detail
-root	sync acl for root directory
-noownership	do not sync ownership
-onlyacl	sync only acls
-aclverify {yes,no}	choose whether you need to skip acl
verification	
-bs <n>	read/write block size for sync (default: 1M)
-ads	sync ntfs alternate data stream

## sync -v

Use the `-v` parameter with the `sync` command to provide detailed debug information.

### Syntax

```
xcp sync -v \\<IP address or hostname of SMB
server>\vol_SMB_source_XXXXXX\warning \\<IP address of SMB destination
server>\vol_SMB_target_XXXXXX
```



## Show example

```
C:\XCP>xcp sync -v \\<IP address or hostname of SMB
server>\vol_SMB_source_XXXXXX\warning \\<IP address of SMB destination
server>\vol_SMB_target_XXXXXX
ERROR failed to remove from target
"assembly\GAC_32\Microsoft.CertificateServices.PKIClient.Cmdlets\v4.0_6
.3.0.0 31bf3856ad364e35\pki.psd1": [Errno 13] Access is denied:
'\\?\UNC\\<IP address of SMB destination server>\vol_SMB_tar
shil\assembly\GAC_32\Microsoft.CertificateServices.PKIClient.Cmdlets
\v4.0_6.3.0.0 31bf3856ad364e35\pki.psd1'
ERROR failed to remove from target
"assembly\GAC_64\Microsoft.GroupPolicy.AdmTmplEditor\v4.0_6.3.0.0
31bf3856ad364e35\Microsoft.GroupPolicy.AdmTmplEditor.dll": [Errno 13]
Access is denied: '\\?\UNC\10.61.
\vol_SMB_target_XXXXXX\assembly\GAC_64\Microsoft.GroupPolicy.AdmTmpl
Editor\v4.0_6.3.0.0 31bf
3856ad364e35\Microsoft.GroupPolicy.AdmTmplEditor.dll'
1,933 scanned, 1,361 compared, 2 errors, 0 skipped, 0 copied, 1,120
removed, 5s ERROR failed to remove from target
"assembly\GAC_64\System.Printing\v4.0_4.0.0.0
31bf3856ad364e35\System.Printing.dll": [Errno 13] Access is denied:
'\\?\UNC\\<IP address of SMB destination
server>\vol_SMB_target_XXXXXX\assembly\
4\System.Printing\v4.0_4.0.0.0 31bf3856ad364e35\System.Printing.dll'
ERROR failed to remove from target
"assembly\GAC_MSIL\Microsoft.PowerShell.Workflow.ServiceCore\v4.0_3.0.0
.0 31bf3856ad364e35\Microsoft.PowerShell.Workflow.ServiceCore.dll":
[Errno 13] Access is denied: '\\\
\\<IP address of SMB destination
server>\vol_SMB_target_XXXXXX\assembly\GAC_MSIL\Microsoft.PowerShel
l.Workflow.ServiceCore\v4
.0_3.0.0.0
31bf3856ad364e35\Microsoft.PowerShell.Workflow.ServiceCore.dll' ERROR
failed to remove from target
"assembly\GAC_MSIL\Microsoft.RightsManagementServices.ServerManager.Dep
loymentPlugin\v4.0_6.3.0.0
31bf3856ad364e35\Microsoft.RightsManagementServices.ServerManager.Deplo
ymen n.dll": [Errno 13] Access is denied: '\\?\UNC\\<IP address of
SMB destination
server>\vol_SMB_target_XXXXXX\assembly\GAC_MSIL\Microsoft.RightsMan
agementServices.ServerMana ger.DeploymentPlugin\v4.0_6.3.0.0
31bf3856ad364e35\Mic
.RightsManagementServices.ServerManager.DeploymentPlugin.dll'
ERROR failed to remove from target
"assembly\GAC_MSIL\Microsoft.WSMan.Management\v4.0_3.0.0.0
```

```

31bf3856ad364e35\Microsoft.WSMan.Management.dll": [Errno 13] Access is
denied: '\\\?\\UNC\\<IP address of SMB destination server>\\vol_SMB_
_target_XXXXXX\assembly\GAC_MSIL\Microsoft.WSMan.Management\4.0.3.0.0
31bf3856ad364e35\Microsoft.WSMan.Management.dll'
ERROR failed to remove from target
"assembly\GAC_MSIL\PresentationUI\4.0.4.0.0
31bf3856ad364e35\PresentationUI.dll": [Errno 13] Access is denied:
 '\\\?\\UNC\\<IP address of SMB destination
server>\\vol_SMB_target_XXXXXX\assembly\
GAC_MSIL\PresentationUI\4.0.4.0.0 31bf3856ad364e35\PresentationUI.dll'
ERROR failed to remove from target
"assembly\GAC_MSIL\System.IO.Compression.FileSystem\4.0.4.0.0
b77a5c561934e089\System.IO.Compression.FileSystem.dll": [Errno 13]
Access is denied: '\\\?\\UNC\\10.61.71.5
_target_XXXXXX\assembly\GAC_MSIL\System.IO.Compression.FileSyste
m\4.0.4.0.0 b77a5c561
934e089\System.IO.Compression.FileSystem.dll'
ERROR failed to remove from target
"assembly\GAC_MSIL\System.IdentityModel.Selectors\4.0.4.0.0
b77a5c561934e089\System.IdentityModel.Selectors.dll": [Errno 13]
Access is denied: '\\\?\\UNC\\<IP address of SMB destination
server>\\v
s_target_XXXXXX\assembly\GAC_MSIL\System.IdentityModel.Selectors\4
.0.4.0.0 b77a5c561934e089\System.IdentityModel.Selectors.dll'
2,747 scanned, 2,675 compared, 9 errors, 0 skipped, 0 copied, 2,624
removed, 10s ERROR failed to remove from target
"assembly\GAC_MSIL\System.Web.DataVisualization\4.0.4.0.0
31bf3856ad364e35\System.Web.DataVisualization.dll": [Errno 13] Access
is denied: '\\\?\\UNC\\<IP address of SMB destination server>\\vol_c
rget_XXXXXX\assembly\GAC_MSIL\System.Web.DataVisualization\4.0.4.0
.0 31bf3856ad364e35\System.Web.DataVisualization.dll'
cp sync -v \\<IP address or hostname of SMB
server>\vol_SMB_source_XXXXXX\warning \\<IP address of SMB destination
server>\vol_SMB_target_XXXXXX
2,831 scanned, 0 copied, 2,831 compared, 0 removed, 10 errors Total
Time : 10s
STATUS : PASSED

```

## sync -parallel <n>

Use the `-parallel <n>` parameter with the `sync` command to set a higher or lower number of XCP concurrent processes. The `sync -parallel <n>` command syncs with the number of concurrent processes (default: `<cpu-count>`).



The maximum value for n is 61.

## Syntax

```
xcp sync -parallel <n>> \\<IP address or hostname of SMB
server>\volxcp\\<IP address of SMB destination server>\xcp1_test1
```

## Show example

```
C:\xcp>xcp sync -parallel 5 \\<IP address or hostname of SMB
server>\volxcp\\<IP address of SMB destination server>\xcp1_test1
658 scanned, 244 compared, 0 errors, 0 skipped, 0 copied, 0 removed, 5s
658 scanned, 606 compared, 0 errors, 0 skipped, 0 copied, 0 removed,
10s
658 scanned, 658 compared, 0 errors, 0 skipped, 0 copied, 0 removed,
10s
Sending statistics...
```

## sync -match <filter>

Use the `-match <filter>` parameter with the `sync` command to scan the source and target tree and compare only the files or directories that match the filter argument. If there are any differences, the command applies the required actions on the target to keep them in sync.

## Syntax

```
xcp sync -match <filter> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp sync -match "'gx' in name" \\<IP address or hostname
of SMB server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync -match "'gx' in name" \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp sync -match 'gx' in name \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
634 scanned, 0 copied, 10 compared, 0 removed, 0 errors
Total Time : 2s
STATUS : PASSED
```

## sync -exclude <filter>

Use the `-exclude <filter>` parameter with the `sync` command to only exclude files and directories in the filter.

### Syntax

```
xcp sync -exclude <filter> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

### Show example

```
C:\netapp\xcp>xcp sync -exclude "path('*Exceptions*')" \\<IP address or
hostname of SMB server>\source_share \\<IP address of SMB destination
server>\dest_share
```

```
xcp sync -exclude path('*Exceptions*') \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
451 scanned, 427 excluded, 0 copied, 24 compared, 0 skipped, 0 removed,
0 errors
Total Time : 2s
STATUS : PASSED
```

## sync -preserve-atime

Use the `-preserve-atime` parameter with the `sync` command to reset "atime" to the original value before XCP read the file.

### Syntax

```
xcp sync -preserve-atime \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp sync -preserve-atime \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync -preserve-atime \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp sync -preserve-atime \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors
Total Time : 4s
STATUS : PASSED
```

## sync -noatime

Use the `-noatime` parameter with the `sync` command to sync all the differences in the source to the target, excluding files that only have differences in access time.

### Syntax

```
xcp sync -noatime \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp sync -noatime \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync -noatime \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share

xcp sync -noatime \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors
Total Time : 3s
STATUS : PASSED
```

## sync -noctime

Use the `-noctime` parameter with the `sync` command to sync all the differences in the source to the target, excluding files that only have differences in creation time.

### Syntax

```
xcp sync -noctime \\<IP address or hostname of SMB server>\source_share  
\\<IP address of SMB destination server>\dest_share
```

### Show example

```
c:\netapp\xcp>xcp sync -noctime \\<IP address or hostname of SMB  
server>\source_share \\<IP address of SMB destination  
server>\dest_share  
xcp sync -noctime \\<IP address or hostname of SMB server>\source_share  
\\<IP address of SMB destination server>\dest_share  
  
xcp sync -noctime \\<IP address or hostname of SMB server>\source_share  
\\<IP address of SMB destination server>\dest_share  
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors  
Total Time : 3s  
STATUS : PASSED
```

## sync -nomtime

Use the `-nomtime` parameter with the `sync` command to sync all the differences in the source to the target, excluding files that only have differences in modification time. (This option is deprecated. The `sync` command will continue to run without this option.)

### Syntax

```
xcp sync -nomtime \\<IP address or hostname of SMB server>\source_share  
\\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp sync -nomtime \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync -nomtime \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share

xcp sync -nomtime \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors
Total Time : 3s
STATUS : PASSED
```

## sync -noattrs

Use the `-noattrs` parameter with the `sync` command to sync all the differences in the source to the target, excluding files that only have differences in file attributes. XCP copies a file only when it has different content (the ACLs are transferred).

### Syntax

```
xcp sync -noattrs \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp sync -noattrs \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync -noattrs \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp sync -noattrs \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors
Total Time : 3s
STATUS : PASSED
```

## sync -noownership

Use the `-noownership` parameter with the `sync` command to sync all the differences of the source to the

target, excluding files that only have differences in ownership.

## Syntax

```
xcp sync -noownership \\<IP address or hostname of SMB
server>\vol_SMB_source_XXXXXX \\<IP address of SMB destination
server>\vol_SMB_target_XXXXXX
```

## Show example

```
>xcp sync -acl -noownership -fallback-user "DOMAIN\User" -fallback
-group "DOMAIN\Group" \\<source_IP_address>\source_share \\<IP address
of SMB destination server>\dest_share
```

### Truncated Output

```
302,909 scanned,    301,365 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 9m46s
307,632 scanned,    303,530 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 9m51s
308,434 scanned,    305,462 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 9m56s
310,824 scanned,    307,328 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 10m1s
313,238 scanned,    310,083 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 10m6s
314,867 scanned,    313,407 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 10m11s
318,277 scanned,    315,856 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 10m17s
321,005 scanned,    318,384 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 10m22s
322,189 scanned,    321,863 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 10m27s
323,906 scanned,    323,906 compared,    0 errors, 0 skipped,    0
copied, 0 removed, 10m29s
```

```
xcp sync -acl -noownership -fallback-user "DOMAIN\User" -fallback-group
"DOMAIN\Group" \\<source_IP_address>\source_share \\<IP address of SMB
destination server>\dest_share
323,906 scanned, 0 copied, 323,906 compared, 0 removed, 0 errors
Total Time : 10m29s
STATUS : PASSED
```



## sync -atimewindow <float>

Use the `-atimewindow <float>` parameter with the `sync` command to specify the acceptable difference, in seconds, for the atime of a file from the source to the destination. XCP does not report files as being different if the difference in atime is less than <value>.

### Syntax

```
xcp sync -atimewindow <float> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

In the following example, XCP accepts a difference in atime of up to 10 minutes between the source and the destination files, and it does not update the atime on the target.

### Show example

```
c:\netapp\xcp>xcp sync -atimewindow 600 \\<IP address or hostname of
SMB server>\source_share \\<IP address of SMB destination
server>\source_share
xcp sync -atimewindow 600 \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\source_share

xcp sync -atimewindow 600 \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\source_share
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors
Total Time : 3s
STATUS : PASSED
```

## sync -ctimewindow <float>

Use the `-ctimewindow <float>` parameter with the `sync` command to specify the acceptable difference, in seconds, for the ctime of a file from the source to the destination. XCP does not report files as being different when the difference in ctime is less than <value>.

### Syntax

```
xcp sync -ctimewindow <float> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

In the following example, XCP accepts a difference in atime for up to 10 minutes between the source and the destination files, and it does not update the ctime on the target.

## Show example

```
c:\netapp\xcp>xcp sync -ctimewindow 600 \\<IP address or hostname of
SMB server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync -ctimewindow 600 \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp sync -ctimewindow 600 \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors
Total Time : 3s
STATUS : PASSED
```

## sync -mtimewindow <float>

Use the `-mtimewindow <float>` parameter with the `sync` command to specify the acceptable difference, in seconds, for the `mtime` of a file from the source to the destination. XCP does not report files as being different when the difference in `mtime` is less than `<value>`.

## Syntax

```
xcp sync -mtimewindow <float> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp sync -mtimewindow 600 \\<IP address or hostname of
SMB server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync -mtimewindow 600 \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp sync -mtimewindow 600 \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors Total Time :
3s
STATUS : PASSED
```

## **sync -acl -fallback-user <fallback\_user> -fallback-group <fallback\_group>**

Use the `-acl`, `-fallback-user` and `-fallback-group` parameters with the `sync` command to compare the data and the security information from the source with the target and apply the required actions on the target. The `-fallback-user` and `-fallback-group` options are a user or group on the target machine or in the Active Directory that receive the permissions of the local (non-domain) source users or groups.



You cannot use the `-acl` option without the `-fallback-user` and `-fallback-group` options.

### **Syntax**

```
xcp sync -acl -fallback-user <fallback_user> -fallback-group  
<fallback_group> \\<IP address or hostname of SMB  
server>\performance_SMB_home_dirs \\<IP address of SMB destination  
server>\performance_SMB_home_dirs
```

## Show example

```
C:\xcp>xcp sync -acl -fallback-user "DOMAIN\User" -fallback-group
"DOMAIN\Group" \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
10,796 scanned, 4,002 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 0s
15,796 scanned, 8,038 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 0s
15,796 scanned, 8,505 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 5s
15,796 scanned, 8,707 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 0s
15,796 scanned, 8,730 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 5s
15,796 scanned, 8,749 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 0s
15,796 scanned, 8,765 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 5s
15,796 scanned, 8,786 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 0s
15,796 scanned, 8,956 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 5s
15,796 scanned, 9,320 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 0s
15,796 scanned, 9,339 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 5s
15,796 scanned, 9,363 compared, 0 errors, 0 skipped, 0
copied, 0 removed, 0s
15,796 scanned, 10,019 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m5s
15,796 scanned, 10,042 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m10s
15,796 scanned, 10,059 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m15s
15,796 scanned, 10,075 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m20s
15,796 scanned, 10,091 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m25s
15,796 scanned, 10,108 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m30s
15,796 scanned, 10,929 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m35s
15,796 scanned, 12,443 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m40s
15,796 scanned, 13,963 compared, 0 errors, 0 skipped, 0
```

```

copied 0 removed, 1m45s
15,796 scanned, 15,488 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m50s
15,796 scanned, 15,796 compared, 0 errors, 0 skipped, 0
copied 0 removed, 1m51s

xcp sync -acl -fallback-user "DOMAIN\User" -fallback-group
"DOMAIN\Group \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
15,796 scanned, 0 copied, 15,796 compared, 0 removed, 0 errors
Total Time : 1m51
STATUS : PASSED

```

## sync -l

Use the `-l` parameter with the `sync` command to provide detailed logging information in the standard output for all actions performed by XCP on the target.

### Syntax

```
xcp sync -l \\<IP address or hostname of SMB server>\source_share \\<IP
address of SMB destination server>\dest_share
```

### Show example

```

c:\netapp\xcp>xcp sync -l \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync -l \\<IP address or hostname of SMB server>\source_share \\<IP
address of SMB destination server>\dest_share

File "atime" changed, timestamps set for "agnostic"
File "atime" changed, timestamps set for "<root>"
xcp sync -l \\<IP address or hostname of SMB server>\source_share \\<IP
address of SMB destination server>\dest_share
634 scanned, 0 copied, 634 compared, 0 removed, 0 errors
Total Time : 3s
STATUS : PASSED

```

## sync -root

Use the `-root` parameter with the `sync` command to sync the ACLs for the root directory.

## Syntax

```
xcp sync -acl -root -fallback-user "DOMAIN\User" -fallback-group  
"DOMAIN\Group" \\<IP address or hostname of SMB server>\source_share \\<IP  
address of SMB destination server>\dest_share
```

## Show example

```
C:\NetApp\XCP>xcp sync -acl -root -fallback-user "DOMAIN\User"  
-fallback-group "DOMAIN\Group" \\<IP address or hostname of SMB  
server>\source_share \\<IP address of SMB destination  
server>\dest_share  
  
xcp sync -acl -root -fallback-user "DOMAIN\User" -fallback-group  
"DOMAIN\Group" \\<IP address or hostname of SMB server>\source_share  
\\<IP address of SMB destination server>\dest_share  
12 scanned, 0 copied, 12 compared, 0 skipped, 0 removed, 0 errors, 1  
acls copied  
Total Time : 2s  
STATUS : PASSED
```

## **sync -onlyacl -fallback-user <fallback\_user> -fallback-group <fallback\_group>**

Use the `-onlyacl`, `-fallback-user`, and `-fallback-group` parameters with the `sync` command to compare the security information between the source with the target and apply the required actions on the target. The `-fallback-user` and `-fallback-group` are a user or group on the target machine or in the Active Directory that receive the permissions of the local (non-domain) source users or groups.



You cannot use the `-onlyacl` parameter without the `-fallback-user` and `-fallback-group` options.

## Syntax

```
xcp sync -onlyacl -fallback-user <fallback_user> -fallback-group  
<fallback_group> \\<IP address or hostname of SMB server>\source_share  
\\<IP address of SMB destination server>\dest_share
```

## Show example

```
C:\Users\ctladmin\Desktop>xcp sync -onlyacl -fallback-user
"DOMAIN\User" -fallback-group "DOMAIN\Group"
\\<source_IP_address>\source_share \\<IP address of SMB destination
server>\dest_share
```

```
8,814 scanned, 0 copied, 620 compared, 0 skipped, 0
removed, 0 errors, 6s
9,294 scanned, 0 copied, 2,064 compared, 0 skipped, 0
removed, 0 errors, 11s
12,614 scanned, 0 copied, 3,729 compared, 0 skipped, 0
removed, 0 errors, 16s
13,034 scanned, 0 copied, 5,136 compared, 0 skipped, 0
removed, 0 errors, 21s
14,282 scanned, 0 copied, 7,241 compared, 0 skipped, 0
removed, 0 errors, 26s
14,282 scanned, 0 copied, 8,101 compared, 0 skipped, 0
removed, 0 errors, 31s
14,282 scanned, 0 copied, 8,801 compared, 0 skipped, 0
removed, 0 errors, 36s
14,282 scanned, 0 copied, 9,681 compared, 0 skipped, 0
removed, 0 errors, 41s
14,282 scanned, 0 copied, 10,405 compared, 0 skipped, 0
removed, 0 errors, 46s
14,282 scanned, 0 copied, 11,431 compared, 0 skipped, 0
removed, 0 errors, 51s
14,282 scanned, 0 copied, 12,471 compared, 0 skipped, 0
removed, 0 errors, 56s
14,282 scanned, 0 copied, 13,495 compared, 0 skipped, 0
removed, 0 errors, 1m1s
14,282 scanned, 0 copied, 14,282 compared, 0 skipped, 0
removed, 0 errors, 1m6s
```

```
xcp sync -onlyacl -preserve-ctime -fallback-user "DOMAIN\User"
-fallback-group "DOMAIN\Group" \\<source_IP_address>\source_share \\<IP
address of SMB destination server>\dest_share
14,282 scanned, 0 copied, 14,282 compared, 0 skipped, 0 removed, 0
errors
Total Time : 1m7s
STATUS : PASSED
```

## sync -aclverify{yes,no}

Use the `-aclverify{yes,no}` parameter with the `sync` command to provide an option to include or skip ACL verification during the ACL sync operation. This option can only be used with the `sync -acl` and `sync -onlyacl` commands. ACL sync performs ACL verification by default. If you set the `-aclverify` option to `no`, you can skip ACL verification and the `fallback-user` and `fallback-group` options are not required. If you set `-aclverify` to `yes`, it requires the `fallback-user` and `fallback-group` options, as shown in the following example.

### Syntax

```
xcp sync -acl -aclverify yes -fallback-user <fallback_user> -fallback
-group <fallback_group> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```



## Show example

```
C:\NetApp\xcp>xcp sync -acl -aclverify yes -fallback-user "DOMAIN\User"
-fallback-group "DOMAIN\Group" \\<source_IP_address>\source_share \\<IP
address of SMB destination server>\dest_share

25 scanned, 0 copied, 24 compared, 0 skipped, 0 removed, 0 errors, 5s,
0 acls copied
25 scanned, 0 copied, 24 compared, 0 skipped, 0 removed, 0 errors, 10s,
0 acls copied
25 scanned, 0 copied, 24 compared, 0 skipped, 0 removed, 0 errors, 15s,
0 acls copied xcp sync -acl -aclverify yes -fallback-user "DOMAIN\User"
-fallback-group "DOMAIN\Group" \\<source_IP_address>\source_share \\<IP
address of SMB destination server>\dest_share
25 scanned, 1 copied, 25 compared, 0 skipped, 0 removed, 0 errors, 12
acls copied Total Time : 16s
STATUS : PASSED
C:\NetApp\xcp>xcp sync -acl -aclverify no
\\<source_IP_address>\source_share \\<IP address of SMB destination
server>\dest_share

xcp sync -acl -aclverify no \\<source_IP_address>\source_share \\<IP
address of SMB destination server>\dest_share
27 scanned, 1 copied, 27 compared, 0 skipped, 0 removed, 0 errors, 13
acls copied Total Time : 2s
STATUS : PASSED
C:\NetApp\xcp>xcp sync -onlyacl -aclverify yes -fallback-user
"DOMAIN\User" -fallback-group "DOMAIN\Group"
\\<source_IP_address>\source_share \\<IP address of SMB destination
server>\dest_share
24 scanned, 0 copied, 24 compared, 0 skipped, 0 removed, 0 errors, 5s,
0 acls copied
24 scanned, 0 copied, 24 compared, 0 skipped, 0 removed, 0 errors, 10s,
0 acls copied
24 scanned, 0 copied, 24 compared, 0 skipped, 0 removed, 0 errors, 15s,
0 acls copied xcp sync -onlyacl -aclverify yes -fallback-user
"DOMAIN\User" -fallback-group "DOMAIN\Group"
\\<source_IP_address>\source_share \\<IP address of SMB destination
server>\dest_share
C:\NetApp\xcp>xcp sync -onlyacl -aclverify no
\\<source_IP_address>\source_share \\<IP address of SMB destination
server>\dest_share
xcp sync -onlyacl -aclverify no \\<source_IP_address>\source_share
\\<IP address of SMB destination server>\dest_share
24 scanned, 0 copied, 24 compared, 0 skipped, 0 removed, 0 errors, 11
acls copied
```

```
Total Time : 2s
STATUS : PASSED
```

## sync -bs <n>

Use the `-bs <n>` parameter with the `sync` command to provide a read/write block size. The default size is 1M.

### Syntax

```
xcp.exe sync -bs <n> \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
```

### Show example

```
C:\Netapp\xcp>xcp.exe sync -bs 64k \\<source_IP_address>\source_share
\\<IP address of SMB destination server>\dest_share
1,136 scanned, 0 copied, 1,135 compared, 0 skipped, 95 removed, 0
errors, 5s
xcp.exe sync -bs 64k \\<source_IP_address>\source_share \\<IP address
of SMB destination server>\dest_share 1,136 scanned, 283 copied, 1,136
compared, 0 skipped, 283 removed, 0 errors
Total Time : 10s
STATUS : PASSED
```

## sync -ads

Use `-ads` parameter with the `sync` command to scan for changes and modifications to alternate data streams in the source and target SMB share. If there are changes, it applies the change to the target to make sure that the target is identical to the source.

### Syntax

```
xcp sync -ads \\<IP address or hostname of SMB server>\source_share \\<IP
address of SMB destination server>\dest_share
```

## Show example

```
C:\netapp\xcp>xcp sync -ads \\<source_IP_address>\source_share\src
\\<dest_IP_address>\dest_share

13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 5s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 10s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 15s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 20s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 25s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 30s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 1m0s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 2m50s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 2m55s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 3m0s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 3m55s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 4m0s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 4m55s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 5m0s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 5m5s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 5m10s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 5m55s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 6m0s, 1 ads copied
13 scanned,      1 copied, 12 compared, 0 skipped, 0
removed,      0 errors, 6m5s, 1 ads copied
xcp sync -ads \\<source_IP_address>\source_share\src
\\<dest_IP_address>\dest_share
13 scanned, 1 copied, 13 compared, 0 skipped, 0 removed, 0 errors, 1
```

```
ads copied
Total Time : 6m9s
STATUS : PASSED
```

## verify

The `verify` command reads and compares the source and target shares and provides information about what is different. You can use the `verify` command on any source and destination, regardless of the tool used to perform the copy or sync operation.

### Syntax

```
xcp verify \\<IP address or hostname of SMB server>\source_share \\<IP
address of SMB destination server>\dest_share
```

### Show example

```
c:\netapp\xcp>xcp verify \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify \\<IP address of SMB source server>\source_share \\ <IP
address of SMB destination server>\dest_share

xcp verify \\<IP address of SMB source server>\source_share \\<IP
address of SMB destination server>\dest_share
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
xcp verify \\<IP address of SMB source server>\source_share \\<IP
address of SMB destination server>\dest_share
Total Time : 3s
STATUS : PASSED
```

The following table lists the `verify` parameters and their description.

Parameter	Description
<code>verify -h, --help</code>	Show this help message and exit.
<code>verify -v</code>	Increase debug verbosity.
<code>verify -parallel &lt;n&gt;</code>	Number of concurrent processes (default: <cpu-count>).
<code>verify -match &lt;filter&gt;</code>	Only process files and directories that match the filter (see <code>xcp help - match</code> for details).
<code>verify -exclude &lt;filter&gt;</code>	Only exclude files and directories in the filter.

Parameter	Description
<code>verify -preserve-atime</code>	Restore last accessed date on source.
<code>verify -nodata</code>	Do not check data.
<code>verify -atime</code>	Verify file access time.
<code>verify -noctime</code>	Do not check file creation time.
<code>verify -nomtime</code>	Do not check file modification time.
<code>verify -noattrs</code>	Do not check attributes.
<code>verify -noownership</code>	Do not check ownership.
<code>verify -ads</code>	Scan for changes and modifications of alternate data streams in the source and target SMB share. If there are changes, it applies the change to the target to make sure that the target is identical to the source.
<code>verify -noacls</code>	Do not check ACLs.
<code>verify -atimewindow &lt;float&gt;</code>	Acceptable access time difference, in seconds.
<code>verify -ctimewindow &lt;float&gt;</code>	Acceptable creation time difference, in seconds.
<code>verify -mtimewindow &lt;float&gt;</code>	Acceptable modification time difference, in seconds.
<code>verify -stats</code>	Scan source and target trees in parallel and compare tree statistics.
<code>verify -l</code>	Increases output detail.
<code>verify -ll</code>	Increases output detail (git diff format).
<code>verify -fallback-user &lt;fallback_user&gt;</code>	Active Directory user or local(non-domain) user on the target machine to receive the permissions of local (non-domain) source machine users (example: domain\administrator).
<code>verify -fallback-group &lt;fallback_group&gt;</code>	Active Directory group or local(non-domain) group on the target machine to receive the permissions of local(non-domain) source machine groups (example: domain\administrators).
<code>verify -root</code>	Sync ACLs for the root directory.
<code>verify -onlyacl</code>	Copy only the security information.

## verify -h, --help

Use the `-h` and `--help` parameters with the `verify` command to display detailed information about the `verify` command

### Syntax

```
xcp verify -help
```

## Show example

```
C:\Netapp\xcp>xcp verify -help
usage: xcp verify [-h] [-v] [-parallel <n>] [-match <filter>] [-exclude
<filter>][-preserve-ctime]
[-loglevel <name>] [-fallback-user FALLBACK_USER]
[-fallback-group FALLBACK_GROUP] [-noacls] [-nodata] [-stats] [-l] [-
root] [-noownership] [-onlyacl] [-noctime] [-nomtime] [-noattrs] [-
ctime]
[-atimewindow <float>] [-ctimewindow <float>] [-mtimewindow <float>] [-
ads] source target
```

Note: ONTAP does not let a SMB client modify COMPRESSED or ENCRYPTED attributes. XCP sync will ignore these file attributes.

positional arguments:

- source
- target

optional arguments:

- h, --help show this help message and exit
- v increase debug verbosity
- parallel <n> number of concurrent processes (default: <cpu-count>)
- match <filter> only process files and directories that match the filter (see `xcp help -match` for details)
- exclude <filter> Exclude files and directories that match the filter (see `xcp help -exclude` for details)
- preserve-ctime restore last accessed date on source
- help-diag Show all options including diag. The diag options should be used only on recommendation by NetApp support.
- loglevel <name> option to set log level filter (default:INFO)
- fallback-user FALLBACK\_USER  
a user on the target machine to translate the permissions of local (non-domain) source machine users (eg. domain\administrator)
- fallback-group FALLBACK\_GROUP  
a group on the target machine to translate the permissions of local (non- domain) source machine groups (eg. domain\administrators)
- nodata do not check data
- stats scan source and target trees in parallel and compare tree statistics
- l detailed file listing output
- root verify acl for root directory
- noacls do not check acls

```

-noownership          do not check ownership
-onlyacl              verify only acls
-noctime              do not check file creation time
-nomtime              do not check file modification time
-noattrs              do not check attributes
-atime                verify access time as well
-atimewindow <float> acceptable access time difference in seconds
-ctimewindow <float> acceptable creation time difference in seconds
-mtimewindow <float> acceptable modification time difference in
seconds
-ads                  verify ntfs alternate data stream

```

## verify -v

Use the `-v` parameter with the `verify` command to provide detailed debug information.

### Syntax

```
xcp verify -v \\<IP address of SMB source server>\source_share address of
SMB destination server>\dest_share
```

### Show example

```

c:\netapp\xcp> xcp verify -v \\<IP address of SMB source
server>\source_share address of SMB destination server>\dest_share
xcp verify -v \\<IP address of SMB source server>\source_share \\<IP
address of SMB destination server>\dest_share

xcp verify -v \\< IP address of SMB source server>\source_share \\<IP
address of SMB destination server>\dest_share
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 3s
STATUS : PASSED

```

## verify -parallel <n>

Use the `-parallel <n>` parameter with the `verify` command to set a higher or lower number of XCP concurrent processes. The `verify -parallel <n>` command verifies the number of concurrent processes (default: `<cpu-count>`).



The maximum value for `n` is 61.

## Syntax

```
xcp verify -v -parallel <n> \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -v -parallel 8 \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -v -parallel 8 \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp verify -v -parallel 8 \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 4s
STATUS : PASSED
```

## verify -match <filter>

Use the `-match <filter>` parameter with the `verify` command to scan the source and target tree and compare only the files or directories that match the filter argument. If there are any differences, the command applies the required actions on the target to keep them in sync.

## Syntax

```
xcp verify -v -match <filter> \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination server>\dest_share
```



## Show example

```
c:\netapp\xcp>xcp verify -v -match "'Microsoft' in name" \\<IP address
of SMB source server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -v -match "'Microsoft' in name" \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp verify -v -match 'Microsoft' in name \\<IP address of SMB source
server> \source_share \\<IP address of SMB destination
server>\dest_share
374 scanned, 0 compared, 0 same, 0 different, 0 missing, 0 errors
Total Time : 1s
STATUS : PASSED
```

## verify -exclude <filter>

Use the `-exclude <filter>` parameter with the `verify` command to only exclude files and directories in the filter.

### Syntax

```
xcp verify -exclude <filter> \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
C:\netapp\xcp>xcp verify -exclude "path('*Exceptions*')" \\<IP address
of SMB sourceserver>\source_share \\<IP address of SMB destination
server>\dest_share

210 scanned, 99 excluded, 6 compared, 5 same, 1 different, 0 missing, 0
errors, 5s
210 scanned, 107 excluded, 13 compared, 12 same, 1 different, 0
missing, 0 errors, 10s
210 scanned, 107 excluded, 13 compared, 12 same, 1 different, 0
missing, 0 errors, 15s
210 scanned, 107 excluded, 13 compared, 12 same, 1 different, 0
missing, 0 errors, 20s
335 scanned, 253 excluded, 13 compared, 12 same, 1 different, 0
missing, 0 errors, 25s
445 scanned, 427 excluded, 15 compared, 14 same, 1 different, 0
missing, 0 errors, 30s
445 scanned, 427 excluded, 15 compared, 14 same, 1 different, 0
missing, 0 errors, 35s
445 scanned, 427 excluded, 15 compared, 14 same, 1 different, 0
missing, 0 errors, 40s
445 scanned, 427 excluded, 15 compared, 14 same, 1 different, 0
missing, 0 errors, 45s
445 scanned, 427 excluded, 16 compared, 15 same, 1 different, 0
missing, 0 errors, 50s
xcp verify -exclude path('*Exceptions*') \\<IP address of SMB
sourceserver>\source_share \\<IP address of SMB destination
server>\dest_share
445 scanned, 427 excluded, 17 compared, 17 same, 0 different, 0
missing, 0 errors
Total Time : 1m11s
STATUS : PASSED
```

## verify -preserve-atime

Use the `-preserve-atime` parameter with the `verify` command to reset `atime` to the original value before XCP read the file.

### Syntax

```
xcp verify -preserve-atime \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -preserve-atime \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -preserve-atime \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share

374 scanned, 179 compared, 179 same, 0 different, 0 missing, 0 errors,
5s
xcp verify -preserve-atime \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 8s
STATUS : PASSED
```

## verify -nodata

Use the `-nodata` parameter with the `verify` command to not compare data.

### Syntax

```
xcp verify -nodata \\<IP address of SMB source server>\source_share \\<IP
address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -nodata \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -nodata \\<IP address of SMB source server>\source_share
\\<IP address of SMB destination server>\dest_share

xcp verify -nodata \\<IP address of SMB source server> \source_share
\\<IP address of SMB destination server>\dest_share : PASSED
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 3s
STATUS : PASSED
```

## verify -atime

Use the `-atime` parameter with the `verify` command to compare file access time stamps from the source to destination.

### Syntax

```
xcp verify -ll -atime \\<IP address of SMB source server>\source_share  
\\<IP address of SMB destination server>\dest_share
```

### Show example

```
c:\Netapp\xcp> xcp verify -ll -atime \\<IP address of SMB source  
server>\source_share \\<IP address of SMB destination  
server>\dest_share  
  
WARNING: your license will expire in less than one week! You can renew  
your license at https://xcp.netapp.com  
dir1: Changed (atime)  
  atime  
    - 2023-04-14 10:28:47 (1681482527.564423)  
    + 2023-04-14 10:24:40 (1681482280.366317)  
dir2: Changed (atime)  
  atime  
    - 2023-04-14 10:28:47 (1681482527.564424)  
    + 2023-04-14 10:24:40 (1681482280.366318)  
<root>: Changed (atime)  
  atime  
    - 2023-04-14 10:28:47 (1681482527.054403)  
    + 2023-04-14 10:28:35 (1681482515.538801)  
xcp verify -ll -atime \\<IP address of SMB source server>\source_share  
\\<IP address of SMB destination server>\dest_share  
14 scanned, 13 compared, 10 same, 3 different, 0 missing, 0 errors  
Total Time : 1s  
STATUS : FAILED
```

## verify -noctime

Use the `-noctime` parameter with the `verify` command to not compare file creation time stamps from the source to destination.

### Syntax

```
xcp verify -noctime \\<IP address of SMB source server>\source_share \\<IP  
address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -noctime \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -noctime \\<IP address of SMB source server>\source_share
\\<IP address of SMB destination server>\dest_share

xcp verify -noctime \\<IP address of SMB source server>\source_share
\\<IP address of SMB destination server>\dest_share : PASSED
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 3s
STATUS : PASSED
```

## verify -nomtime

Use the `-nomtime` parameter with the `verify` command to not compare file modification time stamps from the source to destination.

### Syntax

```
xcp verify -nomtime \\<IP address of SMB source server>\source_share \\<IP
address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -nomtime \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -nomtime \\<IP address of SMB source server>\source_share
\\<IP address of SMB destination server>\dest_share

xcp verify -nomtime \\<IP address of SMB source server>\source_share
\\<IP address of SMB destination server>\dest_share : PASSED
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 3s
STATUS : PASSED
```

## verify -noattrs

Use the `-noattrs` parameter with the `verify` command to not check attributes.

## Syntax

```
xcp verify -noattrs \\<IP address of SMB source server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -noattrs \\<IP address of SMB source server>\source_share \\<IP address of SMB destination server>\dest_share
xcp verify -noattrs \\<IP address of SMB source server>\source_share \\<IP address of SMB destination server>\dest_share

xcp verify -noattrs \\<IP address of SMB source server>\source_share \\<IP address of SMB destination server>\dest_share : PASSED
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 3s
STATUS : PASSED
```

## verify -noownership

Use the `-noownership` parameter with the `verify` command to not check ownership.

## Syntax

```
xcp verify -noownership \\<IP address of SMB source server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -noownership \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -noownership \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp verify -noownership \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share : PASSED
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 3s
STATUS : PASSED
```

## verify -ads

Using `-ads` parameter with the `verify` command to read if there are any alternate data streams on the source and destination and display any differences.

### Syntax

```
xcp verify -ads \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -ads \\<source_IP_address>\source_share\src
\\<dest_IP_address>\dest_share
```

```
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 5s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 10s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 1m0s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 1m55s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 2m0s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 2m5s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 2m55s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 3m0s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 3m5s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 3m55s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 4m55s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 5m0s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 5m5s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 5m55s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 6m0s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 6m5s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 6m10s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 7m0s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 7m5s
7 scanned, 5 compared, 5 same, 0 different, 0
missing, 0 errors, 7m55s
7 scanned, 5 compared, 5 same, 0 different, 0
```



```
missing, 0 errors, 8m0s
```

```
xcp verify -ads \\source_ip_address>\source_share\src  
\\<dest_IP_address>\dest_share  
7 scanned, 6 compared, 6 same, 0 different, 0 missing, 0 errors  
Total Time : 8m4s  
STATUS : PASSED
```

## verify -noacIs

Use the `-noacIs` parameter with the `verify` command to not check ACLs.

### Syntax

```
xcp verify -noacIs -noownership \\<IP address or hostname of SMB  
server>\source_share \\<IP address of SMB destination server>\dest_share
```

### Show example

```
c:\netapp\xcp>xcp verify -noacIs -noownership \\<IP address or hostname  
of SMB server>\source_share \\<IP address of SMB destination  
server>\dest_share  
xcp verify -noacIs -noownership \\<IP address or hostname of SMB  
server>\source_share \\<IP address of SMB destination  
server>\dest_share  
  
xcp verify -noacIs -noownership \\<IP address or hostname of SMB  
server>\source_share \\<IP address of SMB destination  
server>\dest_share  
318 scanned, 317 compared, 317 same, 0 different, 0 missing, 0 errors  
Total Time : 1s  
STATUS : PASSED
```

## verify -noacIs -noownership

Use the `-noownership` parameter with `verify -noacIs` to not check ACLs or ownership from the source to the destination.

### Syntax

```
xcp verify -noacIs -noownership <source> <target>
```

## verify -atimewindow <float>

Use the `-atimewindow <float>` parameter with the `verify` command to specify the acceptable difference, in seconds, for the `atime` of a file from the source to the destination. XCP does not report files as being different if the difference in `atime` is less than `<value>`. The `verify - atimewindow` command can only be used with the `-atime` flag.

### Syntax

```
xcp verify -atimewindow <float> \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination server>\dest_share
```

### Show example

```
c:\Netapp\xcp> xcp verify -atimewindow 600 -atime \\<IP address of SMB
source server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp verify -atimewindow 600 -atime \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share

14 scanned, 13 compared, 13 same, 0 different, 0 missing, 0 errors
```

## verify -ctimewindow <float>

Use the `-ctimewindow <float>` parameter with the `verify` command to specify the acceptable difference, in seconds, for the `ctime` of a file from the source to the destination. XCP does not report files as being different when the difference in `ctime` is less than `<value>`.

### Syntax

```
xcp verify -ctimewindow <float> \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -ctimewindow 600 \\<IP address of SMB
sourceserver>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -ctimewindow 600 \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp verify -ctimewindow 600 \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 3s
STATUS : PASSED
```

## verify -mtimewindow <float>

Use the `-mtimewindow <float>` parameter with the `verify` command to specify the acceptable difference, in seconds, for the `mtime` of a file from the source to the destination. XCP does not report files as being different when the difference in `mtime` is less than `<value>`.

## Syntax

```
xcp verify -mtimewindow <float> \\<IP address of SMB
sourceserver>\source_share \\<IP address of SMB destination
server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -mtimewindow 600 \\<IP address of SMB
sourceserver>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -mtimewindow 600 \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share

xcp verify -mtimewindow 600 \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 3s
STATUS : PASSED
```

## verify -stats

Use the `-stats` parameter with the `verify` command to scan the source and the destination and print a tree statistics report showing similarities or differences between the two shares.

### Syntax

```
xcp verify -stats \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
```

Show example



```

c:\netapp\xcp>xcp verify -stats \\<IP address or hostname of SMB
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -stats \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share

    == Number of files ==
                empty    <8KiB    8-64KiB    64KiB-1MiB    1-10MiB    10-
100MiB    >100MiB
                        81        170        62        2
on-target                same    same    same    same
on-source                same    same    same    same

    == Directory entries ==
                empty    1-10    10-100    100-1K    1K-10K
>10K
                        1        1
on-target                same    same
on-source                same    same

    == Depth ==
                0-5    6-10    11-15    16-20    21-100
>100
                317
on-target                same
on-source                same

    == Modified ==
                >1 year    >1 month    1-31 days    1-24 hrs    <1 hour
<15 mins    future    invalid
                315        2
on-target                same    same
on-source                same    same

Total count: 317 / same / same
Directories: 2 / same / same
Regular files: 315 / same / same
Symbolic links:
Junctions:
Special files:
xcp verify -stats \\<IP address or hostname of SMB server>\source_share
\\<IP address of SMB destination server>\dest_share
635 scanned, 0 errors Total Time : 1s
STATUS : PASSED

```

## verify -l

Use the `-l` parameter with the `verify` command to list the differences between files and directories on the source and destination.

### Syntax

```
xcp verify -l \\<IP address of SMB source server>\source_share \\<IP  
address of SMB destination server>\dest_share
```

In the following example, during copy, the ownership information was not transferred, and you can see the differences in the command output.

### Show example

```
c:\netapp\xcp>xcp verify -l \\<IP address of SMB source  
server>\source_share \\<IP address of SMB destination  
server>\dest_share  
xcp verify -l \\<IP address of SMB source server>\source_share \\<IP  
address of SMB destination server>\dest_share  
  
xcp verify -l \\<IP address of SMB source server>\source_share \\<IP  
address of SMB destination server>\dest_share  
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors  
Total Time : 3s  
STATUS : PASSED
```

## verify -ll

Use the `-ll` parameter with the `verify` command to list the detailed differences of the files or directories from the source and the target. The format is like git diff. The red value is the old one from the source, and the green value is the new one from the target.

### Syntax

```
xcp verify -ll \\<IP address of SMB source server>\source_share \\<IP  
address of SMB destination server>\dest_share
```

## Show example

```
c:\netapp\xcp>xcp verify -ll \\<IP address of SMB source
server>\source_share \\<IP address of SMB destination
server>\dest_share
xcp verify -ll \\<IP address of SMB source server>\source_share \\<IP
address of SMB destination server>\dest_share

xcp verify -ll \\<IP address of SMB source server>\source_share \\<IP
address of SMB destination server>\dest_share
374 scanned, 373 compared, 373 same, 0 different, 0 missing, 0 errors
Total Time : 3s
STATUS : PASSED
```

## verify-fallback-user <fallback\_user> -fallback-group <fallback\_group>

Use the `-fallback-user` and `-fallback-group` parameters with the `verify` command to list the ACL and ownership differences between files and directories on the source and destination.



If you use `fallback-user` and `fallback-group` with a copy or sync operation, NetApp recommends that you also use the `fallback-user` and `fallback-group` parameters with the `verify` operation.

## Syntax

```
xcp verify -fallback-user <fallback_user> -fallback-group <fallback_group>
\\<IP address of SMB source server>\source_share \\<IP address of SMB
destination server>\dest_share
```

## verify -noownership-fallback-user <fallback\_user> -fallback-group <fallback\_group>

Use the `-noownership`, `-fallback-user`, and `-fallback-group` parameters with the `verify` command to list the ACL differences and skip verification of ownership between files and directories on the source and destination.

## Syntax

```
xcp verify -noownership -fallback-user <fallback_user> -fallback-group
<fallback_group> \\<IP address of SMB source server>\source_share \\<IP
address of SMB destination server>\dest_share
```

## verify -noacls-fallback-user <fallback\_user> -fallback-group <fallback\_group>

Use the `-noacls`, `-fallback-user`, and `-fallback-group` parameters with the `verify` command to skip verification of ACLs and verify ownership between files and directories on the source and destination.



## Syntax

```
xcp verify -noacls -fallback-user <fallback_user> -fallback-group  
<fallback_group> \\<IP address of SMB source server>\source_share \\<IP  
address of SMB destination server>\dest_share
```

## verify -root

Use the `-root` parameter with the `verify` command to sync the ACLs for the root directory.

## Syntax

```
xcp verify -root -fallback-user <fallback_user> -fallback- group  
<fallback_group> \\<IP address of SMB source server>\source_share \\<IP  
address of SMB destination server>\dest_share
```

## Show example

```
C:\NetApp\XCP>xcp verify -root -fallback-user "DOMAIN\User" -fallback  
-group "DOMAIN\Group" \\<IP address of SMB source server>\source_share  
\\<IP address of SMB destination server>\dest_share  
  
xcp verify -l -root -fallback-user "DOMAIN\User" -fallback-group  
"DOMAIN\Group" \\<IP address of SMB source server>\source_share \\<IP  
address of SMB destination server>\dest_share  
7 scanned, 6 compared, 6 same, 0 different, 0 missing, 0 errors  
Total Time : 1s  
STATUS : PASSED
```

## verify -onlyacl -fallback-user <fallback\_user> -fallback- group <fallback\_group>

Use the `-onlyacl`, `-fallback-user` and `-fallback-group` parameters with the `verify` command to compare only the security information between the source and destination.

## Syntax

```
xcp verify -onlyacl -preserve-atime -fallback-user <fallback_user>  
-fallback- group <fallback_group> \\<IP address of SMB source  
server>\source_share \\<IP address of SMB destination server>\dest_share
```

## Show example

```
C:\Users\ctladmin\Desktop>xcp verify -onlyacl -preserve-atime -fallback
-user "DOMAIN\User" -fallback- group "DOMAIN\Group" -ll
\\<source_IP_address>\source_share \\<IP address of SMB destination
server>\dest_share
```

```
4,722 scanned, 0 compared, 0 same, 0 different, 0 missing, 0
errors, 5s
7,142 scanned, 120 compared, 120 same, 0 different, 0 missing, 0
errors, 10s
7,142 scanned, 856 compared, 856 same, 0 different, 0 missing, 0
errors, 15s
7,142 scanned, 1,374 compared, 1,374 same, 0 different, 0 missing,
0 errors, 20s
7,142 scanned, 2,168 compared, 2,168 same, 0 different, 0 missing,
0 errors, 25s
7,142 scanned, 2,910 compared, 2,910 same, 0 different, 0 missing,
0 errors, 30s
7,142 scanned, 3,629 compared, 3,629 same, 0 different, 0 missing,
0 errors, 35s
7,142 scanned, 4,190 compared, 4,190 same, 0 different, 0 missing,
0 errors, 40s
7,142 scanned, 4,842 compared, 4,842 same, 0 different, 0 missing,
0 errors, 45s
7,142 scanned, 5,622 compared, 5,622 same, 0 different, 0 missing,
0 errors, 50s
7,142 scanned, 6,402 compared, 6,402 same, 0 different, 0 missing,
0 errors, 55s
7,142 scanned, 7,019 compared, 7,019 same, 0 different, 0 missing,
0 errors, 1m0s
```

```
xcp verify -onlyacl -preserve-atime -fallback-user "DOMAIN\User"
-fallback-group "DOMAIN\Group" -ll \\<source_IP_address>\source_share
\\<IP address of SMB destination server>\dest_share
```

```
7,142 scanned, 7,141 compared, 7,141 same, 0 different, 0 missing, 0
errors
```

```
Total Time : 1m2s
```

```
STATUS : PASSED
```

## configure

The `configure` command configures the SMB system and connects to the system where the PostgreSQL database is running.

## Syntax

```
xcp.exe configure
```

## Show example

```
C:\NetApp\XCP>xcp.exe configure

Please choose the menu you want to start:
1. Configure xcp.ini file
0. Quit
```

## listen

The `listen` command reads the XCP binary and starts the XCP services.

## Syntax

```
xcp.exe listen
```

## Show example

```
c:\NetApp\XCP>xcp.exe listen
* Serving Flask app "xcp_rest_smb_app" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production
deployment. Use a production WSGI server instead.
* Debug mode: off
```

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