

AT(1)

General Commands Manual

AT(1)

## NAME

**at, batch, atq, atrm** - queue, examine, or delete jobs for later execution

## SYNOPSIS

**at [-V] [-q queue] [-f file] [-u username] [-mMlv] timespec ...**

**at [-V] [-q queue] [-f file] [-u username] [-mMkv] [-t time]**

**at -c job [...]**

**at [-V] -l [-o timeformat] [job ...]**

**atq [-V] [-q queue] [-o timeformat] [job ...]**

**at [-rd] job [...]**

**atrm [-V] job [...]**

**batch**

**at -b**

## DESCRIPTION

**at** and **batch** read commands from standard input or a specified file which are to be executed at a later time, using `/bin/sh`.

**at** executes commands at a specified time.

**atq** lists the user's pending jobs, unless the user is the superuser.

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of the output lines (one for each job) is: Job number, date, hour, queue, and username.

**atrm** deletes jobs, identified by their job number.

**batch** executes commands when system load levels permit; in other words, when the load average drops below 1.5, or the value specified in the invocation of **atd**.

**At** allows fairly complex time specifications, extending the POSIX.2 standard. It accepts times of the form HH:MM to run a job at a specific time of day. (If that time is already past, the next day is assumed.) You may also specify midnight, noon, or teatime (4pm) and you can have a time-of-day suffixed with AM or PM for running in the morning or the evening. You can also say what day the job will be run, by giving a date in the form month-name day with an optional year, or giving a date of the form MMDD[CC]YY, MM/DD/[CC]YY, DD.MM.[CC]YY or [CC]YY-MM-DD. The specification of a date must follow the specification of the time of day. You can also give times like now + count time-units, where the time-units can be minutes, hours, days, or weeks and you can tell **at** to run the job today by suffixing the time with to? day and to run the job tomorrow by suffixing the time with tomorrow.

For example, to run a job at 4pm three days from now, you would do **at**

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Jul 31 and to run a job at 1am tomorrow, you would do at 1am tomorrow.

If you specify a job to absolutely run at a specific time and date in the past, the job will run as soon as possible. For example, if it is 8pm and you do a at 6pm today, it will run more likely at 8:05pm.

The definition of the time specification can be found in `/usr/share/doc/at/timespec`.

For both `at` and `batch`, commands are read from standard input or the file specified with the `-f` option and executed. The working directory, the environment (except for the variables `BASH_VERSINFO`, `DISPLAY`, `EUID`, `GROUPS`, `SHELLOPTS`, `TERM`, `UID`, and `_`) and the `umask` are retained from the time of invocation.

As `at` is currently implemented as a `setuid` program, other environment variables (e.g., `LD_LIBRARY_PATH` or `LD_PRELOAD`) are also not exported. This may change in the future. As a workaround, set these variables explicitly in your job.

An `at` - or `batch` - command invoked from a `su(1)` shell will retain the current `userid`. The user will be mailed standard error and standard output from his commands, if any. Mail will be sent using the command `/usr/sbin/sendmail`. If `at` is executed from a `su(1)` shell, the owner of

The superuser may use these commands in any case. For other users, permission to use at is determined by the files `/etc/at.allow` and `/etc/at.deny`. See `at.allow(5)` for details.

## OPTIONS

**-V** prints the version number to standard error and exit success? fully.

**-q queue**

uses the specified queue. A queue designation consists of a single letter; valid queue designations range from a to z and A to Z. The a queue is the default for at and the b queue for batch. Queues with higher letters run with increased niceness. The special queue "=" is reserved for jobs which are currently running.

If a job is submitted to a queue designated with an uppercase letter, the job is treated as if it were submitted to batch at the time of the job. Once the time is reached, the batch processing rules with respect to load average apply. If atq is given a specific queue, it will only show jobs pending in that queue.

**-m** Send mail to the user when the job has completed even if there

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**-M** Never send mail to the user.

**-u** username

Sends mail to username rather than the current user.

**-f** file Reads the job from file rather than standard input.

**-t** time run the job at time, given in the format `[[CC]YY]MMDDhhmm[.ss]`

**-l** Is an alias for atq.

**-r** Is an alias for atrm.

**-d** Is an alias for atrm.

**-b** is an alias for batch.

**-v** Shows the time the job will be executed before reading the job.

Times displayed will be in the format "Thu Feb 20 14:50:00 1997".

**-c** cats the jobs listed on the command line to standard output.

## FILES

`/var/spool/cron/atjobs`

`/var/spool/cron/atspool`

`/proc/loadavg`

`/var/run/utmp`

`/etc/at.allow`

`/etc/at.deny`

## SEE ALSO

`at.allow(5)`, `at.deny(5)`, `atd(8)`, `cron(1)`, `nice(1)`, `sh(1)`, `umask(2)`.

## BUGS

The correct operation of `batch` for Linux depends on the presence of a `proc-` type directory mounted on `/proc`.

If the file `/var/run/utmp` is not available or corrupted, or if the user is not logged on at the time `at` is invoked, the mail is sent to the `userid` found in the environment variable `LOGNAME`. If that is undefined or empty, the current `userid` is assumed.

`At` and `batch` as presently implemented are not suitable when users are competing for resources. If this is the case for your site, you might want to consider another batch system, such as `nqs`.

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## AUTHOR

At was mostly written by Thomas Koenig.

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