NAME

snap — create a snapshot of a given directory

SYNOPSIS

snap [**-chu**] [**-i** [**-ad** *time*]] *dir*

DESCRIPTION

The **snap** tool creates a snapshot of a given directory by either copying its contents in their entirety or as an incremental delta to a previous snapshots.

Incremental snapshots my be taken based on the current timestamp or with a specific timestamp given. Incremental snapshots are stored in a separate directory from the full snapshots and only contain files that have changed since the last full snapshot (or the specified given time).

OPTIONS

The following options are supported by **snap**:

-a *time* Create an incremental snapshot only including files and directories that have an access time newer to the time specified. Only valid in combination with the **-i** flag. See TIME for the time format.

-c Clean up all snapshots except the last full snapshot (and any incremental snapshots newer than the last full snapshot).

-d *time* Create an incremental snapshot only including files and directories that have a modification time newer to the time specified. Only valid in combination with the **-i** flag. See TIME for the time format.

-h Print a short usage summary and exit.

-i Create an incremental snapshot only including files and directories that have a modification time newer to the time of the last complete snapshot.

-u Update the last full snapshot. That is, perform a full snapshot into the directory of the last one instead of into a separate directory.

DETAILS

The **snap** utility will create a copy of the specified directory into a dated subdirectory of the SNAPDIR directory. If no options are specified, it will create a complete copy, equivalent to running "cp -Rp dir $SNAPDIR/full/<dir>/<YYYYMMDDHHMM>", where <dir> is the basename of the given directory.

If instructed to perform an incremental snapshot, then **snap** will create a separate directory containing only files that have been modified since the last full snapshot (or based on the specified access or modificatoin time, should the appropriate flags have been given).

TIME

When doing incremental snapshots, the user may specify a time to indicate which files should be included in the snapshot. The format of the time given to the **-a** and **-d** flags is *YYYYMMDDHHMM*, ie YearMonthDay-HourMinute .

EXAMPLES

The following examples illustrate common usage of the **snap** utility:

To create a new complete snapshot of your home directory:

```
snap ${HOME}
```

To create an incremental snapshot of your home directory:

```
snap -i ${HOME}
```

to create an incremental snapshot of your home directory of only files with a modification time newer than 2008-09-17 21:43:

```
snap -i -d 200809172143 ${HOME}
```

EXIT STATUS

The **snap** utility exits 0 on success, and >0 if an error occurs.

ENVIRONMENT

The following environment variables influence the behaviour of the **snap** utility:

SNAPDIR
: The directory under which to create new snapshots. If not set, defaults to ${HOME}/.snap/.

SEE ALSO

`cp`(1), `stat`(2), `fts`(3)

HISTORY

The **snap** utility was first conceived of and assigned as a midterm project for the class *Advanced Programming in the UNIX Environment* in the Fall of 2008 at Stevens Institute of Technology under Jan Schaumann.