

# CONVEX

■ CXbatch  
for Users  
Quick Reference

■ Third Edition



**Q U I C K   R E F E R E N C E**

# **CONVEX CXbatch for Users**

Order No. DSW-188

Third Edition  
February 1994



**CONVEX**

**CONVEX COMPUTER CORPORATION**

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# **CONVEX CXbatch for Users Quick Reference**

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Printed in the United States of America

Document No. 710-009430-002

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## Submitting requests to a CXbatch queue

To submit job requests to a CXbatch queue, use the `qsub` command, which has the following syntax:

```
qsub [option...]
```

where *option* can be one or more options described in the sections that follow.

**-a** *time*

Run request after a stated time. *time* can include day, month, and year, as well as time zone. If any spaces are imbedded, *time* must be enclosed by quotes. For example:

```
% qsub -a "Jan 1, 2001 12:00 -EDT"
```

**-h** Put request on hold at time of submission.

**-i** Import your current directory.

**-mb** Send mail when your request begins executing.

**-me** Send mail when your request ends execution.

**-mu** *username*

Send mail for request to specific user indicated by *username*.

**-ni** Do not import current directory.

**-p** *priority*

Specify intraqueue priority, where *priority* is an integer between 0 (zero) and 63. Zero is the lowest priority, and 63 is the highest.

**-q** *queuename* [*@hostname*]

Specify queue to which a request is submitted, where *queuename* is the name of the requested queue, and *hostname* is the name of the host on which the queue resides. *hostname* is required if the host is not localhost.

**-r** *request\_name*

Assign a name to request, where *request\_name* is truncated after 15 characters.

**-s** *shell\_name*

Specify a shell to interpret commands, where *shell\_name* is the path to the shell.

**-t** *process\_id*

Signal a process when request is finished, where *process\_id* is an integer representing the PID.

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- x Export values of all environment variables.
  - y Append accounting information to stdout file.

## Directing output and error messages

- e [*hostname* : ]*filename*  
Redirect standard output error to *filename*, where *filename* is a complete path name. *hostname* is the name of a remote system, if *filename* is to reside there.
- eo Send error output to standard output file.
- ke Leave standard error output file on the executing machine.
- ko Leave standard output file on executing machine.
- o [*hostname* : ]*filename*  
Redirect standard output. to *filename*, where *filename* is the complete path name. *hostname* is the name of a remote system, if *filename* is to reside there.

## Setting per-process limits

When using the `qsub` command, you can set per-process limits by using the options in this section. With the following options, *size\_limit* is the hard limit for the particular per-process limit, and *warning\_limit* is the point at which you are warned that you are approaching your hard limit.

- ld *size\_limit* [, *warning\_limit*]  
Establish per-process data segment limit.
- lf *size\_limit* [, *warning\_limit*]  
Establish per-process permanent file limit.
- lm *size\_limit* [, *warning\_limit*]  
Establish per-process memory limit.
- lM *size\_limit* [, *warning\_limit*]  
Establish per-request memory limit.
- ln *size\_limit* [, *warning\_limit*]  
Establish per-process nice value limit.
- ls *size\_limit* [, *warning\_limit*]  
Establish per-process stack segment limit.

- 
- lt *size\_limit* [, *warning\_limit*]  
Establish per-process CPU time limit.
  - lT *size\_limit* [, *warning\_limit*]  
Establish per-request CPU time limit.
  - lw *size\_limit* [, *warning\_limit*]  
Establish per-process working set limit.

Support of per-process limits must be set by your system manager. To view per-process limits that are supported on your system, enter at the shell prompt:

```
% qmgr show limits_supported
```

## Checkpointing submissions

- c Indicate request can be checkpointed.
- cp *number*{minutes|hours|days|weeks}  
Checkpoint request at intervals of the specified period, where *number* is a positive integer representing the number of units of the period. One unit of measure (minutes, hours, days, or weeks) must be specified. Do not include a space between the number and the unit.
- nc Indicate request cannot be checkpointed.

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## Displaying CXbatch queue information

The `qstat` command displays information about the status of CXbatch queues and has the following syntax:

```
qstat [option] [queuename[@hostname]...]
```

where *queuename* is the name of the queue that is being queried, *hostname* is the name of the remote host if the queue is not local, and *option* is any one of the options that follow:

- a Show all requests.
- l Show requests in long format.
- m Show requests in medium-length format.
- u *username*  
Show only those requests belonging to the user specified by *username*.
- x Show queue header in extended format.

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## Deleting a request from a CXbatch queue

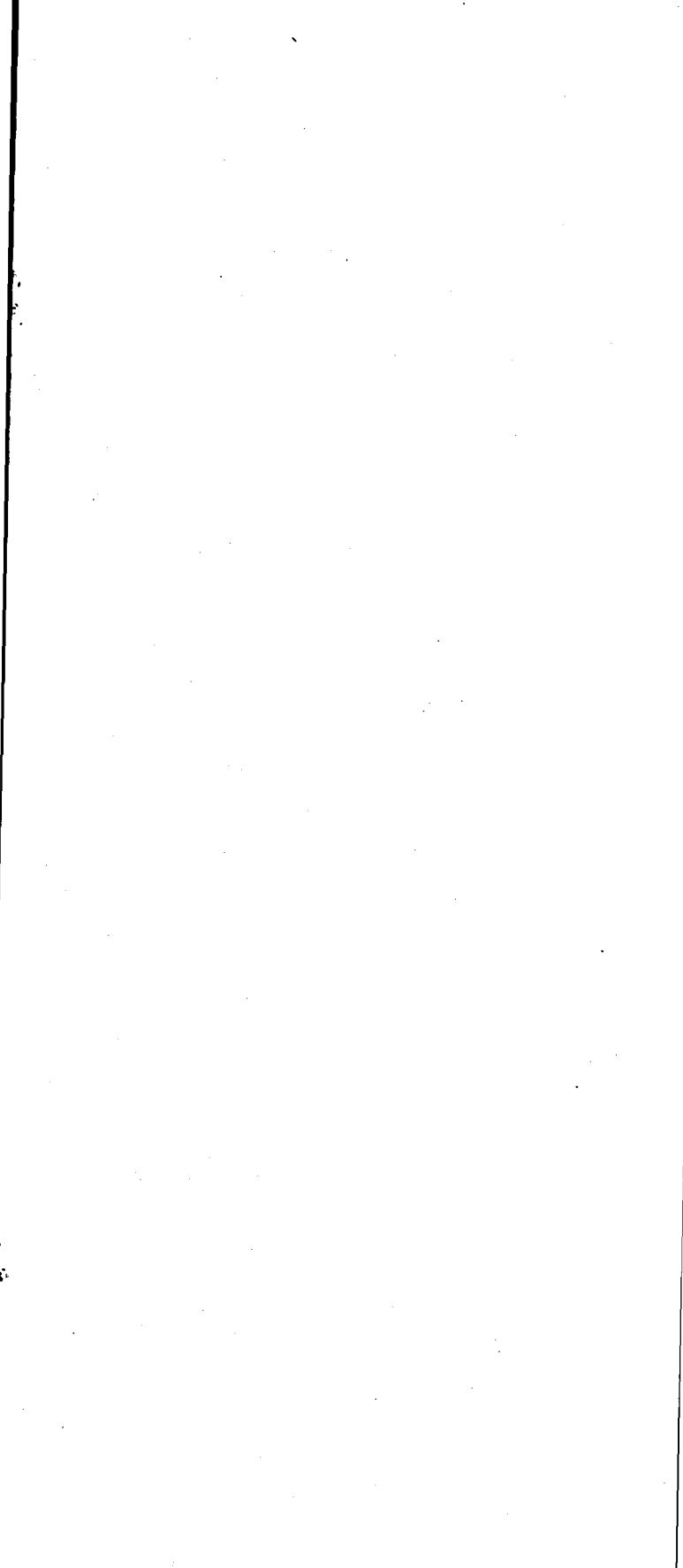
To delete a request from a CXbatch queue, use the `qdel` command, which has the following syntax:

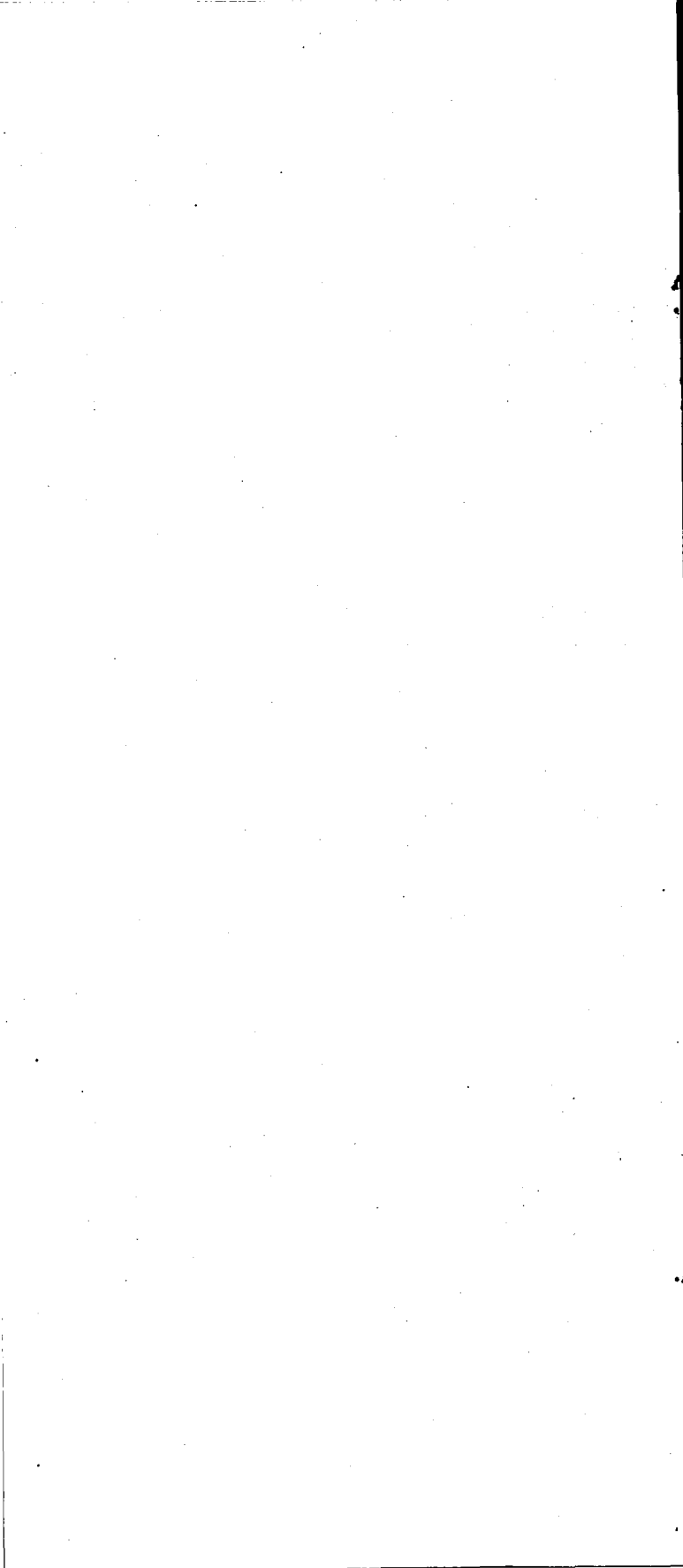
```
qdel [option] request_id[@host]
```

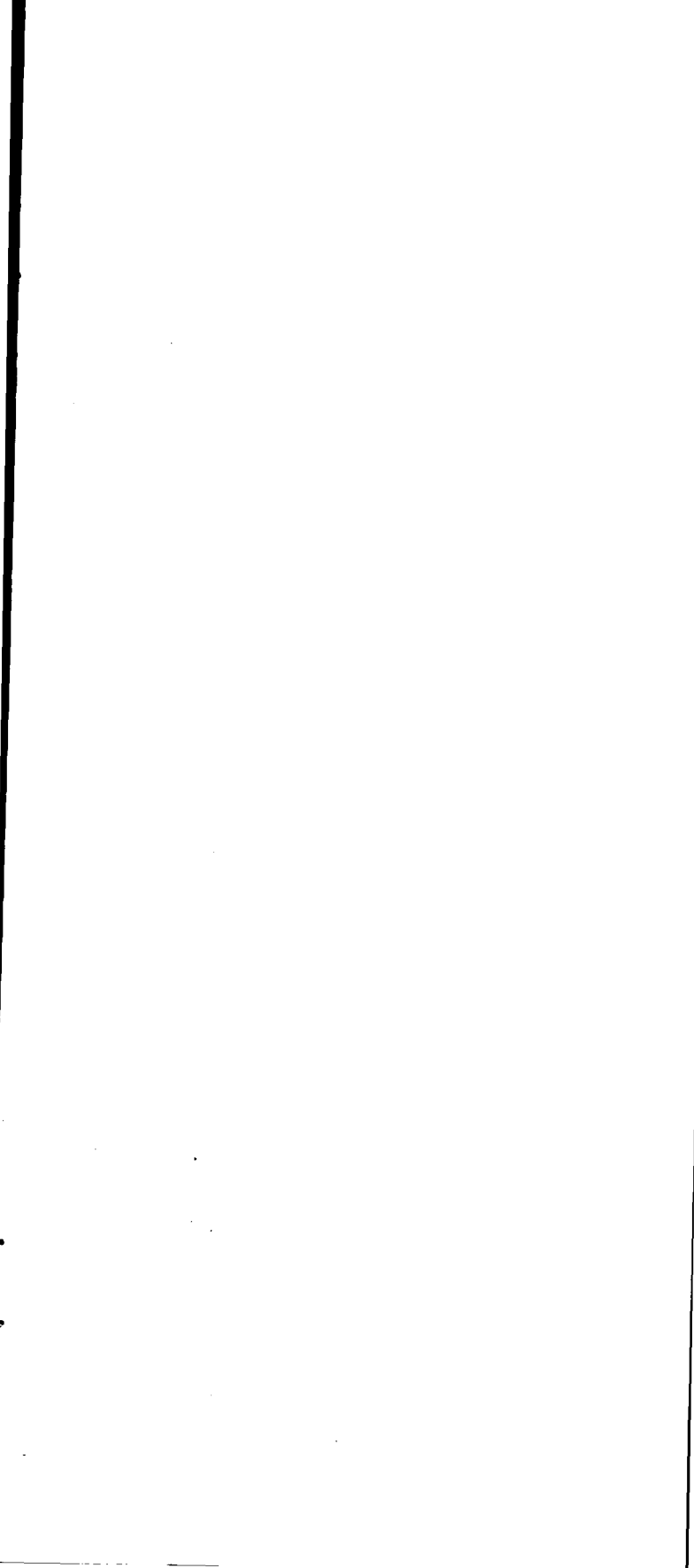
where *request\_id* is the request ID of the job you want to signal, and *host* is the machine from which the request was submitted. *option* can be either of the following:

- k Send a kill signal (SIGKILL) to kill a job.
- sig Send a specified signal to a job, where *sig* can be the number or name of any one of the following signals:
  - 1 QUIT Quit execution.
  - 2 INT Interrupt execution.
  - 6 ABRT Abort execution.
  - 9 KILL Kill execution. (Same as -k option.)
  - 15 TERM Terminate execution.
  - 30 USR1 User-defined signal number 1.
  - 31 USR2 User-defined signal number 2.

For more information on signals, refer to the `signal(3c)` man page. The signal you send to your program when deleting it from a CXbatch queue depends on the program's signal handling. Generally, the `-k` option is sufficient.







ORDER NUMBER  
DSW-188

DOCUMENT NUMBER  
710-009430-002

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