

NAME

submit – submit a unix command

SYNOPSIS

submit

–*l* *log_file*

–*i* *pid_file*

–*e* *exit_code_file*

unix_command

submit help=*y|n*

kill — –*submit process ID*

DESCRIPTION

submit allows you to issue a command to the operating system, let it run independently, and immediately return the control to the calling process.

The calling process is able to check the existence of the process, and exiting status, and the log via files specified.

submit can be used in following situations:

- When you want to issue a long running process and exit from the terminal voluntarily, or you fear that the connection to the server you want to run the process is not reliable.
- When you want to run multiple processes in parallel, and need to check the status of the processes (see `mrunc` program).

Submit is similar to `nohup` (1) and putting a process in background (`nohup unix_command &`). But submit makes it possible, or easier to check the existence and status of the process for *unix_command*, especially for programming purpose.

The mechanisms used by submit and nohup are completely different.

Nohup blocks the SIGHUP to the process running *unix_command*. We need to put the process in background in order to return to the calling process.

Submit uses double *fork()* technique, Submit spawns a child process and then immediately returns to the calling program. The child process is then adopted by init and thus runs independent from the calling program. The child spawns another child process (grand child) that runs the *unix_command*. The child process waits for *unix_command* to complete and reaping the status. The child process is promoted to be the process group leader, so we can kill the processes as a group.

OPTIONS

–*l* *log_file*

The stdout and stderr of the *unix_command* is saved in a self-cleaning log file specified by this option. The default is `HOME_DIR/submit.log` for normal users, and `/opt/local/log/submit.log` for root user. The log file is kept for a maximum number of lines.

The process ID and exit code are also saved in *log_file*, but they can be save separately for easier processing programatically.

–*i* *pid_file*

The submit's child process ID is used this file.

–*e* *exit_code_file*

The exit code of process for *unix_command*.

unix_command

Specify a Unix command. Shell special characters need to escaped so they can be seen by Perl's `system()` call.

EXAMPLES

```
$ submit "make > make.log"
$ submit make \> make.log

$ submit 'make CC="gcc" CFLAGS="-g -O2"'
$ submit make CC="\gcc\" CFLAGS="\-g -O2\"

$ submit make\; make install

$ rsh machine "submit command"

$ submit sleep 120
$ mwang submitting sleep 120, pid=4939
$ ptree 4939
4939 /usr/bin/perl -w /usr/local/bin/submit sleep 120
    4948 sleep 120
$ kill -- -4939
```

SEE ALSO

mrunc help=y, bk.oracle.

Advanced Programming in the Unix Environment, by W. Richard Stevens (Addison–Wesley, 1992).

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Michael Sullivan, 1993.

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