RECOVER(6) 1993 RECOVER(6)

NAME

recover - recover a NetHack game interrupted by disaster

SYNOPSIS

recover [ -d directory ] base1 base2 ...

DESCRIPTION

Occasionally, a NetHack game will be interrupted by disaster

when the game or the system crashes. Prior to NetHack v3.1,

these games were lost because various information like the

player's inventory was kept only in memory. Now, all per-

tinent information can be written out to disk, so such games

can be recovered at the point of the last level change.

The base options tell recover which files to process. Each

base option specifies recovery of a separate game.

The -d option, which must be the first argument if it

appears, supplies a directory which is the NetHack play-

ground. It overrides the value from NETHACKDIR, HACKDIR, or

the directory specified by the game administrator during

compilation (usually /usr/games/lib/nethackdir).

For recovery to be possible, nethack must have been compiled

with the INSURANCE option, and the run-time option check-

point must also have been on. NetHack normally writes out

files for levels as the player leaves them, so they will be

ready for return visits. When checkpointing, NetHack also

writes out the level entered and the current game state on

every level change. This naturally slows level changes down

somewhat.

The level file names are of the form base.nn, where nn is an

internal bookkeeping number for the level. The file base.0

is used for game identity, locking, and, when checkpointing,

for the game state. Various OSes use different strategies

for constructing the base name. Microcomputers use the

character name, possibly truncated and modified to be a

legal filename on that system. Multi-user systems use the

(modified) character name prefixed by a user number to avoid

conflicts, or "xlock" if the number of concurrent players is

being limited. It may be necessary to look in the play-

ground to find the correct base name of the interrupted

game. recover will transform these level files into a save

file of the same name as nethack would have used.

Since recover must be able to read and delete files from the

playground and create files in the save directory, it has

interesting interactions with game security. Giving ordi-

nary players access to recover through setuid or setgid is

tantamount to leaving the playground world-writable, with

respect to both cheating and messing up other players. For

January Last change: 9 1

RECOVER(6) 1993 RECOVER(6)

a single-user system, this of course does not change any-

thing, so some of the microcomputer ports install recover by

default.

For a multi-user system, the game administrator may want to

arrange for all .0 files in the playground to be fed to

recover when the host machine boots, and handle game crashes

individually. If the user population is sufficiently

trustworthy, recover can be installed with the same permis-

sions the nethack executable has. In either case, recover

is easily compiled from the distribution utility directory.

NOTES

Like nethack itself, recover will overwrite existing save-

files of the same name. Savefiles created by recover are

uncompressed; they may be compressed afterwards if desired,

but even a compression-using nethack will find them in the

uncompressed form.

SEE ALSO

nethack(6)

BUGS

recover makes no attempt to find out if a base name speci-

fies a game in progress. If multiple machines share a play-

ground, this would be impossible to determine.

recover should be taught to use the nethack playground lock-

ing mechanism to avoid conflicts.

January Last change: 9 2