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nohup

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nohup is a [POSIX](#) command which means "no hang up". Its purpose is to execute a command such that it ignores the [HUP](#) (hangup) signal and therefore does not stop when the user logs out.

Output that would normally go to the terminal goes to a file called `nohup.out`, if it has not already been redirected.

nohup

Developer(s)	Various open-source and commercial developers
Operating system	Unix , Unix-like , IBM i
Platform	Cross-platform
Type	Command

Use [\[edit \]](#)

The first of the commands below starts the program `abcd` in the background in such a way that the subsequent logout does not stop it.

```
$ nohup abcd &
$ exit
```

Note that these methods prevent the process from being sent a 'stop' signal on logout, but if input/output is being received for these standard I/O files (stdin, stdout, or stderr), they will still hang the terminal.^[1] See [Overcoming hanging](#), below.

nohup is often used in combination with the [nice](#) command to run processes on a lower priority.

```
$ nohup nice abcd &
```

Implementations [\[edit \]](#)

Some shells (e.g. [bash](#)) provide a [shell builtin](#) that may be used to prevent [SIGHUP](#) being sent or propagated to existing jobs, even if they were not started with `nohup`. In `bash`, this can be obtained by using `disown -h job`; using the same builtin without arguments removes the job from the job table, which also implies that the job will not receive the signal. Before using `disown` on an active job, it should be stopped by `Ctrl-Z`, and continued in the background by the `bg` command.^[2] Another relevant `bash` option is `shopt huponexit`, which automatically sends the HUP signal to jobs when the shell is exiting normally.^[3]

The [AIX](#) and [Solaris](#) versions of `nohup` have a `-p` option that modifies a running process to ignore future SIGHUP signals. Unlike the above-described `disown` builtin of `bash`, `nohup -p` accepts process IDs.^[4]

The `nohup` command has also been ported to the [IBM i](#) operating system.^[5]

Overcoming hanging [[edit](#)]

Note that `nohup`ping backgrounded jobs is typically used to avoid terminating them when logging off from a remote [SSH session](#). A different issue that often arises in this situation is that `ssh` is refusing to log off ("hangs"), since it refuses to lose any data from/to the background job(s).^{[6][7]} This problem can also be overcome by [redirecting](#) all three I/O streams:

```
$ nohup ./myprogram > foo.out 2> foo.err < /dev/null &
```

Also note that a closing SSH session does not always send a HUP signal to dependent processes, such as when a [pseudo-terminal](#) has not been allocated.^[8]

Alternatives [[edit](#)]

- A [terminal multiplexer](#) can run a command in a separate session, detached from the current terminal, which means that if the current session ends, the detached session and its associated processes keeps running. One can then reattach to the session later on.

For example, the following invocation of [screen](#) will run `somescript.sh` in the background of a detached session:

```
$ screen -A -m -d -S somename ./somescript.sh &
```

- The `disown` command is used to remove jobs from the job table, or to mark jobs so that a SIGHUP signal is not sent on session termination.

References [edit]

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External links [edit]

- nohup from Solaris's man pages ↗

<div>V · T · E</div>	Unix command-line interface programs and shell builtins	<div>[hide]</div>
File system	cat · chattr · chmod · chown · chgrp · cksum · cmp · cp · dd · du · df · file · fuser · ln · ls · mkdir · mv · pax · pwd · rm · rmdir · split · tee · touch · type · umask	
Processes	at · bg · crontab · fg · kill · nice · ps · time	
User environment	env · exit · logname · mesg · talk · tput · uname · who · write	
Text processing	awk · basename · comm · csplit · cut · diff · dirname · ed · ex · fold · head · iconv · join · m4 · more · nl · paste · patch · printf · read · sed · sort · strings · tail · tr · troff · uniq · vi · wc · xargs	
Shell builtins	alias · cd · echo · test · unset · wait	
Searching	find · grep	
Documentation	man	
Software development	ar · ctags · lex · make · nm · strip · yacc	
Miscellaneous	bc · cal · expr · lp · od · sleep · true and false	
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