

NAME

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

SYNOPSIS

```
at [-V] [-q queue] [-f file] [-mldrbv] time
at [-V] -c job [job ...]
atq [-V] [-q queue] [-v]
atrm [-V] job [job ...]
batch [-V] [-q queue] [-f file] [-mv] [time]
```

DESCRIPTION

At and **batch** read commands from standard input or a specified file which are to be executed at a later time, using `sh(1)`.

at Executes commands at a specified time.

atq Lists the user's pending jobs, unless the user is the superuser. In that case, everybody's jobs are listed.

atrm Deletes jobs.

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 **atrun**.

At allows some moderately complex *time* specifications. It accepts times of the form *HHMM* or *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 *MMDDYY* or *MM/DD/YY* or *DD.MM.YY*. 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 **today** 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 4pm + 3 days**, to run a job at 10:00am on July 31, you would do **at 10am Jul 31** and to run a job at 1am tomorrow, you would do **at 1am tomorrow**.

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 **TERM**, **TERMCAP**, **DISPLAY** and **_**) and the *umask* are retained from the time of invocation. 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 `sendmail(8)`. If **at** is executed from a `su(1)` shell, the owner of the login shell will receive the mail.

The superuser may use these commands in any case. For other users, permission to use **at** is determined by the files `/var/at/at.allow` and `/var/at/at.deny`.

If the file `/var/at/at.allow` exists, only usernames mentioned in it are allowed to use **at**.

If `/var/at/at.allow` does not exist, `/var/at/at.deny` is checked, every username not mentioned in it is then allowed to use **at**.

If neither exists, only the superuser is allowed use of **at**.

An empty `/var/at/at.deny` means that every user is allowed use these commands. This is the default configuration.

OPTIONS

- v** Prints the version number to standard error.
- 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 **c** queue is the default for **at** and the **E** queue for **batch**. Queues with higher letters run with increased niceness. If a job is submitted to a queue designated with an uppercase letter, it is treated as if it had been submitted to batch at that time. 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 was no output.
- f *file***
Reads the job from *file* rather than standard input.
- l** Is an alias for **atq**.
- d** Is an alias for **atrm**.
- r** Is an alias for **atrm**.
- b** Is an alias for **batch**.
- v** For **atq**, shows completed but not yet deleted jobs in the queue. Otherwise shows the time the job will be executed.
- c** Cats the jobs listed on the command line to standard output.

FILES

<code>/var/at/jobs</code>	Directory containing job files
<code>/var/at/spool</code>	Directory containing output spool files
<code>/var/run/utmp</code>	Login records
<code>/var/at/at.allow</code>	Allow permission control
<code>/var/at/at.deny</code>	Deny permission control
<code>/var/at/.lockfile</code>	Job-creation lock file.

SEE ALSO

`cron(8)`, `nice(1)`, `umask(2)`, `sh(1)`, `sendmail(8)`, `atrun(8)`.

BUGS

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 user id 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**.

AUTHORS

At was mostly written by Thomas Koenig <ig25@rz.uni-karlsruhe.de>. The time parsing routines are by David Parsons <orc@pell.chi.il.us>.