# diff

```
$ kopia diff <object-path1> <object-path2>
```

Displays differences between two repository objects (files or directories)

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --diff-command | | diff -u | Displays differences between two repository objects (files or directories) |
| --[no-]files | -f | false | Compare files by launching diff command for all pairs of (old,new) |

| Argument | Help |
|----------|------|
| object-path1 | First object/path |
| object-path2 | Second object/path |

```
$ kopia diff <object-path1> <object-path2>
```

Displays differences between two repository objects (files or directories)

| Flag | Short | Default | Help |
|------|-------|---------|------|

# list

```
$ kopia list <object-path>
```

List a directory stored in repository object.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]error-summary | | true | Emit error summary |
| --[no-]long | -l | false | Long output |
| --[no-]recursive | -r | false | Recursive output |
| --[no-]show-object-id | -o | false | Show object IDs |

| Argument | Help |
|----------|------|
| object-path | Path |

# restore

```
$ kopia restore <sources>
```

Restore a directory or a file.

Restore can operate in two modes:

- from a snapshot: restoring (possibly shallowly) a specified file or directory from a snapshot into a target path. By default, the target path will be created by the restore command if it does not exist.

- by expanding a shallow placeholder in situ where the placeholder was created by a previous restore.

In the from-snapshot mode:

The source to be restored is specified in the form of a directory or file ID and optionally a sub-directory path.

For example, the following source and target arguments will restore the contents of the 'kffbb7c28ea6c34d6cbe555d1cf80faa9' directory into a new, local directory named 'd1'

'restore kffbb7c28ea6c34d6cbe555d1cf80faa9 d1'

Similarly, the following command will restore the contents of a subdirectory 'subdir/subdir2' under 'kffbb7c28ea6c34d6cbe555d1cf80faa9' into a new, local directory named 'sd2'

'restore kffbb7c28ea6c34d6cbe555d1cf80faa9/subdir1/subdir2 sd2'

When restoring to a target path that already has existing data, by default the restore will attempt to overwrite, unless one or more of the following flags has been set (to prevent overwrite of each type):

–no-overwrite-files –no-overwrite-directories –no-overwrite-symlinks

If the '–shallow' option is provided, files and directories this depth and below in the directory hierarchy will be represented by compact placeholder files of the form 'entry.kopia-entry' instead of being restored. (I.e. setting '–shallow' to 0 will only shallow restore.) Snapshots created of directory contents represented by placeholder files will be identical to snapshots of the equivalent fully expanded tree.

In the expanding-a-placeholder mode:

The source to be restored is a pre-existing placeholder entry of the form 'entry.kopia-entry'. The target will be 'entry'. '–shallow' controls the depth of the expansion and defaults to 0. For example:

'restore d3.kopiadir'

will remove the d3.kopiadir placeholder and restore the referenced repository contents into path d3 where the contents of the newly created path d3 will themselves be placeholder files.

| Flag | Short | Default | Help |
|---|---|---|---|
| --[no-]consistent-attributes | | false | When multiple snapshots match, fail if they have inconsistent attributes |
| --[no-]ignore-errors | | false | Ignore all errors |
| --[no-]ignore-permission-errors | | true | Ignore permission errors |
| --mode | | auto | Override restore mode |
| --[no-]overwrite-directories | | true | Overwrite existing directories |
| --[no-]overwrite-files | | true | Specifies whether or not to overwrite already existing files |
| --[no-]overwrite-symlinks | | true | Specifies whether or not to overwrite already existing symlinks |
| --parallel | | 8 | Restore parallelism (1=disable) |
| --shallow | | | Shallow restore the directory hierarchy starting at this level (default is to deep restore the entire hierarchy.) |
| --shallow-minsize | | | When doing a shallow restore, write actual files instead of placeholders smaller than this size. |
| --[no-]skip-existing | | false | Skip files and symlinks that exist in the output |
| --[no-]skip-owners | | false | Skip owners during restore |
| --[no-]skip-permissions | | false | Skip permissions during restore |
| --[no-]skip-times | | false | Skip times during restore |

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --snapshot-time | | latest | When using a path as the source, use the latest snapshot available before this date. Default is latest |
| --[no-]write-files-atomically | | false | Write files atomically to disk, ensuring they are either fully committed, or not written at all, preventing partially written files |
| --[no-]write-sparse-files | | false | When doing a restore, attempt to write files sparsely-allocating the minimum amount of disk space needed. |

| Argument | Help |
|----------|------|
| sources | Two forms: 1. Source directory ID/path in the form of a |

directory ID and optionally a sub-directory path. For example,
'kffbb7c28ea6c34d6cbe555d1cf80faa9' or
'kffbb7c28ea6c34d6cbe555d1cf80faa9/subdir1/subdir2'
followed by the path of the directory for the contents to be restored.

2. one or more placeholder files of the form path.kopia-entry |

# show

```
$ kopia show <object-path>
```

Displays the contents of a repository object.

| Argument | Help |
|---|---|
| object-path | Path |

# show

```
$ kopia show <object-path>
```

Displays the contents of a repository object.

| Argument | Help |
|---|---|
| object-path | Path |

# mount

```
$ kopia mount [path] [mountPoint]
```

Mount repository object as a local filesystem.

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --[no-]browse | | false | Open file browser |
| --[no-]fuse-allow-non-empty-mount | | false | Allows the mounting over a non-empty directory. The files in it will be shadowed by the freshly created mount. |
| --[no-]fuse-allow-other | | false | Allows other users to access the file system. |
| --max-cached-dirs | | 100 | Limit the number of cached directories |
| --max-cached-entries | | 100000 | Limit the number of cached directory entries |
| --[no-]trace-fs | | false | Trace filesystem operations |
| --[no-]webdav | | false | Use WebDAV to mount the repository object regardless of fuse availability. |

| Argument | Help |
| --- | --- |
| mountPoint | Mount point |
| path | Identifier of the directory to mount. |

# benchmark compression

```
$ kopia benchmark compression \
       --data-file=...
```

Run compression benchmarks

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --algorithms | | | Comma-separated list of algorithms to benchmark |
| --[no-]by-alloc | | false | Sort results by allocated bytes |
| --[no-]by-size | | false | Sort results by size |
| --data-file | | | Use data from the given file |
| --[no-]deprecated | | false | Included deprecated compression algorithms |
| --operations | | both | Operations |
| --parallel | | 1 | Number of parallel goroutines |
| --[no-]print-options | | false | Print out options usable for repository creation |
| --repeat | | 0 | Number of repetitions |
| --[no-]verify-stable | | false | Verify that compression is stable |

# benchmark crypto

```
$ kopia benchmark crypto
```

Run combined hash and encryption benchmarks

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --block-size | | 1MB | Size of a block to encrypt |
| --[no-]deprecated | | false | Include deprecated algorithms |
| --parallel | | 1 | Number of parallel goroutines |
| --[no-]print-options | | false | Print out options usable for repository creation |
| --repeat | | 100 | Number of repetitions |

# benchmark splitter

```
$ kopia benchmark splitter
```

Run splitter benchmarks

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --block-count | | 16 | Number of data blocks to split |
| --data-size | | 32MB | Size of a data to split |
| --parallel | | 1 | Number of parallel goroutines |
| --[no-]print-options | | false | Print out the fastest dynamic splitter option |
| --rand-seed | | 42 | Random seed |

# benchmark hashing

```
$ kopia benchmark hashing
```

Run hashing function benchmarks

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --block-size | | 1MB | Size of a block to hash |
| --parallel | | 1 | Number of parallel goroutines |
| --[no-]print-options | | false | Print out options usable for repository creation |
| --repeat | | 10 | Number of repetitions |

```
$ kopia benchmark hashing
```

Run hashing function benchmarks

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --block-size | | 1MB | Size of a block to hash |
| --parallel | | 1 | Number of parallel goroutines |
| --[no-]print-options | | false | Print out options usable for repository creation |
| --repeat | | 10 | Number of repetitions |

# benchmark encryption

```
$ kopia benchmark encryption
```

Run encryption benchmarks

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --block-size | | 1MB | Size of a block to encrypt |
| --[no-]deprecated | | false | Include deprecated algorithms |
| --parallel | | 1 | Number of parallel goroutines |
| --[no-]print-options | | false | Print out options usable for repository creation |
| --repeat | | 1000 | Number of repetitions |

# benchmark ecc

```
$ kopia benchmark ecc
```

Run ECC benchmarks

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --block-size | | 10MB | Size of a block to encrypt |
| --parallel | | 1 | Number of parallel goroutines |
| --[no-]print-options | | false | Print out options usable for repository creation |
| --repeat | | 100 | Number of repetitions |

# notification profile configure email

```
$ kopia notification profile configure email \
        --profile-name=...
```

E-mail notification.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --format | | | Format of the message |
| --mail-cc | | | CC address |
| --mail-from | | | From address |
| --mail-to | | | To address |
| --min-severity | | | Minimum severity |
| --profile-name | | | Profile name |
| --[no-]send-test-notification | | false | Test the notification |
| --smtp-identity | | | SMTP identity |
| --smtp-password | | | SMTP password |
| --smtp-port | | | SMTP port |
| --smtp-server | | | SMTP server |
| --smtp-username | | | SMTP username |

# notification profile configure pushover

```
$ kopia notification profile configure pushover \
        --profile-name=...
```

Pushover notification.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --app-token | | | Pushover App Token |
| --format | | | Format of the message |
| --min-severity | | | Minimum severity |
| --profile-name | | | Profile name |
| --[no-]send-test-notification | | false | Test the notification |
| --user-key | | | Pushover User Key |

# notification profile configure webhook

```
$ kopia notification profile configure webhook \
        --profile-name=...
```

Webhook notification.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --endpoint | | | SMTP server |
| --format | | | Format of the message |
| --method | | | HTTP Method |
| --min-severity | | | Minimum severity |
| --profile-name | | | Profile name |
| --[no-]send-test-notification | | false | Test the notification |

```
$ kopia notification profile configure webhook \
        --profile-name=...
```

Webhook notification.

| Flag | Short | Default | Help |
|------|-------|---------|------|

# notification profile delete

```
$ kopia notification profile delete \
        --profile-name=...
```

Delete notification profile

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --profile-name | | | Profile name |

# notification profile test

```
$ kopia notification profile test \
        --profile-name=...
```

Send test notification

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --profile-name | | | Profile name |

# notification profile list

```
$ kopia notification profile list
```

List notification profiles

| Flag | Short | Default | Help |
|---|---|---|---|
| --[no-]json | | false | Output result in JSON format to stdout |
| --[no-]json-indent | | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |

# notification template list

```
$ kopia notification template list
```

List templates

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]json | | false | Output result in JSON format to stdout |
| --[no-]json-indent | | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |

# notification template set

```
$ kopia notification template set <template>
```

Set the notification template

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]editor | | false | Edit template using default editor |
| --from-file | | | Read new template from file |
| --[no-]from-stdin | | false | Read new template from stdin |

| Argument | Help |
|----------|------|
| template | Template name |

# notification template show

```
$ kopia notification template show <template>
```

Show template

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --format | | | Template format |
| --[no-]html | | false | Convert the output to HTML |
| --[no-]original | | false | Show original template |

| Argument | Help |
|----------|------|
| template | Template name |

# notification template remove

```
$ kopia notification template remove <template>
```

Remove the notification template

| Argument | Help |
|----------|------|
| template | Template name |

# server start

```
$ kopia server start
```

Start Kopia server

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --address | | http://127.0.0.1:51515 | Server address |
| --cache-directory | | | Cache directory |
| --[no-]check-for-updates | | true | Periodically check for Kopia updates on GitHub |
| --content-cache-size-limit-mb | | | Maximum size of local content cache (hard limit) |
| --content-cache-size-mb | | | Desired size of local content cache (soft limit) |
| --content-min-sweep-age | | | Minimal age of content cache item to be subject to sweeping |
| --[no-]control-api | | true | Start the control API |
| --description | | | Human-readable description of the repository |
| --[no-]enable-actions | | false | Allow snapshot actions |
| --[no-]grpc | | true | Start the GRPC server |
| --html | | | Server the provided HTML at the root URL |
| --index-min-sweep-age | | | Minimal age of index cache item to be subject to sweeping |
| --max-concurrency | | 0 | Maximum number of server goroutines |
| --max-list-cache-duration | | | Duration of index cache |
| --metadata-cache-size-limit-mb | | | Maximum size of local metadata cache (hard limit) |
| --metadata-cache-size-mb | | | Desired size of local metadata cache (soft limit) |
| --metadata-min-sweep-age | | | Minimal age of metadata cache item to be subject to sweeping |
| --[no-]persistent-logs | | true | Persist logs in a file |
| --[no-]readonly | | false | Make repository read-only to avoid accidental changes |
| --refresh-interval | | 4h | Frequency for refreshing repository status |
| --server-control-password | | | Server control password |
| --server-control-username | | server-control | Server control username |
| --server-password | | | HTTP server password (basic auth) |
| --server-username | | kopia | HTTP server username (basic auth) |
| --shutdown-grace-period | | 5s | Grace period for shutting down the server |
| --tls-cert-file | | | TLS certificate PEM |
| --tls-key-file | | | TLS key PEM file |
| --[no-]ui | | true | Start the server with HTML UI |
| --ui-preferences-file | | | Path to JSON file storing UI preferences |
| --[no-]async-repo-connect | | false | [ADV] Connect to repository asynchronously |
| --auth-cookie-signing-key | | | [ADV] Force particular auth cookie signing key |
| --[no-]disable-csrf-token-checks | | false | [ADV] Disable CSRF token |
| --[no-]disable-repository-format-cache | | false | [ADV] Disable caching of kopia.repository format blob |
| --htpasswd-file | | | [ADV] Path to htpasswd file that contains allowed user@hostname entries |
| --[no-]insecure | | false | [ADV] Allow insecure configurations (do not use in production) |
| --[no-]log-scheduler | | true | [ADV] Enable logging of scheduler actions |
| --[no-]log-server-requests | | false | [ADV] Log server requests |
| --min-maintenance-interval | | 60s | [ADV] Minimum maintenance interval |
| --override-hostname | | | [ADV] Override hostname used by this repository connection |
| --override-username | | | [ADV] Override username used by this repository connection |
| --[no-]permissive-cache-loading | | false | [ADV] Do not fail when loading bad cache index entries. Repository must be opened in read-only mode |
| --[no-]random-password | | false | [ADV] Generate random password and print to stderr |
| --[no-]random-server-control-password | | false | [ADV] Generate random server control password and print to stderr |

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --repository-format-cache-duration | | | [ADV] Duration of kopia.repository format blob cache |
| --[no-]shutdown-on-stdin | | false | [ADV] Shut down the server when stdin handle has closed. |
| --[no-]tls-generate-cert | | false | [ADV] Generate TLS certificate |
| --tls-generate-cert-name | | 127.0.0.1 | [ADV] Host names/IP addresses to generate TLS certificate for |
| --tls-generate-cert-valid-days | | 3650 | [ADV] How long should the TLS certificate be valid |
| --tls-generate-rsa-key-size | | 4096 | [ADV] TLS RSA Key size (bits) |
| --[no-]tls-print-server-cert | | false | [ADV] Print server certificate |
| --ui-title-prefix | | | [ADV] UI title prefix |
| --[no-]without-password | | false | [ADV] Start the server without a password |

# server acl add

```
$ kopia server acl add \
        --user=... \
        --target=... \
        --access=...
```

Add ACL entry

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --access | | | Access the user gets to subject |
| --[no-]overwrite | | false | Overwrite existing rule with the same user and target |
| --target | | | Manifests targeted by the rule (type:T,key1:value1,…,keyN:valueN) |
| --user | | | User the ACL targets |

# server acl delete

```
$ kopia server acl delete [id]
```

Delete ACL entry

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]all | | false | Remove all ACL entries |
| --[no-]delete | | false | Really delete |

| Argument | Help |
|----------|------|
| id | Entry ID |

# server acl enable

```
$ kopia server acl enable
```

Enable ACLs and install default entries

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --[no-]reset | | false | Reset all ACLs to default |

# server acl list

```
$ kopia server acl list
```

List ACL entries

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]json | | false | Output result in JSON format to stdout |
| --[no-]json-indent | | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |

# server users add

```
$ kopia server users add <username>
```

Add new repository user

| Flag | Short | Default | Help |
|------|-------|---------|------|
| `--[no-]ask-password` | | `false` | Ask for user password |
| `--user-password` | | | Password |
| `--user-password-hash` | | | Password hash |

| Argument | Help |
|----------|------|
| `username` | Username |

# server users set

```
$ kopia server users set <username>
```

Set password for a repository user.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]ask-password | | false | Ask for user password |
| --user-password | | | Password |
| --user-password-hash | | | Password hash |

| Argument | Help |
|----------|------|
| username | Username |

# server users delete

```
$ kopia server users delete <username>
```

Delete user

| Argument | Help |
|----------|------|
| username | The username to delete. |

# server users hash-password

```
$ kopia server users hash-password
```

Hash a user password that can be passed to the 'server user add/set' command

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| `--user-password` | | | Password |

# server users info

```
$ kopia server users info <username>
```

Info about particular user

| Argument | Help |
| --- | --- |
| username | The username to look up. |

# server users list

```
$ kopia server users list
```

List users

| Flag | Short Default | Help |
|---|---|---|
| --[no-]json | false | Output result in JSON format to stdout |
| --[no-]json-indent | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |

# server status

```
$ kopia server status
```

Status of Kopia server

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --address | | http://127.0.0.1:51515 | Address of the server to connect to |
| --[no-]remote | | false | Show remote sources |
| --server-cert-fingerprint | | | Server certificate fingerprint |
| --server-control-password | | | Server control password |
| --server-control-username | | | Server control username |
| --server-password | | | [ADV] Server control password |
| --server-username | | | [ADV] Server control username |

```
$ kopia server status
```

Status of Kopia server

# server refresh

```
$ kopia server refresh
```

Refresh the cache in Kopia server to observe new sources, etc.

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| `--address` | | `http://127.0.0.1:51515` | Address of the server to connect to |
| `--server-cert-fingerprint` | | | Server certificate fingerprint |
| `--server-control-password` | | | Server control password |
| `--server-control-username` | | | Server control username |
| `--server-password` | | | [ADV] Server control password |
| `--server-username` | | | [ADV] Server control username |

```
$ kopia server refresh
```

Refresh the cache in Kopia server to observe new sources, etc.

# server flush

```
$ kopia server flush
```

Flush the state of Kopia server to persistent storage, etc.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --address | | http://127.0.0.1:51515 | Address of the server to connect to |
| --server-cert-fingerprint | | | Server certificate fingerprint |
| --server-control-password | | | Server control password |
| --server-control-username | | | Server control username |
| --server-password | | | [ADV] Server control password |
| --server-username | | | [ADV] Server control username |

# server shutdown

```
$ kopia server shutdown
```

Gracefully shutdown the server

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --address | | http://127.0.0.1:51515 | Address of the server to connect to |
| --server-cert-fingerprint | | | Server certificate fingerprint |
| --server-control-password | | | Server control password |
| --server-control-username | | | Server control username |
| --server-password | | | [ADV] Server control password |
| --server-username | | | [ADV] Server control username |

# server snapshot

```
$ kopia server snapshot [source]
```

Trigger upload for one or more existing sources

| Flag | Short | Default | Help |
|---|---|---|---|
| --address | | http://127.0.0.1:51515 | Address of the server to connect to |
| --[no-]all | | false | All paths managed by server |
| --server-cert-fingerprint | | | Server certificate fingerprint |
| --server-control-password | | | Server control password |
| --server-control-username | | | Server control username |
| --server-password | | | [ADV] Server control password |
| --server-username | | | [ADV] Server control username |

| Argument | Help |
|---|---|
| source | Source path managed by server |

# server cancel

```
$ kopia server cancel [source]
```

Cancels in-progress uploads for one or more sources

| Flag | Short | Default | Help |
|---|---|---|---|
| --address | | http://127.0.0.1:51515 | Address of the server to connect to |
| --[no-]all | | false | All paths managed by server |
| --server-cert-fingerprint | | | Server certificate fingerprint |
| --server-control-password | | | Server control password |
| --server-control-username | | | Server control username |
| --server-password | | | [ADV] Server control password |
| --server-username | | | [ADV] Server control username |

| Argument | Help |
|---|---|
| source | Source path managed by server |

```
$ kopia server cancel [source]
```

Cancels in-progress uploads for one or more sources

# server pause

```
$ kopia server pause [source]
```

Pause the scheduled snapshots for one or more sources

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --address | | http://127.0.0.1:51515 | Address of the server to connect to |
| --[no-]all | | false | All paths managed by server |
| --server-cert-fingerprint | | | Server certificate fingerprint |
| --server-control-password | | | Server control password |
| --server-control-username | | | Server control username |
| --server-password | | | [ADV] Server control password |
| --server-username | | | [ADV] Server control username |

| Argument | Help |
| --- | --- |
| source | Source path managed by server |

# server resume

```
$ kopia server resume [source]
```

Resume the scheduled snapshots for one or more sources

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --address | | http://127.0.0.1:51515 | Address of the server to connect to |
| --[no-]all | | false | All paths managed by server |
| --server-cert-fingerprint | | | Server certificate fingerprint |
| --server-control-password | | | Server control password |
| --server-control-username | | | Server control username |
| --server-password | | | [ADV] Server control password |
| --server-username | | | [ADV] Server control username |

| Argument | Help |
|----------|------|
| source | Source path managed by server |

# server throttle get

```
$ kopia server throttle get
```

Get throttling parameters for a running server

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --address | | http://127.0.0.1:51515 | Address of the server to connect to |
| --[no-]json | | false | Output result in JSON format to stdout |
| --server-cert-fingerprint | | | Server certificate fingerprint |
| --server-control-password | | | Server control password |
| --server-control-username | | | Server control username |
| --[no-]json-indent | | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |
| --server-password | | | [ADV] Server control password |
| --server-username | | | [ADV] Server control username |

```
$ kopia server throttle get
```

Get throttling parameters for a running server

# server throttle set

```
$ kopia server throttle set
```

Set throttling parameters for a running server

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --address | | http://127.0.0.1:51515 | Address of the server to connect to |
| --concurrent-reads | | | Set max concurrent reads |
| --concurrent-writes | | | Set max concurrent writes |
| --download-bytes-per-second | | | Set the download bytes per second |
| --list-requests-per-second | | | Set max lists per second |
| --read-requests-per-second | | | Set max reads per second |
| --server-cert-fingerprint | | | Server certificate fingerprint |
| --server-control-password | | | Server control password |
| --server-control-username | | | Server control username |
| --upload-bytes-per-second | | | Set the upload bytes per second |
| --write-requests-per-second | | | Set max writes per second |
| --server-password | | | [ADV] Server control password |
| --server-username | | | [ADV] Server control username |

# snapshot copy-history

```
$ kopia snapshot copy-history <source> [destination]
```

Performs a copy of the history of snapshots from another user or host. This command will copy snapshot manifests of the specified source to the respective destination. This is typically used when renaming a host, switching username or moving directory around to maintain snapshot history.

```
Both source and destination can be specified using user@host, @host or user@host:/path
where destination values override the corresponding parts of the source, so both targeted
and mass copy is supported.

Source:             Destination         Behavior
---------------------------------------------------
@host1              @host2              copy snapshots from all users of host1
@host1              user2@host2         (disallowed as it would potentially collapse users)
@host1              user2@host2:/path2  (disallowed as it would potentially collapse paths)
user1@host1         @host2              copy all snapshots to user1@host2
user1@host1         user2@host2         copy all snapshots to user2@host2
user1@host1         user2@host2:/path2  (disallowed as it would potentially collapse paths)
user1@host1:/path1  @host2              copy to user1@host2:/path1
user1@host1:/path1  user2@host2         copy to user2@host2:/path1
user1@host1:/path1  user2@host2:/path2  copy snapshots from single path.
```

| Flag | Short | Default | Help |
|------|-------|---------|------|
| `--[no-]dry-run` | `-n` | `false` | Do not actually copy snapshots, only print what would happen |

| Argument | Help |
|----------|------|
| `destination` | Destination (defaults to current user@host) |
| `source` | Source (user@host or user@host:path) |

# snapshot move-history

```
$ kopia snapshot move-history <source> [destination]
```

Performs a move of the history of snapshots from another user or host. This command will move snapshot manifests of the specified source to the respective destination. This is typically used when renaming a host, switching username or moving directory around to maintain snapshot history.

```
Both source and destination can be specified using user@host, @host or user@host:/path
where destination values override the corresponding parts of the source, so both targeted
and mass move is supported.

Source:              Destination        Behavior
--------------------------------------------------
@host1               @host2             move snapshots from all users of host1
@host1               user2@host2        (disallowed as it would potentially collapse users)
@host1               user2@host2:/path2 (disallowed as it would potentially collapse paths)
user1@host1          @host2             move all snapshots to user1@host2
user1@host1          user2@host2        move all snapshots to user2@host2
user1@host1          user2@host2:/path2 (disallowed as it would potentially collapse paths)
user1@host1:/path1   @host2             move to user1@host2:/path1
user1@host1:/path1   user2@host2        move to user2@host2:/path1
user1@host1:/path1   user2@host2:/path2 move snapshots from single path.
```

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]dry-run | -n | false | Do not actually copy snapshots, only print what would happen |

| Argument | Help |
|----------|------|
| destination | Destination (defaults to current user@host) |
| source | Source (user@host or user@host:path) |

# snapshot create

```
$ kopia snapshot create [source]
```

Creates a snapshot of local directory or file.

| Flag | Short Default | Help |
| --- | --- | --- |
| --[no-]all | false | Create snapshots for files or directories previously backed up by this user on this computer. Cannot be used when a source path argument is also specified. |
| --description | | Free-form snapshot description. |
| --end-time | | Override snapshot end timestamp. |
| --[no-]fail-fast | false | Fail fast when creating snapshot. |
| --force-hash | 0 | Force hashing of source files for a given percentage of files [0.0 .. 100.0] |
| --[no-]json | false | Output result in JSON format to stdout |
| --log-dir-detail | | Override log level for directories |
| --log-entry-detail | | Override log level for entries |
| --override-source | | Override the source of the snapshot. |
| --parallel | 0 | Upload N files in parallel |
| --pin | | Create a pinned snapshot that will not expire automatically |
| --start-time | | Override snapshot start timestamp. |
| --stdin-file | | File path to be used for stdin data snapshot. |
| --tags | | Tags applied on the snapshot. Must be provided in the : format. |
| --upload-limit-mb | 0 | Stop the backup process after the specified amount of data (in MB) has been uploaded. |
| --checkpoint-interval | | [ADV] Interval between periodic checkpoints (must be <= 45 minutes). |
| --[no-]flush-per-source | false | [ADV] Flush writes at the end of each source |
| --[no-]force-disable-actions | false | [ADV] Disable snapshot actions even if globally enabled on this client |
| --[no-]force-enable-actions | false | [ADV] Enable snapshot actions even if globally disabled on this client |
| --[no-]json-indent | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |

| Argument | Help |
| --- | --- |
| source | Files or directories to create snapshot(s) of. |

# snapshot delete

```
$ kopia snapshot delete <id>
```

Explicitly delete a snapshot by providing a snapshot ID.

| Flag | Short | Default | Help |
|---|---|---|---|
| --[no-]all-snapshots-for-source | | false | Delete all snapshots for a source |
| --[no-]delete | | false | Confirm deletion |
| --[no-]unsafe-ignore-source | | false | [ADV] Alias for –delete |

| Argument | Help |
|---|---|
| id | Snapshot ID or root object ID to be deleted |

# snapshot estimate

```
$ kopia snapshot estimate <source>
```

Estimate the snapshot size and upload time.

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --max-examples-per-bucket | | 10 | Max examples per bucket |
| --[no-]quiet | -q | false | Do not display scanning progress |
| --[no-]show-files | | false | Show files |
| --upload-speed | | 10 | Upload speed to use for estimation |

| Argument | Help |
| --- | --- |
| source | File or directory to analyze. |

```
$ kopia snapshot estimate <source>
```

# snapshot expire

```
$ kopia snapshot expire [path]
```

Remove old snapshots according to defined expiration policies.

| Flag | Short Default | | Help |
|------|-------|---------|------|
| --[no-]all | | false | Expire all snapshots |
| --[no-]delete | | false | Whether to actually delete snapshots |

| Argument | Help |
|----------|------|
| path | Expire snapshots for given paths only |

```
$ kopia snapshot expire [path]
```

Remove old snapshots according to defined expiration policies.

# snapshot fix invalid-files

```
$ kopia snapshot fix invalid-files
```

Remove references to any invalid (unreadable) files from snapshots.

| Flag | Short Default | | Help |
|------|-------|---------|------|
| --[no-]commit | | false | Update snapshot manifests |
| --invalid-directory-handling | | stub | Handling of invalid directories |
| --invalid-file-handling | | stub | How to handle invalid files |
| --manifest-id | | | Manifest IDs |
| --parallel | | | Parallelism |
| --source | | | Source to target (username@hostname:/path) |
| --verify-files-percent | | 0 | Verify a percentage of files by fully downloading them [0.0 .. 100.0] |

```
$ kopia snapshot fix invalid-files
```

# snapshot fix remove-files

```
$ kopia snapshot fix remove-files
```

Remove references to the specified files from snapshots.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]commit | | false | Update snapshot manifests |
| --filename | | | Remove files by filename (wildcards are supported) |
| --invalid-directory-handling | | stub | Handling of invalid directories |
| --manifest-id | | | Manifest IDs |
| --object-id | | | Remove files by their object ID |
| --parallel | | | Parallelism |
| --source | | | Source to target (username@hostname:/path) |

```
$ kopia snapshot fix remove-files
```

# snapshot list

```
$ kopia snapshot list [source]
```

List snapshots of files and directories.

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --[no-]all | -a | false | Show all snapshots (not just current username/host) |
| --[no-]delta | -d | false | Include deltas. |
| --[no-]human-readable | | true | Show human-readable units |
| --[no-]incomplete | -i | false | Include incomplete. |
| --[no-]json | | false | Output result in JSON format to stdout |
| --[no-]manifest-id | -m | false | Include manifest item ID. |
| --max-results | -n | | Maximum number of entries per source. |
| --[no-]mtime | | false | Include file mod time |
| --[no-]owner | | false | Include owner |
| --[no-]retention | | true | Include retention reasons. |
| --[no-]reverse | | false | Reverse sort order |
| --[no-]show-identical | -l | false | Show identical snapshots |
| --[no-]storage-stats | | false | Compute and show storage statistics |
| --tags | | | Tag filters to apply on the list items. Must be provided in the : format. |
| --[no-]json-indent | | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |

| Argument | Help |
| --- | --- |
| source | File or directory to show history of. |

# snapshot migrate

```
$ kopia snapshot migrate \
        --source-config=...
```

Migrate snapshots from another repository

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]all | | false | Migrate all sources |
| --[no-]apply-ignore-rules | | false | When migrating also apply current ignore rules |
| --[no-]latest-only | | false | Only migrate the latest snapshot |
| --[no-]overwrite-policies | | false | Overwrite policies |
| --parallel | | 1 | Number of sources to migrate in parallel |
| --[no-]policies | | true | Migrate policies too |
| --source-config | | | Configuration file for the source repository |
| --sources | | | List of sources to migrate |

```
$ kopia snapshot migrate \
        --source-config=...
```

# snapshot pin

```
$ kopia snapshot pin <id>
```

Add or remove pins preventing snapshot deletion

| Flag | Short Default | Help |
|------|---------------|------|
| --add |  | Add pins |
| --remove |  | Remove pins |

| Argument | Help |
|----------|------|
| id | Snapshot ID or root object ID |

# snapshot restore

```
$ kopia snapshot restore <sources>
```

Restore a directory or a file.

Restore can operate in two modes:

- from a snapshot: restoring (possibly shallowly) a specified file or directory from a snapshot into a target path. By default, the target path will be created by the restore command if it does not exist.

- by expanding a shallow placeholder in situ where the placeholder was created by a previous restore.

In the from-snapshot mode:

The source to be restored is specified in the form of a directory or file ID and optionally a sub-directory path.

For example, the following source and target arguments will restore the contents of the 'kffbb7c28ea6c34d6cbe555d1cf80faa9' directory into a new, local directory named 'd1'

'restore kffbb7c28ea6c34d6cbe555d1cf80faa9 d1'

Similarly, the following command will restore the contents of a subdirectory 'subdir/subdir2' under 'kffbb7c28ea6c34d6cbe555d1cf80faa9' into a new, local directory named 'sd2'

'restore kffbb7c28ea6c34d6cbe555d1cf80faa9/subdir1/subdir2 sd2'

When restoring to a target path that already has existing data, by default the restore will attempt to overwrite, unless one or more of the following flags has been set (to prevent overwrite of each type):

–no-overwrite-files –no-overwrite-directories –no-overwrite-symlinks

If the '–shallow' option is provided, files and directories this depth and below in the directory hierarchy will be represented by compact placeholder files of the form 'entry.kopia-entry' instead of being restored. (I.e. setting '–shallow' to 0 will only shallow restore.) Snapshots created of directory contents represented by placeholder files will be identical to snapshots of the equivalent fully expanded tree.

In the expanding-a-placeholder mode:

The source to be restored is a pre-existing placeholder entry of the form 'entry.kopia-entry'. The target will be 'entry'. '–shallow' controls the depth of the expansion and defaults to 0. For example:

'restore d3.kopiadir'

will remove the d3.kopiadir placeholder and restore the referenced repository contents into path d3 where the contents of the newly created path d3 will themselves be placeholder files.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| `--[no-]consistent-attributes` | | `false` | When multiple snapshots match, fail if they have inconsistent attributes |
| `--[no-]ignore-errors` | | `false` | Ignore all errors |
| `--[no-]ignore-permission-errors` | | `true` | Ignore permission errors |
| `--mode` | | `auto` | Override restore mode |
| `--[no-]overwrite-directories` | | `true` | Overwrite existing directories |
| `--[no-]overwrite-files` | | `true` | Specifies whether or not to overwrite already existing files |
| `--[no-]overwrite-symlinks` | | `true` | Specifies whether or not to overwrite already existing symlinks |
| `--parallel` | | `8` | Restore parallelism (1=disable) |
| `--shallow` | | | Shallow restore the directory hierarchy starting at this level (default is to deep restore the entire hierarchy.) |
| `--shallow-minsize` | | | When doing a shallow restore, write actual files instead of placeholders smaller than this size. |
| `--[no-]skip-existing` | | `false` | Skip files and symlinks that exist in the output |
| `--[no-]skip-owners` | | `false` | Skip owners during restore |
| `--[no-]skip-permissions` | | `false` | Skip permissions during restore |
| `--[no-]skip-times` | | `false` | Skip times during restore |

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --snapshot-time | | latest | When using a path as the source, use the latest snapshot available before this date. Default is latest |
| --[no-]write-files-atomically | | false | Write files atomically to disk, ensuring they are either fully committed, or not written at all, preventing partially written files |
| --[no-]write-sparse-files | | false | When doing a restore, attempt to write files sparsely-allocating the minimum amount of disk space needed. |

| Argument | Help |
|----------|------|
| sources | Two forms: 1. Source directory ID/path in the form of a |

directory ID and optionally a sub-directory path. For example,
'kffbb7c28ea6c34d6cbe555d1cf80faa9' or
'kffbb7c28ea6c34d6cbe555d1cf80faa9/subdir1/subdir2'

followed by the path of the directory for the contents to be restored.

2. one or more placeholder files of the form path.kopia-entry |

# snapshot verify

```
$ kopia snapshot verify [snapshot-ids]
```

Verify the contents of stored snapshot

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --directory-id | | | Directory object IDs to verify |
| --file-id | | | File object IDs to verify |
| --file-parallelism | | | Parallelism for file verification |
| --file-queue-length | | 20000 | Queue length for file verification |
| --max-errors | | 0 | Maximum number of errors before stopping |
| --parallel | | 8 | Parallelization |
| --sources | | | Verify the provided sources |
| --verify-files-percent | | 0 | Randomly verify a percentage of files by downloading them [0.0 .. 100.0] |
| --[no-]all-sources | | false | [ADV] Verify all snapshots (DEPRECATED) |

| Argument | Help |
| --- | --- |
| snapshot-ids | snapshot IDs to verify |

# policy edit

```
$ kopia policy edit [target]
```

Set snapshot policy for a single directory, user@host or a global policy.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]global | | false | Select the global policy. |

| Argument | Help |
|----------|------|
| target | Select a particular policy ('user@host','@host','user@host:path' or a local path). Use –global to target the global policy. |

# policy list

```
$ kopia policy list
```

List policies.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]json | | false | Output result in JSON format to stdout |
| --[no-]json-indent | | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |

# policy delete

```
$ kopia policy delete [target]
```

Remove snapshot policy for a single directory, user@host or a global policy.

| Flag | Short | Default | Help |
|---|---|---|---|
| --[no-]dry-run | -n | false | Do not remove |
| --[no-]global | | false | Select the global policy. |

| Argument | Help |
|---|---|
| target | Select a particular policy ('user@host','@host','user@host:path' or a local path). Use –global to target the global policy. |

```
$ kopia policy delete [target]
```

# policy set

```
$ kopia policy set [target]
```

Set snapshot policy for a single directory, user@host or a global policy.

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --action-command-mode | | essential | Action command mode |
| --action-command-timeout | | 5m | Max time allowed for an action to run in seconds |
| --add-dot-ignore | | | List of paths to add to the dot-ignore list |
| --add-ignore | | | List of paths to add to the ignore list |
| --add-never-compress | | | List of extensions to add to the never compress list |
| --add-only-compress | | | List of extensions to add to the only-compress list |
| --after-folder-action | | - | Path to after-folder action command ('none' to remove) |
| --after-snapshot-root-action | | - | Path to after-snapshot-root action command ('none' to remove or 'inherit') |
| --before-folder-action | | - | Path to before-folder action command ('none' to remove) |
| --before-snapshot-root-action | | - | Path to before-snapshot-root action command ('none' to remove or 'inherit') |
| --[no-]clear-dot-ignore | | false | Clear list of paths in the dot-ignore list |
| --[no-]clear-ignore | | false | Clear list of paths in the ignore list |
| --[no-]clear-never-compress | | false | Clear list of extensions in the never compress list |
| --[no-]clear-only-compress | | false | Clear list of extensions in the only-compress list |
| --compression | | | Compression algorithm |
| --compression-max-size | | | Max size of file to attempt compression for |
| --compression-min-size | | | Min size of file to attempt compression for |
| --enable-volume-shadow-copy | | | Enable Volume Shadow Copy snapshots ('never', 'always', 'when-available', 'inherit') |
| --[no-]global | | false | Select the global policy. |
| --ignore-cache-dirs | | | Ignore cache directories ('true', 'false', 'inherit') |
| --ignore-dir-errors | | | Ignore errors reading directories while traversing ('true', 'false', 'inherit |
| --ignore-file-errors | | | Ignore errors reading files while traversing ('true', 'false', 'inherit') |
| --ignore-identical-snapshots | | | Do not save identical snapshots (or 'inherit') |
| --ignore-unknown-types | | | Ignore unknown entry types in directories ('true', 'false', 'inherit |
| --inherit | | | Enable or disable inheriting policies from the parent |
| --keep-annual | | | Number of most-recent annual backups to keep per source (or 'inherit') |
| --keep-daily | | | Number of most-recent daily backups to keep per source (or 'inherit') |
| --keep-hourly | | | Number of most-recent hourly backups to keep per source (or 'inherit') |
| --keep-latest | | | Number of most recent backups to keep per source (or 'inherit') |
| --keep-monthly | | | Number of most-recent monthly backups to keep per source (or 'inherit') |
| --keep-weekly | | | Number of most-recent weekly backups to keep per source (or 'inherit') |
| --log-dir-ignored | | | Log detail when a directory is ignored (or 'inherit') |
| --log-dir-snapshotted | | | Log detail when a directory is snapshotted (or 'inherit') |
| --log-entry-cache-hit | | | Log detail on entry cache hit (or 'inherit') |
| --log-entry-cache-miss | | | Log detail on entry cache miss (or 'inherit') |
| --log-entry-ignored | | | Log detail when an entry is ignored (or 'inherit') |
| --log-entry-snapshotted | | | Log detail when an entry is snapshotted (or 'inherit') |
| --[no-]manual | | false | Only create snapshots manually |
| --max-file-size | | | Exclude files above given size |
| --max-parallel-file-reads | | | Maximum number of parallel file reads |
| --max-parallel-snapshots | | | Maximum number of parallel snapshots (server, KopiaUI only) |
| --metadata-compression | | | Metadata Compression algorithm |
| --one-file-system | | | Stay in parent filesystem when finding files ('true', 'false', 'inherit') |
| --parallel-upload-above-size-mib | | | Use parallel uploads above size |
| --[no-]persist-action-script | | false | Persist action script |

| Flag | Short | Default | Help |
|------|-------|---------|------|
| `--remove-dot-ignore` | | | List of paths to remove from the dot-ignore list |
| `--remove-ignore` | | | List of paths to remove from the ignore list |
| `--remove-never-compress` | | | List of extensions to remove from the never compress list |
| `--remove-only-compress` | | | List of extensions to remove from the only-compress list |
| `--run-missed` | | | Run missed time-of-day or cron snapshots ('true', 'false', 'inherit') |
| `--snapshot-interval` | | | Interval between snapshots |
| `--snapshot-time` | | | Comma-separated times of day when to take snapshot (HH:mm,HH:mm,…) or 'inherit' to remove override |
| `--snapshot-time-crontab` | | | Semicolon-separated crontab-compatible expressions (or 'inherit') |
| `--splitter` | | | Splitter algorithm override |

| Argument | Help |
|----------|------|
| `target` | Select a particular policy ('user@host','@host','user@host:path' or a local path). Use –global to target the global policy. |

# policy show

```
$ kopia policy show [target]
```

Show snapshot policy.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]global | | false | Select the global policy. |
| --[no-]json | | false | Output result in JSON format to stdout |
| --[no-]json-indent | | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |

| Argument | Help |
|----------|------|
| target | Select a particular policy ('user@host','@host','user@host:path' or a local path). Use –global to target the global policy. |

```
$ kopia policy show [target]
```

Show snapshot policy.

# policy export

```
$ kopia policy export [target]
```

Exports the policy to the specified file, or to stdout if none is specified.

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]global | | false | Select the global policy. |
| --[no-]overwrite | | false | Overwrite the file if it exists |
| --to-file | | | File path to export to |
| --[no-]json-indent | | false | [ADV] Output result in indented JSON format |

| Argument | Help |
|----------|------|
| target | Select a particular policy ('user@host','@host','user@host:path' or a local path). Use –global to target the global policy. |

```
$ kopia policy export [target]
```

# policy import

```
$ kopia policy import [target]
```

Imports policies from a specified file, or stdin if no file is specified.

| Flag | Short | Default | Help |
|---|---|---|---|
| --[no-]allow-unknown-fields | | false | Allow unknown fields in the policy file |
| --[no-]delete-other-policies | | false | Delete all other policies, keeping only those that got imported |
| --from-file | | | File path to import from |
| --[no-]global | | false | Select the global policy. |

| Argument | Help |
|---|---|
| target | Select a particular policy ('user@host','@host','user@host:path' or a local path). Use –global to target the global policy. |

```
$ kopia policy import [target]
```

Imports policies from a specified file, or stdin if no file is specified.

# repository connect s3

```
$ kopia repository connect s3 \
        --bucket=... \
        --access-key=... \
        --secret-access-key=...
```

Connect to repository in an S3 bucket

| Flag | Short | Default | Help |
|---|---|---|---|
| --access-key | | | Access key ID (overrides AWS_ACCESS_KEY_ID environment variable) |
| --bucket | | | Name of the S3 bucket |
| --cache-directory | | | Cache directory |
| --[no-]check-for-updates | | true | Periodically check for Kopia updates on GitHub |
| --content-cache-size-limit-mb | | | Maximum size of local content cache (hard limit) |
| --content-cache-size-mb | | | Desired size of local content cache (soft limit) |
| --content-min-sweep-age | | | Minimal age of content cache item to be subject to sweeping |
| --description | | | Human-readable description of the repository |
| --[no-]disable-tls | | false | Disable TLS security (HTTPS) |
| --[no-]disable-tls-verification | | false | Disable TLS (HTTPS) certificate verification |
| --[no-]enable-actions | | false | Allow snapshot actions |
| --endpoint | | s3.amazonaws.com | Endpoint to use |
| --index-min-sweep-age | | | Minimal age of index cache item to be subject to sweeping |
| --max-download-speed | | | Limit the download speed. |
| --max-list-cache-duration | | | Duration of index cache |
| --max-upload-speed | | | Limit the upload speed. |
| --metadata-cache-size-limit-mb | | | Maximum size of local metadata cache (hard limit) |
| --metadata-cache-size-mb | | | Desired size of local metadata cache (soft limit) |
| --metadata-min-sweep-age | | | Minimal age of metadata cache item to be subject to sweeping |
| --point-in-time | | | Use a point-in-time view of the storage repository when supported |
| --prefix | | | Prefix to use for objects in the bucket. Put trailing slash (/) if you want to use prefix as directory. e.g my-backup-dir/ would put repository contents inside my-backup-dir directory |
| --[no-]readonly | | false | Make repository read-only to avoid accidental changes |
| --region | | | S3 Region |
| --root-ca-pem-base64 | | | Certificate authority in-line (base64 enc.) |
| --root-ca-pem-path | | | Certificate authority file path |
| --secret-access-key | | | Secret access key (overrides AWS_SECRET_ACCESS_KEY environment variable) |
| --session-token | | | Session token (overrides AWS_SESSION_TOKEN environment variable) |
| --[no-]disable-repository-format-cache | | false | [ADV] Disable caching of kopia.repository format blob |
| --override-hostname | | | [ADV] Override hostname used by this repository connection |
| --override-username | | | [ADV] Override username used by this repository connection |
| --[no-]permissive-cache-loading | | false | [ADV] Do not fail when loading bad cache index entries. Repository must be opened in read-only mode |
| --repository-format-cache-duration | | | [ADV] Duration of kopia.repository format blob cache |

# repository connect from-config

```
$ kopia repository connect from-config
```

Connect to repository in the provided configuration file

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --cache-directory | | | Cache directory |
| --[no-]check-for-updates | | true | Periodically check for Kopia updates on GitHub |
| --content-cache-size-limit-mb | | | Maximum size of local content cache (hard limit) |
| --content-cache-size-mb | | | Desired size of local content cache (soft limit) |
| --content-min-sweep-age | | | Minimal age of content cache item to be subject to sweeping |
| --description | | | Human-readable description of the repository |
| --[no-]enable-actions | | false | Allow snapshot actions |
| --file | | | Path to the configuration file |
| --index-min-sweep-age | | | Minimal age of index cache item to be subject to sweeping |
| --max-list-cache-duration | | | Duration of index cache |
| --metadata-cache-size-limit-mb | | | Maximum size of local metadata cache (hard limit) |
| --metadata-cache-size-mb | | | Desired size of local metadata cache (soft limit) |
| --metadata-min-sweep-age | | | Minimal age of metadata cache item to be subject to sweeping |
| --[no-]readonly | | false | Make repository read-only to avoid accidental changes |
| --token | | | Configuration token |
| --token-file | | | Path to the configuration token file |
| --[no-]token-stdin | | false | Read configuration token from stdin |
| --[no-]disable-repository-format-cache | | false | [ADV] Disable caching of kopia.repository format blob |
| --override-hostname | | | [ADV] Override hostname used by this repository connection |
| --override-username | | | [ADV] Override username used by this repository connection |
| --[no-]permissive-cache-loading | | false | [ADV] Do not fail when loading bad cache index entries. Repository must be opened in read-only mode |
| --repository-format-cache-duration | | | [ADV] Duration of kopia.repository format blob cache |

# repository create s3

```
$ kopia repository create s3 \
      --bucket=... \
      --access-key=... \
      --secret-access-key=...
```

Create repository in an S3 bucket

| Flag | Short | Default | Help |
|---|---|---|---|
| --access-key | | | Access key ID (overrides AWS_ACCESS_KEY_ID environment variable) |
| --block-hash | | BLAKE2B-256-128 | Content hash algorithm. |
| --bucket | | | Name of the S3 bucket |
| --cache-directory | | | Cache directory |
| --[no-]check-for-updates | | true | Periodically check for Kopia updates on GitHub |
| --content-cache-size-limit-mb | | | Maximum size of local content cache (hard limit) |
| --content-cache-size-mb | | | Desired size of local content cache (soft limit) |
| --content-min-sweep-age | | | Minimal age of content cache item to be subject to sweeping |
| --[no-]create-only | -c | false | Create repository, but don't connect to it. |
| --description | | | Human-readable description of the repository |
| --[no-]disable-tls | | false | Disable TLS security (HTTPS) |
| --[no-]disable-tls-verification | | false | Disable TLS (HTTPS) certificate verification |
| --ecc | | REED-SOLOMON-CRC32 | [EXPERIMENTAL] Error correction algorithm. |
| --ecc-overhead-percent | | 0 | [EXPERIMENTAL] How much space overhead can be used for error correction, in percentage. Use 0 to disable ECC. |
| --[no-]enable-actions | | false | Allow snapshot actions |
| --encryption | | AES256-GCM-HMAC-SHA256 | Content encryption algorithm. |
| --endpoint | | s3.amazonaws.com | Endpoint to use |
| --format-block-key-derivation-algorithm | | scrypt-65536-8-1 | Algorithm to derive the encryption key for the format block from the repository password |
| --format-version | | | Force a particular repository format version (1, 2 or 3, 0==default) |
| --index-min-sweep-age | | | Minimal age of index cache item to be subject to sweeping |
| --max-download-speed | | | Limit the download speed. |
| --max-list-cache-duration | | | Duration of index cache |
| --max-upload-speed | | | Limit the upload speed. |
| --metadata-cache-size-limit-mb | | | Maximum size of local metadata cache (hard limit) |
| --metadata-cache-size-mb | | | Desired size of local metadata cache (soft limit) |
| --metadata-min-sweep-age | | | Minimal age of metadata cache item to be subject to sweeping |
| --object-splitter | | DYNAMIC-4M-BUZHASH | The splitter to use for new objects in the repository |
| --point-in-time | | | Use a point-in-time view of the storage repository when supported |
| --prefix | | | Prefix to use for objects in the bucket. Put trailing slash (/) if you want to use prefix as directory. e.g my-backup-dir/ would put repository contents inside my-backup-dir directory |
| --[no-]readonly | | false | Make repository read-only to avoid accidental changes |
| --region | | | S3 Region |
| --retention-mode | | | Set the blob retention-mode for supported storage backends. |
| --retention-period | | | Set the blob retention-period for supported storage backends. |
| --root-ca-pem-base64 | | | Certificate authority in-line (base64 enc.) |
| --root-ca-pem-path | | | Certificate authority file path |
| --secret-access-key | | | Secret access key (overrides AWS_SECRET_ACCESS_KEY environment variable) |

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --session-token | | | Session token (overrides AWS_SESSION_TOKEN environment variable) |
| --[no-]disable-repository-format-cache | | false | [ADV] Disable caching of kopia.repository format blob |
| --override-hostname | | | [ADV] Override hostname used by this repository connection |
| --override-username | | | [ADV] Override username used by this repository connection |
| --[no-]permissive-cache-loading | | false | [ADV] Do not fail when loading bad cache index entries. Repository must be opened in read-only mode |
| --repository-format-cache-duration | | | [ADV] Duration of kopia.repository format blob cache |

# repository create from-config

```
$ kopia repository create from-config
```

Create repository in the provided configuration file

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --block-hash | | BLAKE2B-256-128 | Content hash algorithm. |
| --cache-directory | | | Cache directory |
| --[no-]check-for-updates | | true | Periodically check for Kopia updates on GitHub |
| --content-cache-size-limit-mb | | | Maximum size of local content cache (hard limit) |
| --content-cache-size-mb | | | Desired size of local content cache (soft limit) |
| --content-min-sweep-age | | | Minimal age of content cache item to be subject to sweeping |
| --[no-]create-only | -c | false | Create repository, but don't connect to it. |
| --description | | | Human-readable description of the repository |
| --ecc | | REED-SOLOMON-CRC32 | [EXPERIMENTAL] Error correction algorithm. |
| --ecc-overhead-percent | | 0 | [EXPERIMENTAL] How much space overhead can be used for error correction, in percentage. Use 0 to disable ECC. |
| --[no-]enable-actions | | false | Allow snapshot actions |
| --encryption | | AES256-GCM-HMAC-SHA256 | Content encryption algorithm. |
| --file | | | Path to the configuration file |
| --format-block-key-derivation-algorithm | | scrypt-65536-8-1 | Algorithm to derive the encryption key for the format block from the repository password |
| --format-version | | | Force a particular repository format version (1, 2 or 3, 0==default) |
| --index-min-sweep-age | | | Minimal age of index cache item to be subject to sweeping |
| --max-list-cache-duration | | | Duration of index cache |
| --metadata-cache-size-limit-mb | | | Maximum size of local metadata cache (hard limit) |
| --metadata-cache-size-mb | | | Desired size of local metadata cache (soft limit) |
| --metadata-min-sweep-age | | | Minimal age of metadata cache item to be subject to sweeping |
| --object-splitter | | DYNAMIC-4M-BUZHASH | The splitter to use for new objects in the repository |
| --[no-]readonly | | false | Make repository read-only to avoid accidental changes |
| --retention-mode | | | Set the blob retention-mode for supported storage backends. |
| --retention-period | | | Set the blob retention-period for supported storage backends. |
| --token | | | Configuration token |
| --token-file | | | Path to the configuration token file |
| --[no-]token-stdin | | false | Read configuration token from stdin |
| --[no-]disable-repository-format-cache | | false | [ADV] Disable caching of kopia.repository format blob |
| --override-hostname | | | [ADV] Override hostname used by this repository connection |
| --override-username | | | [ADV] Override username used by this repository connection |
| --[no-]permissive-cache-loading | | false | [ADV] Do not fail when loading bad cache index entries. Repository must be opened in read-only mode |
| --repository-format-cache-duration | | | [ADV] Duration of kopia.repository format blob cache |

# repository disconnect

```
$ kopia repository disconnect
```

Disconnect from a repository.

# repository repair s3

```
$ kopia repository repair s3 \
        --bucket=... \
        --access-key=... \
        --secret-access-key=...
```

Repair repository in an S3 bucket

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --access-key | | | Access key ID (overrides AWS_ACCESS_KEY_ID environment variable) |
| --bucket | | | Name of the S3 bucket |
| --[no-]disable-tls | | false | Disable TLS security (HTTPS) |
| --[no-]disable-tls-verification | | false | Disable TLS (HTTPS) certificate verification |
| --[no-]dry-run | -n | false | Do not modify repository |
| --endpoint | | s3.amazonaws.com | Endpoint to use |
| --max-download-speed | | | Limit the download speed. |
| --max-upload-speed | | | Limit the upload speed. |
| --point-in-time | | | Use a point-in-time view of the storage repository when supported |
| --prefix | | | Prefix to use for objects in the bucket. Put trailing slash (/) if you want to use prefix as directory. e.g my-backup-dir/ would put repository contents inside my-backup-dir directory |
| --recover-format | | auto | Recover format blob from a copy |
| --recover-format-block-prefixes | | | Prefixes of file names |
| --region | | | S3 Region |
| --root-ca-pem-base64 | | | Certificate authority in-line (base64 enc.) |
| --root-ca-pem-path | | | Certificate authority file path |
| --secret-access-key | | | Secret access key (overrides AWS_SECRET_ACCESS_KEY environment variable) |
| --session-token | | | Session token (overrides AWS_SESSION_TOKEN environment variable) |

# repository repair from-config

```
$ kopia repository repair from-config
```

Repair repository in the provided configuration file

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]dry-run | -n | false | Do not modify repository |
| --file | | | Path to the configuration file |
| --recover-format | | auto | Recover format blob from a copy |
| --recover-format-block-prefixes | | | Prefixes of file names |
| --token | | | Configuration token |
| --token-file | | | Path to the configuration token file |
| --[no-]token-stdin | | false | Read configuration token from stdin |

```
$ kopia repository repair from-config
```

Repair repository in the provided configuration file

# repository set-client

```
$ kopia repository set-client
```

Set repository client options.

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --description | | | Change description |
| --[no-]disable-repository-format-cache | | false | Disable caching of kopia.repository format blob |
| --hostname | | | Change hostname |
| --[no-]read-only | | false | Set repository to read-only |
| --[no-]read-write | | false | Set repository to read-write |
| --repository-format-cache-duration | | | Duration of kopia.repository format blob cache |
| --username | | | Change username |
| --[no-]permissive-cache-loading | | false | [ADV] Do not fail when loading bad cache index entries. Repository must be opened in read-only mode |

```
$ kopia repository set-client
```

# repository set-parameters

```
$ kopia repository set-parameters
```

Set repository parameters.

| Flag | Short Default | Help |
|---|---|---|
| --epoch-advance-on-count | | Advance epoch if the number of indexes exceeds given threshold |
| --epoch-advance-on-size-mb | | Advance epoch if the total size of indexes exceeds given threshold |
| --epoch-checkpoint-frequency | | Checkpoint frequency |
| --epoch-cleanup-safety-margin | | Epoch cleanup safety margin |
| --epoch-delete-parallelism | | Epoch delete parallelism |
| --epoch-min-duration | | Minimal duration of a single epoch |
| --epoch-refresh-frequency | | Epoch refresh frequency |
| --index-version | | Set version of index format used for writing |
| --max-pack-size-mb | | Set max pack file size |
| --retention-mode | | Set the blob retention-mode for supported storage backends. |
| --retention-period | | Set the blob retention-period for supported storage backends. |
| --[no-]upgrade | false | Upgrade repository to the latest stable format |

# repository status

```
$ kopia repository status
```

Display the status of connected repository.

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| `--[no-]json` | | `false` | Output result in JSON format to stdout |
| `--[no-]reconnect-token` | `-t` | `false` | Display reconnect command |
| `--[no-]reconnect-token-with-password` | `-s` | `false` | Include password in reconnect token |
| `--[no-]json-indent` | | `false` | [ADV] Output result in indented JSON format to stdout |
| `--[no-]json-verbose` | | `false` | [ADV] Output non-essential data (e.g. statistics) in JSON format |

# repository sync-to s3

```
$ kopia repository sync-to s3 \
        --bucket=... \
        --access-key=... \
        --secret-access-key=...
```

Synchronize repository data to another repository in an S3 bucket

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --access-key | | | Access key ID (overrides AWS_ACCESS_KEY_ID environment variable) |
| --bucket | | | Name of the S3 bucket |
| --[no-]delete | | false | Whether to delete blobs present in destination but not source. |
| --[no-]disable-tls | | false | Disable TLS security (HTTPS) |
| --[no-]disable-tls-verification | | false | Disable TLS (HTTPS) certificate verification |
| --[no-]dry-run | -n | false | Do not perform copying. |
| --endpoint | | s3.amazonaws.com | Endpoint to use |
| --max-download-speed | | | Limit the download speed. |
| --max-upload-speed | | | Limit the upload speed. |
| --[no-]must-exist | | false | Fail if destination does not have repository format blob. |
| --parallel | | 1 | Copy parallelism. |
| --point-in-time | | | Use a point-in-time view of the storage repository when supported |
| --prefix | | | Prefix to use for objects in the bucket. Put trailing slash (/) if you want to use prefix as directory. e.g my-backup-dir/ would put repository contents inside my-backup-dir directory |
| --region | | | S3 Region |
| --root-ca-pem-base64 | | | Certificate authority in-line (base64 enc.) |
| --root-ca-pem-path | | | Certificate authority file path |
| --secret-access-key | | | Secret access key (overrides AWS_SECRET_ACCESS_KEY environment variable) |
| --session-token | | | Session token (overrides AWS_SESSION_TOKEN environment variable) |
| --[no-]times | | false | Synchronize blob times if supported. |
| --[no-]update | | true | Whether to update blobs present in destination and source if the source is newer. |

# repository sync-to from-config

Synchronize repository data to another repository in the provided configuration file

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --[no-]delete | | false | Whether to delete blobs present in destination but not source. |
| --[no-]dry-run | -n | false | Do not perform copying. |
| --file | | | Path to the configuration file |
| --[no-]must-exist | | false | Fail if destination does not have repository format blob. |
| --parallel | | 1 | Copy parallelism. |
| --[no-]times | | false | Synchronize blob times if supported. |
| --token | | | Configuration token |
| --token-file | | | Path to the configuration token file |
| --[no-]token-stdin | | false | Read configuration token from stdin |
| --[no-]update | | true | Whether to update blobs present in destination and source if the source is newer. |

Synchronize repository data to another repository in the provided configuration file

# repository throttle get

```
$ kopia repository throttle get
```

Get throttling parameters for a repository

| Flag | Short | Default | Help |
| --- | --- | --- | --- |
| --[no-]json | | false | Output result in JSON format to stdout |
| --[no-]json-indent | | false | [ADV] Output result in indented JSON format to stdout |
| --[no-]json-verbose | | false | [ADV] Output non-essential data (e.g. statistics) in JSON format |

# repository throttle set

```
$ kopia repository throttle set
```

Set throttling parameters for a repository

| Flag | Short Default | Help |
| --- | --- | --- |
| --concurrent-reads | | Set max concurrent reads |
| --concurrent-writes | | Set max concurrent writes |
| --download-bytes-per-second | | Set the download bytes per second |
| --list-requests-per-second | | Set max lists per second |
| --read-requests-per-second | | Set max reads per second |
| --upload-bytes-per-second | | Set the upload bytes per second |
| --write-requests-per-second | | Set max writes per second |

# repository change-password

```
$ kopia repository change-password
```

Change repository password

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --new-password | | | New password |

```
$ kopia repository change-password
```

Change repository password

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --new-password | | | New password |

# repository validate-provider

```
$ kopia repository validate-provider
```

Validates that a repository provider is compatible with Kopia

| Flag | Short | Default | Help |
|------|-------|---------|------|
| --concurrency-test-duration | | | Duration of concurrency test |
| --get-blob-workers | | | Number of GetBlob workers |
| --get-metadata-workers | | | Number of GetMetadata workers |
| --num-storage-connections | | | Number of storage connections |
| --put-blob-workers | | | Number of PutBlob workers |