



NFS 命令參照

XCP

NetApp
May 21, 2024

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NFS 命令參照

說明

NFS help 命令會顯示命令清單、命令參數、以及每個參數的簡短說明。help 對於剛接觸 XCP 工具的初學者而言、Command 非常實用。

語法

```
xcp help
```

顯示範例

```
[root@client1 linux]# ./xcp help
USAGE:
xcp [[help] [command]| -version]
optional arguments:
help Show XCP help message and exit
-version Show XCP version number and exit
To see help text, you can run:
xcp help Display this content
xcp help info Step by step usage of all commands
xcp help <command> Individual command help
command:
activate Activate an XCP license on the current host
license Show XCP license information
show Request information from host about NFS exports
scan Read all the files from export path
copy Recursively copy everything from source to target
resume Resume copy operation from the point it was halted
sync Synchronize increment changes on source to target after copy
isync Sync changes on target without index
verify Verify that the target is the same as the source
delete Delete data on the NFS exported volume
chown Change the ownership on the NFS exported volume
chmod Change the permissions on the NFS exported volume
logdump Collect all logs related to the XCP job and dump those into
        a zipped folder named <ID>.zip under the current dir
estimate Estimate the time taken for the copy command to complete
indexdelete Remove indexes from catalog
```

說明資訊

使用 `info` 參數 `help` 顯示文件、範例及調整建議的命令。

語法

```
xcp help info
```

```
[root@client1 linux]# ./xcp help info
COMMAND
info

USAGE
help info

DESCRIPTION
Step by step usage of the XCP command. Follow these steps after you
copy the binary and license

1. Download the XCP license and XCP binary to the Linux machine. Run
XCP activate: xcp activate

2. On a fresh system, the above command will fail when looking for a
license in
/opt/NetApp/xFiles/xcp.
Copy the XCP license to /opt/NetApp/xFiles/xcp and run the activate
command again: xcp activate

3. Check the validity of the license: xcp license

4. Configure the ini file located at /opt/NetApp/xFiles/xcp/xcp.ini
with catalog details: add catalog = catalog_nfs_server:/catalog_path

5. List all the exports and details from the NFS server: xcp show
server

6. Pick up one of the exports and run a scan of the export: xcp scan
server:/export1

7. Initiate baseline copy:
xcp copy -newid id1 server:/export1 server2:/e

8. If the copy is halted for some reason, you can use the "xcp resume"
command to resume the copy operation:
xcp resume -id id1
```

9. Start with incremental sync after the baseline is completed:

```
xcp sync -id id1
```

10. After copy or after every sync, you can verify to check data integrity:

```
xcp verify server:/export1 server2:/export2
```

SUPPORTED COMMANDS

help: Display information about commands and options

-exclude: Display examples of filters

-fmt: Display examples of filters

-match: Display examples of filters

help info: Display documentation, examples, and tuning recommendations

show: Request information from hosts about NFS and other RPC services

-v: Show more detailed information about servers

-loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

scan: Read all the directories in a file tree or a saved index

-l, -q: File listing output formats

-stats, -csv, -html: Tree statistics report formats

-nonames: Do not look up user and group names for file listings or reports

-newid <name>: Catalog name for a new index

-id <name>: Catalog name of a previous copy or scan index

-match <filter>: Only process files and directories that match the filter

-fmt <string expression>: Formatted output

-du: Summarize space usage of each directory, including subdirectories

-md5: Checksum the files (also save the checksum files when indexing) (default: False)

-duk: Summarize space usage of directory, include subdirectories, with output in kilobytes

-acl4: Process NFSv4 access control lists (ACLs)

-acl4.threads <n>: Per-process thread pool size (default: 100)

-depth <n>: Limit the search depth

-dircount <n[k]>: Request size for reading directories (default: 64k)

-edupe: Include deduplication estimate in reports (see documentation for details)

-bs <n[k]>: Read/write block size for scans that read data with -md5 or -edupe (default: 64k)

-parallel <n>: Maximum concurrent batch processes (default: 7)

-noId: Disable the creation of a default index (default: False)

-exclude <filter>: Exclude the files and directories that match the

filter

- preserve-ctime: preserve ctime of the file/dir (default: False)
- nodes <name>: comma-separated list of worker nodes
- s3.insecure: use http instead of https
- s3.noverify: do not verify ssl certificates
- s3.endpoint <S3 endpoint Url>: path such as https://10.10.10.101:1010
- s3.profile <profile-name>: config/cred profile to be used
- loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

copy: Recursively copy everything from source to target

- newid <name>: Catalog name for a new index
- md5: Checksum the files (also save the checksum files when indexing) (default: False)
- edupes: Include deduplication estimate in reports (see documentation for details)
- nonames: Do not look up user and group names for file listings or reports
- acl4: Process NFSv4 access control lists (ACLs)
- acl4.threads <n>: Per-process thread pool size (default: 100)
- acl4.alwaysset: call "setacl" for all ACL-capable files and directories
- bs <n[k]>: read/write blocksize (default: 64k)
- dircount <n[k]>: Request size for reading directories (default: 64k)
- parallel <n>: Maximum concurrent batch processes (default: 7)
- noId: Disable the creation of a default index (default: False)
- match <filter>: Only process files and directories that match the filter

-exclude <filter>: Exclude the files and directories that match the filter

- copybatch <filename [args]>: custom batch processing module
- chown: set destination uid and gid when copying as non-root user (default: False)

- preserve-ctime: preserve ctime of the file/dir (default: False)
- nodes <name>: comma-separated list of worker nodes
- s3.insecure: use http instead of https
- s3.noverify: do not verify ssl certificates
- s3.endpoint <S3 endpoint Url>: path such as https://10.10.10.101:1010
- loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

verify: Verify that the target is the same as the source

[no options]: Full verification of target structure, names, attributes, and data

- stats, -csv: Scan source and target trees in parallel and compare tree statistics
- nodata: Do not check data
- noattrs: Do not check attributes (default: False)

-noown: Do not check ownership (uid and gid) (default: False)
-nomods: Do not check file modification times
-mtimewindow <s>: Acceptable modification time difference for verification
-newid <name>: Catalog name for a new index
-v, -l: Output formats to list any differences found
-acl4: Process NFSv4 access control lists (ACLs)
-acl4.threads <n>: Per-process thread pool size (default: 100)
-nonames: Do not look up user and group names for file listings or reports
-match <filter>: Only process files and directories that match the filter
-bs <n[k]>: read/write blocksize (default: 64k)
-parallel <n>: Maximum concurrent batch processes (default: 7)
-dircount <n[k]>: Request size for reading directories (default: 64k)
-noId: Disable the creation of a default index (default: False)
-exclude <filter>: Exclude the files and directories that match the filter
-preserve-ctime: preserve ctime of the file/dir (default: False)
-s3.insecure: use http instead of https
-s3.noverify: do not verify ssl certificates
-s3.endpoint <S3 endpoint Url>: path such as https://10.10.10.101:1010
-s3.profile <profile-name>: config/cred profile to be used
-loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

sync: Find all source changes and apply them to the target

-id <name>: Catalog name of a previous copy index
-snap <name or path>: Access a Snapshot copy of the source tree
-nonames: Do not look up user and group names for file listings or reports
-bs <n[k]>: read/write blocksize (default: 64k)
-dircount <n[k]>: Request size for reading directories (default: 64k)
-parallel <n>: Maximum concurrent batch processes (default: 7)
-acl4.threads <n>: Per-process thread pool size (default: 100)
-exclude <filter>: Exclude the files and directories that match the filter
-preserve-ctime: preserve ctime of the file/dir (default: False)
-loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

sync dry-run: Find source changes but don't apply them to the target

-id <name>: Catalog name of a previous copy index
-snap <name or path>: Access a Snapshot copy of the source tree
-stats: Deep scan the modified directories and report on everything new
-nonames: Do not look up user and group names for file listings or

reports

- v, -l, -q: File listing output formats
- dircount <n[k]>: Request size for reading directories (default: 64k)
- parallel <n>: Maximum concurrent batch processes (default: 7)
- target: Check that the target files match the index
- loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

isync: Sync changes on target without index

- nodata: Do not check data
- noattrs: Do not check attributes
- nomods: Do not check file modification times
- mtimewindow <s>: Acceptable modification time difference for verification
- acl4: Process NFSv4 access control lists (ACLs)
- acl4.threads <n>: Per-process thread pool size (default: 100)
- acl4.alwaysset: call "setacl" for all ACL-capable files and directories
- match <filter>: Only process files and directories that match the filter
- bs <n[k]>: read/write blocksize (default: 64k)
- parallel <n>: Maximum concurrent batch processes (default: 7)
- dircount <n[k]>: Request size for reading directories (default: 64k)
- exclude <filter>: Exclude the files and directories that match the filter
- newid <name>: Catalog name for a new index
- loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)
- preserve-ctime: preserve ctime of the file/dir (default: False)
- s3.insecure: use http instead of https
- s3.noverify: do not verify ssl certificates
- s3.endpoint <S3 endpoint Url>: path such as https://10.10.10.101:1010
- s3.profile <profile-name>: config/cred profile to be used

isync estimate: Find the estimated time to complete the next isync command

- nodata: Do not check data
- noattrs: Do not check attributes
- nomods: Do not check file modification times
- mtimewindow <s>: Acceptable modification time difference for verification
- acl4: Process NFSv4 access control lists (ACLs)
- acl4.threads <n>: Per-process thread pool size (default: 100)
- acl4.alwaysset: call "setacl" for all ACL-capable files and

directories

- match <filter>: Only process files and directories that match the filter
- bs <n[k]>: read/write blocksize (default: 64k)
- parallel <n>: Maximum concurrent batch processes (default: 7)
- dircount <n[k]>: Request size for reading directories (default: 64k)
- exclude <filter>: Exclude the files and directories that match the filter
- loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)
- preserve-atime: preserve atime of the file/dir (default: False)
- s3.insecure: use http instead of https
- s3.noverify: do not verify ssl certificates
- s3.endpoint <S3 endpoint Url>: path such as https://10.10.10.101:1010
- s3.profile <profile-name>: config/cred profile to be used
- id <name>: Catalog name of a previous copy index

resume: Restart an interrupted copy

- id <name>: Catalog name of a previous copy index
- bs <n[k]>: read/write
- s3.insecure: use http instead of https
- s3.noverify: do not verify ssl certificates
- s3.endpoint <S3 endpoint Url>: path such as https://10.10.10.101:1010
- s3.profile <profile-name>: config/cred profile to be used
- loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

delete: Delete everything recursively

- match <filter>: Only process files and directories that match the filter
- force: Delete without confirmation
- removetopdir: remove directory including children
- exclude <filter>: Exclude the files and directories that match the filter
- parallel <n>: Maximum concurrent batch processes (default: 7)
- preserve-atime: preserve atime of the file/dir (default: False)
- s3.insecure: use http instead of https
- s3.noverify: do not verify ssl certificates
- s3.endpoint <S3 endpoint Url>: path such as https://10.10.10.101:1010
- s3.profile <profile-name>: config/cred profile to be used
- loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

activate: Activate a license on the current host
-loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

license: Show xcp license info

license update: Retrieve the latest license from the XCP server

chown: changing ownership of a file object
exclude <filter>: Exclude the files and directories that match the filter
-match <filter>: Only process files and directories that match the filter
-group <group>: linux gid to be set at source
-user <user>: linux uid to be set at source
-user-from <userFrom>: user to be changed
-group-from <groupFrom>: group to be changed
-reference <reference>: referenced file or directory point
-v: reports output for every object processed
-preserve-ctime: preserve ctime of the file/dir (default: False)
-loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

chmod: changing permissions of a file object
-exclude <filter>: Exclude the files and directories that match the filter
-match <filter>: Only process files and directories that match the filter
-reference <reference>: referenced file or directory point
-v: reports output for every object processed
-mode <mode>: mode to be set
-preserve-ctime: preserve ctime of the file/dir (default: False)
-loglevel <name>: Option to set log level; available levels are INFO, DEBUG (default: INFO)

logdump: Collect all logs related to the XCP job and dump those into a zipped folder named <ID>.zip under current dir
-m <migration ID>: Filter logs by migration ID
-j <job ID>: Filter logs by job ID

estimate: Use a saved scan index to estimate copy time

```
-id <name>: Catalog name of a previous copy or scan index
-gbit <n>: Gigabits of bandwidth to estimate best-case time (default:
1)
-target <path>: Target to use for live test copy
-t <n[s|m|h]>: Duration of live test copy (default: 5m)
-bs <n[k]>: read/write blocksize (default: 64k)
-dircount <n[k]>: Request size for reading directories (default: 64k)
-parallel <n>: Maximum concurrent batch processes (default: 7)
preserve-ctime:
  preserve ctime of the file/dir (default: False)
-loglevel <name>: Option to set log level; available levels are INFO,
DEBUG (default: INFO)

indexdelete: delete catalog indexes
  -match <filter>: Only process files and directories that match the
filter
  -loglevel <name>: Option to set log level; available levels are INFO,
DEBUG (default: INFO)
```

OUTPUT

In the `-l` output, the size, space used, and modification time are all shown in human-readable format. Time is relative to the current time, so it is time zone independent. For example, "14dlh" means that the file was modified 14 days and one hour ago. Note: "current time" is the time XCP started. The timestamp is saved in the index metadata (catalog:/xFiles/indexes/*.json) and is used for reports against the index.

The `-stats` option prints a human-readable report to the console. Other report format options are `-html` or `-csv`. The comma-separated values (CSV) format has exact values. CSV and HTML reports are automatically saved in the catalog, if there is one.

The histograms for modified, accessed, and changed only count regular files.

FILTERS

A filter expression should evaluate to True or False in Python. Filters are used in XCP for the `-match` and `-exclude` options. See below for some examples of the filters. Use "xcp help <command>" to check which options are supported for commands.

Variables and file attributes currently available to use in a filter: modified, accessed, changed: Floats representing age in hours depth, size, used, uid, gid, type, nlinks, mode, fileid: Integers name, base,

ext: Strings (if name is "demo.sql" then base is == "demo" and ext is == ".sql") owner, group: Strings size units: k, m, g, t, p = K, M, G, T, P = 1024, 1048576, 2**30, 2**40, 2**50 file types: f, d, b, c, l, s, q = F, D, B, C, L, S, Q = 1, 2, 3, 4, 5, 6, 7

Functions available to use in a filter:

rxm(pattern): Regular expression match for each file name
fnm(pattern): Unix-style wildcard match for each file name
load(path): List of lines from a local (external) file
rand(N): Match one out of every N files at random
path(pattern): Wildcard match for the full path
paths(<full_file_path>): Match or exclude all NFS export paths listed in the file
Note: unlike most shell wildcards, pattern "/a/*" will match path /a/b/c

The rxm() function only runs Python re.compile (pattern) once. Similarly, load() only reads its file once.

Filter examples:

Match files modified less than half an hour ago "type == f and modified < .5"

Find anything with "core" in the name ("in" is a Python operator):
"'core' in name"

Same match using regular expressions: "rxm('.*core.*')"

Same match using wildcards: "fnm('*core*')"

Match files that are not regular files, directories, or links: "type not in (f,d,l)"

Find jpg files over 500 megabytes (M is a variable): "fnm('*.jpg') and size > 500*M"

Find files with "/demo/smith" in the path (x is the file; str(x) is its full path): "'/demo/smith' in str(x)"

Exclude copying anything with "f" in its name: "fnm('*f*')"

Exclude multiple export paths specified in "/root/excludePaths.txt".
"paths('/root/excludePaths.txt')"

The file "excludePaths.txt" may contain multiple export paths where each path is listed on a new line.

The export paths may contain wildcards.

For example, `10.10.1.10:/source_vol/*.txt` in file `excludePaths.txt` will exclude all files having `".txt"` extension

If there are incremental changes in previously included directories and you want to exclude anything that has `"dir40"` as a substring in its name, you can specify the new exclude filter with the `sync`. This overrides the exclude filter used previously with the `copy` command and applies the new exclude filter.

Note that if there are incremental changes on the source after the copy operation and there are files with `"f"` in their name, then these are copied on to the target when the `sync` operation is performed. If you want to avoid copying such files or directories, you can use the following command: `xcp sync -exclude "'f' in name" -id <id>`

PERFORMANCE

On Linux, please set the following in `/etc/sysctl.conf` and run `"sysctl -p"`:

```
net.core.rmem_default = 1342177
net.core.rmem_max = 16777216
net.core.wmem_default = 1342177
net.core.wmem_max = 16777216
net.ipv4.tcp_rmem = 4096 1342177 16777216
net.ipv4.tcp_wmem = 4096 1342177 16777216
net.core.netdev_max_backlog = 300000
net.ipv4.tcp_fin_timeout = 10
```

Make sure that your system has multiple CPUs and at least a few gigabytes (GBs) of free memory.

Searching, checksumming or copying hundreds of thousands or millions of files should be many times faster with XCP than with standard tools such `cp`, `find`, `du`, `rsync`, or OS drag-and-drop.

For the case of a single file, reading or copying with XCP is usually faster with a faster host CPU. When processing many files, reading or copying is faster with more cores or CPUs.

The main performance throttle option is `-parallel` for the maximum number of concurrent processes as the number of concurrent directories being read and files being processed. For small numbers of files and/or when there is a network quality of service (QoS) limiter, you might also be able to increase performance by opening multiple channels. The usage section above shows how to use multiple host target addresses. The same syntax also opens more channels to a single target.

For example: "host1,host1:/vol/src" makes each XCP process open two channels to host1. In some WAN environments, this can improve performance. Within a datacenter, if there are only 1 GbE network interface cards (NICs) on the host with XCP it usually helps to use the multipath syntax to leverage more than one NIC. To verify that you are running I/O over multiple paths, use OS tools to monitor network I/O. For example, on Linux, try "sar -n DEV 2 200".

ENVIRONMENT VARIABLES

XCP_CONFIG_DIR: Override the default location /opt/NetApp/xFiles/xcp. If set, the value should be an OS filesystem path, possibly a mounted NFS directory. When XCP_CONFIG_DIR is set, a new directory with name same as hostname is created inside the custom configuration directory path wherein new logs will be stored.

XCP_LOG_DIR: Override the default, which stores the XCP log in the configuration directory. If set, the value should be an OS filesystem path, possibly a mounted NFS directory. When XCP_LOG_DIR is set, a new directory with name same as hostname is created inside the custom log directory path wherein new logs will be stored.

XCP_CATALOG_PATH: Override the setting in xcp.ini. If set, the value should be in the XCP path format, server:export[:subdirectory].

SECURITY

All the files and directories in the catalog are world readable except for the index files, which have a ".index" suffix and are located in subdirectories under the top-level catalog "indexes" directory. Because each index file is essentially an archive of metadata of an entire file tree, the catalog should be stored on a NetApp volume with export permissions matching the the actual sources and targets. Note that file data is not stored in the index, only metadata.

SUPPORT

<https://www.netapp.com/us/contact-us/support.aspx>

顯示

NFS show 命令會查詢一或多個儲存伺服器的 RPC 服務和 NFS 匯出。此命令也會列出可用的服務和匯出、並顯示每個匯出的已使用和可用容量、以及每個匯出的根目錄屬性。

語法

```
xcp show <ip_address_or_host_name>
```



- show 命令需要 NFSv3 匯出系統的主機名稱或 IP 位址。

顯示範例

```
[root@localhost linux]# ./xcp show <IP address or hostname of NFS
server>

getting pmap dump from <IP address or hostname of NFS server> port
111... getting export list from <IP address or hostname of NFS
server>...
sending 3 mounts and 12 nfs requests to <IP address or hostname of NFS
server>...

== RPC Services ==
'<IP address or hostname of NFS server>': UDP rpc services: MNT v1/2/3,
NFS v3, NLM v4, PMAP v2/3/4, STATUS v1
'<IP address or hostname of NFS server>': TCP rpc services: MNT v1/2/3,
NFS v3/4, NLM v4, PMAP v2/3/4, STATUS v1

== NFS Exports == Mounts Errors Server
3    0 <IP address or hostname of NFS server>

Space      Files    Space      Files
Free       Free     Used       Used Export

93.9 MiB   19,886   1.10 MiB   104 <IP address or hostname of NFS
server>:/
9.44 GiB   2.49M    65.7 MiB   276 <IP address or hostname of NFS
server>:/catalog_vol
84.9 GiB   22.4M    593 MiB 115 <IP address or hostname of NFS
server>:/source_vol

== Attributes of NFS Exports ==
drwxr-xr-x --- root root 4KiB 4KiB 6d2h <IP address or hostname of
NFSserver>:/
drwxr-xr-x --- root root 4KiB 4KiB 6d2h <IP address or hostname of NFS
server>:/catalog_vol
drwxr-xr-x --- root root 4KiB 4KiB 1h30m <IP address or hostname of NFS
server>:/source_vol

Xcp command : xcp show <IP address or hostname of NFS server>
0 error
Speed   : 3.62 KiB in (17.9 KiB/s), 6.28 KiB out (31.1 KiB/s) Total
Time   : 0s.
STATUS  : PASSED
```

顯示 -v

使用 -v 參數 show 命令以傳回使用 IP 位址或主機名稱的 NFS 伺服器詳細資料。

語法

```
xcp show -v
```

授權

NFS license 命令會顯示 XCP 授權資訊。

執行此命令之前，請確認已下載授權檔案並將其複製到 /opt/NetApp/xFiles/xcp/ XCP Linux 用戶端主機上的目錄。

語法

```
xcp license
```

顯示範例

```
[root@localhost /]# ./xcp license

Licensed to "XXX, NetApp Inc, XXX@netapp.com" until Sun Mar 31 00:00:00
2029 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
```

授權更新

使用 update 參數 license 從 XCP 伺服器擷取最新授權的命令。

語法

```
xcp license update
```

顯示範例

```
[root@localhost /]# ./xcp license update

XCP <version>; (c) yyyy NetApp, Inc.; Licensed to XXX [NetApp Inc]
until Sun Mar 31 00:00:00 yyyy
```

啟動

NFS activate 命令會啟動 XCP 授權。



執行此命令之前，請確認已下載授權檔案並將其複製到 `opt/NetApp/xFiles/xcp/ XCP Linux` 用戶端主機上的目錄。

語法

```
xcp activate
```

顯示範例

```
[root@localhost linux]# ./xcp activate

XCP activated
```

掃描

XCP NFS scan 命令會遞迴掃描整個來源 NFSv3 匯出的路徑、並傳回檔案結構統計資料。

NetApp 建議您在掃描作業期間、將來源 NFS 匯出裝載設為唯讀模式。

語法

```
xcp scan <source_nfs_export_path>
```

顯示範例

```
[root@localhost linux]# ./xcp scan <IP address of NFS server>:/

source_vol
source_vol
source_vol/r1.txt
source_vol/USER.1
source_vol/USER.2
source_vol/USER.1/FILE_1
source_vol/USER.1/FILE_2
source_vol/USER.1/FILE_3
source_vol/USER.1/FILE_4
source_vol/USER.1/FILE_5
source_vol/USER.1/file1.txt
source_vol/USER.1/file2.txt
source_vol/USER.1/logfile.txt
source_vol/USER.1/log1.txt
source_vol/USER.2/FILE_1
source_vol/USER.2/FILE_5
source_vol/USER.2/FILE_2
source_vol/USER.2/FILE_3
source_vol/USER.2/FILE_4
Xcp command : xcp scan <IP address of NFS server>:/source_vol
```

下表列出 scan 參數及其說明。

參數	說明
掃描 -l	以長列表輸出格式列出檔案。
掃描 -q	顯示掃描的檔案數量。
掃描 -統計資料	以樹狀結構統計報告格式列出檔案。
掃描 -csv	以樹狀結構統計 CSV 報告格式列出檔案。
掃描 -HTML	以樹狀結構統計 HTML 報告格式列出檔案。
掃描 -nonames	從檔案清單和報告中排除使用者和群組名稱。
<<nfs_scan_newid,掃描 -nevid ; 名稱 >	指定新索引的目錄名稱。
<<nfs_scan_id,掃描 -id ; catalog_name>	指定先前複本或掃描索引的目錄名稱。
<<nfs_scan_match,掃描 -符合 ; 篩選器 >	僅處理符合篩選條件的檔案和目錄。
<<nfs_scan_fmt,掃描 -fmt ; string_expression>	僅處理符合格式的檔案和目錄。
掃描 -du	摘要說明每個目錄（包括子目錄）的空間使用量。

參數	說明
<<nfs_scan_md5,掃描 -md5 ; string_expression>	在檔案上產生 checksum、並在建立索引時儲存 checksum（預設：false）。
<<nfs_scan_depth,掃描深度 ; n>	限制搜尋深度。
<<nfs_scan_dircount,掃描 -dircount ; n[k]>	指定讀取目錄時的要求大小。
掃描重複資料刪除	在報告中包含重複資料刪除預估值。
<<nfs_scan_bs,掃描 -BS ; n[k]>	指定用於讀取資料的掃描的讀取 / 寫入區塊大小 -md5 或 -edupe（預設值：64K）。
<<nfs_scan_parallel,掃描平行 ; n>	指定並行批次處理程序的最大數目（預設值：7）。
掃描 -nold	停用預設索引的建立（預設值：false）。
掃描 -subdir-names	擷取目錄中頂層子目錄的名稱。
掃描 -preserve-atime	將來源上的所有檔案還原至上次存取的日期。
掃描 -s3.insecure	提供選項、可在 S3 Bucket 通訊中使用 HTTP 而非 HTTPS。
<<nfs_scan_endpoint,掃描 -S3.Endpoint ; S3_Endpoint URL>	以 S3 Bucket 通訊的指定 URL 覆寫預設的 Amazon Web Services（AWS）端點 URL。
<<nfs_scan_s3_profile,掃描 -s3.profile ; profile 名稱 >	從 AWS 認證檔案指定用於 S3 儲存區通訊的設定檔。
掃描 -s3.noverify	覆寫 S3 Bucket 通訊的 SSL 認證預設驗證。

掃描 -l

使用 -l 參數 scan 以長清單輸出格式列出檔案的命令。

語法

```
xcp scan -l <ip_address_or_hostname>:/source_vol
```

顯示範例

```
root@localhost linux]# ./xcp scan -l <IP address or hostname of
NFSserver>:/source_vol

drwxr-xr-x --- root root 4KiB 4KiB 6s source_vol
drwxr-xr-x --- root root 4KiB 4KiB 42s source_vol/USER.1
drwxr-xr-x --- root root 4KiB 4KiB 42s source_vol/USER.2
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.1/FILE_1
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.1/FILE_2
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.1/FILE_3
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.1/FILE_4
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.1/FILE_5
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.2/FILE_1
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.2/FILE_5
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.2/FILE_2
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.2/FILE_3
rw-r--r-- --- root root 1KiB 4KiB 42s source_vol/USER.2/FILE_4
Xcp command : xcp scan -l <IP address or hostname of NFS
server>:/source_vol
13 scanned, 0 matched, 0 error
Speed : 3.73 KiB in (4.89 KiB/s), 756 out (989/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 -q

使用 -q 參數 scan 顯示掃描檔案數的命令。

語法

```
xcp scan -q <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@localhost linux]# ./xcp scan -q <IP address or hostname of
NFSserver>:/source_vol

Xcp command : xcp scan -q <IP address or hostname of NFS
server>:/source_vol
13 scanned, 0 matched, 0 error
Speed : 3.73 KiB in (3.96 KiB/s), 756 out(801/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 **-stats**、掃描 **-csv** 和掃描 **-HTML**

使用 `-stats`、`-csv` 和 `-html` 的參數 `scan` 以樹狀結構統計報告格式列出檔案的命令。



XCP 報告 (.csv、.html) 會儲存在中指定的目錄位置 `xcp.ini` 檔案：檔案會儲存在中 `<catalog path>/catalog/indexes/1/reports` 資料夾。您可以在附錄中檢視範例報告。

語法

```
xcp scan -stats <ip_address>:/source_vol
```

顯示範例

```
root@client1 linux]# ./xcp scan -stats <ip_address>:/fgl

Job ID: Job_2023-11-23_23.23.33.930501_scan
== Maximum Values ==
Size Used Depth File Path Namelen Dirsize
50.4 MiB 50.6 MiB 1 24 20 33
== Average Values ==
Size Depth Namelen Dirsize
15.3 MiB 0 6 33
== Top Space Users ==
root
107 MiB
== Top File Owners ==
root
34
== Top File Extensions ==
.sh .out .py .shl other
8 2 2 1 20
16.0 KiB 3.09 MiB 448 1.48 KiB 502 MiB
== Number of files ==
empty <8KiB 8-64KiB 64KiB-1MiB 1-10MiB 10-100MiB >100MiB
20 1 2 10
== Space used ==
empty <8KiB 8-64KiB 64KiB-1MiB 1-10MiB 10-100MiB >100MiB
76 KiB 12 KiB 5.16 MiB 102 MiB
== Directory entries ==
empty 1-10 10-100 100-1K 1K-10K >10K

== Depth ==
0-5 6-10 11-15 16-20 21-100 >100
34
== Accessed ==
>1 year9-12 months 6-9 months 3-6 months 1-3 months 1-31 days 1-24 hrs
<1 hour <15 mins
future
33
505 MiB
== Modified ==
>1 year9-12 months 6-9 months 3-6 months 1-3 months 1-31 days 1-24 hrs
<1 hour <15 mins
future
16
17
400 MiB 105
```



```
MiB
== Changed ==
>1 year9-12 months 6-9 months 3-6 months 1-3 months 1-31 days 1-24 hrs
<1 hour <15 mins
future
16
17
400 MiB 105
MiB
== Path ==
0-1024 >1024
33
Total count: 34
Directories: 1
Regular files: 33
Symbolic links: None
Special files: None
Hard links: None
Multilink files: None
Space Saved by Hard links (KB): 0
Sparse data: N/A
Dedupe estimate: N/A
Total space for regular files: size: 505 MiB, used: 107 MiB
Total space for symlinks: size: 0, used: 0
Total space for directories: size: 8 KiB, used: 8 KiB
Total space used: 107 MiB
Xcp command : xcp scan -stats <ip_address>:/fgl
Stats : 34 scanned
Speed : 6.35 KiB in (7.23 KiB/s), 444 out (506/s)
Total Time : 0s.
Job ID : Job_2023-11-23_23.23.33.930501_scan
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/
Job_2023-11-23_23.23.33.930501_scan.log

STATUS : PASSED
[root@client 1 linux]#
```

語法

```
xcp scan -csv <ip_address_or_hostname>:/source_vol
```

顯示範例

```
root@localhost linux]# ./xcp scan -csv <IP address or hostname of NFS
server>:/source_vol

scan <IP address or hostname of NFS server>:/source_vol
options,"{'-csv': True}"
summary,"13 scanned, 3.73 KiB in (11.3 KiB/s), 756 out (2.23 KiB/s),
0s."
Maximum Values,Size,Used,Depth,Namelen,Dirsize
Maximum Values,1024,4096,2,10,5
Average Values,Namelen,Size,Depth,Dirsize
Average Values,6,1024,1,4
Top Space Users,root
Top Space Users,53248
Top File Owners,root
Top File Owners,13
Top File Extensions,other
Top File Extensions,10
Number of files,empty,<8KiB,8-64KiB,64KiB-1MiB,1-10MiB,10-
100MiB,>100MiB
Number of files,0,10,0,0,0,0,0
Space used,empty,<8KiB,8-64KiB,64KiB-1MiB,1-10MiB,10-100MiB,>100MiB
Space used,0,40960,0,0,0,0,0
Directory entries,empty,1-10,10-100,100-1K,1K-10K,>10K
Directory entries,0,3,0,0,0,0
Depth,0-5,6-10,11-15,16-20,21-100,>100
Depth,13,0,0,0,0,0
Accessed,>1 year,>1 month,1-31 days,1-24 hrs,<1 hour,<15 mins,future
Accessed,0,0,0,0,0,10,0
Modified,>1 year,>1 month,1-31 days,1-24 hrs,<1 hour,<15 mins,future
Modified,0,0,0,0,0,10,0
Changed,>1 year,>1 month,1-31 days,1-24 hrs,<1 hour,<15 mins,future
Changed,0,0,0,0,0,10,0

Total count,13
Directories,3
Regular files,10
Symbolic links,0
Special files,0
Hard links,0,
multilink files,0,
Space Saved by Hard links (KB),0
Sparse data,N/A
Dedupe estimate,N/A
Total space for regular files,size,10240,used,40960
```

```
Total space for symlinks,size,0,used,0
Total space for directories,size,12288,used,12288
Total space used,53248
Xcp command : xcp scan -csv <IP address or hostname of NFS
server>:/source_vol
13 scanned, 0 matched, 0 error
Speed : 3.73 KiB in (11.2 KiB/s), 756 out (2.22 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

語法

```
xcp scan -html <ip_address_or_hostname>:/source_vol
```

顯示範例

```
root@localhost linux]# ./xcp scan -html <IP address or hostname of NFS
server>:/source_vol

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML
4.01//EN""http://www.w3.org/TR/html4/strict.dtd">
<html><head>
[redacted HTML contents]
</body></html>
Xcp command : xcp scan -html <IP address or hostname of
NFSserver>:/source_vol
13 scanned, 0 matched, 0 error
Speed : 3.73 KiB in (4.31 KiB/s), 756 out(873/s)
Total Time : 0s.
STATUS : PASSED
[root@localhost source_vol]#
```

掃描 -nonames

使用 `-nonames` 參數 `scan` 從檔案清單或報告中排除使用者和群組名稱的命令。



搭配使用時 `scan` 命令 `-nonames` 參數僅適用於使用傳回的檔案清單 `-l` 選項。

語法

```
xcp scan -nonames <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@localhost linux]# ./xcp scan -nonames <IP address or hostname of
NFS server>:/source_vol

source_vol
source_vol/USER.1
source_vol/USER.2
source_vol/USER.1/FILE_1
source_vol/USER.1/FILE_2
source_vol/USER.1/FILE_3
source_vol/USER.1/FILE_4
source_vol/USER.1/FILE_5
source_vol/USER.2/FILE_1
source_vol/USER.2/FILE_5
source_vol/USER.2/FILE_2
source_vol/USER.2/FILE_3
source_vol/USER.2/FILE_4
Xcp command : xcp scan -nonames <IP address or hostname of
NFSserver>:/source_vol
13 scanned, 0 matched, 0 error
Speed : 3.73 KiB in (4.66 KiB/s), 756 out(944/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 -newid <name>

使用 -newid <name> 參數 scan 命令，用於在執行掃描時指定新索引的目錄名稱。

語法

```
xcp scan -newid <name> <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@localhost linux]# ./xcp scan -newid ID001 <IP address or hostname of NFS server>:/source_vol

Xcp command : xcp scan -newid ID001 <IP address or hostname of NFS server>:/source_vol
13 scanned, 0 matched, 0 error
Speed : 13.8 KiB in (17.7 KiB/s), 53.1 KiB out (68.0 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 -id <catalog_name>

使用 -id 參數 scan 命令指定先前複本或掃描索引的目錄名稱。

語法

```
xcp scan -id <catalog_name>
```

顯示範例

```
[root@localhost linux]# ./xcp scan -id 3

xcp: Index: {source: 10.10.1.10:/vol/ex_s01/etc/keymgr, target: None}
keymgr/root/cacert.pem
keymgr/cert/secureadmin.pem
keymgr/key/secureadmin.pem
keymgr/csr/secureadmin.pem
keymgr/root
keymgr/csr
keymgr/key
keymgr/cert
keymgr
9 reviewed, 11.4 KiB in (11.7 KiB/s), 1.33 KiB out (1.37 KiB/s), 0s.
```

掃描 - 比對 <filter>

使用 -match <filter> 參數 scan 命令，指定只處理與篩選器相符的檔案和目錄。

語法

```
xcp scan -match <filter> <ip_address_or_hostname>:/source_vol
```

顯示範例

```
root@localhost linux]# ./xcp scan -match bin <IP address or hostname of
NFS server>:/source_vol

source_vol
source_vol/USER.1/FILE_1
source_vol/USER.1/FILE_2
source_vol/USER.1/FILE_3
source_vol/USER.1/FILE_4
source_vol/USER.1/FILE_5
source_vol/USER.1/file1.txt
source_vol/USER.1/file2.txt
source_vol/USER.1/logfile.txt
source_vol/USER.1/log1.txt
source_vol/r1.txt
source_vol/USER.1
source_vol/USER.2
source_vol/USER.2/FILE_1
source_vol/USER.2/FILE_5
source_vol/USER.2/FILE_2
source_vol/USER.2/FILE_3
source_vol/USER.2/FILE_4
Filtered: 0 did not match
Xcp command : xcp scan -match bin <IP address or hostname of
NFSserver>:/source_vol
18 scanned, 18 matched, 0 error
Speed : 4.59 KiB in (6.94 KiB/s), 756 out (1.12KiB/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 **-fmt <string_expression>**

使用 `-fmt` 參數 `scan` 命令指定只傳回符合指定格式的檔案和目錄。

語法

```
xcp scan -fmt <string_expression> <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@localhost linux]# ./xcp scan -fmt "'{ }, { }, { }, { },
{ }'.format(name, x, ctime, atime, mtime)"
<IP address or hostname of NFS server>:/source_vol

source_vol, <IP address or hostname of NFS server>:/source_vol,
1583294484.46, 1583294492.63,
1583294484.46
ILE_1, <IP address or hostname of NFS
server>:/source_vol/USER.1/FILE_1, 1583293637.88,
1583293637.83, 1583293637.83
FILE_2, <IP address or hostname of NFS
server>:/source_vol/USER.1/FILE_2, 1583293637.88,
1583293637.83, 1583293637.84
FILE_3, <IP address or hostname of NFS
server>:/source_vol/USER.1/FILE_3, 1583293637.88,
1583293637.84, 1583293637.84
FILE_4, <IP address or hostname of NFS
server>:/source_vol/USER.1/FILE_4, 1583293637.88,
1583293637.84, 1583293637.84
FILE_5, <IP address or hostname of NFS
server>:/source_vol/USER.1/FILE_5, 1583293637.88,
1583293637.84, 1583293637.84
file1.txt, <IP address or hostname of NFS
server>:/source_vol/USER.1/file1.txt, 1583294284.78,
1583294284.78, 1583294284.78
file2.txt, <IP address or hostname of NFS
server>:/source_vol/USER.1/file2.txt, 1583294284.78,
1583294284.78, 1583294284.78
logfile.txt, <IP address or hostname of NFS
server>:/source_vol/USER.1/logfile.txt,
1583294295.79, 1583294295.79, 1583294295.79
log1.txt, <IP address or hostname of NFS
server>:/source_vol/USER.1/log1.txt, 1583294295.8,
1583294295.8, 1583294295.8
r1.txt, <IP address or hostname of NFS server>:/source_vol/r1.txt,
1583294484.46, 1583294484.45,
1583294484.45
USER.1, <IP address or hostname of NFS server>:/source_vol/USER.1,
1583294295.8, 1583294492.63,
1583294295.8
USER.2, <IP address or hostname of NFS server>:/source_vol/USER.2,
1583293637.95, 1583294492.63,
1583293637.95
```

```
FILE_1, <IP address or hostname of NFS
server>:/source_vol/USER.2/FILE_1, 1583293637.95,
1583293637.94, 1583293637.94
FILE_5, <IP address or hostname of NFS
server>:/source_vol/USER.2/FILE_5, 1583293637.96,
1583293637.94, 1583293637.94
FILE_2, <IP address or hostname of NFS
server>:/source_vol/USER.2/FILE_2, 1583293637.96,
1583293637.95, 1583293637.95
FILE_3, <IP address or hostname of NFS
server>:/source_vol/USER.2/FILE_3, 1583293637.96,
1583293637.95, 1583293637.95
FILE_4, <IP address or hostname of NFS
server>:/source_vol/USER.2/FILE_4, 1583293637.96,
1583293637.95, 1583293637.96
Xcp command : xcp scan -fmt '{}', {}, {}, {}, {}'.format(name, x, ctime,
atime, mtime) <IP address
or hostname of NFS server>:/source_vol
18 scanned, 0 matched, 0 error
Speed : 4.59 KiB in (4.14 KiB/s), 756 out (683/s)
Total Time : 1s.
STATUS : PASSED
```

掃描 -du

使用 -du 參數 scan 用於總結每個目錄（包括子目錄）的空間使用情況的命令。

語法

```
xcp scan -du <ip_address_or_hostname>:/source_vol
```


顯示範例

```
[root@localhost linux]# ./xcp scan -du <IP address or hostname of
NFSserver>:/source_vol

24KiB source_vol/USER.1
24KiB source_vol/USER.2
52KiB source_vol
Xcp command : xcp scan -du <IP address or hostname of
NFSserver>:/source_vol
18 scanned, 0 matched, 0 error
Speed : 4.59 KiB in (12.9 KiB/s), 756 out (2.07KiB/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 **-MD5 <string_expression>**

使用 `-md5` 參數 `scan` 命令來產生檔案清單的校驗和、並在建立索引時儲存校驗和。預設值設為 `false`。



校驗和不用於檔案驗證；它們僅用於掃描作業期間的檔案清單。

語法

```
xcp scan -md5 <ip_address_or_hostname>:/source_vol
```

顯示範例

```
root@localhost linux]# ./xcp scan -md5 <IP address or hostname of
NFSserver>:/source_vol

source_vol
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.1/FILE_1
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.1/FILE_2
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.1/FILE_3
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.1/FILE_4
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.1/FILE_5
d41d8cd98f00b204e9800998ecf8427e source_vol/USER.1/file1.txt
d41d8cd98f00b204e9800998ecf8427e source_vol/USER.1/file2.txt
d41d8cd98f00b204e9800998ecf8427e source_vol/USER.1/logfile.txt
d41d8cd98f00b204e9800998ecf8427e source_vol/USER.1/log1.txt
e894f2344aaa92289fb57bc8f597ffa9 source_vol/r1.txt
source_vol/USER.1
source_vol/USER.2
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.2/FILE_1
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.2/FILE_5
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.2/FILE_2
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.2/FILE_3
d47b127bc2de2d687ddc82dac354c415 source_vol/USER.2/FILE_4
Xcp command : xcp scan -md5 <IP address or hostname of NFS
server>:/source_vol
18 scanned, 0 matched, 0 error
Speed : 16.0 KiB in (34.5 KiB/s), 2.29 KiB out (4.92 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

掃描深度 <n>

使用 `-depth <n>` 參數 `scan` 用於限制掃描搜尋深度的命令。。`-depth <n>` 參數指定 XCP 可以掃描檔案的子目錄深度。例如、如果指定數字 2、則 XCP 只會掃描前兩個子目錄層級。

語法

```
xcp scan -depth <n> <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@localhost linux]# ./xcp scan -depth 2 <IP address or hostname of
NFS server>:/source_vol

source_vol
source_vol/r1.txt
source_vol/USER.1
source_vol/USER.2
source_vol/USER.1/FILE_1
source_vol/USER.1/FILE_2
source_vol/USER.1/FILE_3
source_vol/USER.1/FILE_4
source_vol/USER.1/FILE_5
source_vol/USER.1/file1.txt
source_vol/USER.1/file2.txt
source_vol/USER.1/logfile.txt
source_vol/USER.1/log1.txt
source_vol/USER.2/FILE_1
source_vol/USER.2/FILE_5
source_vol/USER.2/FILE_2
source_vol/USER.2/FILE_3
source_vol/USER.2/FILE_4
Xcp command : xcp scan -depth 2 <IP address or hostname of
NFSserver>:/source_vol
18 scanned, 0 matched, 0 error
Speed : 4.59 KiB in (6.94 KiB/s), 756 out (1.12KiB/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 **-dircount <n[k]>**

使用 `-dircount <n[k]>` 參數 `scan` 用於指定在掃描中讀取目錄時的要求大小的命令。預設值為 64k。

語法

```
xcp scan -dircount <n[k]> <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@localhost linux]# ./xcp scan -dircount 64k <IP address or
hostname of NFS server>:/source_vol

source_vol
source_vol/USER.1/FILE_1
source_vol/USER.1/FILE_2
source_vol/USER.1/FILE_3
source_vol/USER.1/FILE_4
source_vol/USER.1/FILE_5
source_vol/USER.1/file1.txt
source_vol/USER.1/file2.txt
source_vol/USER.1/logfile.txt
source_vol/USER.1/log1.txt
source_vol/r1.txt
source_vol/USER.1
source_vol/USER.2
source_vol/USER.2/FILE_1
source_vol/USER.2/FILE_5
```

掃描重複資料刪除

使用 `-edupe` 參數 `scan` 將重複資料刪除預估納入報告中的命令。



Simple Storage Service (S3) 不支援稀疏檔案。因此、請將 S3 儲存區指定為的目標目的地 `scan -edupe` 傳回稀疏資料的值「無」。

語法

```
xcp scan -edupe <ip_address_or_hostname>:/source_vol
```

顯示範例

```
root@localhost linux]# ./xcp scan -edupe <IP address or hostname of
NFSserver>:/source_vol

== Maximum Values ==
Size Used Depth Namelen Dirsize
1 KiB 4 KiB 2 11 9
== Average Values ==
Namelen Size Depth Dirsize
6 682 1 5
== Top Space Users ==
root
52 KiB
== Top File Owners ==
root
18
== Top File Extensions ==
.txt other
5 10
== Number of files ==
empty <8KiB 8-64KiB 64KiB-1MiB 1-10MiB 10-100MiB >100MiB
4 11
== Space used ==
empty <8KiB 8-64KiB 64KiB-1MiB 1-10MiB 10-100MiB >100MiB
40 KiB
== Directory entries ==
empty 1-10 10-100 100-1K 1K-10K >10K
3
== Depth ==
0-5 6-10 11-15 16-20 21-100 >100
18
== Accessed ==
>1 year >1 month 1-31 days 1-24 hrs <1 hour
4
<15 mins
11
future
== Modified ==
>1 year >1 month 1-31 days 1-24 hrs <1 hour <15 mins future
15
== Changed ==
>1 year >1 month 1-31 days 1-24 hrs <1 hour <15 mins future
15

Total count: 18
```

```
Directories: 3
Regular files: 15
Symbolic links: None
Special files: None
Hard links: None,
multilink files: None,
Space Saved by Hard links (KB): 0
Sparse data: None
Dedupe estimate: N/A
Total space for regular files: size: 10.0 KiB, used: 40 KiB
Total space for symlinks: size: 0, used: 0
Total space for directories: size: 12 KiB, used: 12 KiB
Total space used: 52 KiB
Xcp command : xcp scan -edupe <IP address or hostname of
NFSserver>:/source_vol
18 scanned, 0 matched, 0 error
Speed : 16.0 KiB in (52.7 KiB/s), 2.29 KiB out (7.52 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 **-BS** <n[k]>

使用 `-bs <n[k]>` 參數 `scan` 指定讀寫區塊大小的命令。這適用於使用讀取資料的掃描 `-md5` 或 `-edupe` 參數。預設區塊大小為 64k。

語法

```
xcp scan -bs <n[k]> <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@localhost linux]# ./xcp scan -bs 32 <IP address or hostname of
NFS server>:/source_vol

source_vol
source_vol/r1.txt
source_vol/USER.1
source_vol/USER.2
source_vol/USER.1/FILE_1
source_vol/USER.1/FILE_2
source_vol/USER.1/FILE_3
source_vol/USER.1/FILE_4
source_vol/USER.1/FILE_5
source_vol/USER.1/file1.txt
source_vol/USER.1/file2.txt
source_vol/USER.1/logfile.txt
source_vol/USER.1/log1.txt
source_vol/USER.2/FILE_1
source_vol/USER.2/FILE_5
source_vol/USER.2/FILE_2
source_vol/USER.2/FILE_3
source_vol/USER.2/FILE_4
Xcp command : xcp scan -bs 32 <IP address or hostname of
NFSserver>:/source_vol
18 scanned, 0 matched, 0 error
Speed : 4.59 KiB in (19.0 KiB/s), 756 out (3.06KiB/s)
Total Time : 0s.
STATUS : PASSED
```

掃描平行 <n>

使用 `-parallel` 參數 `scan` 命令以指定並行批次處理程序的最大數目。預設值為 7。

語法

```
xcp scan -parallel <n> <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@localhost linux]# ./xcp scan -parallel 5 <IP address or hostname
of NFS server>:/source_vol

source_vol
source_vol/USER.1/FILE_1
source_vol/USER.1/FILE_2
source_vol/USER.1/FILE_3
source_vol/USER.1/FILE_4
source_vol/USER.1/FILE_5
source_vol/USER.1/file1.txt
source_vol/USER.1/file2.txt
source_vol/USER.1/logfile.txt
source_vol/USER.1/log1.txt
source_vol/r1.txt
source_vol/USER.1
source_vol/USER.2
source_vol/USER.2/FILE_1
source_vol/USER.2/FILE_5
source_vol/USER.2/FILE_2
source_vol/USER.2/FILE_3
source_vol/USER.2/FILE_4
Xcp command : xcp scan -parallel 5 <IP address or hostname of NFS
server>:/source_vol
18 scanned, 0 matched, 0 error
Speed : 4.59 KiB in (7.36 KiB/s), 756 out (1.19 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 -nold

使用 -noId 參數 scan 命令以停用預設索引的建立。預設值為假。

語法

```
xcp scan -noId <ip_address_or_hostname>:/source_vol
```


顯示範例

```
[root@localhost linux]# ./xcp scan -noId <IP address or hostname of NFS
server>:/source_vol

source_vol
source_vol/USER.1/FILE_1
source_vol/USER.1/FILE_2
source_vol/USER.1/FILE_3
source_vol/USER.1/FILE_4
source_vol/USER.1/FILE_5
source_vol/USER.1/file1.txt
source_vol/USER.1/file2.txt
source_vol/USER.1/logfile.txt
source_vol/USER.1/log1.txt
source_vol/r1.txt
source_vol/USER.1
source_vol/USER.2
source_vol/USER.2/FILE_1
source_vol/USER.2/FILE_5
source_vol/USER.2/FILE_2
source_vol/USER.2/FILE_3
source_vol/USER.2/FILE_4
Xcp command : xcp scan -noId <IP address or hostname of
NFSserver>:/source_vol
18 scanned, 0 matched, 0 error
Speed : 4.59 KiB in (5.84 KiB/s), 756 out(963/s)
Total Time : 0s.
STATUS : PASSED
```

掃描 -subdir-names

使用 -subdir-names 參數 scan 用於擷取目錄中頂層子目錄名稱的命令。

語法

```
xcp scan -subdir-names <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@localhost linux]# ./xcp scan -subdir-names <IP address or
hostname of NFS server>:/source_vol

source_vol
Xcp command : xcp scan -subdir-names <IP address or hostname of NFS
server>:/source_vol
7 scanned, 0 matched, 0 error
Speed : 1.30 KiB in (1.21 KiB/s), 444 out(414/s)
Total Time : 1s.
STATUS : PASSED
```

掃描 **-preserve-ctime**

使用 `-preserve-ctime` 參數 `scan` 命令將所有檔案還原至來源上上次存取的日期。

掃描 NFS 共用時、如果儲存系統設定為修改讀取時的存取時間、則會修改檔案的存取時間。XCP 不會直接變更存取時間。XCP 會逐一讀取檔案、這會觸發存取時間的更新。◦ `-preserve-ctime` 選項會將存取時間重設為 XCP 讀取作業之前設定的原始值。

語法

```
xcp scan -preserve-ctime <ip_address_or_hostname>:/source_vol
```

顯示範例

```
[root@client 1 linux]# ./xcp scan -preserve-atime
101.10.10.10:/source_vol

xcp: Job ID: Job_2022-06-30_14.14.15.334173_scan
source_vol/USER2/DIR1_4/FILE_DIR1_4_1024_1
source_vol/USER2/DIR1_4/FILE_DIR1_4_13926_4
source_vol/USER2/DIR1_4/FILE_DIR1_4_65536_2
source_vol/USER2/DIR1_4/FILE_DIR1_4_7475_3
source_vol/USER2/DIR1_4/FILE_DIR1_4_20377_5
source_vol/USER2/DIR1_4/FILE_DIR1_4_26828_6
source_vol/USER2/DIR1_4/FILE_DIR1_4_33279_7
source_vol/USER2/DIR1_4/FILE_DIR1_4_39730_8
source_vol/USER1
source_vol/USER2
source_vol/USER1/FILE_USER1_1024_1
source_vol/USER1/FILE_USER1_65536_2
source_vol/USER1/FILE_USER1_7475_3
source_vol/USER1/FILE_USER1_13926_4
source_vol/USER1/FILE_USER1_20377_5
source_vol/USER1/FILE_USER1_26828_6
source_vol/USER1/FILE_USER1_33279_7
source_vol/USER1/FILE_USER1_39730_8
source_vol/USER1/DIR1_2
source_vol/USER1/DIR1_3
source_vol/USER2/FILE_USER2_1024_1
source_vol/USER2/FILE_USER2_65536_2
source_vol/USER2/FILE_USER2_7475_3
source_vol/USER2/FILE_USER2_13926_4
source_vol/USER2/FILE_USER2_20377_5
source_vol/USER2/FILE_USER2_26828_6
source_vol/USER2/FILE_USER2_33279_7
source_vol/USER2/FILE_USER2_39730_8
source_vol/USER2/DIR1_3
source_vol/USER2/DIR1_4
source_vol/USER1/DIR1_2/FILE_DIR1_2_1024_1
source_vol/USER1/DIR1_2/FILE_DIR1_2_7475_3
source_vol/USER1/DIR1_2/FILE_DIR1_2_33279_7
source_vol/USER1/DIR1_2/FILE_DIR1_2_26828_6
source_vol/USER1/DIR1_2/FILE_DIR1_2_65536_2
source_vol/USER1/DIR1_2/FILE_DIR1_2_39730_8
source_vol/USER1/DIR1_2/FILE_DIR1_2_13926_4
source_vol/USER1/DIR1_2/FILE_DIR1_2_20377_5
source_vol/USER1/DIR1_3/FILE_DIR1_3_1024_1
```

```
source_vol/USER1/DIR1_3/FILE_DIR1_3_7475_3
source_vol/USER1/DIR1_3/FILE_DIR1_3_65536_2
source_vol/USER1/DIR1_3/FILE_DIR1_3_13926_4
source_vol/USER1/DIR1_3/FILE_DIR1_3_20377_5
source_vol/USER1/DIR1_3/FILE_DIR1_3_26828_6
source_vol/USER1/DIR1_3/FILE_DIR1_3_33279_7
source_vol/USER1/DIR1_3/FILE_DIR1_3_39730_8
source_vol/USER2/DIR1_3/FILE_DIR1_3_1024_1
source_vol/USER2/DIR1_3/FILE_DIR1_3_65536_2
source_vol/USER2/DIR1_3/FILE_DIR1_3_7475_3
source_vol/USER2/DIR1_3/FILE_DIR1_3_13926_4
source_vol/USER2/DIR1_3/FILE_DIR1_3_20377_5
source_vol/USER2/DIR1_3/FILE_DIR1_3_26828_6
source_vol/USER2/DIR1_3/FILE_DIR1_3_33279_7
source_vol/USER2/DIR1_3/FILE_DIR1_3_39730_8
source_vol
Xcp command : xcp scan -preserve-atime 101.10.10.10:/source_vol
Stats : 55 scanned
Speed : 14.1 KiB in (21.2 KiB/s), 2.33 KiB out (3.51 KiB/s)
Total Time : 0s.
Job ID : Job_2022-06-30_14.14.15.334173_scan
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2022-06-
30_14.14.15.334173_scan.log
STATUS : PASSED
```

掃描 **-s3.insecure**

使用 `-s3.insecure` 參數 `scan` 命令使用 HTTP 取代 HTTPS 進行 S3 儲存區通訊。

語法

```
xcp scan -s3.insecure s3://<bucket_name>
```

顯示範例

```
[root@client1 linux]# ./xcp scan -s3.insecure s3://bucket1

Job ID: Job_2023-06-08_08.16.31.345201_scan
file5g_1
USER1/FILE_USER1_1024_1
USER1/FILE_USER1_1024_2
USER1/FILE_USER1_1024_3
USER1/FILE_USER1_1024_4
USER1/FILE_USER1_1024_5
Xcp command : xcp scan -s3.insecure s3:// -bucket1
Stats : 8 scanned, 6 s3.objects
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 2s.
Job ID : Job_2023-06-08_08.16.31.345201_scan
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
08_08.16.31.345201_scan.log
STATUS : PASSED
```

掃描 **-S3.Endpoint** <s3_endpoint_url>

使用 `-s3.endpoint <s3_endpoint_url>` 參數 `scan` 命令以指定的 URL 取代預設 AWS 端點 URL、以進行 S3 貯體通訊。

語法

```
xcp scan -s3.endpoint https://<endpoint_url>: s3://<bucket_name>
```

顯示範例

```
[root@client1 linux]# ./xcp scan -s3.endpoint https://<endpoint_url>:
s3://xcp-testing

Job ID: Job_2023-06-13_11.23.06.029137_scan
aws_files/USER1/FILE_USER1_1024_1
aws_files/USER1/FILE_USER1_1024_2
aws_files/USER1/FILE_USER1_1024_3
aws_files/USER1/FILE_USER1_1024_4
aws_files/USER1/FILE_USER1_1024_5
Xcp command : xcp scan -s3.endpoint https://<endpoint_url>: s3://xcp-
testing
Stats : 8 scanned, 5 s3.objects
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 0s.
Job ID : Job_2023-06-13_11.23.06.029137_scan
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
13_11.23.06.029137_scan.log
STATUS : PASSED
```

掃描 **-s3.profile <name>**

使用 `s3.profile` 參數 `scan` 命令、從 AWS 認證檔案中指定用於 S3 儲存區通訊的設定檔。

語法

```
xcp scan -s3.profile <name> -s3.endpoint https://<endpoint_url>:
s3://<bucket_name>
```

顯示範例

```
[root@client1 linux]# ./xcp scan -s3.profile sg -s3.endpoint
https://<endpoint_url>:
s3://bucket1

Job ID: Job_2023-06-08_08.47.11.963479_scan
1 scanned, 0 in (0/s), 0 out (0/s), 5s
USER1/FILE_USER1_1024_1
USER1/FILE_USER1_1024_2
USER1/FILE_USER1_1024_3
USER1/FILE_USER1_1024_4
USER1/FILE_USER1_1024_5
Xcp command : xcp scan -s3.profile sg -s3.endpoint
https://<endpoint_url>: s3://bucket1
Stats : 7 scanned, 5 s3.objects
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 6s.
Job ID : Job_2023-06-08_08.47.11.963479_scan
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
08_08.47.11.963479_scan.log
STATUS : PASSED
[root@client1 linux]#
```

掃描 **-s3.noverify**

使用 `-s3.noverify` 參數 `scan` 用於覆寫 S3 儲存區通訊之 SSL 憑證預設驗證的命令。

語法

```
xcp scan -s3.noverify s3://<bucket_name>
```

顯示範例

```
root@client1 linux]# ./xcp scan -s3.noverify s3:// bucket1

Job ID: Job_2023-06-13_11.00.59.742237_scan
aws_files/USER1/FILE_USER1_1024_1
aws_files/USER1/FILE_USER1_1024_2
aws_files/USER1/FILE_USER1_1024_3
aws_files/USER1/FILE_USER1_1024_4
aws_files/USER1/FILE_USER1_1024_5
Xcp command : xcp scan -s3.noverify s3://bucket1
Stats : 8 scanned, 5 s3.objects
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 2s.
Job ID : Job_2023-06-13_11.00.59.742237_scan
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
13_11.00.59.742237_scan.log
STATUS : PASSED
```

複本

XCP NFS copy 命令會掃描整個來源目錄結構、並將其複製到目的地 NFSv3 匯出。

◦ copy 命令需要將來源和目的地路徑做為變數。掃描和複製的檔案、處理量、速度和經過時間詳細資料會顯示在複製作業結束時。



- 執行階段記錄檔位於 /opt/NetApp/xFiles/xcp/xcp.log 此路徑是可設定的。執行每個命令之後、目錄中會出現其他記錄。
- 如果來源為 7-Mode 系統、您可以使用 Snapshot 複本作為來源。例如：
<ip_address>:/vol/ex_s01/.snapshot/<snapshot_name>

語法

```
xcp copy <source_nfs_export_path> <destination_nfs_export_path>
```


顯示範例

```
root@localhost linux]# ./xcp copy <IP address of NFS
server>:/source_vol < IP address of
destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_copy_2020-03-
03_23.46.33.153705
Xcp command : xcp copy <IP address of NFS server>:/source_vol <IP
address of destination NFS
server>:/dest_vol
18 scanned, 0 matched, 17 copied, 0 error
Speed : 38.9 KiB in (51.2 KiB/s), 81.2 KiB out (107KiB/s)
Total Time : 0s.
STATUS : PASSED
```

下表列出 `copy` 參數及其說明。

參數	說明
複製 - 非名稱	從檔案清單和報告中排除使用者和群組名稱。
<<copy_match,複製 -符合 ; 篩選器 >	僅處理符合篩選條件的檔案和目錄。
<<copy_md5,複製 -md5 ; string_expression>	在檔案上產生 checksum 、並在建立索引時儲存 checksum (預設: false) 。
<<copy_dircount,複製 -dircount ; n[k]>	指定讀取目錄時的要求大小。
複製重複資料刪除	在報告中包含重複資料刪除預估值。
<<copy_bs,複製 -BS ; n[k]>	指定讀寫區塊大小 (預設值: 64K) 。
<<copy_parallel,複製平行 ; n>	指定並行批次處理程序的最大數目 (預設值: 7) 。
複製 - 保留 - atime	將來源上的所有檔案還原至上次存取的日期。
複製 -s3.insecure	提供選項、可在 S3 Bucket 通訊中使用 HTTP 而非 HTTPS 。
<<copy_s3_endpoint,複製 -S3.Endpoint ; S3_Endpoint_URL>	以 S3 Bucket 通訊的指定 URL 覆寫預設的 Amazon Web Services (AWS) 端點 URL 。
<<copy_s3_profile,複製 -s3.profile ; profile_name>	從 AWS 認證檔案指定用於 S3 儲存區通訊的設定檔。
複製 -s3.noverify	覆寫 S3 Bucket 通訊的 SSL 認證預設驗證。

複製 - 非名稱

使用 `-nonames` 參數 `copy` 從檔案清單或報告中排除使用者和群組名稱的命令。

語法

```
xcp copy -nonames <source_ip_address_or_hostname>:/source_vol  
<destination_ip_address_or_hostname>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp copy -nonames <IP address or hostname of  
NFS server>:/source_vol <IP  
address of destination NFS server>:/dest_vol  
  
xcp: WARNING: No index name has been specified, creating one with name:  
autoname_copy_2020-03-  
03_23.48.48.147261  
Xcp command : xcp copy -nonames <IP address or hostname of NFS  
server>:/source_vol <IP address of  
destination NFS server>:/dest_vol  
18 scanned, 0 matched, 17 copied, 0 error  
Speed : 38.9 KiB in (53.5 KiB/s), 81.3 KiB out (112 KiB/s)  
Total Time : 0s.  
STATUS : PASSED
```

複製 - 比對 <filter>

使用 `-match <filter>` 參數 `copy` 命令，指定只處理與篩選器相符的檔案和目錄。

語法

```
xcp copy -match <filter> <source_ip_address_or_hostname>:/source_vol  
<destination_ip_address_or_hostname>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp copy -match bin <IP address or hostname
of NFS server>:/source_vol <IP
address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_copy_2020-03-
04_00.00.07.125990
Xcp command : xcp copy -match bin <IP address or hostname of NFS
server>:/source_vol <IP address
of destination NFS server>:/dest_vol
18 scanned, 18 matched, 17 copied, 0 error
Speed : 39.1 KiB in (52.6 KiB/s), 81.7 KiB out (110 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

複製 **-MD5 <string_expression>**

使用 `-md5` 參數 `copy` 命令來產生檔案清單的校驗和、並在建立索引時儲存校驗和。預設值設為 `false`。

語法

```
xcp copy -md5 <source_ip_address_or_hostname>:/source_vol
<destination_ip_address_or_hostname>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp copy -md5 <IP address or hostname of NFS
server>:/source_vol <IP
address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_copy_2020-03-
03_23.47.41.137615
Xcp command : xcp copy -md5 <IP address or hostname of NFS
server>:/source_vol <IP address of
destination NFS server>:/dest_vol
18 scanned, 0 matched, 17 copied, 0 error
Speed : 38.9 KiB in (52.1 KiB/s), 81.3 KiB out (109 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

Copy -dircount <n[k]>

使用 `-dircount <n[k]>` 參數 `copy` 用於指定讀取目錄時的要求大小的命令。預設值為 64k。

語法

```
xcp copy -dircount <n[k]> <source_ip_address_or_hostname>:/source_vol  
<destination_ip_address_or_hostname>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp copy -dircount 32k <IP address or  
hostname of NFS server>:/source_vol  
<IP address of destination NFS server>:/dest_vol  
  
xcp: WARNING: No index name has been specified, creating one with name:  
autoname_copy_2020-03-  
03_23.58.01.094460  
Xcp command : xcp copy -dircount 32k <IP address or hostname of NFS  
server>:/source_vol <IP  
address of destination NFS server >:/dest_vol  
18 scanned, 0 matched, 17 copied, 0 error  
Speed : 39.1 KiB in (56.7 KiB/s), 81.6 KiB out (119 KiB/s)  
Total Time : 0s.  
STATUS : PASSED
```

複製重複資料刪除

使用 `-edupe` 參數 `copy` 將重複資料刪除預估納入報告中的命令。



Simple Storage Service (S3) 不支援稀疏檔案。因此、請將 S3 儲存區指定為的目標目的地 `copy -edupe` 傳回稀疏資料的值「無」。

語法

```
xcp copy -edupe <source_ip_address_or_hostname>:/source_vol  
<destination_ip_address_or_hostname>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp copy -edupe <IP address or hostname of
NFS server>:/source_vol <IP
address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_copy_2020-03-
03_23.48.10.436325
== Maximum Values ==
Size Used Depth Namelen Dirsize
1 KiB 4 KiB 2 11 9
== Average Values ==
Namelen Size Depth Dirsize
6 682 1 5
== Top Space Users ==
root
52 KiB
== Top File Owners ==
root
18
== Top File Extensions ==
.txt other
5 10
== Number of files ==
empty <8KiB 8-64KiB 64KiB-1MiB 1-10MiB 10-100MiB >100MiB
4 11
== Space used ==
empty <8KiB 8-64KiB 64KiB-1MiB 1-10MiB 10-100MiB >100MiB
40 KiB
== Directory entries ==
empty 1-10
3
10-100 100-1K 1K-10K >10K
== Depth ==
0-5 6-10 11-15 16-20 21-100 >100
18
== Accessed ==
>1 year >1 month 1-31 days 1-24 hrs <1 hour <15 mins future
4 11
== Modified ==
>1 year >1 month 1-31 days 1-24 hrs <1 hour <15 mins future
10 5
== Changed ==
>1 year >1 month 1-31 days 1-24 hrs <1 hour <15 mins future
```

```
10 5
Total count: 18
Directories: 3
Regular files: 15
Symbolic links: None
Special files: None
Hard links: None,
multilink files: None,
Space Saved by Hard links (KB): 0
Sparse data: None
Dedupe estimate: N/A
Total space for regular files: size: 10.0 KiB, used: 40 KiB
Total space for symlinks: size: 0, used: 0
Total space for directories: size: 12 KiB, used: 12 KiB
Total space used: 52 KiB
Xcp command : xcp copy -edupe <IP address or hostname of NFS
server>:/source_vol <destination NFS
export path>:/dest_vol
18 scanned, 0 matched, 17 copied, 0 error
Speed : 38.9 KiB in (36.7 KiB/s), 81.3 KiB out (76.7 KiB/s)
Total Time : 1s.
STATUS : PASSED
```

Copy -BS <n[k]>

使用 `-bs <n[k]>` 參數 `copy` 指定讀寫區塊大小的命令。預設區塊大小為 64k。

語法

```
xcp copy -bs <n[k]> <ip_address_or_hostname>:/source_vol
<destination_ip_address_or_hostname>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp copy -bs 32k <IP address or hostname of
NFS server>:/source_vol <IP
address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_copy_2020-03-
03_23.57.04.742145
Xcp command : xcp copy -bs 32k <IP address or hostname of NFS
server>:/source_vol <IP address of
destination NFS server>:/dest_vol
18 scanned, 0 matched, 17 copied, 0 error
Speed : 39.1 KiB in (115 KiB/s), 81.6 KiB out (241 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

複製平行 <n>

使用 `-parallel <n>` 參數 `copy` 命令以指定並行批次處理程序的最大數目。預設值為 7。

語法

```
xcp copy -parallel <n> <ip_address_or_hostname>:/source_vol
destination_ip_address_or_hostname:/<dest_vol>
```

顯示範例

```
[root@localhost linux]# ./xcp copy -parallel 4 <IP address or hostname
of NFS server>:/source_vol
<IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_copy_2020-03-
03_23.59.41.477783
Xcp command : xcp copy -parallel 4 <IP address or hostname of NFS
server>:/source_vol <IP address
of destination NFS server>:/dest_vol
18 scanned, 0 matched, 17 copied, 0 error
Speed : 39.1 KiB in (35.6 KiB/s), 81.6 KiB out (74.4 KiB/s)
Total Time : 1s.
STATUS : PASSED
```

複製 - 保留 - atime

使用 `-preserve-atime` 參數 `copy` 命令將所有檔案還原至來源上上次存取的日期。

◦ `-preserve-atime` 選項會將存取時間重設為 XCP 讀取作業之前設定的原始值。

語法

```
xcp copy -preserve-atime <source_ip_address_or_hostname>:/source_vol
<destination_ip_address_or_hostname>:/dest_vol
```

顯示範例

```
[root@client1 linux]# ./xcp copy -preserve-atime
101.10.10.10:/source_vol 10.102.102.10:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
XCP_copy_2022-06-
30_14.22.53.742272
xcp: Job ID: Job_XCP_copy_2022-06-30_14.22.53.742272_2022-06-
30_14.22.53.742272_copy
Xcp command : xcp copy -preserve-atime 101.10.10.10:/source_vol
10.102.102.10:/dest_vol
Stats : 55 scanned, 54 copied, 55 indexed
Speed : 1.26 MiB in (852 KiB/s), 1.32 MiB out (896 KiB/s)
Total Time : 1s.
Migration ID: XCP_copy_2022-06-30_14.22.53.742272
Job ID : Job_XCP_copy_2022-06-30_14.22.53.742272_2022-06-
30_14.22.53.742272_copy
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2022-06-
30_14.22.53.742272_2022-06-
30_14.22.53.742272_copy.log
STATUS : PASSED
[root@client1 linux]#
```

複製 -s3.insecure

使用 `-s3.insecure` 參數 `copy` 命令使用 HTTP 取代 HTTPS 進行 S3 儲存區通訊。

語法

```
xcp copy -s3.insecure s3://<bucket_name>
```


顯示範例

```
[root@client1 linux]# ./xcp copy -s3.insecure hdfs:///user/test
s3://bucket1

xcp: WARNING: No index name has been specified, creating one with name:
XCP_copy_2023-06-
08_09.01.47.581599
Job ID: Job_XCP_copy_2023-06-08_09.01.47.581599_copy
Xcp command : xcp copy -s3.insecure hdfs:///user/test s3://bucket1
Stats : 8 scanned, 5 copied, 8 indexed, 5 KiB s3.data.uploaded, 5
s3.copied.single.key.file, 5 s3.copied.file
Speed : 6.78 KiB in (1.86 KiB/s), 83.3 KiB out (22.9 KiB/s)
Total Time : 3s.
Migration ID: XCP_copy_2023-06-08_09.01.47.581599
Job ID : Job_XCP_copy_2023-06-08_09.01.47.581599_copy
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
08_09.01.47.581599_copy.log
STATUS : PASSED

[root@client1 linux]# ./xcp copy -s3.insecure hdfs:///user/demo
s3://bucket1

xcp: WARNING: No index name has been specified, creating one with name:
XCP_copy_2023-06-
08_09.15.58.807485
Job ID: Job_XCP_copy_2023-06-08_09.15.58.807485_copy
Xcp command : xcp copy -s3.insecure hdfs:///user/demo s3://bucket1
Stats : 8 scanned, 5 copied, 8 indexed, 5 KiB s3.data.uploaded, 5
s3.copied.single.key.file, 5 s3.copied.file
Speed : 10.4 KiB in (3.60 KiB/s), 85.3 KiB out (29.6 KiB/s)
Total Time : 2s.
Migration ID: XCP_copy_2023-06-08_09.15.58.807485
Job ID : Job_XCP_copy_2023-06-08_09.15.58.807485_copy
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
08_09.15.58.807485_copy.log
STATUS : PASSED
```

copy -s3.Endpoint <s3_endpoint_url>

使用 `-s3.endpoint <s3_endpoint_url>` 參數 `copy` 命令以指定的 URL 取代預設 AWS 端點 URL、以進行 S3 貯體通訊。

語法

```
xcp copy -s3.endpoint https://<endpoint_url>: s3://<bucket_name>
```

顯示範例

```
root@client1 linux]# ./xcp copy -s3.endpoint https://<endpoint_url>:
hdfs:///user/test
s3://xcp-testing

xcp: WARNING: No index name has been specified, creating one with name:
XCP_copy_2023-06-
13_11.20.32.571348
Job ID: Job_XCP_copy_2023-06-13_11.20.32.571348_copy
Xcp command : xcp copy -s3.endpoint https://<endpoint_url>
hdfs:///user/test s3://xcp-testing
Stats : 8 scanned, 5 copied, 8 indexed, 5 KiB s3.data.uploaded, 5
s3.copied.single.key.file, 5 s3.copied.file
Speed : 6.78 KiB in (1.77 KiB/s), 83.6 KiB out (21.8 KiB/s)
Total Time : 3s.
Migration ID: XCP_copy_2023-06-13_11.20.32.571348
Job ID : Job_XCP_copy_2023-06-13_11.20.32.571348_copy
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
13_11.20.32.571348_copy.log
STATUS : PASSED
[root@client1 linux]# ./xcp copy -s3.endpoint https://<endpoint_url>:
hdfs:///user/demo
s3://xcp-testing

xcp: WARNING: No index name has been specified, creating one with name:
XCP_copy_2023-06-
13_11.40.26.913130
Job ID: Job_XCP_copy_2023-06-13_11.40.26.913130_copy
15,009 scanned, 1,462 copied, 9 indexed, 1.46 MiB s3.data.uploaded,
1,491
s3.copied.single.key.file, 1,491 s3.copied.file, 4.58 MiB in (933
KiB/s), 1.72 MiB out (350
KiB/s), 5s
15,009 scanned, 4,283 copied, 9 indexed, 4.20 MiB s3.data.uploaded,
4,302
s3.copied.single.key.file, 4,302 s3.copied.file, 7.70 MiB in (629
KiB/s), 4.85 MiB out (632
KiB/s), 10s
15,009 scanned, 7,323 copied, 9 indexed, 7.17 MiB s3.data.uploaded,
7,343
s3.copied.single.key.file, 7,343 s3.copied.file, 11.0 MiB in (672
KiB/s), 8.24 MiB out (681
KiB/s), 15s
15,009 scanned, 10,427 copied, 9 indexed, 10.2 MiB s3.data.uploaded,
10,439
```

```
s3.copied.single.key.file, 10,439 s3.copied.file, 14.5 MiB in (690
KiB/s), 11.7 MiB out (695
KiB/s), 20s
15,009 scanned, 13,445 copied, 9 indexed, 13.1 MiB s3.data.uploaded,
13,454
s3.copied.single.key.file, 13,454 s3.copied.file, 17.8 MiB in (676
KiB/s), 15.0 MiB out (682
KiB/s), 25s
Xcp command : xcp copy -s3.endpoint https://<endpoint_url>:
hdfs:///user/demo s3://xcp-testing
Stats : 15,009 scanned, 15,005 copied, 15,009 indexed, 14.7 MiB
s3.data.uploaded, 15,005
s3.copied.single.key.file, 15,005 s3.copied.file
Speed : 19.2 MiB in (712 KiB/s), 17.1 MiB out (635 KiB/s)
Total Time : 27s.
Migration ID: XCP_copy_2023-06-13_11.40.26.913130
Job ID : Job_XCP_copy_2023-06-13_11.40.26.913130_copy
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
13_11.40.26.913130_copy.log
STATUS : PASSED
```

複製 **-s3.profile <name>**

使用 `s3.profile` 參數 `copy` 命令、從 AWS 認證檔案中指定用於 S3 儲存區通訊的設定檔。

語法

```
xcp copy -s3.profile <name> -s3.endpoint https://<endpoint_url>:
s3://<bucket_name>
```

顯示範例

```
root@client1 linux]# ./xcp copy -s3.endpoint https://<endpoint_url>:
hdfs:///user/test
s3://xcp-testing

xcp: WARNING: No index name has been specified, creating one with name:
XCP_copy_2023-06-
13_11.20.32.571348
Job ID: Job_XCP_copy_2023-06-13_11.20.32.571348_copy
Xcp command : xcp copy -s3.endpoint https://<endpoint_url>
hdfs:///user/test s3://xcp-testing
Stats : 8 scanned, 5 copied, 8 indexed, 5 KiB s3.data.uploaded, 5
s3.copied.single.key.file, 5 s3.copied.file
Speed : 6.78 KiB in (1.77 KiB/s), 83.6 KiB out (21.8 KiB/s)
Total Time : 3s.
Migration ID: XCP_copy_2023-06-13_11.20.32.571348
Job ID : Job_XCP_copy_2023-06-13_11.20.32.571348_copy
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
13_11.20.32.571348_copy.log
STATUS : PASSED
[root@client1 linux]# ./xcp copy -s3.endpoint https://<endpoint_url>:
hdfs:///user/demo
s3://xcp-testing

xcp: WARNING: No index name has been specified, creating one with name:
XCP_copy_2023-06-
13_11.40.26.913130
Job ID: Job_XCP_copy_2023-06-13_11.40.26.913130_copy
15,009 scanned, 1,462 copied, 9 indexed, 1.46 MiB s3.data.uploaded,
1,491
s3.copied.single.key.file, 1,491 s3.copied.file, 4.58 MiB in (933
KiB/s), 1.72 MiB out (350
KiB/s), 5s
15,009 scanned, 4,283 copied, 9 indexed, 4.20 MiB s3.data.uploaded,
4,302
s3.copied.single.key.file, 4,302 s3.copied.file, 7.70 MiB in (629
KiB/s), 4.85 MiB out (632
KiB/s), 10s
15,009 scanned, 7,323 copied, 9 indexed, 7.17 MiB s3.data.uploaded,
7,343
s3.copied.single.key.file, 7,343 s3.copied.file, 11.0 MiB in (672
KiB/s), 8.24 MiB out (681
KiB/s), 15s
15,009 scanned, 10,427 copied, 9 indexed, 10.2 MiB s3.data.uploaded,
10,439
```

```
s3.copied.single.key.file, 10,439 s3.copied.file, 14.5 MiB in (690
KiB/s), 11.7 MiB out (695
KiB/s), 20s
15,009 scanned, 13,445 copied, 9 indexed, 13.1 MiB s3.data.uploaded,
13,454
s3.copied.single.key.file, 13,454 s3.copied.file, 17.8 MiB in (676
KiB/s), 15.0 MiB out (682
KiB/s), 25s
Xcp command : xcp copy -s3.endpoint https://<endpoint_url>:
hdfs:///user/demo s3://xcp-testing
Stats : 15,009 scanned, 15,005 copied, 15,009 indexed, 14.7 MiB
s3.data.uploaded, 15,005
s3.copied.single.key.file, 15,005 s3.copied.file
Speed : 19.2 MiB in (712 KiB/s), 17.1 MiB out (635 KiB/s)
Total Time : 27s.
Migration ID: XCP_copy_2023-06-13_11.40.26.913130
Job ID : Job_XCP_copy_2023-06-13_11.40.26.913130_copy
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
13_11.40.26.913130_copy.log
STATUS : PASSED
```

複製 **-s3.noverify**

使用 `-s3.noverify` 參數 `copy` 用於覆寫 S3 儲存區通訊之 SSL 憑證預設驗證的命令。

語法

```
xcp copy -s3.noverify s3://<bucket_name>
```

顯示範例

```
[root@client1 linux]# ./xcp copy -s3.noverify hdfs://user/test s3://
bucket1

xcp: WARNING: No index name has been specified, creating one with name:
XCP_copy_2023-06-
13_10.57.41.994969
Job ID: Job_XCP_copy_2023-06-13_10.57.41.994969_copy
Xcp command : xcp copy -s3.noverify hdfs://user/test s3://bucket1
Stats : 8 scanned, 5 copied, 8 indexed, 5 KiB s3.data.uploaded, 5
s3.copied.single.key.file, 5 s3.copied.file
Speed : 6.78 KiB in (2.36 KiB/s), 83.3 KiB out (29.0 KiB/s)
Total Time : 2s.
Migration ID: XCP_copy_2023-06-13_10.57.41.994969
Job ID : Job_XCP_copy_2023-06-13_10.57.41.994969_copy
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
13_10.57.41.994969_copy.log
STATUS : PASSED
./xcp copy -s3.profile sg -s3.noverify -s3.endpoint
https://<endpoint_url>: hdfs:///user/demo s3://bucket1

xcp: WARNING: No index name has been specified, creating one with name:
XCP_copy_2023-06-
13_11.26.56.143287
Job ID: Job_XCP_copy_2023-06-13_11.26.56.143287_copy
1 scanned, 9.95 KiB in (1.99 KiB/s), 12.9 KiB out (2.58 KiB/s), 5s
15,009 scanned, 1,555 copied, 9 indexed, 1.54 MiB s3.data.uploaded,
1,572
s3.copied.single.key.file, 1,572 s3.copied.file, 4.68 MiB in (951
KiB/s), 1.81 MiB out (365
KiB/s), 10s
15,009 scanned, 4,546 copied, 9 indexed, 4.46 MiB s3.data.uploaded,
4,572
s3.copied.single.key.file, 4,572 s3.copied.file, 7.95 MiB in (660
KiB/s), 5.15 MiB out (674
KiB/s), 15s
15,009 scanned, 7,702 copied, 9 indexed, 7.53 MiB s3.data.uploaded,
7,710
s3.copied.single.key.file, 7,710 s3.copied.file, 11.5 MiB in (710
KiB/s), 8.65 MiB out (707
KiB/s), 20s
15,009 scanned, 10,653 copied, 9 indexed, 10.4 MiB s3.data.uploaded,
10,669
s3.copied.single.key.file, 10,669 s3.copied.file, 14.7 MiB in (661
KiB/s), 11.9 MiB out (670
```

```
KiB/s), 25s
15,009 scanned, 13,422 copied, 9 indexed, 13.1 MiB s3.data.uploaded,
13,428
s3.copied.single.key.file, 13,428 s3.copied.file, 17.8 MiB in (627
KiB/s), 15.0 MiB out (627
KiB/s), 30s
Xcp command : xcp copy -s3.profile sg -s3.noverify -s3.endpoint
https://<endpoint_url>: hdfs:///user/demo s3://bucket1
Stats : 15,009 scanned, 15,005 copied, 15,009 indexed, 14.7 MiB
s3.data.uploaded, 15,005
s3.copied.single.key.file, 15,005 s3.copied.file
Speed : 19.2 MiB in (609 KiB/s), 17.1 MiB out (543 KiB/s)
Total Time : 32s.
Migration ID: XCP_copy_2023-06-13_11.26.56.143287
Job ID : Job_XCP_copy_2023-06-13_11.26.56.143287_copy
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
13_11.26.56.143287_copy.log
STATUS : PASSED
```

同步

檢視 XCP 的說明、參數和範例 `sync` 命令、包括何時執行 `sync` 命令可搭配使用 `dry run` 選項。

同步

XCP NFS `sync` 命令會使用目錄索引標籤名稱或先前複製作業的編號來掃描來源 NFS 目錄的變更和修改。對來源的遞增變更會複製並套用至目標目錄。同步作業之後、舊型目錄索引編號會以新的索引編號取代。



在同步作業期間、修改過的檔案和目錄會再次複製到目的地 NFSv3 匯出。

語法

```
xcp sync -id <catalog_name>
```



◦ `-id <catalog_name>` 參數是必要的 `sync` 命令。

顯示範例

```
[root@localhost linux]# ./xcp sync -id autoname_copy_2020-03-04_01.10.22.338436

xcp: Index: {source: <IP address or hostname of NFS server>:/source_vol, target: <IP address of destination NFS server>:/dest_vol}
Xcp command : xcp sync -id autoname_copy_2020-03-04_01.10.22.338436
0 scanned, 0 copied, 0 modification, 0 new item, 0 delete item, 0 error
Speed : 26.4 KiB in (27.6 KiB/s), 22.7 KiB out (23.7 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

下表列出 `sync` 參數及其說明。

參數	說明
<<sync_id,同步 -id ; catalog_name>	指定先前複本索引的目錄名稱。這是的必要參數 <code>sync</code> 命令。
同步 -nonames	從檔案清單和報告中排除使用者和群組名稱。
<<sync_bs,同步 -BS ; n[k]>	指定讀寫區塊大小（預設值：64K）。
<<sync_dircount,同步 -dircount ; n[k]>	指定讀取目錄時的要求大小。
<<sync_parallel,同步 -parallel ; n>	指定並行批次處理程序的最大數目（預設值：7）。
同步 -preserve-atime	將來源上的所有檔案還原至上次存取的日期。

同步 `-nonames`

使用 `-nonames` 參數 `sync` 從檔案清單或報告中排除使用者和群組名稱的命令。

語法

```
xcp sync -id <catalog_name> -nonames
```

顯示範例

```
[root@localhost linux]# ./xcp sync -id ID001 -nonames

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync -id ID001 -nonames
0 scanned, 0 copied, 0 modification, 0 new item, 0 delete item, 0 error
Speed : 26.4 KiB in (22.2 KiB/s), 22.3 KiB out (18.8 KiB/s)
Total Time : 1s.
STATUS : PASSED
```

同步 **-BS <n[k]>**

使用 `-bs <n[k]>` 參數 `sync` 指定讀寫區塊大小的命令。預設區塊大小為 64k。

語法

```
xcp sync -id <catalog_name> -bs <n[k]>
```

顯示範例

```
[root@localhost linux]# ./xcp sync -id ID001 -bs 32k

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync -id ID001 -bs 32k
0 scanned, 0 copied, 0 modification, 0 new item, 0 delete item, 0 error
Speed : 25.3 KiB in (20.4 KiB/s), 21.0 KiB out (16.9 KiB/s)
Total Time : 1s.
STATUS : PASSED
```

同步 **-dircount <n[k]>**

使用 `-dircount <n[k]>` 參數 `sync` 用於指定讀取目錄時的要求大小的命令。預設值為 64k。

語法

```
xcp sync -id <catalog_name> -dircount <n[k]>
```

顯示範例

```
[root@localhost linux]# ./xcp sync -id ID001 -dircount 32k

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync -id ID001 -dircount 32k
0 scanned, 0 copied, 0 modification, 0 new item, 0 delete item, 0 error
Speed : 25.3 KiB in (27.8 KiB/s), 21.0 KiB out (23.0 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

同步 - 平行

使用 `-parallel` 參數 `sync` 命令以指定並行批次處理程序的最大數目。預設值為 7。

語法

```
xcp sync -id <catalog_name> -parallel <n>
```

顯示範例

```
[root@localhost linux]# ./xcp sync -id ID001 -parallel 4

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync -id ID001 -parallel 4
0 scanned, 0 copied, 0 modification, 0 new item, 0 delete item, 0 error
Speed : 25.3 KiB in (20.6 KiB/s), 21.0 KiB out (17.1 KiB/s)
Total Time : 1s.
STATUS : PASSED
```

-preserve-atime

使用 `-preserve-atime` 參數 `sync` 命令將所有檔案還原至來源上上次存取的日期。

- `-preserve-atime` 選項會將存取時間重設為 XCP 讀取作業之前設定的原始值。

語法

```
xcp sync -preserve-atime -id <catalog_name>
```

顯示範例

```
[root@client-1 linux]# ./xcp sync -preserve-atime -id XCP_copy_2022-06-30_14.22.53.742272

xcp: Job ID: Job_XCP_copy_2022-06-30_14.22.53.742272_2022-06-30_14.27.28.660165_sync
xcp: Index: {source: 101.10.10.10:/source_vol, target: 10.201.201.20:/dest_vol}
xcp: diff 'XCP_copy_2022-06-30_14.22.53.742272': 55 reviewed, 55 checked at source, 1 modification, 54 reindexed, 23.3 KiB in (15.7 KiB/s), 25.1 KiB out (16.9 KiB/s), 1s.
xcp: sync 'XCP_copy_2022-06-30_14.22.53.742272': Starting search pass for 1 modified directory...
xcp: find changes: 55 reviewed, 55 checked at source, 1 modification, 55 re-reviewed, 54 reindexed, 28.0 KiB in (18.4 KiB/s), 25.3 KiB out (16.6 KiB/s), 1s.
xcp: sync phase 2: Rereading the 1 modified directory...
xcp: sync phase 2: 55 reviewed, 55 checked at source, 1 modification, 55 re-reviewed, 1 new dir, 54 reindexed, 29.2 KiB in (19.0 KiB/s), 25.6 KiB out (16.7 KiB/s), 1s.
xcp: sync 'XCP_copy_2022-06-30_14.22.53.742272': Deep scanning the 1 modified directory...
xcp: sync 'XCP_copy_2022-06-30_14.22.53.742272': 58 scanned, 55 copied, 56 indexed, 55 reviewed, 55 checked at source, 1 modification, 55 re-reviewed, 1 new dir, 54 reindexed, 1.28 MiB in (739 KiB/s), 1.27 MiB out (732 KiB/s), 1s.
Xcp command : xcp sync -preserve-atime -id XCP_copy_2022-06-30_14.22.53.742272
Stats : 58 scanned, 55 copied, 56 indexed, 55 reviewed, 55 checked at source, 1 modification, 55 re-reviewed, 1 new dir, 54 reindexed
Speed : 1.29 MiB in (718 KiB/s), 1.35 MiB out (755 KiB/s)
Total Time : 1s.
Migration ID: XCP_copy_2022-06-30_14.22.53.742272
Job ID : Job_XCP_copy_2022-06-30_14.22.53.742272_2022-06-30_14.27.28.660165_sync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2022-06-30_14.22.53.742272_2022-06-30_14.27.28.660165_sync.log
STATUS : PASSED
```

同步試跑

◦ `sync` 命令 `dry-run` 選項會使用複本作業的先前目錄索引編號、尋找對來源 NFS 目錄所做的變更或修改。此命令也會偵測自上一次複製作業之後、新增、移動、刪除或重新命名的檔案和目錄。命令會報告來源變更、但不會將其套用至目標。

語法

```
xcp sync dry-run -id <catalog_name>
```



◦ `-id <catalog_name>` 參數是必要的 `sync dry-run` 命令選項。

顯示範例

```
[root@localhost linux]# ./xcp sync dry-run -id ID001

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync dry-run -id ID001
0 matched, 0 error
Speed : 15.2 KiB in (46.5 KiB/s), 5.48 KiB out (16.7 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

下表列出 `sync dry-run` 參數及其說明。

參數	說明
<<sync_dry_run_id,同步演習 -id ; catalog_name>	指定先前複本索引的目錄名稱。這是的必要參數 <code>sync</code> 命令。
同步乾跑 - 統計資料	對修改過的目錄執行深度掃描、並報告所有內容全新。
同步乾跑 -l	列印變更檔案和目錄的詳細資料。
同步演習 -nonames	從檔案清單和報告中排除使用者和群組名稱。
<<sync_dry_run_dircount,同步乾燥執行 -dircount ; n[k]>	指定讀取目錄時的要求大小。
<<sync_dry_run_parallel,同步乾運行並行 () ;	指定並行批次處理程序的最大數目（預設值：7）。

同步演習 `-id <catalog_name>`

使用 `-id <catalog_name>` 參數 `sync dry-run` 指定先前複本索引的目錄名稱。



- `-id <catalog_name>` 參數是必要的 `sync dry-run` 命令選項。

語法

```
xcp sync dry-run -id <catalog_name>
```

顯示範例

```
[root@localhost linux]# ./xcp sync dry-run -id ID001

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync dry-run -id ID001
0 matched, 0 error
Speed : 15.2 KiB in (21.7 KiB/s), 5.48 KiB out (7.81 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

同步乾跑 - 統計資料

使用 `-stats` 參數 `sync dry-run` 對修改過的目錄執行深度掃描、並報告所有新內容。

語法

```
xcp sync dry-run -id <catalog_name> -stats
```

顯示範例

```
[root@localhost linux]# ./xcp sync dry-run -id ID001 -stats

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
4,895 reviewed, 43,163 checked at source, 12.8 MiB in (2.54 MiB/s),
5.49 MiB out (1.09 MiB/s),
5s
4,895 reviewed, 101,396 checked at source, 19.2 MiB in (1.29 MiB/s),
12.8 MiB out (1.47 MiB/s),
10s
Xcp command : xcp sync dry-run -id ID001 -stats
0 matched, 0 error
Speed : 22.9 MiB in (1.74 MiB/s), 17.0 MiB out (1.29 MiB/s)
Total Time : 13s.
STATUS : PASSED
```

同步乾跑 -l

使用 `-l` 參數 `sync dry-run` 可打印有關更改的文件和目錄的詳細信息。

語法

```
xcp sync dry-run -id <catalog_name> -l
```

顯示範例

```
[root@localhost linux]# ./xcp sync dry-run -id ID001 -l

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync dry-run -id ID001 -l
0 matched, 0 error
Speed : 15.2 KiB in (13.6 KiB/s), 5.48 KiB out (4.88 KiB/s)
Total Time : 1s.
STATUS : PASSED
```


同步演習 -nonames

使用 `-nonames` 參數 `sync dry-run` 從檔案清單或報告中排除使用者和群組名稱。

語法

```
xcp sync dry-run -id <catalog_name> -nonames
```

顯示範例

```
[root@localhost linux]# ./xcp sync dry-run -id ID001 -nonames

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync dry-run -id ID001 -nonames
0 matched, 0 error
Speed : 15.2 KiB in (15.8 KiB/s), 5.48 KiB out (5.70 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

SYNC DRY -dircount <n[k]>

使用 `-dircount <n[k]>` 參數 `sync dry-run` 指定讀取目錄時的要求大小。預設值為 64k。

語法

```
xcp sync dry-run -id <catalog_name> -dircount <n[k]>
```

顯示範例

```
[root@localhost linux]# ./xcp sync dry-run -id ID001 -dircount 32k

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync dry-run -id ID001 -dircount 32k
0 matched, 0 error
Speed : 15.2 KiB in (32.5 KiB/s), 5.48 KiB out (11.7 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

同步乾跑 - 平行

使用 `-parallel` 參數 `sync dry-run` 指定並行批次處理程序的最大數目。預設值為 7。

語法

```
xcp sync dry-run -id <catalog_name> -parallel <n>
```

顯示範例

```
[root@localhost linux]# ./xcp sync dry-run -id ID001 -parallel 4

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
Xcp command : xcp sync dry-run -id ID001 -parallel 4
0 matched, 0 error
Speed : 15.2 KiB in (25.4 KiB/s), 5.48 KiB out (9.13 KiB/s)
Total Time : 0s.
STATUS : PASSED
```

繼續

XCP NFS `resume` 命令會指定目錄索引名稱或編號，以重新啟動中斷的複本作業。目錄索引名稱或上一個複本作業的編號位於中 `<catalog path>:/catalog/indexes` 目錄。

語法

```
xcp resume -id <catalog_name>
```



- `-id <catalog_name>` 參數是必要的 `resume` 命令。

顯示範例

```
[root@localhost linux]# ./xcp resume -id ID001

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
xcp: resume 'ID001': Reviewing the incomplete index...
xcp: diff 'ID001': Found 652 completed directories and 31 in progress
4,658 reviewed, 362 KiB in (258 KiB/s), 7.66 KiB out (5.46 KiB/s), 1s.
xcp: resume 'ID001': Starting second pass for the in-progress
directories...
xcp: resume 'ID001': Resuming the in-progress directories...
xcp: resume 'ID001': Resumed command: copy {-newid: u'ID001'}
xcp: resume 'ID001': Current options: {-id: 'ID001'}
xcp: resume 'ID001': Merged options: {-id: 'ID001', -newid: u'ID001'}
xcp: resume 'ID001': Values marked with a * include operations before
resume
28,866
MiB/s),
scanned*,
5s 9,565 copied*, 4,658 indexed*, 108 MiB in (21.6 MiB/s), 100.0 MiB
out (20.0
44,761
MiB/s),
44,761
scanned*,
11s
scanned*,
16,440
20,795
copied*,
copied*,
4,658 indexed*, 206 MiB in (19.3 MiB/s), 191 MiB out (17.9
4,658 indexed*, 362 MiB in (31.3 MiB/s), 345 MiB out (30.8
MiB/s),
44,761
16s
scanned*, 25,985 copied*, 4,658 indexed*, 488 MiB in (25.2 MiB/s), 465
MiB out (24.0
MiB/s),
44,761
21s
scanned*, 31,044 copied*, 4,658 indexed*, 578 MiB in (17.9 MiB/s), 558
MiB out (18.6
```

MiB/s),
54,838
26s
scanned*, 36,980 copied*, 14,276 indexed*, 679 MiB in (20.2 MiB/s), 657
MiB out (19.8
MiB/s),
67,123
31s
scanned*, 42,485 copied*, 29,160 indexed*, 742 MiB in (12.5 MiB/s), 720
MiB out (12.4
MiB/s),
79,681
36s
scanned*, 49,863 copied*, 39,227 indexed*, 801 MiB in (11.8 MiB/s), 779
MiB out (11.7
MiB/s),
79,681
41s
scanned*, 56,273 copied*, 39,227 indexed*, 854 MiB in (10.6 MiB/s), 832
MiB out (10.6
MiB/s),
79,681
46s
scanned*, 62,593 copied*, 39,227 indexed*, 906 MiB in (10.2 MiB/s), 881
MiB out (9.70
MiB/s),
84,577
51s
scanned*, 68,000 copied*, 44,047 indexed*, 976 MiB in (14.0 MiB/s), 951
MiB out (14.1
MiB/s),
86,737
56s
scanned*, 72,738 copied*, 49,071 indexed*, 1.04 GiB in (17.8 MiB/s),
1.01 GiB out (17.5
MiB/s),
89,690
1m1s
scanned*, 77,440 copied*, 54,110 indexed*, 1.14 GiB in (20.5 MiB/s),
1.11 GiB out (20.1
MiB/s), 1m6s
110,311 scanned*, 84,497 copied*, 74,158 indexed*, 1.24 GiB in (20.3
MiB/s), 1.21 GiB out (20.4
MiB/s), 1m11s
114,726 scanned*, 91,285 copied*, 74,158 indexed*, 1.33 GiB in (17.9
MiB/s), 1.30 GiB out (17.6

```

MiB/s), 1m16s
114,726 scanned*, 97,016 copied*, 74,158 indexed*, 1.46 GiB in (26.6
MiB/s), 1.43 GiB out (26.6
MiB/s), 1m21s
118,743 scanned*, 100,577 copied*, 79,331 indexed*, 1.65 GiB in (40.1
MiB/s), 1.62 GiB out (39.3
MiB/s), 1m26s
122,180 scanned*, 106,572 copied*, 84,217 indexed*, 1.77 GiB in (24.7
MiB/s), 1.74 GiB out (25.0
MiB/s), 1m31s
124,724 scanned*, 111,727 copied*, 84,217 indexed*, 1.89 GiB in (22.8
MiB/s), 1.86 GiB out (22.5
MiB/s), 1m36s
128,268 scanned*, 114,686 copied*, 99,203 indexed*, 1.99 GiB in (21.1
MiB/s), 1.96 GiB out (21.2
MiB/s), 1m41s
134,630 scanned*, 118,217 copied*, 104,317 indexed*, 2.06 GiB in (13.8
MiB/s), 2.03 GiB out
(13.7 MiB/s), 1m46s
134,630 scanned*, 121,742 copied*, 109,417 indexed*, 2.10 GiB in (9.02
MiB/s), 2.07 GiB out
(9.30 MiB/s), 1m51s
134,630 scanned*, 126,057 copied*, 109,417 indexed*, 2.20 GiB in (21.0
MiB/s), 2.17 GiB out
(21.0 MiB/s), 1m56s
134,630 scanned*, 130,034 copied*, 114,312 indexed*, 2.36 GiB in (32.1
MiB/s), 2.33 GiBout
(31.8 MiB/s), 2m1s
Xcp command : xcp resume -id ID001
134,630 scanned*, 134,630 copied*, 0 modification, 0 new item, 0 delete
item, 0 error
Speed : 2.40 GiB in (19.7 MiB/s), 2.37 GiB out (19.5 MiB/s)
Total Time : 2m4s.
STATUS : PASSED

```

下表列出 `resume` 參數及其說明。

參數	說明
<<resume_id,繼續 -id ; catalog_name>	指定先前複本索引的目錄名稱。這是 RESUME 命令所需的參數。
<<resume_bs,繼續 -bs ; n[k]>	指定讀寫區塊大小（預設值：64K）。
<<resume_dircount,繼續 -dircount ; n[k]>	指定讀取目錄時的要求大小。
<<resume_parallel,繼續 -parallel ; n>	指定並行批次處理程序的最大數目（預設值：7）。

參數	說明
恢復 - 保留 - 保留	將來源上的所有檔案還原至上次存取的日期。
繼續 -s3.insecure	提供選項、可在 S3 Bucket 通訊中使用 HTTP 而非 HTTPS。
<<resume_s3_endpoint,繼續 -S3.Endpoint ; S3_Endpoint URL>	以 S3 Bucket 通訊的指定 URL 覆寫預設的 Amazon Web Services (AWS) 端點 URL。
<<resume_s3_profile,繼續 -s3.profile	從 AWS 認證檔案指定用於 S3 儲存區通訊的設定檔。
繼續 -s3.noverify	覆寫 S3 Bucket 通訊的 SSL 認證預設驗證。

恢復 - BS <n[k]>

使用 `-bs <n[k]>` 參數 `resume` 指定讀寫區塊大小的命令。預設區塊大小為 64k。

語法

```
xcp resume -id <catalog_name> -bs <n[k]>
```

顯示範例

```
[root@localhost linux]# ./xcp resume -id ID001 -bs 32k

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
xcp: resume 'ID001': Reviewing the incomplete index...
xcp: diff 'ID001': Found 2,360 completed directories and 152 in
progress
19,440 reviewed, 1.28 MiB in (898 KiB/s), 9.77 KiB out (6.71 KiB/s),
1s.
xcp: resume 'ID001': Starting second pass for the in-progress
directories...
xcp: resume 'ID001': Resuming the in-progress directories...
xcp: resume 'ID001': Resumed command: copy {-newid: u'ID001'}
xcp: resume 'ID001': Current options: {-bs: '32k', -id: 'ID001'}
xcp: resume 'ID001': Merged options: {-bs: '32k', -id: 'ID001', -newid:
u'ID001'}
xcp: resume 'ID001': Values marked with a * include operations before
resume
44,242
MiB/s),
scanned*,
5s 24,132 copied*, 19,440 indexed*, 36.7 MiB in (7.34 MiB/s), 30.6 MiB
out (6.12
59,558
MiB/s),
59,558
scanned*,
10s
scanned*,
30,698
35,234
copied*,
copied*,
19,440
19,440
indexed*,
indexed*,
142
203
MiB
MiB
in
```

```
in
(20.9 MiB/s), 125
(12.1 MiB/s), 187
MiB
MiB
out
out
(18.8
(12.2
MiB/s),
59,558
15s
scanned*, 40,813 copied*, 19,440 indexed*, 286 MiB in (16.5 MiB/s), 269
MiB out (16.5
MiB/s),
65,126
20s
scanned*, 46,317 copied*, 24,106 indexed*, 401 MiB in (22.9 MiB/s), 382
MiB out (22.5
MiB/s),
69,214
25s
scanned*, 53,034 copied*, 29,031 indexed*, 496 MiB in (19.0 MiB/s), 476
MiB out (18.7
MiB/s),
85,438
30s
scanned*, 60,627 copied*, 53,819 indexed*, 591 MiB in (18.9 MiB/s), 569
MiB out (18.5
MiB/s),
94,647
35s
scanned*, 66,948 copied*, 53,819 indexed*, 700 MiB in (21.6 MiB/s), 679
MiB out (21.9
MiB/s),
94,647
40s
scanned*, 73,632 copied*, 53,819 indexed*, 783 MiB in (16.5 MiB/s), 761
MiB out (16.4
MiB/s),
99,683
45s
scanned*, 80,541 copied*, 58,962 indexed*, 849 MiB in (13.0 MiB/s), 824
MiB out (12.4
MiB/s), 50s
99,683
```



```
MiB/s),
scanned*,
55s
84,911 copied*, 58,962 indexed*, 1013 MiB in (32.8 MiB/s), 991 MiB out
(33.2
101,667 scanned*, 91,386 copied*, 73,849 indexed*, 1.06 GiB in (15.4
MiB/s), 1.04 GiB out (15.4
MiB/s), 1m0s
118,251 scanned*, 98,413 copied*, 89,168 indexed*, 1.13 GiB in (14.0
MiB/s), 1.11 GiB out (13.3
MiB/s), 1m5s
124,672 scanned*, 104,134 copied*, 89,168 indexed*, 1.25 GiB in (23.9
MiB/s), 1.22 GiB out (23.2
MiB/s), 1m10s
130,171 scanned*, 109,594 copied*, 94,016 indexed*, 1.38 GiB in (25.7
MiB/s), 1.35 GiB out (25.5
MiB/s), 1m15s
134,574 scanned*, 113,798 copied*, 94,016 indexed*, 1.52 GiB in (28.6
MiB/s), 1.48 GiB out (28.2
MiB/s), 1m20s
134,574 scanned*, 118,078 copied*, 94,016 indexed*, 1.64 GiB in (24.6
MiB/s), 1.61 GiB out (25.1
MiB/s), 1m25s
134,574 scanned*, 121,502 copied*, 94,016 indexed*, 1.80 GiB in (34.0
MiB/s), 1.77 GiB out (33.0
MiB/s), 1m30s
134,630 scanned*, 126,147 copied*, 104,150 indexed*, 1.88 GiB in (16.2
MiB/s), 1.86 GiB out
(17.5 MiB/s), 1m35s
134,630 scanned*, 131,830 copied*, 119,455 indexed*, 1.95 GiB in (13.6
MiB/s), 1.92 GiB out
(13.5 MiB/s), 1m41s
Xcp command : xcp resume -id ID001 -bs 32k
134,630 scanned*, 134,630 copied*, 0 modification, 0 new item, 0 delete
item, 0 error
Speed : 2.02 GiB in (19.9 MiB/s), 1.99 GiB out (19.7 MiB/s)
Total Time : 1m43s.
STATUS : PASSED
```

RESUME -dircount <n[k]>

使用 `-dircount <n[k]>` 參數 `resume` 用於指定讀取目錄時的要求大小的命令。預設值為 64k。

語法

```
xcp resume -id <catalog_name> -dircount <n[k]>
```

顯示範例

```
root@localhost linux]# ./xcp resume -id ID001 -dircount 32k

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
xcp: resume 'ID001': Reviewing the incomplete index...
xcp: diff 'ID001': Found 4,582 completed directories and 238 in
progress
39,520 reviewed, 2.47 MiB in (1.49 MiB/s), 12.6 KiB out (7.62 KiB/s),
1s.
xcp: resume 'ID001': Starting second pass for the in-progress
directories...
xcp: resume 'ID001': Resuming the in-progress directories...
xcp: resume 'ID001': Resumed command: copy {-newid: u'ID001'}
xcp: resume 'ID001': Current options: {-dircount: '32k', -id: 'ID001'}
xcp: resume 'ID001': Merged options: {-dircount: '32k', -id: 'ID001',
-newid: u'ID001'}
xcp: resume 'ID001': Values marked with a * include operations before
resume
76,626 scanned*, 43,825 copied*, 39,520 indexed*, 31.7 MiB in (6.33
MiB/s), 23.0 MiB out (4.60
MiB/s), 5s
79,751 scanned*, 49,942 copied*, 39,520 indexed*, 140 MiB in (21.7
MiB/s), 131 MiB out (21.5
MiB/s), 10s
79,751 scanned*, 55,901 copied*, 39,520 indexed*, 234 MiB in (18.8
MiB/s), 223 MiB out (18.3
MiB/s), 15s
79,751 scanned*, 61,764 copied*, 39,520 indexed*, 325 MiB in (18.0
MiB/s), 313 MiB out (17.9
MiB/s), 20s
84,791 scanned*, 68,129 copied*, 44,510 indexed*, 397 MiB in (14.3
MiB/s), 384 MiB out (14.2
MiB/s), 25s
94,698 scanned*, 74,741 copied*, 54,039 indexed*, 485 MiB in (17.4
MiB/s), 473 MiB out (17.8
MiB/s), 30s
99,734 scanned*, 80,110 copied*, 59,044 indexed*, 605 MiB in (24.1
MiB/s), 591 MiB out (23.7
MiB/s), 35s
104,773 scanned*, 86,288 copied*, 69,005 indexed*, 716 MiB in (22.2
MiB/s), 703 MiB out (22.3
MiB/s), 40s
```

```
110,076 scanned*, 93,265 copied*, 79,102 indexed*, 795 MiB in (15.8
MiB/s), 781 MiB out (15.5
MiB/s), 45s
121,341 scanned*, 100,077 copied*, 84,096 indexed*, 897 MiB in (20.4
MiB/s), 881 MiB out (19.9
MiB/s), 50s
125,032 scanned*, 105,712 copied*, 89,132 indexed*, 1003 MiB in (21.2
MiB/s), 985 MiB out (20.7
MiB/s), 55s
129,548 scanned*, 110,382 copied*, 89,132 indexed*, 1.14 GiB in (32.0
MiB/s), 1.12 GiB out (32.1
MiB/s), 1m0s
131,976 scanned*, 115,158 copied*, 94,221 indexed*, 1.23 GiB in (19.2
MiB/s), 1.21 GiB out (18.3
MiB/s), 1m5s
134,430 scanned*, 119,161 copied*, 94,221 indexed*, 1.37 GiB in (27.8
MiB/s), 1.35 GiB out (28.3
MiB/s), 1m10s
134,630 scanned*, 125,013 copied*, 109,402 indexed*, 1.47 GiB in (21.2
MiB/s), 1.45 GiB out
(21.4 MiB/s), 1m15s
134,630 scanned*, 129,301 copied*, 114,532 indexed*, 1.61 GiB in (29.4
MiB/s), 1.60 GiB out
(29.8 MiB/s), 1m20s
134,630 scanned*, 132,546 copied*, 124,445 indexed*, 1.69 GiB in (14.8
MiB/s), 1.67 GiB out
(15.0 MiB/s), 1m25s
Xcp command : xcp resume -id ID001 -dircount 32k
134,630 scanned*, 134,630 copied*, 0 modification, 0 new item, 0 delete
item, 0 error
Speed : 1.70 GiB in (19.7 MiB/s), 1.69 GiB out (19.5 MiB/s)
Total Time : 1m28s.
STATUS : PASSED
```

恢復平行 <n>

使用 `-parallel <n>` 參數 `resume` 命令以指定並行批次處理程序的最大數目。預設值為 7。

語法

```
xcp resume -id <catalog_name> -parallel <n>
```

顯示範例

```
[root@localhost linux]# ./xcp resume -id ID001 -parallel 3

xcp: Index: {source: <IP address or hostname of NFS
server>:/source_vol, target: <IP address of
destination NFS server>:/dest_vol}
xcp: resume 'ID001': Reviewing the incomplete index...
xcp: diff 'ID001': Found 2,347 completed directories and 149 in
progress
19,399 reviewed, 1.28 MiB in (659 KiB/s), 9.77 KiB out (4.93 KiB/s),
1s.
xcp: resume 'ID001': Starting second pass for the in-progress
directories...
xcp: resume 'ID001': Resuming the in-progress directories...
xcp: resume 'ID001': Resumed command: copy {-newid: u'ID001'}
xcp: resume 'ID001': Current options: {-id: 'ID001', -parallel: 3}
xcp: resume 'ID001': Merged options: {-id: 'ID001', -newid: u'ID001',
-parallel: 3}
xcp: resume 'ID001': Values marked with a * include operations before
resume
39,610 scanned*, 23,642 copied*, 19,399 indexed*, 56.3 MiB in (11.2
MiB/s), 45.8 MiB out (9.15
MiB/s), 5s
39,610 scanned*, 28,980 copied*, 19,399 indexed*, 145 MiB in (17.6
MiB/s), 134 MiB out (17.6
MiB/s), 10s
48,111 scanned*, 34,782 copied*, 34,042 indexed*, 223 MiB in (15.8
MiB/s), 212 MiB out (15.7
MiB/s), 15s
55,412 scanned*, 40,468 copied*, 34,042 indexed*, 317 MiB in (18.4
MiB/s), 304 MiB out (18.1
MiB/s), 21s
59,639 scanned*, 46,980 copied*, 39,032 indexed*, 390 MiB in (14.6
MiB/s), 377 MiB out (14.5
MiB/s), 26s
69,520 scanned*, 55,251 copied*, 49,006 indexed*, 438 MiB in (9.59
MiB/s), 423 MiB out (9.21
MiB/s), 31s
78,596 scanned*, 62,054 copied*, 59,001 indexed*, 492 MiB in (10.7
MiB/s), 476 MiB out (10.6
MiB/s), 36s
79,673 scanned*, 68,163 copied*, 59,001 indexed*, 610 MiB in (23.5
MiB/s), 593 MiB out (23.5
MiB/s), 41s
```

```

84,600 scanned*, 74,238 copied*, 64,150 indexed*, 723 MiB in (22.5
MiB/s), 705 MiB out (22.3
MiB/s), 46s
94,525 scanned*, 80,754 copied*, 74,157 indexed*, 807 MiB in (16.7
MiB/s), 788 MiB out (16.4
MiB/s), 51s
94,525 scanned*, 85,119 copied*, 74,157 indexed*, 1007 MiB in (39.9
MiB/s), 988 MiB out (39.9
MiB/s), 56s
09,514 scanned*, 93,474 copied*, 89,192 indexed*, 1.08 GiB in (20.7
MiB/s), 1.06 GiB out (20.2
MiB/s), 1m1s
111,953 scanned*, 100,639 copied*, 94,248 indexed*, 1.18 GiB in (19.3
MiB/s), 1.16 GiB out (19.2
MiB/s), 1m6s
114,605 scanned*, 105,958 copied*, 94,248 indexed*, 1.36 GiB in (36.8
MiB/s), 1.34 GiB out (36.6
MiB/s), 1m11s
124,531 scanned*, 112,340 copied*, 104,275 indexed*, 1.51 GiB in (29.8
MiB/s), 1.48 GiB out
(29.4 MiB/s), 1m16s
129,694 scanned*, 117,218 copied*, 109,236 indexed*, 1.67 GiB in (33.2
MiB/s), 1.65 GiB out
(33.1 MiB/s), 1m21s
131,753 scanned*, 123,850 copied*, 114,358 indexed*, 1.80 GiB in (25.9
MiB/s), 1.77 GiB out
(25.9 MiB/s), 1m26s
134,630 scanned*, 130,829 copied*, 124,437 indexed*, 1.85 GiB in (11.2
MiB/s), 1.83 GiB out
(11.2 MiB/s), 1m31s
Xcp command : xcp resume -id ID001 -parallel 3
134,630 scanned*, 134,630 copied*, 0 modification, 0 new item, 0 delete
item, 0 error
Speed : 2.02 GiB in (21.6 MiB/s), 2.00 GiB out (21.3 MiB/s)
Total Time : 1m35s.
STATUS : PASSED

```

恢復 - 保留 - 保留

使用 `-preserve-atime` 參數 `resume` 命令將所有檔案還原至來源上上次存取日期。

- `-preserve-atime` 參數會將存取時間重設為 XCP 讀取作業之前設定的原始值。

語法

```
xcp resume -id <catalog_name> -preserve-atime
```

顯示範例

```
root@client1 linux]# ./xcp resume -preserve-atime -id XCP_copy_2022-06-30_14.22.53.742272

xcp: Job ID: Job_XCP_copy_2022-06-30_14.22.53.742272_2022-06-30_14.37.07.746208_resume
xcp: Index: {source: 101.10.10.12:/source_vol, target: 10.102.102.70:/dest_vol}
xcp: Tune: Previous operation on id 'XCP_copy_2022-06-30_14.22.53.742272' already completed;
nothing to resume
0 in (0/s), 0 out (0/s), 6s
Xcp command : xcp resume -preserve-atime -id XCP_copy_2022-06-30_14.22.53.742272
Stats :
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 6s.
Migration ID: XCP_copy_2022-06-30_14.22.53.742272
Job ID : Job_XCP_copy_2022-06-30_14.22.53.742272_2022-06-30_14.37.07.746208_resume
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2022-06-30_14.22.53.742272_2022-06-30_14.37.07.746208_resume.log
STATUS : PASSED
```

繼續 **-s3.insecure**

使用 `-s3.insecure` 參數 `resume` 命令使用 HTTP 取代 HTTPS 進行 S3 儲存區通訊。



如果是 `-s3.insecure` 參數用於 `copy` 命令、在恢復時會忽略。您必須指定 `-s3.insecure` 再次使用恢復選項。

語法

```
xcp resume -s3.insecure -id <catalog_name>
```

顯示範例

```
root@client1 linux]# ./xcp resume -s3.insecure -id XCP_copy_2023-06-08_10.31.47.381883

Job ID: Job_XCP_copy_2023-06-08_10.31.47.381883_2023-06-08_10.34.02.964143_resume
Index: {source: 1 hdfs:///user/demo, target: s3://bucket1/}
Reviewing the incomplete index...
Found 0 completed directories and 2 in progress
4,009 reviewed, 88.7 KiB in (76.1 KiB/s), 332 out (285/s), 1s.
4,009 reviewed, 90.9 KiB in (77.6 KiB/s), 2.44 KiB out (2.08 KiB/s), 1s.
Starting second pass for the in-progress directories...
4,009 reviewed, 4,009 re-reviewed, 179 KiB in (130 KiB/s), 2.72 KiB out (1.98 KiB/s), 1s.
9,008 scanned*, 4,540 copied*, 4,009 indexed*, 534 KiB
s3.data.uploaded, 534
s3.copied.single.key.file, 534 s3.copied.file, 2.28 MiB in (464 KiB/s), 631 KiB out (126 KiB/s), 5s
9,008 scanned*, 5,551 copied*, 4,009 indexed*, 1.51 MiB
s3.data.uploaded, 1,544
s3.copied.single.key.file, 1,544 s3.copied.file, 3.38 MiB in (222 KiB/s), 1.74 MiB out (226 KiB/s), 10s
9,008 scanned*, 6,596 copied*, 4,009 indexed*, 2.53 MiB
s3.data.uploaded, 2,595
s3.copied.single.key.file, 2,595 s3.copied.file, 4.55 MiB in (235 KiB/s), 2.91 MiB out (236 KiB/s), 15s
9,008 scanned*, 7,658 copied*, 4,009 indexed*, 3.57 MiB
s3.data.uploaded, 3,652
s3.copied.single.key.file, 3,652 s3.copied.file, 5.71 MiB in (234 KiB/s), 4.09 MiB out (238 KiB/s), 20s
9,008 scanned*, 8,711 copied*, 4,009 indexed*, 4.60 MiB
s3.data.uploaded, 4,706
s3.copied.single.key.file, 4,706 s3.copied.file, 6.88 MiB in (235 KiB/s), 5.26 MiB out (236 KiB/s), 25s
Xcp command : xcp resume -s3.insecure -id XCP_copy_2023-06-08_10.31.47.381883
Stats : 9,008 scanned*, 9,006 copied*, 9,009 indexed*, 4.88 MiB
s3.data.uploaded, 4,996
```



```
s3.copied.single.key.file, 4,996 s3.copied.file
Speed : 7.10 MiB in (270 KiB/s), 5.76 MiB out (219 KiB/s)
Total Time : 26s.
Migration ID: XCP_copy_2023-06-08_10.31.47.381883
Job ID : Job_XCP_copy_2023-06-08_10.31.47.381883_2023-06-
08_10.34.02.964143_resume
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
08_10.31.47.381883_2023-06-
08_10.34.02.964143_resume.log
STATUS : PASSED
```

繼續 -S3.Endpoint <s3_endpoint_url>

使用 `-s3.endpoint <s3_endpoint_url>` 參數 `resume` 命令以 S3 Bucket 通訊的指定 URL 覆寫預設 AWS 端點 URL。



根據預設、RESUME 會使用複製作業期間指定的 S3 設定檔和 S3 端點。不過、如果您在恢復時指定新的 S3 端點和 S3 設定檔、它會覆寫與搭配使用的預設值 `copy` 命令。

語法

```
xcp resume -s3.profile <profile_name> -s3.endpoint https://<endpoint_url>:
-id <catalog_name>
```

顯示範例

```
[root@client1 linux]# ./xcp resume -id XCP_copy_2023-06-13_11.48.59.454327

Job ID: Job_XCP_copy_2023-06-13_11.48.59.454327_2023-06-13_11.49.34.887164_resume
Index: {source: hdfs:///user/demo, target: s3://xcp-testing/}
Reviewing the incomplete index...
Found 0 completed directories and 2 in progress
9 reviewed, 4.53 KiB in (2.47 KiB/s), 188 out (102/s), 1s.
9 reviewed, 6.81 KiB in (3.70 KiB/s), 2.30 KiB out (1.25 KiB/s), 1s.
Starting second pass for the in-progress directories...
9 reviewed, 9 re-reviewed, 10.9 KiB in (5.65 KiB/s), 2.44 KiB out (1.26 KiB/s), 1s.
15,008 scanned*, 1,532 copied*, 9 indexed*, 1.50 MiB s3.data.uploaded, 1,539 s3.copied.single.key.file, 1,539 s3.copied.file, 4.64 MiB in (946 KiB/s), 1.77 MiB out (360 KiB/s), 6s
15,008 scanned*, 4,764 copied*, 9 indexed*, 4.67 MiB s3.data.uploaded, 4,784 s3.copied.single.key.file, 4,784 s3.copied.file, 8.21 MiB in (727 KiB/s), 5.38 MiB out (736 KiB/s), 11s
15,008 scanned*, 7,928 copied*, 9 indexed*, 7.75 MiB s3.data.uploaded, 7,935 s3.copied.single.key.file, 7,935 s3.copied.file, 11.7 MiB in (703 KiB/s), 8.89 MiB out (708 KiB/s), 16s
15,008 scanned*, 10,863 copied*, 9 indexed*, 10.6 MiB s3.data.uploaded, 10,864 s3.copied.single.key.file, 10,864 s3.copied.file, 14.9 MiB in (660 KiB/s), 12.2 MiB out (664 KiB/s), 21s
15,008 scanned*, 14,060 copied*, 9 indexed*, 13.7 MiB s3.data.uploaded, 14,076 s3.copied.single.key.file, 14,076 s3.copied.file, 18.5 MiB in (716 KiB/s), 15.7 MiB out (725 KiB/s), 26s
Xcp command : xcp resume -id XCP_copy_2023-06-13_11.48.59.454327
Stats : 15,008 scanned*, 15,006 copied*, 15,009 indexed*, 14.6 MiB s3.data.uploaded,
```

```
14,996 s3.copied.single.key.file, 14,996 s3.copied.file
Speed : 19.2 MiB in (708 KiB/s), 17.1 MiB out (631 KiB/s)
Total Time : 27s.
Migration ID: XCP_copy_2023-06-13_11.48.59.454327
Job ID : Job_XCP_copy_2023-06-13_11.48.59.454327_2023-06-
13_11.49.34.887164_resume
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
13_11.48.59.454327_2023-06-
13_11.49.34.887164_resume.log
STATUS : PASSED
```

繼續 `s3.profile <profile_name>`

使用 `-s3.profile <profile_name>` 參數 `resume` 命令、從 AWS 認證檔案中指定用於 S3 儲存區通訊的設定檔。



根據預設、RESUME 會使用複製作業期間指定的 S3 設定檔和 S3 端點。不過、如果您在恢復時指定新的 S3 端點和 S3 設定檔、它會覆寫與搭配使用的預設值 `copy` 命令。

語法

```
xcp resume -s3.profile <name> -s3.endpoint -id <catalog_name>
```

顯示範例

```
[root@client1 linux]# ./xcp resume -s3.profile sg -s3.endpoint
https://<endpoint_url>: -id
XCP_copy_2023-06-08_10.40.42.519258

Job ID: Job_XCP_copy_2023-06-08_10.40.42.519258_2023-06-
08_10.52.18.453982_resume
Index: {source: hdfs:///user/demo target: s3://xxx-bucket/
Reviewing the incomplete index...
Found 0 completed directories and 2 in progress
9 reviewed, 4.53 KiB in (3.03 KiB/s), 188 out (126/s), 1s.
9 reviewed, 6.81 KiB in (4.52 KiB/s), 2.30 KiB out (1.53 KiB/s), 1s.
Starting second pass for the in-progress directories...
9 reviewed, 9 re-reviewed, 10.9 KiB in (6.76 KiB/s), 2.44 KiB out (1.51
KiB/s), 1s.
15,008 scanned*, 1,660 copied*, 9 indexed*, 1.64 MiB s3.data.uploaded,
1,675
s3.copied.single.key.file, 1,675 s3.copied.file, 4.75 MiB in (971
KiB/s), 1.92 MiB out (392
KiB/s), 5s
15,008 scanned*, 3,453 copied*, 9 indexed*, 3.39 MiB s3.data.uploaded,
3,467
s3.copied.single.key.file, 3,467 s3.copied.file, 6.79 MiB in (412
KiB/s), 3.91 MiB out (403
KiB/s), 10s
15,008 scanned*, 6,296 copied*, 9 indexed*, 6.16 MiB s3.data.uploaded,
6,305
s3.copied.single.key.file, 6,305 s3.copied.file, 9.86 MiB in (619
KiB/s), 7.08 MiB out (637
KiB/s), 15s
15,008 scanned*, 9,527 copied*, 9 indexed*, 9.33 MiB s3.data.uploaded,
9,554
s3.copied.single.key.file, 9,554 s3.copied.file, 13.4 MiB in (717
KiB/s), 10.7 MiB out (726
KiB/s), 20s
15,008 scanned*, 12,656 copied*, 9 indexed*, 12.4 MiB s3.data.uploaded,
12,648
s3.copied.single.key.file, 12,648 s3.copied.file, 16.9 MiB in (715
KiB/s), 14.1 MiB out (706
KiB/s), 25s
Xcp command : xcp resume -s3.profile sg -s3.endpoint
https://<endpoint_url>: -id XCP_copy_2023-
06-08_10.40.42.519258
Stats : 15,008 scanned*, 15,006 copied*, 15,009 indexed*, 14.6 MiB
```

```
s3.data.uploaded,  
14,996 s3.copied.single.key.file, 14,996 s3.copied.file  
Speed : 19.2 MiB in (661 KiB/s), 17.1 MiB out (590 KiB/s)  
Total Time : 29s.  
Migration ID: XCP_copy_2023-06-08_10.40.42.519258  
Job ID : Job_XCP_copy_2023-06-08_10.40.42.519258_2023-06-  
08_10.52.18.453982_resume  
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-  
08_10.40.42.519258_2023-06-  
08_10.52.18.453982_resume.log  
STATUS : PASSED
```

繼續 **-s3.noverify**

使用 `-s3.noverify` 參數 `resume` 用於覆寫 S3 儲存區通訊之 SSL 憑證預設驗證的命令。

語法

```
xcp resume -s3.noverify -id <catalog_name>
```

顯示範例

```
[root@client1 linux]# ./xcp resume -s3.noverify -id XCP_copy_2023-06-13_11.32.47.743708

Job ID: Job_XCP_copy_2023-06-13_11.32.47.743708_2023-06-13_11.33.41.388541_resume
Index: {source: hdfs:///user/demo, target: s3://bucket/
Reviewing the incomplete index...
Found 0 completed directories and 2 in progress
9 reviewed, 4.53 KiB in (3.70 KiB/s), 188 out (153/s), 1s.
9 reviewed, 6.81 KiB in (5.52 KiB/s), 2.30 KiB out (1.87 KiB/s), 1s.
Starting second pass for the in-progress directories...
9 reviewed, 9 re-reviewed, 10.9 KiB in (8.19 KiB/s), 2.44 KiB out (1.83 KiB/s), 1s.
15,008 scanned*, 1,643 copied*, 9 indexed*, 1.62 MiB s3.data.uploaded, 1,662 s3.copied.single.key.file, 1,662 s3.copied.file, 4.78 MiB in (969 KiB/s), 1.90 MiB out (385 KiB/s), 5s
15,008 scanned*, 4,897 copied*, 9 indexed*, 4.78 MiB s3.data.uploaded, 4,892 s3.copied.single.key.file, 4,892 s3.copied.file, 8.38 MiB in (735 KiB/s), 5.50 MiB out (737 KiB/s), 10s
15,008 scanned*, 8,034 copied*, 9 indexed*, 7.86 MiB s3.data.uploaded, 8,048 s3.copied.single.key.file, 8,048 s3.copied.file, 11.8 MiB in (696 KiB/s), 9.02 MiB out (708 KiB/s), 15s
15,008 scanned*, 11,243 copied*, 9 indexed*, 11.0 MiB s3.data.uploaded, 11,258 s3.copied.single.key.file, 11,258 s3.copied.file, 15.3 MiB in (709 KiB/s), 12.6 MiB out (724 KiB/s), 20s
15,008 scanned*, 14,185 copied*, 9 indexed*, 13.9 MiB s3.data.uploaded, 14,195 s3.copied.single.key.file, 14,195 s3.copied.file, 18.6 MiB in (662 KiB/s), 15.9 MiB out (660 KiB/s), 25s
Xcp command : xcp resume -s3.noverify -id XCP_copy_2023-06-13_11.32.47.743708
Stats : 15,008 scanned*, 15,006 copied*, 15,009 indexed*, 14.6 MiB s3.data.uploaded, 14,996 s3.copied.single.key.file, 14,996 s3.copied.file
```

```
Speed : 19.2 MiB in (736 KiB/s), 17.1 MiB out (657 KiB/s)
Total Time : 26s.
Migration ID: XCP_copy_2023-06-13_11.32.47.743708
Job ID : Job_XCP_copy_2023-06-13_11.32.47.743708_2023-06-
13_11.33.41.388541_resume
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_XCP_copy_2023-06-
13_11.32.47.743708_2023-06-
13_11.33.41.388541_resume.log
STATUS : PASSED
```

驗證

◦ `verify` 命令會在複製作業之後、在來源目錄和目標目錄之間使用每位元組的完整資料比較、而無需使用目錄索引編號。此命令會檢查修改時間及其他檔案或目錄屬性、包括權限。命令也會讀取兩側的檔案、並比較資料。

語法

```
xcp verify <source NFS export path> <destination NFS exportpath>
```

顯示範例

```
[root@localhost linux]# ./xcp verify <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
04_23.54.40.893449
32,493 scanned, 11,303 found, 7,100 compared, 7,100 same data, 374 MiB
in (74.7 MiB/s), 4.74 MiB
out (971 KiB/s), 5s
40,109 scanned, 24,208 found, 18,866 compared, 18,866 same data, 834
MiB in (91.5 MiB/s), 10.5
MiB out (1.14 MiB/s), 10s
56,030 scanned, 14,623 indexed, 33,338 found, 27,624 compared, 27,624
same data, 1.31 GiB in
(101 MiB/s), 15.9 MiB out (1.07 MiB/s), 15s
73,938 scanned, 34,717 indexed, 45,583 found, 38,909 compared, 38,909
same data, 1.73 GiB in
(86.3 MiB/s), 22.8 MiB out (1.38 MiB/s), 20s
76,308 scanned, 39,719 indexed, 61,810 found, 54,885 compared, 54,885
same data, 2.04 GiB in
(62.8 MiB/s), 30.2 MiB out (1.48 MiB/s), 25s
103,852 scanned, 64,606 indexed, 77,823 found, 68,301 compared, 68,301
same data, 2.31 GiB in
(56.0 MiB/s), 38.2 MiB out (1.60 MiB/s), 30s
110,047 scanned, 69,579 indexed, 89,082 found, 78,794 compared, 78,794
same data, 2.73 GiB in
(85.6 MiB/s), 43.6 MiB out (1.06 MiB/s), 35s
113,871 scanned, 79,650 indexed, 99,657 found, 89,093 compared, 89,093
same data, 3.23 GiB in
(103 MiB/s), 49.3 MiB out (1.14 MiB/s), 40s
125,092 scanned, 94,616 indexed, 110,406 found, 98,369 compared, 98,369
same data, 3.74 GiB in
(103 MiB/s), 55.0 MiB out (1.15 MiB/s), 45s
134,630 scanned, 104,764 indexed, 120,506 found, 106,732 compared,
106,732 same data, 4.23 GiB
in (99.9 MiB/s), 60.4 MiB out (1.05 MiB/s), 50s
134,630 scanned, 114,823 indexed, 129,832 found, 116,198 compared,
116,198 same data, 4.71 GiB
in (97.2 MiB/s), 65.5 MiB out (1.04 MiB/s), 55s
Xcp command : xcp verify <IP address of NFS server>:/source_vol <IP
address of destination NFS
server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
```



```
verified (data, attrs, mods), 0
different item, 0 error
Speed : 4.95 GiB in (86.4 MiB/s), 69.2 MiB out (1.18 MiB/s)
Total Time : 58s.
STATUS : PASSED
```

下表列出 `verify` 參數及其說明。

參數	說明
驗證 -stats	平行掃描來源和目標樹、並比較樹狀結構統計資料。
驗證 -csv	平行掃描來源和目標樹、並比較樹狀結構統計資料。
驗證 -nodata	不檢查資料。
驗證 -noatts	不檢查屬性。
驗證 -nomods	不會檢查檔案修改時間。
驗證 -mtimeWindow	指定可接受的修改時間差異以進行驗證。
驗證 -v	擷取輸出格式以列出找到的任何差異。
驗證 -l	擷取輸出格式以列出找到的任何差異。
驗證 -nonames	從檔案清單或報告中排除使用者和群組名稱。
驗證 -MATCH	僅處理符合格式的檔案和目錄。
<<nfs_verify_bs,驗證 -BS ; n[k]>	指定讀寫區塊大小（預設值：64K）。
<<nfs_verify_parallel,驗證 -parallel ; n>	指定並行批次處理程序的最大數目（預設值：7）。
<<nfs_verify_dircount,驗證 -dircount ; n[k]>	指定讀取目錄時的要求大小。
驗證 -nold	停用預設索引的建立（預設值：false）。
驗證 -preserve-atime	將來源上的所有檔案還原至上次存取的日期。
驗證 -s3.insecure	提供選項、可在 S3 Bucket 通訊中使用 HTTP 而非 HTTPS。
<<nfs_verify_s3_endpoint,驗證 -s3.Endpoint ; s3_Endpoint URL>	以 S3 Bucket 通訊的指定 URL 覆寫預設的 Amazon Web Services（AWS）端點 URL。
<<nfs_verify_s3_profile,驗證 -s3.profile ; profile 名稱 >	從 AWS 認證檔案指定用於 S3 儲存區通訊的設定檔。
驗證 -s3.noverify	覆寫 S3 Bucket 通訊的 SSL 認證預設驗證。

驗證 **-stats** 並驗證 **-csv**

使用 `-stats` 和 `-csv` 的參數 `verify` 用於平行掃描來源和目標樹的命令、並比較樹狀結構統計資料。

語法

```
cp verify -stats <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -stats
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol

228,609 scanned, 49.7 MiB in (9.93 MiB/s), 3.06 MiB out (625 KiB/s), 5s
== Number of files ==
empty <8KiB 8-64KiB 64KiB-1MiB 1-10MiB 10-100MiB >100MiB
235 73,916 43,070 4,020 129 15
same same same same same same
== Directory entries ==
empty 1-10 10-100 100-1K 1K-10K >10K
3
same
10,300
same
2,727
same
67
same
11
same
== Depth ==
0-5 6-10 11-15 16-20 21-100 >100
47,120
same
79,772
same
7,608
same
130
same
== Modified ==
>1 year >1 month 1-31 days 1-24 hrs <1 hour <15 mins future
15
same 116,121
same 5,249
same
Total count: 134,630 / same
Directories: 13,108 / same
Regular files: 121,385 / same
Symbolic links: 137 / same
Special files: None / same
Hard links: None / same, Multilink files: None / same
Xcp command : xcp verify -stats <source_ip_address>:/source_vol
```

```
<<destination_ip_address>:/dest_vol  
269,260 scanned, 0 matched, 0 error  
Speed : 59.5 MiB in (7.44 MiB/s), 3.94 MiB out (506 KiB/s)  
Total Time : 7s.  
STATUS : PASSED
```

語法

```
xcp verify -csv <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -csv
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol

222,028 scanned, 48.2 MiB in (9.63 MiB/s), 2.95 MiB out (603 KiB/s), 5s
== Number of files ==
empty
235
same <8KiB 73,916
same 8-64KiB
43,070
same 64KiB-1MiB
4,020
same 1-10MiB
129
same 10-100MiB >100MiB
15
same
== Directory entries ==
empty 1-10 10-100 100-1K 1K-10K >10K
3
same 10,300
same 2,727
same 67
same 11
same
== Depth ==
0-5
6-10
11-15
16-20
21-100
>100
47,120
same 79,772
same 7,608
same 130
same
== Modified ==
>1 year >1 month
1-31 days
1-24 hrs
<1 hour
<15 mins
```

```
future
```

```
15
```

```
same 121,370
```

```
same
```

```
Total count: 134,630 / same Directories: 13,108 / same Regular files:  
121,385 / same Symbolic links: 137 / same Special files: None / same  
Hard links: None / same, Multilink files: None / same
```

```
Xcp command : xcp verify -csv <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

```
269,260 scanned, 0 matched, 0 error
```

```
Speed : 59.5 MiB in (7.53 MiB/s), 3.94 MiB out (512 KiB/s) Total Time  
: 7s.
```

```
STATUS : PASSED
```

語法

```
xcp verify -stats -csv <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -stats -csv <IP address of source
NFS server>:/source_vol <IP
address of destination NFS server>:/dest_vol

224,618 scanned, 48.7 MiB in (9.54 MiB/s), 2.98 MiB out (597 KiB/s), 5s
== Number of files ==
empty <8KiB 8-64KiB 64KiB-1MiB 1-10MiB 10-100MiB >100MiB
235 73,916 43,070 4,020 129 15
same same same same same same
== Directory entries ==
empty 1-10 10-100 100-1K 1K-10K >10K
3
same
10,300
same
2,727
same
67
same
11
same
== Depth ==
0-5 6-10 11-15 16-20 21-100 >100
47,120
same
79,772
same
7,608
same
130
same
== Modified ==
>1 year >1 month 1-31 days 1-24 hrs <1 hour <15 mins future
15
same 121,370
same
Total count: 134,630 / same
Directories: 13,108 / same
Regular files: 121,385 / same
Symbolic links: 137 / same
Special files: None / same
Hard links: None / same, Multilink files: None / same
Xcp command : xcp verify -stats -csv <IP address of source NFS
```

```
server>:/source_vol <IP
address of destination NFS server>:/dest_vol
269,260 scanned, 0 matched, 0 error
Speed : 59.5 MiB in (7.49 MiB/s), 3.94 MiB out (509 KiB/s)
Total Time : 7s.
STATUS : PASSED
```

驗證 -nodata

使用 -nodata 參數 verify 指定不檢查資料的命令。

語法

```
xcp verify -nodata <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -nodata <IP address of source NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_02.18.01.159115
70,052 scanned, 29,795 indexed, 43,246 found, 25.8 MiB in (5.14 MiB/s),
9.39 MiB out
(1.87 MiB/s), 5s
117,136 scanned, 94,723 indexed, 101,434 found, 50.3 MiB in (4.90
MiB/s), 22.4 MiB out (2.60
MiB/s), 10s
Xcp command : xcp verify -nodata <IP address of source NFS
server>:/source_vol <IP address of
destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (attrs, mods), 0
different item, 0 error
Speed : 62.7 MiB in (4.65 MiB/s), 30.2 MiB out (2.24MiB/s)
Total Time : 13s.
STATUS : PASSED
```


驗證 **-noattr** 些

使用 `-noattrs` 參數 `verify` 指定不檢查屬性的命令。

語法

```
xcp verify -noattrs <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -noattrs <IP address of source NFS
server>:/source_vol <IP address
of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-05_02.19.14.011569

40,397 scanned, 9,917 found, 4,249 compared, 4,249 same data, 211 MiB
in (41.6 MiB/s), 3.78 MiB
out (764 KiB/s), 5s
40,397 scanned, 14,533 found, 8,867 compared, 8,867 same data, 475 MiB
in (52.9 MiB/s), 6.06 MiB
out (466 KiB/s), 10s
40,397 scanned, 20,724 found, 15,038 compared, 15,038 same data, 811
MiB in (67.0 MiB/s), 9.13
MiB out (628 KiB/s), 15s
40,397 scanned, 25,659 found, 19,928 compared, 19,928 same data, 1.02
GiB in (46.6 MiB/s), 11.5
MiB out (477 KiB/s), 20s
40,397 scanned, 30,535 found, 24,803 compared, 24,803 same data, 1.32
GiB in (62.0 MiB/s), 14.0
MiB out (513 KiB/s), 25s
75,179 scanned, 34,656 indexed, 39,727 found, 32,595 compared, 32,595
same data, 1.58 GiB in
(53.4 MiB/s), 20.1 MiB out (1.22 MiB/s), 30s
75,179 scanned, 34,656 indexed, 47,680 found, 40,371 compared, 40,371
same data, 1.74 GiB in
(32.3 MiB/s), 23.6 MiB out (717 KiB/s), 35s
75,179 scanned, 34,656 indexed, 58,669 found, 51,524 compared, 51,524
same data, 1.93 GiB in
(37.9 MiB/s), 28.4 MiB out (989 KiB/s), 40s
78,097 scanned, 39,772 indexed, 69,343 found, 61,858 compared, 61,858
same data, 2.12 GiB in
(39.0 MiB/s), 33.4 MiB out (1015 KiB/s), 45s
110,213 scanned, 69,593 indexed, 80,049 found, 69,565 compared, 69,565
same data, 2.37 GiB in
(51.3 MiB/s), 39.3 MiB out (1.18 MiB/s), 50s
110,213 scanned, 69,593 indexed, 86,233 found, 75,727 compared, 75,727
same data, 2.65 GiB in
(57.8 MiB/s), 42.3 MiB out (612 KiB/s), 55s
110,213 scanned, 69,593 indexed, 93,710 found, 83,218 compared, 83,218
same data, 2.93 GiB in
(56.1 MiB/s), 45.8 MiB out (705 KiB/s), 1m0s
110,213 scanned, 69,593 indexed, 99,700 found, 89,364 compared, 89,364
```

```
same data, 3.20 GiB in
(56.9 MiB/s), 48.7 MiB out (593 KiB/s), 1m5s
124,888 scanned, 94,661 indexed, 107,509 found, 95,304 compared, 95,304
same data, 3.54 GiB in
(68.6 MiB/s), 53.5 MiB out (1000 KiB/s), 1m10s
134,630 scanned, 104,739 indexed, 116,494 found, 102,792 compared,
102,792 same data, 3.94 GiB
in (81.7 MiB/s), 58.2 MiB out (949 KiB/s), 1m15s
134,630 scanned, 104,739 indexed, 123,475 found, 109,601 compared,
109,601 same data, 4.28 GiB
in (70.0 MiB/s), 61.7 MiB out (711 KiB/s), 1m20s
134,630 scanned, 104,739 indexed, 129,354 found, 115,295 compared,
115,295 same data, 4.55 GiB
in (55.3 MiB/s), 64.5 MiB out (572 KiB/s), 1m25s
Xcp command : xcp verify -noattrs <IP address of source NFS
server>:/source_vol <IP address
of destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (data, mods), 0
different item, 0 error
Speed : 4.95 GiB in (56.5 MiB/s), 69.2 MiB out (789 KiB/s)
Total Time : 1m29s.
STATUS : PASSED
```

驗證 -nomods

使用 -nomods 參數 verify 指定不檢查檔案修改時間的命令。

語法

```
xcp verify -nomods <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -nomods <IP address of NFS
server>:/source_vol <IP address of
destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_02.22.33.738593
40,371 scanned, 10,859 found, 5,401 compared, 5,401 same data, 296 MiB
in (59.1 MiB/s), 4.29 MiB
out (876 KiB/s), 5s
40,371 scanned, 22,542 found, 17,167 compared, 17,167 same data, 743
MiB in (88.9 MiB/s), 9.67
MiB out (1.07 MiB/s), 10s
43,521 scanned, 4,706 indexed, 32,166 found, 26,676 compared, 26,676
same data, 1.17 GiB in
(91.3 MiB/s), 14.5 MiB out (996 KiB/s), 15s
70,260 scanned, 29,715 indexed, 43,680 found, 37,146 compared, 37,146
same data, 1.64 GiB in
(96.0 MiB/s), 21.5 MiB out (1.38 MiB/s), 20s
75,160 scanned, 34,722 indexed, 60,079 found, 52,820 compared, 52,820
same data, 2.01 GiB in
(74.4 MiB/s), 29.1 MiB out (1.51 MiB/s), 25s
102,874 scanned, 69,594 indexed, 77,322 found, 67,907 compared, 67,907
same data, 2.36 GiB in
(71.2 MiB/s), 38.3 MiB out (1.85 MiB/s), 30s
110,284 scanned, 69,594 indexed, 89,143 found, 78,952 compared, 78,952
same data, 2.82 GiB in
(92.8 MiB/s), 43.9 MiB out (1.08 MiB/s), 35s
112,108 scanned, 79,575 indexed, 100,228 found, 89,856 compared, 89,856
same data, 3.25 GiB in
(89.3 MiB/s), 49.6 MiB out (1.15 MiB/s), 40s
128,122 scanned, 99,743 indexed, 111,358 found, 98,663 compared, 98,663
same data, 3.80 GiB in
(112 MiB/s), 55.8 MiB out (1.24 MiB/s), 45s
134,630 scanned, 104,738 indexed, 123,253 found, 109,472 compared,
109,472 same data, 4.36 GiB
in (114 MiB/s), 61.7 MiB out (1.16 MiB/s), 50s
134,630 scanned, 119,809 indexed, 133,569 found, 120,008 compared,
120,008 same data, 4.94 GiB
in (115 MiB/s), 67.8 MiB out (1.20 MiB/s), 55s]

Xcp command : xcp verify -nomods <IP address of NFS server>:/source_vol
<IP address of destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
```

```
verified (data, attrs), 0
different item, 0 error
Speed : 4.95 GiB in (90.5 MiB/s), 69.2 MiB out (1.24 MiB/s)
Total Time : 56s.
STATUS : PASSED
```

驗證 **-mtimeWindow <s>**

使用 `-mtimewindow <s>` 參數 `verify` 命令以指定可接受的修改時間差異以進行驗證。

語法

```
xcp verify -mtimewindow <s> <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -mtimewindow 2 <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
06_02.26.03.797492
27,630 scanned, 9,430 found, 5,630 compared, 5,630 same data, 322 MiB
in (64.1 MiB/s), 3.91 MiB
out (798 KiB/s), 5s
38,478 scanned, 19,840 found, 14,776 compared, 14,776 same data, 811
MiB in (97.8 MiB/s), 8.86
MiB out (1012 KiB/s), 10s
55,304 scanned, 14,660 indexed, 29,893 found, 23,904 compared, 23,904
same data, 1.33 GiB in
(109 MiB/s), 14.6 MiB out (1.14 MiB/s), 15s
64,758 scanned, 24,700 indexed, 43,133 found, 36,532 compared, 36,532
same data, 1.65 GiB in
(65.3 MiB/s), 21.0 MiB out (1.28 MiB/s), 20s
75,317 scanned, 34,655 indexed, 56,020 found, 48,942 compared, 48,942
same data, 2.01 GiB in
(72.5 MiB/s), 27.4 MiB out (1.25 MiB/s), 25s
95,024 scanned, 54,533 indexed, 70,675 found, 61,886 compared, 61,886
same data, 2.41 GiB in
(81.3 MiB/s), 34.9 MiB out (1.49 MiB/s), 30s
102,407 scanned, 64,598 indexed, 85,539 found, 76,158 compared, 76,158
same data, 2.74 GiB in
(67.3 MiB/s), 42.0 MiB out (1.42 MiB/s), 35s
113,209 scanned, 74,661 indexed, 97,126 found, 86,525 compared, 86,525
same data, 3.09 GiB in
(72.6 MiB/s), 48.0 MiB out (1.19 MiB/s), 40s
125,040 scanned, 84,710 indexed, 108,480 found, 96,253 compared, 96,253
same data, 3.51 GiB in
(84.0 MiB/s), 53.6 MiB out (1.10 MiB/s), 45s
132,726 scanned, 99,775 indexed, 117,252 found, 103,740 compared,
103,740 same data, 4.04 GiB in
(108 MiB/s), 58.4 MiB out (986 KiB/s), 50s
134,633 scanned, 109,756 indexed, 126,700 found, 112,978 compared,
112,978 same data, 4.52 GiB
in (97.6 MiB/s), 63.6 MiB out (1.03 MiB/s), 55s
134,633 scanned, 129,807 indexed, 134,302 found, 120,779 compared,
120,779 same data, 4.95 GiB
in (86.5 MiB/s), 68.8 MiB out (1.02 MiB/s), 1m0s
Xcp command : xcp verify -mtimewindow 2 <IP address of NFS
```

```
server>:/source_vol <IP address of destination NFS server>:/dest_vol
134,633 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (data, attrs, mods), 0
different item, 0 error
Speed : 4.95 GiB in (83.6 MiB/s), 69.2 MiB out (1.14 MiB/s)
Total Time : 1m0s.
STATUS : PASSED
```

驗證 -v 並驗證 -l

使用 -v 和 l 的參數 verify 命令以擷取輸出格式、並列出發現的任何差異。

語法

```
xcp verify -v <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```




```

[root@localhost linux]# ./xcp verify -v <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_02.26.30.055115
32,349 scanned, 10,211 found, 5,946 compared, 5,946 same data, 351 MiB
in (70.1 MiB/s), 4.27 MiB
out (872 KiB/s), 5s
40,301 scanned, 21,943 found, 16,619 compared, 16,619 same data, 874
MiB in (104 MiB/s), 9.74
MiB out (1.09 MiB/s), 10s
52,201 scanned, 14,512 indexed, 33,173 found, 27,622 compared, 27,622
same data, 1.35 GiB in
(102 MiB/s), 16.0 MiB out (1.24 MiB/s), 15s
70,886 scanned, 34,689 indexed, 46,699 found, 40,243 compared, 40,243
same data, 1.77 GiB in
(86.2 MiB/s), 23.3 MiB out (1.47 MiB/s), 20s
80,072 scanned, 39,708 indexed, 63,333 found, 55,743 compared, 55,743
same data, 2.04 GiB in
(55.4 MiB/s), 31.0 MiB out (1.54 MiB/s), 25s
100,034 scanned, 59,615 indexed, 76,848 found, 67,738 compared, 67,738
same data, 2.35 GiB in
(61.6 MiB/s), 37.6 MiB out (1.31 MiB/s), 30s
110,290 scanned, 69,597 indexed, 88,493 found, 78,203 compared, 78,203
same data, 2.75 GiB in
(81.7 MiB/s), 43.4 MiB out (1.14 MiB/s), 35s
116,829 scanned, 79,603 indexed, 102,105 found, 90,998 compared, 90,998
same data, 3.32 GiB in
(117 MiB/s), 50.3 MiB out (1.38 MiB/s), 40s
59
128,954 scanned, 94,650 indexed, 114,340 found, 101,563 compared,
101,563 same data, 3.91 GiB in
(121 MiB/s), 56.8 MiB out (1.30 MiB/s), 45s
134,630 scanned, 109,858 indexed, 125,760 found, 112,077 compared,
112,077 same data, 4.41 GiB
in (99.9 MiB/s), 63.0 MiB out (1.22 MiB/s), 50s
Xcp command : xcp verify -v <IP address of NFS server>:/source_vol <IP
address of destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (data, attrs, mods), 0
different item, 0 error
Speed : 4.95 GiB in (91.7 MiB/s), 69.2 MiB out (1.25 MiB/s)
Total Time : 55s.
STATUS : PASSED

```

語法

```
xcp verify -l <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -l <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_02.27.58.969228
32,044 scanned, 11,565 found, 7,305 compared, 7,305 same data, 419 MiB
in (83.7 MiB/s), 4.93 MiB
out (1008 KiB/s), 5s
40,111 scanned, 21,352 found, 16,008 compared, 16,008 same data, 942
MiB in (104 MiB/s), 9.64
MiB out (962 KiB/s), 10s
53,486 scanned, 14,677 indexed, 30,840 found, 25,162 compared, 25,162
same data, 1.34 GiB in
(86.4 MiB/s), 15.0 MiB out (1.07 MiB/s), 15s
71,202 scanned, 34,646 indexed, 45,082 found, 38,555 compared, 38,555
same data, 1.72 GiB in
(76.7 MiB/s), 22.5 MiB out (1.51 MiB/s), 20s
75,264 scanned, 34,646 indexed, 60,039 found, 53,099 compared, 53,099
same data, 2.00 GiB in
(58.5 MiB/s), 29.1 MiB out (1.30 MiB/s), 25s
95,205 scanned, 54,684 indexed, 76,004 found, 67,054 compared, 67,054
same data, 2.34 GiB in
(67.5 MiB/s), 37.0 MiB out (1.57 MiB/s), 30s
110,239 scanned, 69,664 indexed, 87,892 found, 77,631 compared, 77,631
same data, 2.78 GiB in
(89.7 MiB/s), 43.2 MiB out (1.23 MiB/s), 35s
115,192 scanned, 79,627 indexed, 100,246 found, 89,450 compared, 89,450
same data, 3.22 GiB in
(90.0 MiB/s), 49.4 MiB out (1.24 MiB/s), 40s
122,694 scanned, 89,740 indexed, 109,158 found, 97,422 compared, 97,422
same data, 3.65 GiB in
(89.4 MiB/s), 54.2 MiB out (978 KiB/s), 45s
134,630 scanned, 104,695 indexed, 119,683 found, 106,036 compared,
106,036 same data, 4.17 GiB
in (105 MiB/s), 59.9 MiB out (1.11 MiB/s), 50s
134,630 scanned, 109,813 indexed, 129,117 found, 115,432 compared,
115,432 same data, 4.59 GiB
in (86.1 MiB/s), 64.7 MiB out (979 KiB/s), 55s
Xcp command : xcp verify -l <IP address of NFS server>:/source_vol <IP
address of destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (data, attrs, mods), 0
```

```
different item, 0 error
```

```
Speed : 4.95 GiB in (84.9 MiB/s), 69.2 MiB out (1.16 MiB/s)
```

```
Total Time : 59s.
```

```
STATUS : PASSED
```

語法

```
xcp verify -v -l <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -v -l <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_02.30.00.952454
24,806 scanned, 8,299 found, 4,817 compared, 4,817 same data, 296 MiB
in (59.1 MiB/s), 3.44 MiB
out (704 KiB/s), 5s
39,720 scanned, 20,219 found, 14,923 compared, 14,923 same data, 716
MiB in (84.0 MiB/s), 8.78
MiB out (1.07 MiB/s), 10s
44,395 scanned, 9,648 indexed, 29,851 found, 24,286 compared, 24,286
same data, 1.20 GiB in (102
MiB/s), 14.0 MiB out (1.05 MiB/s), 15s
62,763 scanned, 24,725 indexed, 40,946 found, 34,760 compared, 34,760
same data, 1.69 GiB in
(101 MiB/s), 20.2 MiB out (1.24 MiB/s), 20s
76,181 scanned, 39,708 indexed, 57,566 found, 50,595 compared, 50,595
same data, 1.98 GiB in
(58.7 MiB/s), 28.3 MiB out (1.61 MiB/s), 25s
90,411 scanned, 49,594 indexed, 73,357 found, 64,912 compared, 64,912
same data, 2.37 GiB in
(79.0 MiB/s), 35.8 MiB out (1.48 MiB/s), 30s

110,222 scanned, 69,593 indexed, 87,733 found, 77,466 compared, 77,466
same data, 2.77 GiB in
(80.5 MiB/s), 43.1 MiB out (1.45 MiB/s), 35s
116,417 scanned, 79,693 indexed, 100,053 found, 89,258 compared, 89,258
same data, 3.23 GiB in
(94.3 MiB/s), 49.4 MiB out (1.26 MiB/s), 40s
122,224 scanned, 89,730 indexed, 111,684 found, 100,059 compared,
100,059 same data, 3.83 GiB in
(123 MiB/s), 55.5 MiB out (1.22 MiB/s), 45s
134,630 scanned, 109,758 indexed, 121,744 found, 108,152 compared,
108,152 same data, 4.36 GiB
in (107 MiB/s), 61.3 MiB out (1.14 MiB/s), 50s
134,630 scanned, 119,849 indexed, 131,678 found, 118,015 compared,
118,015 same data, 4.79 GiB
in (87.2 MiB/s), 66.7 MiB out (1.08 MiB/s), 55s
Xcp command : xcp verify -v -l <IP address of NFS server>:/source_vol
<IP address of destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (data, attrs, mods), 0
```

```
different item, 0 error
Speed : 4.95 GiB in (87.6 MiB/s), 69.2 MiB out (1.20 MiB/s)
Total Time : 57s.
STATUS : PASSED
```

驗證 **-nonames**

使用 `-nonames` 參數 `verify` 從檔案清單或報告中排除使用者和群組名稱的命令

語法

```
xcp verify -nonames <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```



```

[root@localhost linux]# ./xcp verify -nonames <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_04.03.58.173082
30,728 scanned, 9,242 found, 5,248 compared, 5,248 same data, 363 MiB
in (72.6 MiB/s), 3.93 MiB
out (805 KiB/s), 5s
40,031 scanned, 20,748 found, 15,406 compared, 15,406 same data, 837
MiB in (94.5 MiB/s), 9.19
MiB out (1.05 MiB/s), 10s
50,859 scanned, 9,668 indexed, 32,410 found, 26,305 compared, 26,305
same data, 1.30 GiB in
(99.5 MiB/s), 15.2 MiB out (1.20 MiB/s), 15s
73,631 scanned, 34,712 indexed, 45,362 found, 38,567 compared, 38,567
same data, 1.75 GiB in
(92.2 MiB/s), 22.6 MiB out (1.49 MiB/s), 20s
82,931 scanned, 44,618 indexed, 59,988 found, 52,270 compared, 52,270
same data, 2.08 GiB in
(66.7 MiB/s), 29.6 MiB out (1.39 MiB/s), 25s
96,691 scanned, 59,630 indexed, 77,567 found, 68,573 compared, 68,573
same data, 2.50 GiB in
(85.2 MiB/s), 38.2 MiB out (1.73 MiB/s), 30s
110,763 scanned, 74,678 indexed, 92,246 found, 82,010 compared, 82,010
same data, 2.93 GiB in
(88.8 MiB/s), 45.5 MiB out (1.45 MiB/s), 35s
120,101 scanned, 79,664 indexed, 105,420 found, 94,046 compared, 94,046
same data, 3.47 GiB in
(110 MiB/s), 51.9 MiB out (1.27 MiB/s), 40s
131,659 scanned, 99,780 indexed, 116,418 found, 103,109 compared,
103,109 same data, 4.05 GiB in
(120 MiB/s), 58.1 MiB out (1.25 MiB/s), 45s
134,630 scanned, 114,770 indexed, 127,154 found, 113,483 compared,
113,483 same data, 4.54 GiB
in (100 MiB/s), 64.1 MiB out (1.20 MiB/s), 50s
Xcp command : xcp verify -nonames <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (data, attrs, mods), 0
different item, 0 error
Speed : 4.95 GiB in (92.5 MiB/s), 69.2 MiB out (1.26 MiB/s)
Total Time : 54s.
STATUS : PASSED

```


驗證 <filter> 是否相符

使用 `-match <filter>` 參數 `verify` 僅處理與篩選器相符的檔案和目錄的命令。

語法

```
xcp verify -match bin <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```



```

[root@localhost linux]# ./xcp verify -match bin <IP address of NFS
server>:/source_vol <IP address
of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_04.16.46.005121
32,245 scanned, 25,000 matched, 10,657 found, 6,465 compared, 6,465
same data, 347 MiB in (69.4
MiB/s), 4.44 MiB out (908 KiB/s), 5s
40,306 scanned, 35,000 matched, 21,311 found, 15,969 compared, 15,969
same data, 850 MiB in (101
MiB/s), 9.44 MiB out (1024 KiB/s), 10s
55,582 scanned, 45,000 matched, 14,686 indexed, 31,098 found, 25,293
compared, 25,293 same data,
1.33 GiB in (102 MiB/s), 15.1 MiB out (1.12 MiB/s), 15s
75,199 scanned, 65,000 matched, 34,726 indexed, 45,587 found, 38,738
compared, 38,738 same data,
1.72 GiB in (77.9 MiB/s), 22.7 MiB out (1.52 MiB/s), 20s
78,304 scanned, 70,000 matched, 39,710 indexed, 61,398 found, 54,232
compared, 54,232 same data,
2.08 GiB in (75.0 MiB/s), 30.0 MiB out (1.45 MiB/s), 25s
102,960 scanned, 95,000 matched, 69,682 indexed, 78,351 found, 69,034
compared, 69,034 same
data, 2.43 GiB in (71.9 MiB/s), 38.8 MiB out (1.76 MiB/s), 30s
110,344 scanned, 105,000 matched, 69,682 indexed, 93,873 found, 83,637
compared, 83,637 same
data, 2.85 GiB in (84.2 MiB/s), 45.6 MiB out (1.36 MiB/s), 35s
121,459 scanned, 120,000 matched, 84,800 indexed, 107,012 found, 95,357
compared, 95,357 same
data, 3.30 GiB in (92.8 MiB/s), 52.3 MiB out (1.33 MiB/s), 40s
130,006 scanned, 125,000 matched, 94,879 indexed, 115,077 found,
102,104 compared, 102,104 same
data, 3.97 GiB in (136 MiB/s), 57.2 MiB out (1001 KiB/s), 45s
134,630 scanned, 134,630 matched, 109,867 indexed, 125,755 found,
112,025 compared, 112,025 same
data, 4.53 GiB in (115 MiB/s), 63.2 MiB out (1.20 MiB/s), 50s
Xcp command : xcp verify -match bin <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol
134,630 scanned, 134,630 matched, 100% found (121,150 have data), 100%
verified (data, attrs,
mods), 0 different item, 0 error
Speed : 4.95 GiB in (92.2 MiB/s), 69.2 MiB out (1.26 MiB/s)
Total Time : 54s.
STATUS : PASSED

```

驗證 **-Bs <n>**

使用 `-bs <n>` 參數 `verify` 指定讀寫區塊大小的命令。預設值為 64k。

語法

```
xcp verify -bs 32k <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -bs 32k <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_04.20.19.266399
29,742 scanned, 9,939 found, 5,820 compared, 5,820 same data, 312 MiB
in (62.3 MiB/s), 4.58 MiB
out (938 KiB/s), 5s
40,156 scanned, 20,828 found, 15,525 compared, 15,525 same data, 742
MiB in (85.0 MiB/s), 10.2
MiB out (1.10 MiB/s), 10s
41,906 scanned, 9,846 indexed, 30,731 found, 25,425 compared, 25,425
same data, 1.14 GiB in
(85.6 MiB/s), 16.1 MiB out (1.18 MiB/s), 15s
66,303 scanned, 29,712 indexed, 42,861 found, 36,708 compared, 36,708
same data, 1.61 GiB in
(94.9 MiB/s), 23.7 MiB out (1.53 MiB/s), 20s
70,552 scanned, 34,721 indexed, 58,157 found, 51,528 compared, 51,528
same data, 1.96 GiB in
(73.0 MiB/s), 31.4 MiB out (1.53 MiB/s), 25s
100,135 scanned, 59,611 indexed, 76,047 found, 66,811 compared, 66,811
same data, 2.29 GiB in
(66.3 MiB/s), 40.7 MiB out (1.82 MiB/s), 30s
105,951 scanned, 69,665 indexed, 90,022 found, 80,330 compared, 80,330
same data, 2.71 GiB in
(85.3 MiB/s), 48.1 MiB out (1.49 MiB/s), 35s
113,440 scanned, 89,486 indexed, 101,634 found, 91,152 compared, 91,152
same data, 3.19 GiB in
(97.8 MiB/s), 55.4 MiB out (1.45 MiB/s), 40s
128,693 scanned, 94,484 indexed, 109,999 found, 97,319 compared, 97,319
same data, 3.59 GiB in
(82.6 MiB/s), 60.2 MiB out (985 KiB/s), 45s
134,630 scanned, 94,484 indexed, 119,203 found, 105,402 compared,
105,402 same data, 3.98 GiB in
(78.3 MiB/s), 65.1 MiB out (986 KiB/s), 50s
134,630 scanned, 104,656 indexed, 127,458 found, 113,774 compared,
113,774 same data, 4.49 GiB
in (103 MiB/s), 70.8 MiB out (1.15 MiB/s), 55s
Xcp command : xcp verify -bs 32k <IP address of NFS server>:/source_vol
<IP address of destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (data, attrs, mods), 0
```

```
different item, 0 error
Speed : 4.96 GiB in (84.5 MiB/s), 77.5 MiB out (1.29 MiB/s)
Total Time : 1m0s.
STATUS : PASSED
```

驗證平行 <n>

使用 `-parallel <n>` 參數 `verify` 命令以指定並行批次處理程序的最大數目。

語法

```
xcp verify -parallel <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -parallel 2 <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_04.35.10.356405
15,021 scanned, 6,946 found, 4,869 compared, 4,869 same data, 378 MiB
in (74.5 MiB/s), 3.24 MiB
out (654 KiB/s), 5s
25,165 scanned, 9,671 indexed, 15,945 found, 12,743 compared, 12,743
same data, 706 MiB in (65.4
MiB/s), 7.81 MiB out (934 KiB/s), 10s
35,367 scanned, 19,747 indexed, 24,036 found, 19,671 compared, 19,671
same data, 933 MiB in
(45.3 MiB/s), 11.9 MiB out (827 KiB/s), 15s
45,267 scanned, 29,761 indexed, 32,186 found, 26,909 compared, 26,909
same data, 1.38 GiB in
(94.6 MiB/s), 16.5 MiB out (943 KiB/s), 20s
55,690 scanned, 39,709 indexed, 40,413 found, 34,805 compared, 34,805
same data, 1.69 GiB in
(62.8 MiB/s), 20.9 MiB out (874 KiB/s), 25s
55,690 scanned, 39,709 indexed, 48,325 found, 42,690 compared, 42,690
same data, 1.88 GiB in
(38.1 MiB/s), 24.3 MiB out (703 KiB/s), 31s
65,002 scanned, 49,670 indexed, 57,872 found, 51,891 compared, 51,891
same data, 2.04 GiB in
(33.2 MiB/s), 29.0 MiB out (967 KiB/s), 36s
75,001 scanned, 59,688 indexed, 66,789 found, 60,291 compared, 60,291
same data, 2.11 GiB in
(14.8 MiB/s), 33.4 MiB out (883 KiB/s), 41s
85,122 scanned, 69,690 indexed, 75,009 found, 67,337 compared, 67,337
same data, 2.42 GiB in
(62.3 MiB/s), 37.6 MiB out (862 KiB/s), 46s
91,260 scanned, 79,686 indexed, 82,097 found, 73,854 compared, 73,854
same data, 2.69 GiB in
(55.0 MiB/s), 41.4 MiB out (770 KiB/s), 51s
95,002 scanned, 79,686 indexed, 88,238 found, 79,707 compared, 79,707
same data, 2.99 GiB in
(60.7 MiB/s), 44.4 MiB out (608 KiB/s), 56s
105,002 scanned, 89,787 indexed, 96,059 found, 86,745 compared, 86,745
same data, 3.19 GiB in
(41.3 MiB/s), 48.4 MiB out (810 KiB/s), 1m1s
110,239 scanned, 99,872 indexed, 104,757 found, 94,652 compared, 94,652
```

```
same data, 3.47 GiB in
(57.0 MiB/s), 52.7 MiB out (879 KiB/s), 1m6s
120,151 scanned, 104,848 indexed, 111,491 found, 100,317 compared,
100,317 same data, 3.95 GiB
in (97.2 MiB/s), 56.3 MiB out (733 KiB/s), 1m11s
130,068 scanned, 114,860 indexed, 119,867 found, 107,260 compared,
107,260 same data, 4.25 GiB
in (60.5 MiB/s), 60.6 MiB out (871 KiB/s), 1m16s
134,028 scanned, 119,955 indexed, 125,210 found, 111,886 compared,
111,886 same data, 4.65 GiB
in (83.2 MiB/s), 63.7 MiB out (647 KiB/s), 1m21s
134,630 scanned, 129,929 indexed, 132,679 found, 119,193 compared,
119,193 same data, 4.93 GiB
in (56.8 MiB/s), 67.9 MiB out (846 KiB/s), 1m26s
Xcp command : xcp verify -parallel 2 <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (data, attrs, mods), 0
different item, 0 error
```

驗證 **-dircount <n[k]>**

使用 `-dircount <n[k]>` 參數 `verify` 用於指定讀取目錄時的要求大小的命令。預設值為 64k。

語法

```
xcp verify -dircount <n[k]> <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```


顯示範例

```
[root@localhost linux]# ./xcp verify -dircount 32k <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

xcp: WARNING: No index name has been specified, creating one with name:
autoname_verify_2020-03-
05_04.28.58.235953
32,221 scanned, 10,130 found, 5,955 compared, 5,955 same data, 312 MiB
in (62.1 MiB/s), 4.15 MiB
out (848 KiB/s), 5s
40,089 scanned, 21,965 found, 16,651 compared, 16,651 same data, 801
MiB in (97.5 MiB/s), 9.55
MiB out (1.07 MiB/s), 10s

51,723 scanned, 14,544 indexed, 33,019 found, 27,288 compared, 27,288
same data, 1.24 GiB in
(93.8 MiB/s), 15.6 MiB out (1.22 MiB/s), 15s
67,360 scanned, 34,733 indexed, 45,615 found, 39,341 compared, 39,341
same data, 1.73 GiB in
(100 MiB/s), 22.8 MiB out (1.43 MiB/s), 20s
82,314 scanned, 44,629 indexed, 63,276 found, 55,559 compared, 55,559
same data, 2.05 GiB in
(64.7 MiB/s), 31.0 MiB out (1.63 MiB/s), 25s
100,085 scanned, 59,585 indexed, 79,799 found, 70,618 compared, 70,618
same data, 2.43 GiB in
(77.2 MiB/s), 38.9 MiB out (1.57 MiB/s), 30s
110,158 scanned, 69,651 indexed, 93,005 found, 82,654 compared, 82,654
same data, 2.87 GiB in
(89.1 MiB/s), 45.4 MiB out (1.28 MiB/s), 35s
120,047 scanned, 79,641 indexed, 104,539 found, 93,226 compared, 93,226
same data, 3.40 GiB in
(108 MiB/s), 51.4 MiB out (1.20 MiB/s), 40s
130,362 scanned, 94,662 indexed, 114,193 found, 101,230 compared,
101,230 same data, 3.87 GiB in
(97.3 MiB/s), 56.7 MiB out (1.06 MiB/s), 45s
134,630 scanned, 104,789 indexed, 124,272 found, 110,547 compared,
110,547 same data, 4.33 GiB
in (94.2 MiB/s), 62.3 MiB out (1.12 MiB/s), 50s
134,630 scanned, 129,879 indexed, 133,227 found, 119,717 compared,
119,717 same data, 4.93 GiB
in (119 MiB/s), 68.2 MiB out (1.17 MiB/s), 55s
Xcp command : xcp verify -dircount 32k <IP address of NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol
134,630 scanned, 0 matched, 100% found (121,150 have data), 100%
verified (data, attrs, mods), 0
```

```
different item, 0 error
Speed : 4.95 GiB in (89.3 MiB/s), 69.2 MiB out (1.22 MiB/s)
Total Time : 56s.
STATUS : PASSED
```

驗證 -noid

使用 -noId 參數 verify 命令以停用預設索引的建立。預設值為假。

語法

```
xcp verify -noId <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@localhost linux]# ./xcp verify -noid <IP address of source NFS
server>:/source_vol <IP address of destination NFS server>:/dest_vol

Job ID: Job_2024-04-22_07.19.41.825308_verify
 49,216 scanned, 10,163 found, 9,816 compared, 9.59 KiB same data, 1.15
GiB in (234 MiB/s), 5.67 MiB out (1.13 MiB/s), 6s
 49,615 scanned, 4,958 indexed, 27,018 found, 26,534 compared, 25.9 KiB
same data, 3.08 GiB in (390 MiB/s), 15.1 MiB out (1.86 MiB/s), 11s
 73,401 scanned, 34,884 indexed, 46,365 found, 45,882 compared, 44.8
KiB same data, 5.31 GiB in (420 MiB/s), 26.6 MiB out (2.12 MiB/s), 16s
 80,867 scanned, 44,880 indexed, 63,171 found, 62,704 compared, 61.2
KiB same data, 7.23 GiB in (377 MiB/s), 36.2 MiB out (1.83 MiB/s), 21s
 83,102 scanned, 69,906 indexed, 79,587 found, 79,246 compared, 77.4
KiB same data, 9.13 GiB in (387 MiB/s), 46.0 MiB out (1.95 MiB/s), 26s

Xcp command : xcp verify 10.235.122.70:/source_vol
10.235.122.86:/dest_vol
Stats       : 83,102 scanned, 83,102 indexed, 100% found (82,980 have
data), 82,980 compared, 100% verified (data, attrs, mods)
Speed       : 9.55 GiB in (347 MiB/s), 48.4 MiB out (1.72 MiB/s)
Total Time  : 28s.
Job ID      : Job_2024-04-22_07.19.41.825308_verify
Log Path    : /opt/NetApp/xFiles/xcp/xcplogs/Job_2024-04-
22_07.19.41.825308_verify.log
STATUS      : PASSED
```

驗證 **-preserve-atime**

使用 `-preserve-atime` 參數 `verify` 命令將所有檔案還原至來源上上次存取的日子。◦◦ `-preserve-atime` 參數會將存取時間重設為 XCP 讀取作業之前設定的原始值。

語法

```
xcp verify -preserve-atime <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@client1 linux]# ./xcp verify -preserve-atime  
<IP_address>:/source_vol <destination_IP_address>:/dest_vol  
  
xcp: WARNING: No index name has been specified, creating one with name:  
XCP_verify_2022-06-  
30_15.29.03.686503  
xcp: Job ID: Job_2022-06-30_15.29.03.723260_verify  
Xcp command : xcp verify -preserve-atime <IP_address>:/source_vol  
<destination_IP_address>:/dest_vol Stats :  
110 scanned, 110 indexed, 100% found (96 have data), 96 compared, 100%  
verified (data, attrs,  
mods)  
Speed : 4.87 MiB in (3.02 MiB/s), 160 KiB out (99.4 KiB/s) Total Time :  
1s.  
Job ID : Job_2022-06-30_15.29.03.723260_verify  
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2022-06-  
30_15.29.03.723260_verify.log STATUS :  
PASSED
```

驗證 **-s3.insecure**

使用 `-s3.insecure` 參數 `verify` 命令使用 HTTP 取代 HTTPS 進行 S3 儲存區通訊。

語法

```
xcp verify -s3.insecure hdfs:///user/test s3://<bucket_name>
```

顯示範例

```
[root@client1 linux]# ./xcp verify -s3.insecure hdfs://<HDFS source>
s3://<s3-bucket>

xcp: WARNING: No index name has been specified, creating one with name:
XCP_verify_2023-06-
08_09.04.33.301709
Job ID: Job_2023-06-08_09.04.33.301709_verify
Xcp command : xcp verify -s3.insecure hdfs://<HDFS source> s3://<s3-
bucket>
Stats : 8 scanned, 8 indexed, 100% found (5 have data), 5 compared,
100% verified (data)
Speed : 21.3 KiB in (8.20 KiB/s), 90.8 KiB out (34.9 KiB/s)
Total Time : 2s.
Job ID : Job_2023-06-08_09.04.33.301709_verify
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
08_09.04.33.301709_verify.log
STATUS : PASSED
```

驗證 -S3.Endpoint <s3_endpoint_url>

使用 `-s3.endpoint <s3_endpoint_url>` 參數 `verify` 命令以指定的 URL 取代預設 AWS 端點 URL、以進行 S3 貯體通訊。

語法

```
xcp verify -s3.endpoint https://<endpoint_url>: s3://<bucket_name>
```

顯示範例

```
[root@client1 linux]# ./xcp verify -s3.endpoint https://<endpoint_url>
hdfs://<HDFS source> s3://<s3-bucket>

xcp: WARNING: No index name has been specified, creating one with name:
XCP_verify_2023-06-
13_11.20.48.203492
Job ID: Job_2023-06-13_11.20.48.203492_verify
2 scanned, 2 found, 9.55 KiB in (1.90 KiB/s), 12.5 KiB out (2.50
KiB/s), 5s
Xcp command : xcp verify -s3.endpoint https://<endpoint_url>
hdfs://<HDFS source> s3://<s3-bucket>
Stats : 8 scanned, 8 indexed, 100% found (5 have data), 5 compared,
100% verified (data)
Speed : 21.3 KiB in (2.28 KiB/s), 91.1 KiB out (9.72 KiB/s)
Total Time : 9s.
Job ID : Job_2023-06-13_11.20.48.203492_verify
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
13_11.20.48.203492_verify.log
STATUS : PASSED
```

驗證 **-s3.profile <name>**

使用 `s3.profile` 參數 `verify` 命令、從 AWS 認證檔案中指定用於 S3 儲存區通訊的設定檔。

語法

```
xcp verify -s3.profile <name> -s3.endpoint https://<endpoint_url>:
s3://<bucket_name>
```

顯示範例

```
[root@client1 linux]# ./xcp verify -s3.profile sg -s3.endpoint
https://<endpoint_url> hdfs://<HDFS source> s3://<s3-bucket>

xcp: WARNING: No index name has been specified, creating one with name:
XCP_verify_2023-06-
08_09.05.22.412914
Job ID: Job_2023-06-08_09.05.22.412914_verify
Xcp command : xcp verify -s3.profile sg -s3.endpoint
https://<endpoint_url> hdfs://<HDFS source> s3://<s3-bucket>
Stats : 8 scanned, 8 indexed, 100% found (5 have data), 5 compared,
100% verified (data)
Speed : 21.3 KiB in (6.52 KiB/s), 91.2 KiB out (27.9 KiB/s)
Total Time : 3s.
Job ID : Job_2023-06-08_09.05.22.412914_verify
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
08_09.05.22.412914_verify.log
STATUS : PASSED
[root@client1 linux]# ./xcp verify -s3.profile sg -s3.endpoint
https://<endpoint_url> hdfs://<HDFS source> s3://<s3-bucket>

xcp: WARNING: No index name has been specified, creating one with name:
XCP_verify_2023-06-
08_09.20.53.763772
Job ID: Job_2023-06-08_09.20.53.763772_verify
Xcp command : xcp verify -s3.profile sg -s3.endpoint
https://<endpoint_url>
hdfs://<HDFS source> s3://<s3-bucket>
Stats : 8 scanned, 8 indexed, 100% found (5 have data), 5 compared,
100% verified (data)
Speed : 25.3 KiB in (14.5 KiB/s), 93.7 KiB out (53.8 KiB/s)
Total Time : 1s.
Job ID : Job_2023-06-08_09.20.53.763772_verify
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
08_09.20.53.763772_verify.log
STATUS : PASSED
```

驗證 **-s3.noverify**

使用 `-s3.noverify` 參數 `verify` 用於覆寫 S3 儲存區通訊之 SSL 憑證預設驗證的命令。

語法

```
xcp verify -s3.noverify s3://<bucket_name>
```

顯示範例

```
[root@client1 linux]# ./xcp verify -s3.noverify hdfs://<HDFS source>
s3://<s3-bucket>

xcp: WARNING: No index name has been specified, creating one with name:
XCP_verify_2023-06-
13_10.59.01.817044
Job ID: Job_2023-06-13_10.59.01.817044_verify
Xcp command : xcp verify -s3.noverify hdfs://<HDFS source> s3://<s3-
bucket>
Stats : 8 scanned, 8 indexed, 100% found (5 have data), 5 compared,
100% verified (data)
Speed : 21.3 KiB in (5.84 KiB/s), 90.8 KiB out (24.9 KiB/s)
Total Time : 3s.
Job ID : Job_2023-06-13_10.59.01.817044_verify
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
13_10.59.01.817044_verify.log
STATUS : PASSED

./xcp verify -s3.profile sg -s3.noverify -s3.endpoint
https://<endpoint_url> hdfs://<HDFS source> s3://<s3-bucket>

xcp: WARNING: No index name has been specified, creating one with name:
XCP_verify_2023-06-
13_11.29.00.543286
Job ID: Job_2023-06-13_11.29.00.543286_verify
15,009 scanned, 9 indexed, 1,194 found, 908 compared, 908 same data,
4.87 MiB in (980 KiB/s), 199 KiB
out (39.1 KiB/s), 5s
15,009 scanned, 9 indexed, 2,952 found, 2,702 compared, 2.64 KiB same
data, 8.56 MiB in (745 KiB/s),
446 KiB out (48.7 KiB/s), 10s
15,009 scanned, 9 indexed, 4,963 found, 4,841 compared, 4.73 KiB same
data, 12.9 MiB in (873 KiB/s),
729 KiB out (55.9 KiB/s), 15s
15,009 scanned, 9 indexed, 6,871 found, 6,774 compared, 6.62 KiB same
data, 16.9 MiB in (813 KiB/s),
997 KiB out (53.4 KiB/s), 20s
15,009 scanned, 9 indexed, 8,653 found, 8,552 compared, 8.35 KiB same
data, 20.6 MiB in (745 KiB/s),
1.22 MiB out (49.3 KiB/s), 25s
15,009 scanned, 9 indexed, 10,436 found, 10,333 compared, 10.1 KiB same
data, 24.3 MiB in (754
KiB/s), 1.46 MiB out (49.8 KiB/s), 31s
15,009 scanned, 9 indexed, 12,226 found, 12,114 compared, 11.8 KiB same
```



```

data, 28.0 MiB in (751
KiB/s), 1.71 MiB out (49.7 KiB/s), 36s
15,009 scanned, 9 indexed, 14,005 found, 13,895 compared, 13.6 KiB same
data, 31.7 MiB in (756
KiB/s), 1.95 MiB out (50.0 KiB/s), 41s
15,009 scanned, 9 indexed, 14,229 found, 14,067 compared, 13.7 KiB same
data, 32.2 MiB in (102
KiB/s), 1.98 MiB out (6.25 KiB/s), 46s
Xcp command : xcp verify -s3.profile sg -s3.noverify -s3.endpoint
https://<endpoint_url> <HDFS source> s3://<s3-bucket>
Stats : 15,009 scanned, 15,009 indexed, 100% found (15,005 have data),
15,005 compared, 100%
verified (data)
Speed : 33.9 MiB in (724 KiB/s), 2.50 MiB out (53.5 KiB/s)
Total Time : 47s.
Job ID : Job_2023-06-13_11.29.00.543286_verify
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
13_11.29.00.543286_verify.log
STATUS : PASSED

```

chmod

XCP NFS chmod 命令會掃描及變更指定目錄結構中所有檔案的檔案權限。「chmod」命令需要模式或參照、NFS 共用或 POSIX 路徑做為變數。XCP chmod 命令會遞迴變更指定路徑的權限。命令輸出會顯示掃描的檔案總數、以及在輸出中變更的權限。

語法

```
xcp chmod -mode <value> <source NFS export path>
```

顯示範例

```

[root@user-1 linux]# ./xcp chmod -mode <IP address>:/source_vol

Xcp command : xcp chmod -mode <IP address>://source_vol
Stats : 6 scanned, 4 changed mode
Speed : 1.96 KiB in (2.13 KiB/s), 812 out (882/s)
Total Time : 0s.
STATUS : PASSED
[root@user-1 linux] #

```

下表列出 chmod 參數及其說明。

參數	說明
<<nfs_chmod_exclude,chmod -exclude ; 篩選器 >	排除符合篩選條件的檔案和目錄。
<<nfs_chmod_match,chmod -match ; 篩選器 >	僅處理與篩選器相符的檔案和目錄。
<<nfs_chmod_reference,chmod -reference ; 參考 gt;	指定參考的檔案或目錄點。
<code>chmod -v</code>	報告每個已處理物件的輸出。

chmod -exclude <filter>

使用 `-exclude <filter>` 參數 `chmod` 命令來排除符合篩選條件的檔案和目錄。

語法

```
xcp chmod -exclude <filter> -mode <value> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chmod -exclude "fnm('3.img')" -mode 770
101.11.10.10:/s_v1/D3/

Excluded: 1 excluded, 0 did not match exclude criteria
Xcp command : xcp chmod -exclude fnm('3.img') -mode 770
101.11.10.10:/s_v1/D3/
Stats : 5 scanned, 1 excluded, 5 changed mode
Speed : 2.10 KiB in (7.55 KiB/s), 976 out (3.43 KiB/s)
Total Time : 0s.
STATUS : PASSED
[root@user-1 linux]#
```

chmod -Match <filter>

使用 `-match <filter>` 參數 `chmod` 僅處理與篩選器相符的檔案和目錄的命令。

語法

```
xcp chmod -match <filter> -mode <value> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chmod -match "fnm('2.img')" -mode 777
101.11.10.10:/s_v1/D2/

Filtered: 1 matched, 5 did not match
Xcp command : xcp chmod -match fnm('2.img') -mode
101.11.10.10:/s_v1/D2/
Stats : 6 scanned, 1 matched, 2 changed mode
Speed : 1.67 KiB in (1.99 KiB/s), 484 out (578/s)
Total Time : 0s.
STATUS : PASSED
[root@user-1 linux]
```

chmod -reference <reference>

使用 `-reference <reference>` 參數 `chmod` 指定參考檔案或目錄點的命令。

語法

```
xcp chmod -reference <reference> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chmod -reference 101.11.10.10:/s_v1/D1/1.txt
102.21.10.10:/s_v1/D2/

Xcp command : xcp chmod -reference 101.11.10.10:/s_v1/D1/1.txt
102.21.10.10:/s_v1/D2/
Stats : 6 scanned, 6 changed mode
Speed : 3.11 KiB in (3.15 KiB/s), 1.98 KiB out (2.00 KiB/s)
Total Time : 0s.
STATUS : PASSED
[root@user-1 linux]#
```

chmod -v

使用 `-v` 參數 `chmod` 用於報告每個已處理物件輸出的命令。

語法

```
chmod -mode <value> -v <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chmod -mode 111 -v file:///mnt/s_v1/D1/

mode of 'file:///mnt/s_v1/D1' changed from 0777 to 0111
mode of 'file:///mnt/s_v1/D1/1.txt' changed from 0777 to 0111
mode of 'file:///mnt/s_v1/D1/softlink_1.img' changed from 0777 to 0111
mode of 'file:///mnt/s_v1/D1/softlink_to_hardlink_1.img' changed from
0777 to 0111 mode
of 'file:///mnt/s_v1/D1/1.img' changed from 0777 to 0111
mode of 'file:///mnt/s_v1/D1/hardlink_1.img' changed from 0777 to 0111
mode of
'file:///mnt/s_v1/D1/1.img1' changed from 0777 to 0111
Xcp command : xcp chmod -mode 111 -v file:///mnt/s_v1/D1/ Stats : 7
scanned, 7
changed mode
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 0s.
STATUS : PASSED
[root@user-1 linux]#
```

Chown

XCP NFS `chown` 命令會掃描並變更指定目錄結構的所有檔案擁有權。◦◦ `chown` 命令需要 NFS 共用或 POSIX 路徑做為變數。XCP 會遞迴變更指定路徑的擁有權。◦◦ `chown` 命令會顯示檔案的已變更使用者 ID (UID)。

語法

```
xcp chown -user/-group <user-name/group-name> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chown -user user2 -v
101.101.10.110:/s_v1/smaple_set/D1

Sat Apr 2 23:06:05 2022
changed ownership of 101.101.10.110:/s_v1/smaple_set/D1 from 1001:0 to
1004:0
changed ownership of 101.101.10.110:/s_v1/smaple_set/D1/1.txt from
1001:0 to 1004:0
changed ownership of 101.101.10.110:/s_v1/smaple_set/D1/softlink_1.img
from 1001:0 to 1004:0
changed ownership of 101.101.10.110:/s_v1/smaple_set/D1/1.img from
1001:0 to 1004:0
changed ownership of 101.101.10.110:/s_v1/smaple_set/D1/hardlink_1.img
from 1001:0 to 1004:0
changed ownership of
101.101.10.110:/s_v1/smaple_set/D1/softlink_to_hardlink_1.img from
1001:0 to
1004:0
Xcp command : xcp chown -user user2 -v
101.101.10.110:/s_v1/smaple_set/D1
Stats : 6 scanned, 6 changed ownership
Speed : 2.25 KiB in (1.82 KiB/s), 1.11 KiB out (923/s)
Total Time : 1s.
STATUS : PASSED
[root@user-1 linux]#
```

下表列出 `chown` 參數及其說明。

參數	說明
<<nfs_chown_exclude,chown - 排除 ; 篩選器 >	排除符合篩選條件的檔案和目錄。
<<nfs_chown_match,chown -match ; 篩選器 >	僅處理與篩選器相符的檔案和目錄。
<<nfs_chown_group,chown - 群組 ; 群組 >	設定來源的 Linux 群組 ID (GID) 。
<<nfs_chown_user,chown - 使用者 ; 使用者 >	設定來源的 Linux UID 。
<<nfs_chown_user_from,chown -user-from ; user_from gt;	變更 UID 。
<<nfs_chown_group_from,chown -group-from ; group_from gt;	變更 GID 。
<<nfs_chown_reference,chown - 參考 ; 參考 >	指定參考的檔案或目錄點。
<code>chown -v</code>	報告每個已處理物件的輸出。

chown - 排除 <filter>

使用 `-exclude <filter>` 參數 `chown` 命令來排除符合篩選條件的檔案和目錄。

語法

```
xcp chown -exclude <filter> -user <user_name> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chown -exclude "fnm('1.img')" -user user2
101.101.10.210:/s_v1/smaple_set/D1

Excluded: 1 excluded, 0 did not match exclude criteria
Xcp command : xcp chown -exclude fnm('1.img') -user
user2101.101.10.210:/s_v1/smaple_set/D1
Stats : 5 scanned, 1 excluded, 5 changed ownership
Speed : 2.10 KiB in (1.75 KiB/s), 976 out (812/s)
Total Time : 1s.
STATUS : PASSED
[root@user-1 linux]#
```

Chown -Match <filter>

使用 `-match <filter>` 參數 `chown` 僅處理與篩選器相符的檔案和目錄的命令。

語法

```
xcp chown -match <filter> -user <user_name> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chown -exclude "fnm('1.img')" -user user2
101.101.10.210:/s_v1/smaple_set/D1

Excluded: 1 excluded, 0 did not match exclude criteria
Xcp command : xcp chown -exclude fnm('1.img') -user
user2101.101.10.210:/s_v1/smaple_set/D1
Stats : 5 scanned, 1 excluded, 5 changed ownership
Speed : 2.10 KiB in (1.75 KiB/s), 976 out (812/s)
Total Time : 1s.
STATUS : PASSED
[root@user-1 linux]#
```

Chown 群組 <group>

使用 `-group <group>` 參數 `chown` 在來源設定 Linux GID 的命令。

語法

```
xcp chown -match <filter> -user <user_name> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chown -group group1
101.101.10.210:/s_v1/smaple_set/D1

Xcp command : xcp chown -group group1
101.101.10.210:/s_v1/smaple_set/D1
Stats : 6 scanned, 6 changed ownership
Speed : 2.25 KiB in (1.92 KiB/s), 1.11 KiB out (974/s)
Total Time : 1s.
STATUS : PASSED
[root@user-1 linux]#
```

Chown - 使用者 <user>

使用 `-user <user>` 參數 `chown` 在來源設定 Linux UID 的命令。

語法

```
xcp chown -user -user <user_name> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chown -user user1
102.101.10.210:/s_v1/smaple_set/D1

Xcp command : xcp chown -user user1 102.101.10.210:/s_v1/smaple_set/D1
Stats : 6 scanned, 6 changed ownership
Speed : 2.25 KiB in (3.12 KiB/s), 1.11 KiB out (1.55 KiB/s)
Total Time : 0s.
STATUS : PASSED
[root@user-1 linux]#
```

Chown -user-from <user_from>

使用 -user-from <user_from> 參數 chown 變更 UID 的命令。

語法

```
xcp chown -user-from user1 -user <user_name> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chown -user-from user1 -user user2
101.101.10.210:/s_v1/smaple_set/D1

Xcp command : xcp chown -user-from user1 -user user2
102.108.10.210:/s_v1/smaple_set/D1
Stats : 6 scanned, 6 changed ownership
Speed : 2.25 KiB in (2.44 KiB/s), 1.11 KiB out (1.21 KiB/s)
Total Time : 0s.
STATUS : PASSED
[root@user-1 linux]#
```

來自 <group_from> 的 chown -group-

使用 -group-from <group_from> 參數 chown 變更 GID 的命令。

語法

```
xcp chown -group-from <group_name> -group <group_name> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chown -group-from group1 -group group2
101.101.10.210:/s_v1/smaple_set/D1

Xcp command : xcp chown -group-from group1 -group group2
101.101.10.210:/s_v1/smaple_set/D1
Stats : 6 scanned, 6 changed ownership
Speed : 2.25 KiB in (4.99 KiB/s), 1.11 KiB out (2.47 KiB/s)
Total Time : 0s.
STATUS : PASSED
[root@user-1 linux]#
```

Chown - 參考 <reference>

使用 `-reference <reference>` 參數 `chown` 指定參考檔案或目錄點的命令。

語法

```
xcp chown -reference <reference> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chown -reference
101.101.10.210:/s_v1/smaple_set/D2/2.img
101.101.10.210:/s_v1/smaple_set/D1

Xcp command : xcp chown -reference
101.101.10.210:/s_v1/smaple_set/D2/2.img
101.101.10.210:/s_v1/smaple_set/D1
Stats : 6 scanned, 6 changed ownership
Speed : 3.11 KiB in (6.25 KiB/s), 2.01 KiB out (4.05 KiB/s)
Total Time : 0s.
STATUS : PASSED
[root@user-1 linux]#
```

chown -v

使用 `-v` 參數 `chown` 用於報告每個已處理物件輸出的命令。

語法

```
xcp chown -user-from <user_name> -v -user <user_name> <source NFS export path>
```

顯示範例

```
[root@user-1 linux]# ./xcp chown -user-from user2 -v -user user1
101.101.10.210:/s_v1/smaple_set/D1

changed ownership of 101.101.10.210:/s_v1/smaple_set/D1 from 1004:1003
to 1001:1003
changed ownership of 101.101.10.210:/s_v1/smaple_set/D1/1.img from
1004:1003 to 1001:1003
changed ownership of 101.101.10.210:/s_v1/smaple_set/D1/1.txt from
1004:1003 to 1001:1003
changed ownership of 101.101.10.210:/s_v1/smaple_set/D1/softlink_1.img
from 1004:1003 to
1001:1003
changed ownership of
101.101.10.210:/s_v1/smaple_set/D1/softlink_to_hardlink_1.img from
1004:1003 to 1001:1003
changed ownership of 101.101.10.210:/s_v1/smaple_set/D1/hardlink_1.img
from 1004:1003 to
1001:1003
Xcp command : xcp chown -user-from user2 -v -user user1
101.101.10.210:/s_v1/smaple_set/D1
Stats : 6 scanned, 6 changed ownership
Speed : 2.25 KiB in (2.02 KiB/s), 1.11 KiB out (1.00 KiB/s)
Total Time : 1s.

STATUS : PASSED
[root@user-1]
```

記錄傾印

`NFS logdump` 命令會根據移轉 ID 或工作 ID 來篩選記錄、並將這些記錄傾印至 `.zip` 目前目錄中的檔案。◦ `.zip` 檔案的名稱與命令所使用的移轉或工作 ID 相同。

語法

```
xcp logdump -m <migration ID>  
xcp logdump -j <job ID>
```

顯示範例

```
[root@client1 xcp_nfs]# xcp logdump -j Job_2022-06-14_21.49.28.060943_scan

xcp: Job ID: Job_2022-06-14_21.52.48.744198_logdump
Xcp command : xcp logdump -j Job_2022-06-14_21.49.28.060943_scan
Stats :
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 0s.
Job ID : Job_2022-06-14_21.52.48.744198_logdump
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2022-06-14_21.52.48.744198_logdump.log
STATUS : PASSED
[root@client xcp_nfs]# ls Job_2022-06-14_21.49.28.060943_scan
Job_2022-06-14_21.49.28.060943_scan.log supplementary
[root@client1 xcp_nfs]# ls Job_2022-06-14_21.49.28.060943_scan/supplementary/
Job_idx_2022-06-14_21.46.05.167338_copy.log Job_idx_2022-06-14_21.47.41.868410_sync.log
xcp_history.json

Job_idx_2022-06-14_21.46.35.134294_sync.log Job_idx_2022-06-14_21.48.00.085869_sync.log
[root@client1 xcp_nfs]#
[root@client1 xcp_nfs]# ./xcp logdump -m idx

xcp: Job ID: Job_2022-06-14_21.56.04.218977_logdump
Xcp command : xcp logdump -m idx
Stats :
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 0s.
Job ID : Job_2022-06-14_21.56.04.218977_logdump
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2022-06-14_21.56.04.218977_logdump.log
STATUS : PASSED
[root@client1 xcp_nfs]# ls idx
Job_idx_2022-06-14_21.46.05.167338_copy.log Job_idx_2022-06-14_21.47.41.868410_sync.log
xcp_history.json
Job_idx_2022-06-14_21.46.35.134294_sync.log Job_idx_2022-06-14_21.48.00.085869_sync.log
```

刪除

XCP NFS delete 命令會刪除指定路徑中的所有內容。

語法

```
xcp delete <NFS export path>
```

```
[root@localhost ]# /xcp/linux/xcp delete <IP address of destination
NFSserver>:/dest_vol

WARNING: You have selected <IP address of destination NFS
server>:/dest_vol for
removing data.Data in this path /dest_vol will be deleted.
Are you sure you want to delete (yes/no): yes
Recursively removing data in <IP address of destination NFS
server>:/dest_vol ...
31,996 scanned, 5,786 removes, 3 rmdirs, 8.27 MiB in (1.65 MiB/s), 1.52
MiB out (312
KiB/s), 5s
40,324 scanned, 19,829 removes, 22 rmdirs, 12.2 MiB in (799 KiB/s),
3.89 MiB out
(485 KiB/s),10s
54,281 scanned, 32,194 removes, 2,365 rmdirs, 17.0 MiB in (991 KiB/s),
6.15 MiB out
(463 KiB/s),15s
75,869 scanned, 44,903 removes, 4,420 rmdirs, 23.4 MiB in (1.29 MiB/s),
8.60
MiB out (501KiB/s), 20s
85,400 scanned, 59,728 removes, 5,178 rmdirs, 27.8 MiB in (881 KiB/s),
11.1 MiB out
(511 KiB/s),25s
106,391 scanned, 76,229 removes, 6,298 rmdirs, 34.7 MiB in (1.39
MiB/s), 14.0
MiB out (590KiB/s), 30s
122,107 scanned, 93,203 removes, 7,448 rmdirs, 40.9 MiB in (1.24
MiB/s), 16.9
MiB out (606KiB/s), 35s
134,633 scanned, 109,815 removes, 9,011 rmdirs, 46.5 MiB in (1.12
MiB/s), 20.0
MiB out (622KiB/s), 40s
134,633 scanned, 119,858 removes, 9,051 rmdirs, 47.9 MiB in (288
KiB/s), 21.4
MiB out (296KiB/s), 45s
134,633 scanned, 119,858 removes, 9,051 rmdirs, 47.9 MiB in (0/s), 21.4
MiB out (0/s), 50s
134,633 scanned, 121,524 removes, 9,307 rmdirs, 48.2 MiB in (51.7
KiB/s), 21.7
MiB out (49.5KiB/s), 55s
Xcp command : xcp delete <IP address of destination NFS
server>:/dest_vol134,633 scanned, 0 matched, 134,632 delete
```

```

items, 0 error
Speed : 48.7 MiB in (869 KiB/s), 22.2 MiB out
(396 KiB/s)Total Time : 57s.
STATUS : PASSED

```

下表列出 `delete` 參數及其說明。

參數	說明
<<nfs_delete_match,刪除 - 符合 ; 篩選器 >	僅處理與篩選器相符的檔案和目錄。
刪除 - 強制	刪除但不確認。
刪除 -remotivopdir	移除目錄、包括子目錄。
<<nfs_delete_exclude,刪除 - 排除 ; 篩選器 >	排除符合篩選條件的檔案和目錄。
<<nfs_delete_parallel,刪除平行 ; n>	指定最大並行批次處理程序數（預設值：7）。
刪除 -preserve-atime	保留檔案或目錄的存取時間（預設：false）。
<<nfs_delete_loglevel,刪除 -loglevel ; 名稱 >	設定記錄層級；可用層級為 info 、 debug （預設：info）。
刪除 -s3.insecure	提供選項、可在 S3 Bucket 通訊中使用 HTTP 而非 HTTPS。
<<nfs_delete_endpoint,刪除 -s3.Endpoint ; s3_Endpoint URL>	以 S3 Bucket 通訊的指定 URL 覆寫預設的 Amazon Web Services（AWS）端點 URL。
<<nfs_delete_s3_profile,刪除 -s3.profile ; profile_name gt;	從 AWS 認證檔案指定用於 S3 儲存區通訊的設定檔。
刪除 -s3.noverify	覆寫 S3 Bucket 通訊的 SSL 認證預設驗證。

刪除 - 比對 <filter>

使用 `-match <filter>` 參數 `delete` 僅處理與篩選器相符的檔案和目錄的命令。

語法

```
xcp delete -match <filter> <NFS export path>
```

顯示範例

```
[root@client1 linux]# ./xcp delete -match "fnm('XCP_copy_2023-04-25_05.51.28.315997')" 10.101.10.101:/xcp_catalog

Job ID: Job_2023-04-25_06.10.29.637371_delete
WARNING: You have selected 10.101.10.101:/xcp_catalog for removing
data. Data in this path
/xcp_catalog will be deleted.
Are you sure you want to delete (yes/no): yes
Recursively removing data in 10.101.10.101:/xcp_catalog ...
Xcp command : xcp delete -match fnm('XCP_copy_2023-04-25_05.51.28.315997')
10.101.10.101:/xcp_catalog
Stats : 209 scanned, 14 matched, 12 removes, 2 rmdirs
Speed : 58.9 KiB in (18.6 KiB/s), 8.25 KiB out (2.60 KiB/s)
Total Time : 3s.
Job ID : Job_2023-04-25_06.10.29.637371_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-25_06.10.29.637371_delete.log
STATUS : PASSED
```

刪除 - 強制

使用 `-force` 參數 `delete` 不經確認即刪除的命令。

語法

```
xcp delete -force <NFS export path>
```


顯示範例

```
[root@client1 linux]# ./xcp delete -force
10.101.10.101:/xcp_catalog/catalog/indexes/XCP_copy_2023-04-
25_05.53.58.273910

Job ID: Job_2023-04-25_06.11.30.584440_delete
WARNING: You have selected
10.101.10.101:/xcp_catalog/catalog/indexes/XCP_copy_2023-04-
25_05.53.58.273910 for removing data. Data in this path
/xcp_catalog/catalog/indexes/XCP_copy_2023-04-25_05.53.58.273910 will
be deleted.
Recursively removing data in
10.101.10.101:/xcp_catalog/catalog/indexes/XCP_copy_2023-04-
25_05.53.58.273910 ...
Xcp command : xcp delete -force
110.101.10.101:/xcp_catalog/catalog/indexes/XCP_copy_2023-04-
25_05.53.58.273910
Stats : 14 scanned, 12 removes, 1 rmdir
Speed : 6.44 KiB in (4.73 KiB/s), 3.59 KiB out (2.64 KiB/s)
Total Time : 1s.
Job ID : Job_2023-04-25_06.11.30.584440_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
25_06.11.30.584440_delete.log
STATUS : PASSED
[root@client-1 linux] #
```

刪除 **-remotivopdir**

使用 `-removetopdir` 參數 `delete` 移除目錄的命令、包括子目錄。

語法

```
xcp delete -force -loglevel <name> -removetopdir <NFS export path>
```

顯示範例

```
[root@client1 linux]# ./xcp delete -force -loglevel DEBUG -removetopdir
10.101.10.101:/temp7/user9

Job ID: Job_2023-04-25_08.03.38.218893_delete
WARNING: You have selected 10.101.10.101:/temp7/user9 for removing
data. Data in this path
/temp7/user9 will be deleted.
Recursively removing data in 10.101.10.101:/temp7/user9 ...
50,500 scanned, 16,838 removes, 11.5 MiB in (2.27 MiB/s), 2.70 MiB out
(547 KiB/s), 5s
85,595 scanned, 43,016 removes, 21.5 MiB in (1.97 MiB/s), 6.70 MiB out
(806 KiB/s), 10s
.
.
.
1.01M scanned, 999,771 removes, 1,925 rmdirs, 324 MiB in (1.42 MiB/s),
153 MiB out (922
KiB/s), 3m6s

Xcp command : xcp delete -force -loglevel DEBUG -removetopdir
10.101.10.101:/temp7/user9
Stats : 1.01M scanned, 1.01M removes, 2,041 rmdirs
Speed : 326 MiB in (1.73 MiB/s), 155 MiB out (842 KiB/s)
Total Time : 3m8s.
Job ID : Job_2023-04-25_08.03.38.218893_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
25_08.03.38.218893_delete.log
STATUS : PASSED
[root@client1 linux]#
```

刪除 - 排除 <filter>

使用 `-exclude <filter>` 參數 `delete` 命令來排除符合篩選條件的檔案和目錄。

語法

```
xcp delete -force -exclude <filter> <NFS export path>
```

顯示範例

```
[root@client1 linux]# ./xcp delete -force -exclude "fnm('USER5')"  
10.101.10.101:/temp7/user2/  
  
Job ID: Job_2023-04-25_07.54.25.241216_delete  
WARNING: You have selected 10.101.10.101:/temp7/user2 for removing  
data. Data in this path  
/temp7/user2 will be deleted.  
Recursively removing data in 10.101.10.101:/temp7/user2 ...  
29,946 scanned, 1 excluded, 6,492 removes, 977 rmdirs, 7.42 MiB in  
(1.48 MiB/s), 1.54 MiB out  
(316 KiB/s), 5s  
Xcp command : xcp delete -force -exclude fnm('USER5')  
10.101.10.101:/temp7/user2/  
Stats : 29,946 scanned, 1 excluded, 28,160 removes, 1,785 rmdirs  
Speed : 10.6 MiB in (1.18 MiB/s), 5.03 MiB out (574 KiB/s)  
Total Time : 8s.  
Job ID : Job_2023-04-25_07.54.25.241216_delete  
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-  
25_07.54.25.241216_delete.log  
STATUS : PASSED  
[root@client1 linux]#
```

刪除平行 <n>

使用 `-parallel <n>` 參數 `delete` 命令以指定並行批次處理程序的最大數目。預設值為 7。

語法

```
xcp delete -force -parallel <n> -match <filter> <NFS export path>
```

顯示範例

```
[root@client1 linux]# ./xcp delete -force -parallel 8 -match
"fnm('2023-04-25_05.49.26.733160*')" 10.101.10.101:/xcp_catalog/

Job ID: Job_2023-04-25_06.15.27.024987_delete
WARNING: You have selected 10.101.10.101:/xcp_catalog for removing
data. Data in this path /xcp_catalog will be deleted.
Recursively removing data in 10.101.10.101:/xcp_catalog ...
Xcp command : xcp delete -force -parallel 8 -match fnm('2023-04-
25_05.49.26.733160*')
10.101.10.101:/xcp_catalog/
Stats : 182 scanned, 1 matched, 1 remove
Speed : 50.0 KiB in (115 KiB/s), 5.45 KiB out (12.5 KiB/s)
Total Time : 0s.
Job ID : Job_2023-04-25_06.15.27.024987_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
25_06.15.27.024987_delete.log
STATUS : PASSED
[root@client1 linux]#
```

刪除 **-preserve-atime**

使用 `-preserve-atime <preserve-atime>` 參數 `delete` 保留檔案或目錄存取時間的命令。預設值為假。

語法

```
xcp delete -force -preserve-atime <NFS export path>
```

顯示範例

```
[root@client1 linux]# ./xcp delete -force -preserve-atime
<IP_address>:/temp7/user2/

Job ID: Job_2023-04-25_07.55.30.972162_delete
WARNING: You have selected <IP_address>:/temp7/user2 for removing data.
Data in this path
/temp7/user2 will be deleted.
Recursively removing data in <IP_address>:/temp7/user2 ...
Xcp command : xcp delete -force -preserve-atime
<IP_address>:/temp7/user2/
Stats : 256 scanned, 255 rmdirs
Speed : 199 KiB in (108 KiB/s), 75.7 KiB out (41.1 KiB/s)
Total Time : 1s.
Job ID : Job_2023-04-25_07.55.30.972162_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
25_07.55.30.972162_delete.log
STATUS : PASSED
[root@client-1 linux]#
```

刪除 **-logLevel <name>**

使用 `-loglevel <name>` 參數 `delete` 用於設置日誌級別的命令；可用級別為 `info` 和 `debug`。預設層級為資訊。

語法

```
xcp delete -force -loglevel DEBUG -removetopdir <NFS export path>
```

顯示範例

```
[root@client1 linux]# ./xcp delete -force -loglevel DEBUG -removetopdir
10.101.10.101:/temp7/user9

Job ID: Job_2023-04-25_08.03.38.218893_delete
WARNING: You have selected 10.101.10.101:/temp7/user9 for removing
data. Data in this
path /temp7/user9 will be deleted.
Recursively removing data in 10.101.10.101:/temp7/user9 ...
50,500 scanned, 16,838 removes, 11.5 MiB in (2.27 MiB/s), 2.70 MiB out
(547 KiB/s), 5s
85,595 scanned, 43,016 removes, 21.5 MiB in (1.97 MiB/s), 6.70 MiB out
(806 KiB/s),
10s
.
.
.
1.01M scanned, 999,771 removes, 1,925 rmdirs, 324 MiB in (1.42 MiB/s),
153 MiB out
(922 KiB/s), 3m6s
Xcp command : xcp delete -force -loglevel DEBUG -removetopdir
10.101.10.101:/temp7/user9
Stats : 1.01M scanned, 1.01M removes, 2,041 rmdirs
Speed : 326 MiB in (1.73 MiB/s), 155 MiB out (842 KiB/s)
Total Time : 3m8s.
Job ID : Job_2023-04-25_08.03.38.218893_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
25_08.03.38.218893_delete.log
STATUS : PASSED
[root@client-1 linux]#
```

刪除 **-s3.insecure**

使用 `-s3.insecure` 參數 `delete` 命令使用 HTTP 取代 HTTPS 進行 S3 儲存區通訊。

語法

```
xcp delete -s3.insecure s3://bucket1
```

顯示範例

```
[root@client1 linux]# ./xcp delete -s3.insecure s3:// bucket1

Job ID: Job_2023-06-08_08.51.40.849991_delete
WARNING: You have selected s3://bucket1 for removing data. Data in this
path //bucket1 will be
deleted.
Are you sure you want to delete (yes/no): yes
Recursively removing data in s3://bucket1 ...
Xcp command : xcp delete -s3.insecure s3://bucket1
Stats : 8 scanned, 6 s3.objects, 6 s3.removed
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 5s.
Job ID : Job_2023-06-08_08.51.40.849991_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
08_08.51.40.849991_delete.log
STATUS : PASSED
```

刪除 -S3.Endpoint <s3_endpoint_url>

使用 `-s3.endpoint <s3_endpoint_url>` 參數 `delete` 命令以指定的 URL 取代預設 AWS 端點 URL、以進行 S3 貯體通訊。

語法

```
xcp delete -s3.endpoint https://<endpoint_url>: s3://bucket
```

顯示範例

```
[root@client1 linux]# ./xcp delete -s3.endpoint https://<endpoint_url>:
s3://xcp-testing

Job ID: Job_2023-06-13_11.39.33.042545_delete
WARNING: You have selected s3://xcp-testing for removing data. Data in
this path //xcp-testing
will be deleted.
Are you sure you want to delete (yes/no): yes
Recursively removing data in s3://xcp-testing ...
Xcp command : xcp delete -s3.endpoint https://<endpoint_url>: s3://xcp-
testing
Stats : 8 scanned, 5 s3.objects, 5 s3.removed
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 4s.
Job ID : Job_2023-06-13_11.39.33.042545_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
13_11.39.33.042545_delete.log
STATUS : PASSED
```

刪除 **-s3.profile <name>**

使用 `s3.profile` 參數 `delete` 命令、從 AWS 認證檔案中指定用於 S3 儲存區通訊的設定檔。

語法

```
xcp delete -s3.profile sg -s3.endpoint https://<endpoint_url>:
s3://bucket
```


顯示範例

```
[root@client1 linux]# ./xcp delete -s3.profile sg -s3.endpoint
https://<endpoint_url>: s3://bucket

Job ID: Job_2023-06-08_08.53.19.059745_delete
WARNING: You have selected s3://bucket for removing data. Data in this
path //bucket will be deleted.
Are you sure you want to delete (yes/no): yes
Recursively removing data in s3://bucket ...
1 scanned, 0 in (0/s), 0 out (0/s), 5s
Xcp command : xcp delete -s3.profile sg -s3.endpoint
https://<endpoint_url>: s3:/ bucket
Stats : 7 scanned, 5 s3.objects, 5 s3.removed
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 9s.
Job ID : Job_2023-06-08_08.53.19.059745_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
08_08.53.19.059745_delete.log
STATUS : PASSED
```

刪除 **-s3.noverify**

使用 `-s3.noverify` 參數 `delete` 用於覆寫 S3 儲存區通訊之 SSL 憑證預設驗證的命令。

語法

```
xcp delete -s3.noverify s3://bucket
```

顯示範例

```
[root@client-1 linux]# ./xcp delete -s3.noverify s3://bucket1

Job ID: Job_2023-06-13_10.56.19.319076_delete
WARNING: You have selected s3://bucket1 for removing data. Data in this
path //bucket1 will be
deleted.
Are you sure you want to delete (yes/no): yes
Recursively removing data in s3://bucket1 ...
2,771 scanned, 0 in (0/s), 0 out (0/s), 5s
9,009 scanned, 9,005 s3.objects, 2,000 s3.removed, 0 in (0/s), 0 out
(0/s), 10s
Xcp command : xcp delete -s3.noverify s3://bucket1
Stats : 9,009 scanned, 9,005 s3.objects, 9,005 s3.removed
Speed : 0 in (0/s), 0 out (0/s)
Total Time : 15s.
Job ID : Job_2023-06-13_10.56.19.319076_delete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-06-
13_10.56.19.319076_delete.log
STATUS : PASSED
```

預估

XCP NFS `estimate` 命令用於估計從來源複本到目的地完成基準複本的時間。它會使用所有目前可用的系統資源（例如 CPU、RAM、網路和其他參數）來計算完成基礎複本的預估時間。您可以使用 `-target` 選項可開始範例複本作業並取得預估時間。

語法

```
xcp estimate -id <name>
```

顯示範例

```
[root@client-01 linux]# ./xcp estimate -t 100 -id estimate01 -target
10.101.10.10:/temp8

xcp: WARNING: your license will expire in less than 10 days! You can
renew your license at https://xcp.netapp.com
Job ID: Job_2023-04-12_08.09.16.126908_estimate
Starting live test for 1m40s to estimate time to copy
'10.101.10.10:/temp4' to
'10.101.10.10:/temp8'...
estimate regular file copy task completed before the 1m40s duration
0 in (0/s), 0 out (0/s), 5s
0 in (0/s), 0 out (0/s), 10s
Estimated time to copy '10.101.12.11:/temp4' to '10.101.12.10:/temp8'
based on a 1m40s live test:
5.3s
Xcp command : xcp estimate -t 100 -id estimate01 -target
10.101.12.10:/temp8
Estimated Time : 5.3s
Job ID : Job_2023-04-12_08.09.16.126908_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
12_08.09.16.126908_estimate.log
STATUS : PASSED
[root@client-01linux]#
```

下表列出 `estimate` 參數及其說明。

參數	說明
<<nfs_estimate_id,估計 -id ; 名稱 >	指定先前複本或掃描索引的目錄名稱。
<<nfs_estimate_gbit,估計 -Gbit () ;	使用 Gb 頻寬來估計最佳案例時間（預設值：1）。
估計 - 目標	指定用於即時測試複本的目標。
<<nfs_estimate_t,估計 -t ; n/s/m/h>	指定即時測試複本的持續時間（預設值：5 分鐘）。
<<nfs_estimate_bs,估計 -bs ; n[k]>	指定讀寫區塊大小（預設值：64K）。
<<nfs_estimate_dircount,估計 -dircount ; n[k]>	指定讀取目錄的要求大小（預設值：64K）。
預估 - 保留 - 保留	保留檔案或目錄的存取時間（預設：false）。
<<nfs_estimate_loglevel,估計 -loglevel ; 名稱 >	設定記錄層級；可用層級為 info、debug（預設：info）

估計 **-id <name>**

使用 `-id <name>` 參數 `estimate` 命令來排除符合篩選條件的檔案和目錄。

語法

```
xcp estimate -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp estimate -id csdata01

xcp: WARNING: your license will expire in less than 11 days! You can
renew your license at
https://xcp.netapp.com
xcp: WARNING: XCP catalog volume is low on disk space: 99.99% used,
62.0 MiB free space.
Job ID: Job_2023-04-20_12.59.31.260914_estimate
== Best-case estimate to copy `data-set:/user1given 1 gigabit of
bandwidth ==
112 TiB of data at max 128 MiB/s: at least 10d13h
Xcp command : xcp estimate -id csdata01
Estimated Time : 10d13h
Job ID : Job_2023-04-20_12.59.31.260914_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
20_12.59.31.260914_estimate.log
STATUS : PASSED
xcp: WARNING: XCP catalog volume is low on disk space: 99.99% used,
62.0 MiB free space.
[root@client1 linux]#
```

估計 **-Gbit <n>**

使用 `-gbit <n>` 參數 `estimate` 估計最佳案例時間的命令（預設值：1）。此選項無法與搭配使用 `-target` 選項。

語法

```
xcp estimate -gbit <n> -id <name>
```

顯示範例

```
[root@client-01 linux]# ./xcp estimate -gbit 10 -id estimate01

xcp: WARNING: your license will expire in less than 10 days! You can
renew your license at
https://xcp.netapp.com
Job ID: Job_2023-04-12_08.12.28.453735_estimate
== Best-case estimate to copy '10.101.12.11:/temp4' given 10 gigabits
of bandwidth ==
0 of data at max 1.25 GiB/s: at least 0.0s
Xcp command : xcp estimate -gbit 10 -id estimate01
Estimated Time : 0.0s
Job ID : Job_2023-04-12_08.12.28.453735_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
12_08.12.28.453735_estimate.log
STATUS : PASSED
[root@client-01linux]#
```

預估 - 目標 <path>

使用 `-target <path>` 參數 `estimate` 指定用於即時測試複本的目標命令。

語法

```
xcp estimate -t 100 -id <name> -target <path>
```

顯示範例

```
[root@client-01 linux]# ./xcp estimate -t 100 -id estimate01 -target
10.101.12.11:/temp8

xcp: WARNING: your license will expire in less than 10 days! You can
renew your license at https://xcp.netapp.com
Job ID: Job_2023-04-12_08.09.16.126908_estimate
Starting live test for 1m40s to estimate time to copy
'10.101.12.11:/temp4' to '10.101.12.11:/temp8'...
estimate regular file copy task completed before the 1m40s duration
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
12_08.09.16.126908_estimate.log
STATUS : PASSED
[root@client-01linux]#
```

估計 -t <n[s|m|h]>

使用 -t <n[s|m|h]> 參數 estimate 指定即時測試複本持續時間的命令。預設值為 5 公尺。

語法

```
xcp estimate -t <n[s|m|h]> -id <name> -target <path>
```

顯示範例

```
[root@client-01 linux]# ./xcp estimate -t 100 -id estimate01 -target
10.101.12.12:/temp8

xcp: WARNING: your license will expire in less than 10 days! You can
renew your license at
https://xcp.netapp.com
Job ID: Job_2023-04-12_08.09.16.126908_estimate
Starting live test for 1m40s to estimate time to copy
'10.101.12.11:/temp4' to
'10.101.12.12:/temp8'...
estimate regular file copy task completed before the 1m40s duration
0 in (0/s), 0 out (0/s), 5s
0 in (0/s), 0 out (0/s), 10s
Estimated time to copy '10.101.12.11:/temp4' to '10.101.12.12:/temp8'
based on a 1m40s live
test: 5.3s

Xcp command : xcp estimate -t 100 -id estimate01 -target
10.101.12.11:/temp8
Estimated Time : 5.3s
Job ID : Job_2023-04-12_08.09.16.126908_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
12_08.09.16.126908_estimate.log
STATUS : PASSED
[root@client-01linux]#
```

估計 -BS <n[k]>

使用 -bs <n[k]> 參數 estimate 指定讀寫區塊大小的命令。預設值為 64k。

語法

```
xcp estimate -id <name> -bs <n[k]>
```

顯示範例

```
[root@client1 linux]# ./xcp estimate -id estimate01 -bs 128k

xcp: WARNING: your license will expire in less than 7 days! You can
renew your license at
https://xcp.netapp.com
Job ID: Job_2023-04-24_08.44.12.564441_estimate
63.2 KiB in (12.5 KiB/s), 2.38 KiB out (484/s), 5s
== Best-case estimate to copy 'xxx' given 1 gigabit of bandwidth ==
112 TiB of data at max 128 MiB/s: at least 10d13h
Xcp command : xcp estimate -id estimate01 -bs 128k
Estimated Time : 10d13h
Job ID : Job_2023-04-24_08.44.12.564441_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
24_08.44.12.564441_estimate.log
STATUS : PASSED
[root@client1 linux]#
```

估計 **-dircount <n[k]>**

使用 `-dircount <n[k]>` 參數 `estimate` 用於指定讀取目錄所需大小的命令。預設值為 64k。

語法

```
xcp estimate -id <name> -dircount <n[k]> -t <n> -target <path>
```

顯示範例

```
[root@client1 linux]# ./xcp estimate -id csdata01 -dircount 128k -t 300
-target <path>

xcp: WARNING: your license will expire in less than 11 days! You can
renew your license at
https://xcp.netapp.com
xcp: WARNING: XCP catalog volume is low on disk space: 99.99% used,
61.6 MiB free space.
Job ID: Job_2023-04-20_13.03.46.820673_estimate
Starting live test for 5m0s to estimate time to copy `data-set:/user1
to `<path>`...
1,909 scanned, 126 copied, 2 giants, 580 MiB in (115 MiB/s), 451 MiB
out (89.5 MiB/s), 5s
1,909 scanned, 134 copied, 2 giants, 1.23 GiB in (136 MiB/s), 1015 MiB
out (112 MiB/s), 10s
1,909 scanned, 143 copied, 2 giants, 1.88 GiB in (131 MiB/s), 1.54 GiB
out (113 MiB/s), 15s
.
.
.
7,136 scanned, 2,140 copied, 4 linked, 8 giants, 33.6 GiB in (110
MiB/s), 32.4 GiB out (110
MiB/s), 4m57s
Sample test copy completed for, 300.03s
0 in (-7215675436.180/s), 0 out (-6951487617.036/s), 5m2s
2,186 scanned, 610 KiB in (121 KiB/s), 76.9 KiB out (15.3 KiB/s), 5m7s
Estimated time to copy `data-set:/user1to '10.01.12.11:/mapr11' based
on a 5m0s live test:
7d6h
Xcp command : xcp estimate -id csdata01 -dircount 128k -t 300 -target
10.101.12.11:/mapr11
Estimated Time : 7d6h
Job ID : Job_2023-04-20_13.03.46.820673_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
20_13.03.46.820673_estimate.log
STATUS : PASSED
xcp: WARNING: XCP catalog volume is low on disk space: 99.99% used,
61.6 MiB free space.
[root@client1 linux]#
```


估計平行 <n>

使用 `-parallel <n>` 參數 `estimate` 命令以指定並行批次處理程序的最大數目。預設值為 7。

語法

```
xcp estimate -loglevel <name> -parallel <n> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp estimate -loglevel DEBUG -parallel 8 -id
estimate1

xcp: WARNING: your license will expire in less than 11 days! You can
renew your license at
https://xcp.netapp.com
Job ID: Job_2023-04-20_11.36.45.535209_estimate
== Best-case estimate to copy '10.10.101.10:/users009/xxx/mnt' given 1
gigabit of bandwidth ==
6.75 GiB of data at max 128 MiB/s: at least 54.0s
Xcp command : xcp estimate -loglevel DEBUG -parallel 8 -id estimate1
Estimated Time : 54.0s
Job ID : Job_2023-04-20_11.36.45.535209_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
20_11.36.45.535209_estimate.log
STATUS : PASSED
[root@client1 linux]#
```

預估 - 保留 - 保留

使用 `-preserve-atime` 參數 `estimate` 保留檔案或目錄存取時間的命令。預設值為假。

語法

```
xcp estimate -loglevel <name> -preserve-atime -id <name>
```

顯示範例

```
root@client1 linux]# ./xcp estimate -loglevel DEBUG -preserve-atime -id
estimate1

xcp: WARNING: your license will expire in less than 11 days! You can
renew your license at
https://xcp.netapp.com
Job ID: Job_2023-04-20_11.19.04.050516_estimate
== Best-case estimate to copy '10.10.101.10:/users009/xxx/mnt' given 1
gigabit of bandwidth
==
6.75 GiB of data at max 128 MiB/s: at least 54.0s
Xcp command : xcp estimate -loglevel DEBUG -preserve-atime -id
estimate1
Estimated Time : 54.0s
Job ID : Job_2023-04-20_11.19.04.050516_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
20_11.19.04.050516_estimate.log
STATUS : PASSED
[root@client1 linux]#
```

估計 **-logLevel <name>**

使用 `-loglevel <name>` 參數 `estimate` 用於設置日誌級別的命令；可用級別為 `info` 和 `debug`。預設層級為 `info`。

語法

```
xcp estimate -loglevel <name> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp estimate -loglevel DEBUG -parallel 8 -id estimate1

xcp: WARNING: your license will expire in less than 11 days! You can
renew your license at
https://xcp.netapp.com
Job ID: Job_2023-04-20_11.36.45.535209_estimate
== Best-case estimate to copy '10.10.101.10:/users009/xxx/mnt' given 1
gigabit of bandwidth ==
6.75 GiB of data at max 128 MiB/s: at least 54.0s
Xcp command : xcp estimate -loglevel DEBUG -parallel 8 -id estimate1
Estimated Time : 54.0s
Job ID : Job_2023-04-20_11.36.45.535209_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-04-
20_11.36.45.535209_estimate.log
STATUS : PASSED
[root@client1 linux]#
```

索引刪除

NFS `indexdelete` 命令會刪除目錄索引。

語法

```
xcp indexdelete
```

顯示範例

```
[root@client1 linux]# ./xcp indexdelete

Job ID: Job_2023-11-16_02.41.20.260166_indexdelete
=====
=====
Name Command Size Created Updated
=====
=====
isync_tcl_retry copy 996 KiB 15-Nov-2023 15-Nov-2023
isync_est_isync isync 1012 KiB 15-Nov-2023 15-Nov-2023
XCP_verify_2023-11-15_05.56.17.522428 verify 1016 KiB 15-Nov-2023 15-
Nov-2023
XCP_verify_2023-11-15_06.04.31.693517 verify 1.00 MiB 15-Nov-2023 15-
Nov-2023
isync_tcl_retry1 copy 988 KiB 15-Nov-2023 15-Nov-2023
XCP_verify_2023-11-15_09.02.46.973624 verify 988 KiB 15-Nov-2023 15-
Nov-2023
est001 isync 1012 KiB 15-Nov-2023 15-Nov-2023
XCP_verify_2023-11-15_09.37.24.179634 verify 0 15-Nov-2023 15-Nov-2023
albatch_error1 copy 368 KiB 15-Nov-2023 15-Nov-2023
XCP_verify_2023-11-15_09.45.53.104055 verify 360 KiB 15-Nov-2023 15-
Nov-2023
albatch_error2 isync 376 KiB 15-Nov-2023 15-Nov-2023
XCP_verify_2023-11-15_09.48.05.000473 verify 372 KiB 15-Nov-2023 15-
Nov-2023
blbatch_error1 copy 4.50 KiB 15-Nov-2023 15-Nov-2023
XCP_verify_2023-11-15_12.00.29.214479 verify 4.50 KiB 15-Nov-2023 15-
Nov-2023
blbatch_error2 isync 4.50 KiB 15-Nov-2023 15-Nov-2023
XCP_verify_2023-11-15_12.00.40.536687 verify 4.50 KiB 15-Nov-2023 15-
Nov-2023
XCP_verify_2023-11-15_12.27.08.055501 verify 4.50 KiB 15-Nov-2023 15-
Nov-2023
XCP_verify_2023-11-15_12.27.39.797020 verify 4.50 KiB 15-Nov-2023 15-
Nov-2023
XCP_verify_2023-11-15_12.52.29.408766 verify 4.50 KiB 15-Nov-2023 15-
Nov-2023
XCP_verify_2023-11-15_12.53.01.870109 verify 4.50 KiB 15-Nov-2023 15-
Nov-2023
clbatch_error1 copy 988 KiB 15-Nov-2023 15-Nov-2023
XCP_verify_2023-11-15_22.54.11.081944 verify 976 KiB 15-Nov-2023 15-
Nov-2023
clbatch_error2 isync 1020 KiB 15-Nov-2023 15-Nov-2023
```

```

XCP_verify_2023-11-15_23.19.44.158263 verify 1.00 MiB 15-Nov-2023 15-
Nov-2023
XCP_verify_2023-11-15_23.44.01.274732 verify 4.50 KiB 15-Nov-2023 15-
Nov-2023
clbatch_error132576 copy 992 KiB 16-Nov-2023 16-Nov-2023
clbatch_error227998 isync 1004 KiB 16-Nov-2023 16-Nov-2023
XCP_verify_2023-11-16_01.07.45.824516 verify 1012 KiB 16-Nov-2023 16-
Nov-2023
S3_index copy 52.5 KiB 16-Nov-2023 16-Nov-2023
S3_index1 copy 52.5 KiB 16-Nov-2023 16-Nov-2023
clbatch_error14383 copy 728 KiB 16-Nov-2023 16-Nov-2023
32 scanned, 941 KiB in (1.04 MiB/s), 48.8 KiB out (55.4 KiB/s), 0s.
WARNING: 31 indexes will be deleted permanently.
Are you sure you want to delete (yes/no): yes
Xcp command : xcp indexdelete
Stats : 466 scanned, 31 index deleted
Speed : 1.09 MiB in (216 KiB/s), 133 KiB out (25.8 KiB/s)
Total Time : 5s.
Job ID : Job_2023-11-16_02.41.20.260166_indexdelete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.41.20.260166_indexdelete.log
STATUS : PASSED
[root@client1 linux]#

```

下表列出 `indexdelete` 參數及其說明。

參數	說明
<<nfs_indexdelete_match,索引刪除 - 符合 ; 篩選器 >	僅處理與篩選器相符的檔案和目錄。
<<nfs_indexdelete_loglevel,indexdelete -loglevel ; 名稱 >	設定記錄層級; 可用層級為 info 、 debug (預設: info) 。

indexdelete -match <filter>

使用 `-match <filter>` 參數 `indexdelete` 僅處理與篩選器相符的檔案和目錄的命令。

語法

```
xcp indexdelete -match <filter>
```

顯示範例

```
[root@client1 linux]# ./xcp indexdelete -match "fnm('S3_index12')"  
  
Job ID: Job_2023-11-16_02.44.39.862423_indexdelete  
=====
```

Name	Command	Size	Created	Updated
S3_index12	copy	52.5 KiB	16-Nov-2023	16-Nov-2023

```
=====
```

5 scanned, 1 matched, 141 KiB in (121 KiB/s), 6.05 KiB out (5.20 KiB/s), 1s.
WARNING: 1 matched index will be deleted permanently.
Are you sure you want to delete (yes/no): yes
Xcp command : xcp indexdelete -match fnm('S3_index12')
Stats : 19 scanned, 1 matched, 1 index deleted
Speed : 146 KiB in (29.3 KiB/s), 8.59 KiB out (1.72 KiB/s)
Total Time : 4s.
Job ID : Job_2023-11-16_02.44.39.862423_indexdelete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-16_02.44.39.862423_indexdelete.log
STATUS : PASSED
[root@client1 linux]#

indexdelete -loglevel <name>

使用 `-loglevel <name>` 參數 `indexdelete` 用於設置日誌級別的命令；可用級別為 `info` 和 `debug`。預設層級為資訊。

語法

```
xcp indexdelete -loglevel <name> -match <filter>
```

顯示範例

```
root@client1 linux]# ./xcp indexdelete -loglevel DEBUG -match
"fnm('test*')"

Job ID: Job_2023-11-16_03.39.36.814557_indexdelete
=====
=====
Name Command Size Created Updated
=====
=====
testing scan 24.5 KiB 16-Nov-2023 16-Nov-2023
testingisync isync 12.5 KiB 16-Nov-2023 16-Nov-2023
5 scanned, 2 matched, 65.1 KiB in (61.1 KiB/s), 6.24 KiB out (5.85
KiB/s), 1s.
WARNING: 2 matched indexes will be deleted permanently.
Are you sure you want to delete (yes/no): yes
6 scanned, 2 matched, 65.1 KiB in (10.5 KiB/s), 6.39 KiB out (1.03
KiB/s), 7s
Xcp command : xcp indexdelete -loglevel DEBUG -match fnm('test*')
Stats : 32 scanned, 2 matched, 2 index deleted
Speed : 75.5 KiB in (10.3 KiB/s), 11.1 KiB out (1.52 KiB/s)
Total Time : 7s.
Job ID : Job_2023-11-16_03.39.36.814557_indexdelete
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_03.39.36.814557_indexdelete.log
STATUS : PASSED
[root@client1 linux]#
```

iSync

檢視 XCP 的說明、參數和範例 `isync` 命令、包括何時執行 `isync` 命令可搭配使用 `estimate` 選項。

iSync

XCP NFS `isync` 命令會比較來源和目的地、並在不使用目錄索引的情況下同步目標上的差異。

語法

```
xcp isync <source_ip_address>:/src <destination_ip_address>:/dest
```

顯示範例

```
[root@client1 linux]# ./xcp isync <source_ip_address>:/src
<destination_ip_address>:/dest

Job ID: Job_2023-11-20_04.11.03.128824_isync
41,030 scanned, 935 MiB in (162 MiB/s), 4.23 MiB out (752 KiB/s), 6s
57,915 scanned, 2.10 GiB in (239 MiB/s), 10.00 MiB out (1.13 MiB/s),
11s
57,915 scanned, 3.20 GiB in (210 MiB/s), 14.6 MiB out (879 KiB/s), 16s
92,042 scanned, 4.35 GiB in (196 MiB/s), 21.6 MiB out (1.17 MiB/s), 22s
123,977 scanned, 5.70 GiB in (257 MiB/s), 29.6 MiB out (1.49 MiB/s),
27s
137,341 scanned, 6.75 GiB in (212 MiB/s), 36.0 MiB out (1.25 MiB/s),
32s
154,503 scanned, 8.00 GiB in (226 MiB/s), 43.0 MiB out (1.24 MiB/s),
38s
181,578 scanned, 36 copied, 8.68 GiB in (132 MiB/s), 49.7 MiB out (1.26
MiB/s), 43s
target scan completed: 181,656 scanned, 1,477 copied, 1 removed, 8.76
GiB in (200 MiB/s), 123 MiB
out (2.75 MiB/s), 44s.
181,907 scanned, 10,013 copied, 1 removed, 9.17 GiB in (95.3 MiB/s),
545 MiB out (95.2 MiB/s), 49s
Xcp command : xcp isync <source_ip_address>:/src
<destination_ip_address>:/dest
Stats : 1 removed, 181,907 scanned, 10,263 copied
Speed : 9.17 GiB in (190 MiB/s), 548 MiB out (11.1 MiB/s)
Total Time : 49s.
Job ID : Job_2023-11-20_04.11.03.128824_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
20_04.11.03.128824_isync.log
STATUS : PASSED
[root@client1 linux]
```

下表列出 `isync` 參數及其說明。

參數	說明
<code>iSync -nodata</code>	不檢查資料。
<code>iSync -noattos</code>	不檢查屬性。
<code>iSync -nomods</code>	不會檢查檔案修改時間。
<code>iSync -mtimeWindow</code>	指定可接受的修改時間差異以進行驗證。

參數	說明
<<nfs_isync_match,iSync - 符合 ; 篩選器 >	僅處理與篩選器相符的檔案和目錄。
<<nfs_isync_bs,iSync -BS ; n[k]>	指定讀寫區塊大小（預設值：64K）。
<<nfs_isync_parallel,iSync -parallel ; n>	指定並行批次處理程序的最大數目（預設值：7）。
<<nfs_isync_dircount,iSync -dircount ; n[k]>	指定讀取目錄時的要求大小（預設為 64k）。
<<nfs_isync_exclude,iSync - 排除 ; 篩選器 >	排除符合篩選條件的檔案和目錄。
<<nfs_isync_newid,iSync -nevid ; 名稱 >	指定新索引目錄的目錄名稱。
<<nfs_isync_loglevel,iSync -loglevel ; 名稱 >	設定記錄層級；可用層級為 info 、 debug （預設：info）。
iSync -preserve-atime	將來源上的所有檔案還原至上次存取的日期。
iSync -s3.insecure	提供選項、可在 S3 Bucket 通訊中使用 HTTP 而非 HTTPS。
<<nfs_isync_endpoint,iSync -S3.Endpoint ; S3_端點_URL>	以 S3 Bucket 通訊的指定 URL 覆寫預設的 Amazon Web Services （AWS）端點 URL。
<<nfs_isync_s3_profile,iSync -s3.profile ; profile_name gt;	從 AWS 認證檔案指定用於 S3 儲存區通訊的設定檔。
iSync -s3.noverify	覆寫 S3 Bucket 通訊的 SSL 認證預設驗證。

iSync -nodata

使用 `-nodata` 參數 `isync` 指定不檢查資料的命令。

語法

```
xcp isync -nodata <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
root@client1 linux]# ./xcp isync -nodata
<source_ip_address>:/source_vol<destination_ip_address>:/dest_vol

Job ID: Job_2023-11-16_22.47.20.930900_isync
11,301 scanned, 3.26 MiB in (414 KiB/s), 479 KiB out (59.5 KiB/s), 8s
28,644 scanned, 437 copied, 33.7 MiB in (5.39 MiB/s), 27.2 MiB out
(4.75 MiB/s), 13s
29,086 scanned, 1,001 copied, 58.2 MiB in (3.54 MiB/s), 51.8 MiB out
(3.55 MiB/s), 20s
29,490 scanned, 1,001 copied, 597 removed, 61.1 MiB in (592 KiB/s),
53.7 MiB out (375 KiB/s),
25s
98
.
.
.
43,391 scanned, 1,063 copied, 1,001 removed, 2.49 GiB in (115 MiB/s),
2.48 GiB out (115 MiB/s),
1m17s
43,391 scanned, 1,082 copied, 1,001 removed, 3.08 GiB in (119 MiB/s),
3.07 GiB out (119 MiB/s),
1m23s
43,391 scanned, 1,088 copied, 1,001 removed, 3.68 GiB in (122 MiB/s),
3.67 GiB out (122 MiB/s),
1m28s
Xcp command : xcp isync -nodata <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
Stats : 1,001 removed, 43,391 scanned, 1,108 copied
Speed : 4.19 GiB in (46.7 MiB/s), 4.18 GiB out (46.5 MiB/s)
Total Time : 1m31s.
Job ID : Job_2023-11-16_22.47.20.930900_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_22.47.20.930900_isync.log
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_22.47.20.930900_isync.error
STATUS : PASSED
```

iSync -noattos

使用 `-noattr` 參數 `isync` 指定不檢查屬性的命令。

語法

```
xcp isync -noattrs <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@client1 linux]# ./xcp isync -noattrs  
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol  
  
Job ID: Job_2023-11-16_22.49.22.056646_isync  
18,036 scanned, 940 MiB in (168 MiB/s), 2.67 MiB out (488 KiB/s), 5s  
30,617 scanned, 285 removed, 4.23 GiB in (666 MiB/s), 12.0 MiB out  
(1.82 MiB/s), 10s  
32,975 scanned, 746 removed, 6.71 GiB in (505 MiB/s), 18.3 MiB out  
(1.25 MiB/s), 15s  
34,354 scanned, 1,000 removed, 9.39 GiB in (543 MiB/s), 24.9 MiB out  
(1.32 MiB/s), 20s  
34,594 scanned, 1,000 removed, 12.1 GiB in (540 MiB/s), 31.2 MiB out  
(1.24 MiB/s), 26s  
36,142 scanned, 722 copied, 1,000 removed, 14.9 GiB in (540 MiB/s),  
73.7 MiB out (7.93 MiB/s),  
31s  
.br/>.br/>.br/>42,496 scanned, 1,000 copied, 1,000 removed, 234 GiB in (716 MiB/s),  
582 MiB out (1.55 MiB/s),  
7m22s  
Xcp command : xcp isync -noattrs <<source_ip_address>>:/source_vol  
<destination_ip_address>:/dest_vol  
Stats : 1,000 removed, 42,496 scanned, 1,000 copied  
Speed : 234 GiB in (542 MiB/s), 583 MiB out (1.32 MiB/s)  
Total Time : 7m22s.  
Job ID : Job_2023-11-16_22.49.22.056646_isync  
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-  
16_22.49.22.056646_isync.log  
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-  
16_22.49.22.056646_isync.error  
STATUS : PASSED
```

iSync - nomods

使用 `-nomods` 參數 `isync` 指定不檢查檔案修改時間的命令。

語法

```
isync -nomods <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@client1 linux]# ./xcp isync -nomodes  
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol  
  
Job ID: Job_2023-11-16_22.56.48.571392_isync  
13,897 scanned, 763 MiB in (152 MiB/s), 2.28 MiB out (463 KiB/s), 5s  
21,393 scanned, 148 removed, 4.81 GiB in (739 MiB/s), 12.5 MiB out  
(1.81 MiB/s), 11s  
28,517 scanned, 148 removed, 7.68 GiB in (578 MiB/s), 19.1 MiB out  
(1.31 MiB/s), 16s  
28,517 scanned, 148 removed, 10.7 GiB in (619 MiB/s), 26.3 MiB out  
(1.43 MiB/s), 21s  
29,167 scanned, 396 copied, 148 removed, 13.2 GiB in (434 MiB/s), 51.4  
MiB out (4.33 MiB/s), 27s  
.br/>.br/>.br/>42,790 scanned, 1,000 copied, 1,000 removed, 229 GiB in (641 MiB/s),  
571 MiB out (1.40 MiB/s),  
6m42s  
42,790 scanned, 1,000 copied, 1,000 removed, 232 GiB in (668 MiB/s),  
578 MiB out (1.46 MiB/s),  
6m47s  
Xcp command : xcp isync -nomods <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol  
Stats : 1,000 removed, 42,790 scanned, 1,000 copied  
Speed : 234 GiB in (585 MiB/s), 583 MiB out (1.42 MiB/s)  
Total Time : 6m50s.  
Job ID : Job_2023-11-16_22.56.48.571392_isync  
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-  
16_22.56.48.571392_isync.log  
STATUS : PASSED
```

iSync -mtimeWindow <s>

使用 `-mtimewindow <s>` 參數 `isync` 命令以指定可接受的修改時間差異以進行驗證。

語法

```
xcp isync -mtimewindow <s> <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@client1 linux]# ./xcp isync -mtimewindow 10
10.101.101.101:/source_vol 10.101.101.101:/dest_vol

Job ID: Job_2023-11-16_23.03.41.617300_isync

 23,154 scanned, 146 removed, 1.26 GiB in (247 MiB/s), 4.50 MiB out
(882 KiB/s), 5s

 29,587 scanned, 485 removed, 4.51 GiB in (659 MiB/s), 13.4 MiB out
(1.77 MiB/s), 10s

 29,587 scanned, 485 removed, 7.40 GiB in (590 MiB/s), 20.0 MiB out
(1.32 MiB/s), 16s

 32,712 scanned, 485 removed, 10.3 GiB in (592 MiB/s), 26.9 MiB out
(1.34 MiB/s), 21s

 33,712 scanned, 485 removed, 13.2 GiB in (578 MiB/s), 33.6 MiB out
(1.33 MiB/s), 26s

 33,712 scanned, 961 copied, 485 removed, 15.5 GiB in (445 MiB/s), 86.6
MiB out (9.89 MiB/s), 31s

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.

42,496 scanned, 1,000 copied, 1,000 removed, 233 GiB in (655 MiB/s),
581 MiB out (1.43 MiB/s), 7m11s

Xcp command : xcp isync -mtimewindow 10 -loglevel DEBUG
10.101.101.101:/source_vol 10.101.101.101:/dest_vol

Stats      : 1,000 removed, 42,496 scanned, 1,000 copied

Speed      : 234 GiB in (554 MiB/s), 583 MiB out (1.35 MiB/s)

Total Time : 7m12s.

Job ID     : Job_2023-11-16_23.03.41.617300_isync
```

```
Log Path      : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-16_23.03.41.617300_isync.log
```

```
Error Path    : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-16_23.03.41.617300_isync.error
```

```
STATUS       : PASSED
```

iSync -Match <filter>

使用 `-match <filter>` 參數 `isync` 僅處理與篩選器相符的檔案和目錄的命令。

語法

```
xcp isync -match <filter> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync -match fnm("FILE_USER5*")
<source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
Job ID: Job_2023-11-16_23.25.03.734323_isync
24,006 scanned, 570 matched, 32.5 MiB in (5.31 MiB/s), 221 KiB out
(36.2 KiB/s), 6s
33,012 scanned, 570 matched, 34.2 MiB in (223 KiB/s), 237 KiB out (2.06
KiB/s), 14s
33,149 scanned, 572 matched, 275 MiB in (38.3 MiB/s), 781 KiB out (86.6
KiB/s), 20s
39,965 scanned, 572 matched, 276 MiB in (214 KiB/s), 812 KiB out (4.95
KiB/s), 27s
40,542 scanned, 572 matched, 276 MiB in (15.4 KiB/s), 818 KiB out (1.00
KiB/s), 32s
40,765 scanned, 1,024 matched, 1.88 GiB in (297 MiB/s), 4.51 MiB out
(682 KiB/s), 38s
target scan completed: 41,125 scanned, 1,055 matched, 1.88 GiB in (48.9
MiB/s), 4.51 MiB out
(117 KiB/s), 39s.
42,372 scanned, 1,206 matched, 4.26 GiB in (445 MiB/s), 9.92 MiB out
(1013 KiB/s), 43s
Filtered: 1206 matched, 41290 did not match
Xcp command : xcp isync -match fnm("FILE_USER5*")
<source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
Stats : 42,496 scanned, 1,206 matched
Speed : 6.70 GiB in (145 MiB/s), 15.4 MiB out (332 KiB/s)
Total Time : 47s.
Job ID : Job_2023-11-16_23.25.03.734323_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_23.25.03.734323_isync.log
STATUS : PASSED
```

iSync -BS <n[k]>

使用 `-bs <n[k]>` 參數 `isync` 指定讀寫區塊大小的命令。預設區塊大小為 64k。

語法

```
xcp isync -loglevel DEBUG -bs <n[k]> <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```


顯示範例

```
root@client1 linux]# ./xcp isync -loglevel DEBUG -bs 32k
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol

Job ID: Job_2023-11-17_00.49.20.336389_isync
20,616 scanned, 1.62 GiB in (332 MiB/s), 8.23 MiB out (1.64 MiB/s), 5s
30,240 scanned, 4.55 GiB in (594 MiB/s), 22.4 MiB out (2.81 MiB/s), 10s
30,439 scanned, 7.47 GiB in (589 MiB/s), 35.6 MiB out (2.60 MiB/s), 15s
30,439 scanned, 10.5 GiB in (617 MiB/s), 49.5 MiB out (2.75 MiB/s), 20s
30,863 scanned, 1 copied, 13.3 GiB in (547 MiB/s), 62.7 MiB out (2.56
MiB/s), 25s
.
.
.
42,497 scanned, 71 copied, 227 GiB in (637 MiB/s), 5.12 GiB out (2.79
MiB/s), 6m40s
42,497 scanned, 71 copied, 229 GiB in (538 MiB/s), 5.13 GiB out (2.35
MiB/s), 6m45s
Xcp command : xcp isync -loglevel DEBUG -bs 32k
<source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
Stats : 42,497 scanned, 71 copied
Speed : 231 GiB in (579 MiB/s), 5.14 GiB out (12.9 MiB/s)
Total Time : 6m48s.
Job ID : Job_2023-11-17_00.49.20.336389_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
17_00.49.20.336389_isync.log
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
17_00.49.20.336389_isync.error
STATUS : PASSED
[root@client1 linux]#
```

iSync - 平行

使用 `-parallel <n>` 參數 `isync` 命令以指定並行批次處理程序的最大數目。預設值為 7。

語法

```
xcp isync -parallel <n> <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@client1 linux]# xcp isync -parallel 16
<source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol

Job ID: Job_2023-11-16_23.25.57.058655_isync
21,279 scanned, 765 MiB in (104 MiB/s), 2.43 MiB out (337 KiB/s), 7s
30,208 scanned, 126 removed, 3.00 GiB in (461 MiB/s), 9.11 MiB out
(1.33 MiB/s), 12s
35,062 scanned, 592 removed, 6.01 GiB in (615 MiB/s), 17.2 MiB out
(1.61 MiB/s), 17s
35,062 scanned, 592 removed, 7.35 GiB in (272 MiB/s), 20.3 MiB out (642
KiB/s), 22s
.
.
.
42,496 scanned, 1,027 copied, 1,027 removed, 231 GiB in (602 MiB/s),
576 MiB out (1.31 MiB/s),
7m40s
Xcp command : xcp isync -parallel 16 <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
Stats : 1,027 removed, 42,496 scanned, 1,027 copied
Speed : 234 GiB in (515 MiB/s), 584 MiB out (1.26 MiB/s)
Total Time : 7m45s.
Job ID : Job_2023-11-16_23.25.57.058655_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_23.25.57.058655_isync.log
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_23.25.57.058655_isync.error
STATUS : PASSED
```

iSync -dircount <n[k]>

使用 `-dircount <n[k]>` 參數 `isync` 用於指定讀取目錄時的要求大小的命令。預設值為 64k。

語法

```
xcp isync -dircount <n[k]> <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
root@client1 linux]# ./xcp isync -dircount 32k
<source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
Job ID: Job_2023-11-16_23.33.45.854686_isync
16,086 scanned, 824 MiB in (164 MiB/s), 2.75 MiB out (558 KiB/s), 5s
24,916 scanned, 4.42 GiB in (727 MiB/s), 12.5 MiB out (1.91 MiB/s), 11s
31,633 scanned, 237 removed, 7.19 GiB in (567 MiB/s), 19.0 MiB out
(1.30 MiB/s), 16s
31,633 scanned, 237 removed, 9.74 GiB in (512 MiB/s), 24.7 MiB out
(1.13 MiB/s), 21s
33,434 scanned, 237 removed, 11.6 GiB in (385 MiB/s), 29.3 MiB out (935
KiB/s), 26s
33,434 scanned, 499 copied, 237 removed, 13.1 GiB in (298 MiB/s), 57.7
MiB out (5.66 MiB/s), 31s
.
.
.
42,496 scanned, 1,000 copied, 1,000 removed, 229 GiB in (609 MiB/s),
572 MiB out (1.34 MiB/s),
7m3s
42,496 scanned, 1,000 copied, 1,000 removed, 232 GiB in (549 MiB/s),
578 MiB out (1.20 MiB/s),
7m8s
Xcp command : xcp isync -dircount 32k <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
Stats : 1,000 removed, 42,496 scanned, 1,000 copied
Speed : 234 GiB in (555 MiB/s), 583 MiB out (1.35 MiB/s)
Total Time : 7m11s.
Job ID : Job_2023-11-16_23.33.45.854686_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_23.33.45.854686_isync.log
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_23.33.45.854686_isync.error
STATUS : PASSED
```

iSync - 排除 <filter>

使用 `-exclude <filter>` 參數 `isync` 命令來排除符合篩選條件的檔案和目錄。

語法

```
xcp isync -exclude <filter> <source_ip_address>:/source_vol  
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@client1 linux]# ./xcp isync -exclude fnm("FILE_USER5*")  
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol  
Job ID: Job_2023-11-16_23.41.00.713151_isync  
14,514 scanned, 570 excluded, 675 MiB in (133 MiB/s), 2.03 MiB out (411  
KiB/s), 5s  
24,211 scanned, 570 excluded, 4.17 GiB in (713 MiB/s), 11.0 MiB out  
(1.79 MiB/s), 10s  
30,786 scanned, 574 excluded, 116 removed, 7.07 GiB in (589 MiB/s),  
17.7 MiB out (1.32  
MiB/s), 15s  
30,786 scanned, 574 excluded, 116 removed, 10.1 GiB in (629 MiB/s),  
24.7 MiB out (1.40  
MiB/s), 20s  
31,106 scanned, 222 copied, 574 excluded, 116 removed, 12.8 GiB in (510  
MiB/s), 42.3 MiB out  
(3.33 MiB/s), 26s  
.br/>.br/>.br/>41,316 scanned, 1,000 copied, 1,206 excluded, 1,000 removed, 225 GiB in  
(616 MiB/s), 563 MiB  
out (1.36 MiB/s), 6m35s  
Excluded: 1206 excluded, 0 did not match exclude criteria  
Xcp command : xcp isync -exclude fnm("FILE_USER5*")  
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol  
Stats : 1,000 removed, 41,316 scanned, 1,000 copied, 1,206 excluded  
Speed : 227 GiB in (584 MiB/s), 568 MiB out (1.42 MiB/s)  
Total Time : 6m38s.  
Job ID : Job_2023-11-16_23.41.00.713151_isync  
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-  
16_23.41.00.713151_isync.log  
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-  
16_23.41.00.713151_isync.error  
STATUS : PASSED
```

iSync -newid <name>

使用 `-newid <name>` 參數 `isync` 用於指定新索引目錄的目錄名稱的命令。

語法

```
xcp isync -newid <name> -s3.endpoint <S3_endpoint_url>
<source_ip_address>:/src/USER4 s3://isyncestimate/
```

顯示範例

```
root@client1 linux]# ./xcp isync -newid testing -s3.endpoint
<S3_endpoint_url> <source_ip_address>:/src/USER4 s3://isyncestimate/

Job ID: Job_2023-11-16_04.33.32.381458_isync
target scan completed: 502 scanned, 250 s3.objects, 251 indexed, 118
KiB in (38.9 KiB/s), 63.7
KiB out (20.9 KiB/s), 3s.
Xcp command : xcp isync -newid testing -s3.endpoint S3_endpoint_url>
<source_ip_address>:/src/USER4 s3://isyncestimate/
Stats : 502 scanned, 250 s3.objects, 251 indexed
Speed : 118 KiB in (38.8 KiB/s), 63.7 KiB out (20.9 KiB/s)
Total Time : 3s.
Job ID : Job_2023-11-16_04.33.32.381458_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_04.33.32.381458_isync.log
STATUS : PASSED
```

iSync -logLevel <name>

使用 `-loglevel <name>` 參數 `isync` 用於設置日誌級別的命令；可用級別為 `info` 和 `debug`。預設值為 `info`。

語法

```
xcp isync -loglevel <name> -bs <n[k]> <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@client1 linux]# ./xcp isync -loglevel DEBUG -bs 32k
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol

Job ID: Job_2023-11-17_00.49.20.336389_isync
20,616 scanned, 1.62 GiB in (332 MiB/s), 8.23 MiB out (1.64 MiB/s), 5s
30,240 scanned, 4.55 GiB in (594 MiB/s), 22.4 MiB out (2.81 MiB/s), 10s
30,439 scanned, 7.47 GiB in (589 MiB/s), 35.6 MiB out (2.60 MiB/s), 15s
30,439 scanned, 10.5 GiB in (617 MiB/s), 49.5 MiB out (2.75 MiB/s), 20s
30,863 scanned, 1 copied, 13.3 GiB in (547 MiB/s), 62.7 MiB out (2.56
MiB/s), 25s
.
.
.
42,497 scanned, 71 copied, 227 GiB in (637 MiB/s), 5.12 GiB out (2.79
MiB/s), 6m40s
42,497 scanned, 71 copied, 229 GiB in (538 MiB/s), 5.13 GiB out (2.35
MiB/s), 6m45s
Xcp command : xcp isync -loglevel DEBUG -bs 32k
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol
Stats : 42,497 scanned, 71 copied
Speed : 231 GiB in (579 MiB/s), 5.14 GiB out (12.9 MiB/s)
Total Time : 6m48s.
Job ID : Job_2023-11-17_00.49.20.336389_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
17_00.49.20.336389_isync.log
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
17_00.49.20.336389_isync.error
STATUS : PASSED
```

iSync -preserve-atime

使用 `-preserve-atime` 參數 `isync` 命令將所有檔案還原至來源上上次存取日期。

語法

```
xcp isync -preserve-atime <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
```

顯示範例

```
[root@client1 linux]# ./xcp isync -preserve-atime
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol

Job ID: Job_2023-11-17_01.31.26.077154_isync
21,649 scanned, 1.41 GiB in (260 MiB/s), 5.63 MiB out (1.01 MiB/s), 5s
32,034 scanned, 10.9 GiB in (400 MiB/s), 29.3 MiB out (925 KiB/s), 30s
33,950 scanned, 1 copied, 12.9 GiB in (399 MiB/s), 35.5 MiB out (1.24
MiB/s), 35s
33,950 scanned, 1 copied, 14.7 GiB in (361 MiB/s), 39.6 MiB out (830
KiB/s), 41s
.
.
.
42,499 scanned, 1 copied, 229 GiB in (623 MiB/s), 529 MiB out (1.37
MiB/s), 7m16s
42,499 scanned, 1 copied, 233 GiB in (719 MiB/s), 536 MiB out (1.56
MiB/s), 7m21s
Xcp command : xcp isync -preserve-atime <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
Stats : 42,499 scanned, 1 copied
Speed : 234 GiB in (541 MiB/s), 540 MiB out (1.22 MiB/s)
Total Time : 7m23s.
Job ID : Job_2023-11-17_01.31.26.077154_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
17_01.31.26.077154_isync.log
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
17_01.31.26.077154_isync.error
STATUS : PASSED
```

iSync -s3.insecure

使用 `-s3.insecure` 參數 `isync` 命令使用 HTTP 取代 HTTPS 進行 S3 儲存區通訊。

語法

```
xcp isync -newid <name> -s3.insecure -s3.endpoint <S3_endpoint_url>
<source_ip_address>:/src/USER4 s3:///isyncestimate/
```

顯示範例

```
[root@client1 linux]# ./xcp isync -newid testing2 -s3.insecure
-s3.endpoint <S3_endpoint_url> <source_ip_address>:/src/USER4
s3://isyncestimate/

Job ID: Job_2023-11-16_05.09.28.579606_isync
target scan completed: 502 scanned, 250 s3.objects, 118 KiB in (47.6
KiB/s), 50.8 KiB out (20.5
KiB/s), 2s.
Xcp command : xcp isync -newid testing2 -s3.insecure -s3.endpoint
<S3_endpoint_url> <source_ip_address>:/src/USER4 s3://isyncestimate/
Stats : 502 scanned, 250 s3.objects, 251 indexed
Speed : 118 KiB in (38.5 KiB/s), 63.8 KiB out (20.7 KiB/s)
Total Time : 3s.
Job ID : Job_2023-11-16_05.09.28.579606_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_05.09.28.579606_isync.log
STATUS : PASSED
[root@client1 linux]#
```

iSync -S3.Endpoint <s3_endpoint_url>

使用 `-s3.endpoint <s3_endpoint_url>` 參數 `isync` 命令以指定的 URL 取代預設 AWS 端點 URL、以進行 S3 貯體通訊。

語法

```
xcp isync -newid <name> -s3.noverify -s3.endpoint <endpoint_url>
<source_ip_address>:/src/USER4 s3://isyncestimate/
```


顯示範例

```
root@client1 linux]# ./xcp isync -newid testing -s3.endpoint <S3-
endpoint_url> <source_ip_address>:/src/USER4 s3://isyncestimate/

Job ID: Job_2023-11-16_04.33.32.381458_isync
target scan completed: 502 scanned, 250 s3.objects, 251 indexed, 118
KiB in (38.9 KiB/s), 63.7 KiB
out (20.9 KiB/s), 3s.
Xcp command : xcp isync -newid testing -s3.endpoint S3-endpoint_url>
<source_ip_address>:/src/USER4 s3://isyncestimate/
Stats : 502 scanned, 250 s3.objects, 251 indexed
Speed : 118 KiB in (38.8 KiB/s), 63.7 KiB out (20.9 KiB/s)
Total Time : 3s.
Job ID : Job_2023-11-16_04.33.32.381458_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_04.33.32.381458_isync.log
STATUS : PASSED
```

iSync -s3.profile <name>

使用 `s3.profile` 參數 `isync` 命令、從 AWS 認證檔案中指定用於 S3 儲存區通訊的設定檔。

語法

```
xcp isync -s3.profile <name> -s3.endpoint <S3-endpoint_url>
<source_ip_address>:/src/USER4 s3://isyncestimate
```

顯示範例

```
[root@client1 linux]# /xcp/linux/xcp isync -s3.profile s3_profile
-s3.endpoint <S3-endpoint_url> <source_ip_address>:/src/USER4
s3://isyncestimate

Job ID: Job_2023-11-16_05.29.21.279709_isync
target scan completed: 502 scanned, 250 s3.objects, 108 KiB in (46.5
KiB/s), 38.4 KiB out (16.5
KiB/s), 2s.
Xcp command : xcp isync -s3.profile s3_profile -s3. <S3-endpoint_url>
<source_ip_address>:/src/USER4 s3://isyncestimate
Stats : 502 scanned, 250 s3.objects
Speed : 108 KiB in (34.2 KiB/s), 38.4 KiB out (12.1 KiB/s)
Total Time : 3s.
Job ID : Job_2023-11-16_05.29.21.279709_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_05.29.21.279709_isync.log
STATUS : PASSED
[root@client1 linux]#
```

iSync -s3.noverify

使用 `-s3.noverify` 參數 `isync` 用於覆寫 S3 儲存區通訊之 SSL 憑證預設驗證的命令。

語法

```
xcp isync -newid <name> -s3.noverify -s3.endpoint <endpoint_url>
<source_ip_address>:/src/USER4 s3://isyncestimate/
```

顯示範例

```
root@client1 linux]# ./xcp isync -newid testing5 -s3.noverify
-s3.endpoint <endpoint_url> <source_ip_address>:/src/USER4
s3://isyncestimate/

Job ID: Job_2023-11-16_05.11.12.803441_isync
target scan completed: 502 scanned, 250 s3.objects, 118 KiB in (40.8
KiB/s), 50.8 KiB out (17.6
KiB/s), 2s.
Xcp command : xcp isync -newid testing5 -s3.noverify -s3.endpoint
<endpoint_url>
<source_ip_address>:/src/USER4 s3://isyncestimate/
Stats : 502 scanned, 250 s3.objects, 251 indexed
Speed : 118 KiB in (34.7 KiB/s), 63.8 KiB out (18.6 KiB/s)
Total Time : 3s.
Job ID : Job_2023-11-16_05.11.12.803441_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_05.11.12.803441_isync.log
STATUS : PASSED
[root@client1 linux]#
```

iSync 預估

◦ `isync` 命令可搭配使用 `estimate` 預估所需時間的選項 `isync` 同步遞增變更的命令。◦ `-id` 參數指定先前複本作業的目錄名稱。

語法

```
xcp isync estimate -id <name>
```



◦ `-id` 參數是必要的 `isync estimate` 命令選項。

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -id <name>

Job ID: Job_2023-11-20_04.08.18.967541_isync_estimate
Index: aalbatch_error1 {source: <source_ip_address>:/src, target:
<destination_ip_address>:/dest}
30,611 scanned, 786 MiB in (141 MiB/s), 3.60 MiB out (661 KiB/s), 5s
45,958 scanned, 1.92 GiB in (223 MiB/s), 8.48 MiB out (939 KiB/s), 10s
53,825 scanned, 3.11 GiB in (216 MiB/s), 13.5 MiB out (912 KiB/s), 16s
67,260 scanned, 4.33 GiB in (231 MiB/s), 18.6 MiB out (961 KiB/s), 22s
81,328 scanned, 5.57 GiB in (253 MiB/s), 23.8 MiB out (1.05 MiB/s), 27s
85,697 scanned, 6.85 GiB in (241 MiB/s), 29.2 MiB out (1005 KiB/s), 32s
85,697 scanned, 8.14 GiB in (262 MiB/s), 34.5 MiB out (1.06 MiB/s), 37s
Xcp command : xcp isync estimate -id <name>
Estimated Time : 45.1s
Job ID : Job_2023-11-20_04.08.18.967541_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
20_04.08.18.967541_isync_estimate.log
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
20_04.08.18.967541_isync_estimate.error
STATUS : PASSED
```

下表列出 isync estimate 參數及其說明。

參數	說明
iSync 預估 -nodata	不檢查資料。
iSync 預估 -noattis	不檢查屬性。
iSync 預估 -nomods	不會檢查檔案修改時間。
iSync 預估 -mtimeWindow	指定可接受的修改時間差異以進行驗證。
<<nfs_isync_estimate_match,iSync 預估值 - 符合 ; 篩選器 >	僅處理與篩選器相符的檔案和目錄。
<<nfs_isync_estimate_bs,iSync 預估 - bs ; n[k]>	指定讀寫區塊大小（預設值：64K）。
<<nfs_isync_estimate_parallel,iSync 預估 - 平行 ; n>	指定並行批次處理程序的最大數目（預設值：7）。
<<nfs_isync_estimate_dircount,iSync 預估 -dircount ; n[k]>	指定讀取目錄時的要求大小（預設為 64k）。
<<nfs_isync_estimate_exclude,iSync 預估 - 排除 ; 篩選器 >	排除符合篩選條件的檔案和目錄。
<<nfs_isync_estimate_id,iSync 預估 -id ; 名稱 >	指定先前複本作業的目錄名稱。
<<nfs_isync_estimate_loglevel,iSync 估計值 -loglevel ; 名稱 >	設定記錄層級；可用層級為 info 、 debug （預設：info）。

參數	說明
iSync 預估 - Preserve-atime	將來源上的所有檔案還原至上次存取的日期。
iSync 預估 -s3.insecure	提供選項、可在 S3 Bucket 通訊中使用 HTTP 而非 HTTPS。
<<nfs_isync_estimate_endpoint,iSync 預估 -S3.Endpoint ; S3_Endpoint_URL>	以 S3 Bucket 通訊的指定 URL 覆寫預設的 Amazon Web Services (AWS) 端點 URL。
<<nfs_isync_estimate_s3_profile,iSync -s3.profile ; profile_name gt;	從 AWS 認證檔案指定用於 S3 儲存區通訊的設定檔。
iSync 預估 -s3.noverify	覆寫 S3 Bucket 通訊的 SSL 認證預設驗證。

iSync 預估 -nodata

使用 `-nodata` 參數 `isync estimate` 指定不檢查資料。

語法

```
xcp isync estimate -nodata -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -nodata -id <name>

Job ID: Job_2023-11-23_23.19.45.648691_isync_estimate
Index: isync_est {source: <source_ip_address>:/fg1, target:
<destination_ip_address>:/fv}
Xcp command : xcp isync estimate -nodata -id <name>
Estimated Time : 0.6s
Job ID : Job_2023-11-23_23.19.45.648691_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
23_23.19.45.648691_isync_estimate.log
STATUS : PASSED
```

iSync 預估 -noattis

使用 `-noattr` 參數 `isync estimate` 指定不檢查屬性。

語法

```
xcp isync estimate -noattr -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -noattrs -id <name>

Job ID: Job_2023-11-23_23.20.25.042500_isync_estimate
Index: isync_est {source: <source_ip_address>:/fg1, target:
<target_ip_address>:/fv}
Xcp command : xcp isync estimate -noattrs -id <name>
Estimated Time : 2.4s
Job ID : Job_2023-11-23_23.20.25.042500_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
23_23.20.25.042500_isync_estimate.log
STATUS : PASSED
```

iSync 預估 - nomods

使用 `-nomods` 參數 `isync estimate` 指定不檢查檔案修改時間。

語法

```
xcp isync estimate -nomods -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync -nomodes
<source_ip_address>:/source_vol <destination_ip_address>:/dest_vol

Job ID: Job_2023-11-16_22.56.48.571392_isync
13,897 scanned, 763 MiB in (152 MiB/s), 2.28 MiB out (463 KiB/s), 5s
21,393 scanned, 148 removed, 4.81 GiB in (739 MiB/s), 12.5 MiB out
(1.81 MiB/s), 11s
28,517 scanned, 148 removed, 7.68 GiB in (578 MiB/s), 19.1 MiB out
(1.31 MiB/s), 16s
28,517 scanned, 148 removed, 10.7 GiB in (619 MiB/s), 26.3 MiB out
(1.43 MiB/s), 21s
29,167 scanned, 396 copied, 148 removed, 13.2 GiB in (434 MiB/s), 51.4
MiB out (4.33 MiB/s), 27s
.
.
.
42,790 scanned, 1,000 copied, 1,000 removed, 229 GiB in (641 MiB/s),
571 MiB out (1.40 MiB/s),
6m42s
42,790 scanned, 1,000 copied, 1,000 removed, 232 GiB in (668 MiB/s),
578 MiB out (1.46 MiB/s),
6m47s
Xcp command : xcp isync -nomods <source_ip_address>:/source_vol
<destination_ip_address>:/dest_vol
Stats : 1,000 removed, 42,790 scanned, 1,000 copied
Speed : 234 GiB in (585 MiB/s), 583 MiB out (1.42 MiB/s)
Total Time : 6m50s.
Job ID : Job_2023-11-16_22.56.48.571392_isync
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_22.56.48.571392_isync.log
STATUS : PASSED
```

iSync 估算 -mtimeWindow <s>

使用 `-mtimewindow <s>` 參數 `isync estimate` 指定可接受的修改時間差異以進行驗證。

語法

```
xcp isync estimate -mtimewindow <s> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -mtimewindow 10 -id <name>

Job ID: Job_2023-11-16_01.47.05.139847_isync_estimate
Index: <name> {source: <source_ip_address>:/source_vol, target:
<destination_ip_address>:/dest_vol}
Xcp command : xcp isync estimate -mtimewindow 10 -id <name>
Estimated Time : 2m42s
Job ID : Job_2023-11-16_01.47.05.139847_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_01.47.05.139847_isync_estimate.log
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_01.47.05.139847_isync_estimate.error
STATUS : PASSED
```

iSync 預估 - 符合 <filter>

使用 `-match <filter>` 參數 `isync estimate` 僅處理與篩選器相符的檔案和目錄。

語法

```
xcp isync estimate -match <filter> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -match <filter> -id <name>

Job ID: Job_2023-11-16_02.13.34.904794_isync_estimate
Index: <name> {source: <source_ip_address>:/source_vol, target:
<destination_ip_address>:/dest_vol}
Filtered: 0 matched, 6 did not match
Xcp command : xcp isync estimate -match fnm('FILE_*') -id <name>
Estimated Time : 0.8s
Job ID : Job_2023-11-16_02.13.34.904794_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.13.34.904794_isync_estimate.log
STATUS : PASSED
```

iSync 預估 -BS <n[k]>

使用 `-bs <n[k]>` 參數 `isync estimate` 指定讀取 / 寫入區塊大小。預設區塊大小為 64k。

語法

```
xcp isync estimate -bs <n[k]> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -bs 128k -id <name>

Job ID: Job_2023-11-16_02.14.21.263618_isync_estimate
Index: <name> {source: <source_ip_address>:/source_vol, target:
<destination_ip_address>:/dest_vol}
Xcp command : xcp isync estimate -bs 128k -id <name>
Estimated Time : 6m48s
Job ID : Job_2023-11-16_02.14.21.263618_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.14.21.263618_isync_estimate.log
STATUS : PASSED
```

iSync 預估 - 平行

使用 `-parallel <n>` 參數 `isync estimate` 指定並行批次處理程序的最大數目。預設值為 7。

語法

```
xcp isync estimate -parallel <n> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -parallel 10 -id <name>

Job ID: Job_2023-11-16_02.15.25.109554_isync_estimate
Index: <name> {source: <source_ip_address>:/source_vol, target:
<destination_ip_address>:/dest_vol}
Xcp command : xcp isync estimate -parallel 10 -id <name>
Estimated Time : 8m3s
Job ID : Job_2023-11-16_02.15.25.109554_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.15.25.109554_isync_estimate.log
STATUS : PASSED
```

iSync 預估 -dircount <n[k]>

使用 `-dircount <n[k]>` 參數 `isync estimate` 指定讀取目錄時的要求大小。預設值為 64k。

語法

```
xcp isync estimate -dircount <n[k]> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -dircount 128k -id <name>

Job ID: Job_2023-11-16_02.15.56.200697_isync_estimate
Index: <name> {source: <source_ip_address>:/source_vol, target:
<destination_ip_address>:/dest_vol}
Xcp command : xcp isync estimate -dircount 128k -id <name>
Estimated Time : 8m6s
Job ID : Job_2023-11-16_02.15.56.200697_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.15.56.200697_isync_estimate.log
STATUS : PASSED
```

iSync 預估 - 排除 <filter>

使用 `-exclude <filter>` 參數 `isync estimate` 可排除與篩選器匹配的文件和目錄。

語法

```
xcp isync estimate -exclude <filter> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -exclude "fnm('DIR1*')" -id
<name>

Job ID: Job_2023-11-16_02.16.30.449378_isync_estimate
Index: <name> {source: <source_ip_address>:/source_vol, target:
<destination_ip_address>:/dest_vol}
Excluded: 60 excluded, 0 did not match exclude criteria
Xcp command : xcp isync estimate -exclude fnm('DIR1*') -id <name>
Estimated Time : 3m29s
Job ID : Job_2023-11-16_02.16.30.449378_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.16.30.449378_isync_estimate.log
STATUS : PASSED
```

iSync 預估 -id <name>

使用 -id <name> 參數 isync estimate 指定目錄名稱 pf 先前的複本作業。

語法

```
xcp isync estimate -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -id <name>

Job ID: Job_2023-11-20_04.08.18.967541_isync_estimate
Index: <name> {source: <source_ip_address>:/src, target:
<destination_ip_address>:/dest}
30,611 scanned, 786 MiB in (141 MiB/s), 3.60 MiB out (661 KiB/s), 5s
45,958 scanned, 1.92 GiB in (223 MiB/s), 8.48 MiB out (939 KiB/s), 10s
53,825 scanned, 3.11 GiB in (216 MiB/s), 13.5 MiB out (912 KiB/s), 16s
67,260 scanned, 4.33 GiB in (231 MiB/s), 18.6 MiB out (961 KiB/s), 22s
81,328 scanned, 5.57 GiB in (253 MiB/s), 23.8 MiB out (1.05 MiB/s), 27s
85,697 scanned, 6.85 GiB in (241 MiB/s), 29.2 MiB out (1005 KiB/s), 32s
85,697 scanned, 8.14 GiB in (262 MiB/s), 34.5 MiB out (1.06 MiB/s), 37s
Xcp command : xcp isync estimate -id <name>
Estimated Time : 45.1s
Job ID : Job_2023-11-20_04.08.18.967541_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
20_04.08.18.967541_isync_estimate.log
Error Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
20_04.08.18.967541_isync_estimate.error
STATUS : PASSED
```

iSync 預估 -logLevel <name>

使用 `-loglevel <name>` 參數 `isync estimate` 若要設定記錄層級、可用的層級為 `info` 和 `debug`。預設值為 `info`。

語法

```
xcp isync estimate -loglevel <name> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -loglevel DEBUG -id <name>

Job ID: Job_2023-11-16_02.16.58.212518_isync_estimate
Index: <name> {source: <source_ip_address>:/source_vol, target:
<destination_ip_address>:/dest_vol}
Xcp command : xcp isync estimate -loglevel DEBUG -id <name>
Estimated Time : 8m18s
Job ID : Job_2023-11-16_02.16.58.212518_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.16.58.212518_isync_estimate.log
STATUS : PASSED
```

iSync 預估 - Preserve-atime

使用 `-preserve-atime` 參數 `isync estimate` 將所有檔案還原至來源上上次存取的日期。

語法

```
xcp isync estimate -preserve-atime -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -preserve-atime -id <name>

Job ID: Job_2023-11-16_02.17.32.085754_isync_estimate
Index: <name> {source: <source_ip_address>:/source_vol, target:
<destination_ip_address>:/dest_vol}
Xcp command : xcp isync estimate -preserve-atime -id <name>
Estimated Time : 8m26s
Job ID : Job_2023-11-16_02.17.32.085754_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.17.32.085754_isync_estimate.log
STATUS : PASSED
```

iSync 預估 -s3.insecure

使用 `-s3.insecure` 參數 `isync estimate` 使用 HTTP 取代 HTTPS 進行 S3 儲存區通訊。

語法

```
xcp isync estimate -s3.insecure -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -s3.insecure -id S3_index

Job ID: Job_2023-11-16_02.22.36.481539_isync_estimate
Index: S3_index {source: <source_ip_address>:/source_vol/USER5, target:
s3://
xcptesting/test_ankit/}
2,002 scanned, 432 KiB in (86.1 KiB/s), 5.53 KiB out (1.10 KiB/s), 5s
2,002 scanned, 432 KiB in (0/s), 5.53 KiB out (0/s), 10s
Xcp command : xcp isync estimate -s3.insecure -id S3_index
Estimated Time : 9.4s
Job ID : Job_2023-11-16_02.22.36.481539_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.22.36.481539_isync_estimate.log
STATUS : PASSED
```

iSync 預估 -S3.Endpoint <s3_endpoint_url>

使用 `-s3.endpoint <s3_endpoint_url>` 參數 `isync estimate` 以指定的 URL 覆寫預設 AWS 端點 URL 以進行 S3 儲存區通訊。

語法

```
xcp isync estimate -s3.endpoint <S3_endpoint_url> -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -s3.endpoint
<S3_endpoint_url> -id S3_index1

Job ID: Job_2023-11-16_02.35.49.911194_isync_estimate
Index: S3_index1 {source: <source_ip_address>:/source_vol/USER5,
target: s3://isyncestimate/}
2,002 scanned, 432 KiB in (85.6 KiB/s), 5.54 KiB out (1.10 KiB/s), 5s
2,002 scanned, 432 KiB in (0/s), 5.54 KiB out (0/s), 10s
Xcp command : xcp isync estimate -s3.endpoint <S3_endpoint_url> -id
S3_index1
Estimated Time : 13.3s
Job ID : Job_2023-11-16_02.35.49.911194_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-
16_02.35.49.911194_isync_estimate.log
STATUS : PASSED
```

iSync 預估 -s3.profile <name>

使用 s3.profile 參數 isync estimate 從 AWS 認證檔案中指定用於 S3 儲存區通訊的設定檔。

語法

```
xcp isync estimate -s3.profile s3_profile -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -s3.profile s3_profile -id S3_index

Job ID: Job_2023-11-16_02.25.57.045692_isync_estimate
Index: S3_index {source: <source_ip_address>:/source_vol/USER5, target: s3://xcptesting/test_ankit/}
2,002 scanned, 432 KiB in (84.9 KiB/s), 5.53 KiB out (1.09 KiB/s), 5s
2,002 scanned, 432 KiB in (0/s), 5.53 KiB out (0/s), 10s
Xcp command : xcp isync estimate -s3.profile s3_profile -id S3_index
Estimated Time : 9.7s
Job ID : Job_2023-11-16_02.25.57.045692_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-16_02.25.57.045692_isync_estimate.log
STATUS : PASSED
```

iSync 預估 -s3.noverify

使用 `-s3.noverify` 參數 `isync estimate` 覆寫 S3 Bucket 通訊的 SSL 憑證預設驗證。

語法

```
xcp isync estimate -s3.noverify -id <name>
```

顯示範例

```
[root@client1 linux]# ./xcp isync estimate -s3.noverify -id S3_index

Job ID: Job_2023-11-16_02.23.36.515890_isync_estimate
Index: S3_index {source: <source_ip_address>:/source_vol/USER5, target: s3://xcptesting/test_ankit/}
2,002 scanned, 432 KiB in (85.7 KiB/s), 5.53 KiB out (1.10 KiB/s), 5s
2,002 scanned, 432 KiB in (0/s), 5.53 KiB out (0/s), 10s
Xcp command : xcp isync estimate -s3.noverify -id S3_index
Estimated Time : 9.3s
Job ID : Job_2023-11-16_02.23.36.515890_isync_estimate
Log Path : /opt/NetApp/xFiles/xcp/xcplogs/Job_2023-11-16_02.23.36.515890_isync_estimate.log
STATUS : PASSED
```


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