

The QEF Quick Reference Card (October, 2005)

User Setup

- Set **\$QTREE** to **Q-Tree** directory tree to be used:
`export QTREE=qtree-root` (possibly 'lclqtree')
- Add **\$QTREE/bin** to your **\$PATH**
`export PATH=$QTREE/bin:$PATH`
- Define **qd** used to chdir using **qds**:
`eval `qfunc qd` # add -c if using csh`
- A useful function to edit a file from the source path:
`eds() { $EDITOR $(sls $*); }`
- To set up **-.qtree** directory:
`dirsetup -d $HOME dotqtree`
- To set up **-.qtree** directory with alternative name:
`dirsetup -d $HOME -m .qtree=name dotqtree`
`export HOME_QTREE=$HOME/name`

Documentation

- Manual pages are in **\$QTREE/man**
- qefgui** can be used to view man pages and **x_db** databases
- Every **Q-Tree** program has an **-x** flag that outputs synopsis, one line description, summary of flags and options.
- quete** or **xpbs** can be used to list or query **x_db** databases
- xpbs** will list available **x-*** databases
- www.qef.com contains The Guide and other documentation

Documentation Conventions

- topic(x-dbnm)** refers to entry called **topic** in the **x_db** database **dbnm**. To access this topic use: **x-dbnm topic**
- @Variable** refers to a **qvars** variable. For documentation on such a variable use: **x-qvars Variable**

Navigating the Forest

Fields of a **qdsrv** path records:

Index Project Revision TreeType User Host Config Pathdirs ...

qds selection flags (i.e., a *path-spec*):

- p project ***; **-r revision ***; **-t treetype ****;
- u user ***; **-h host ***; **-c config**

-num - explicit path number
* use '.' for current value; automatically applied, if necessary, unless the **-a** flag is specified.

** **-o == -tobject**, **-b == -tbaseline**, **-w == -tworking**

qds -b -pproj # Find the baseline for project *proj*

qds -u. -a # Find all your paths

qds -R # Find the path of the current tree

qdid -s123 # Bind user's qdid to a specific path (e.g., 123)

qdid -s # Bind user's qdid to the current tree

qd -i # chdir to current path bound to user's **qdid** identifier

qd -I path-spec # chdir to selected path and simultaneously bind user's qdid to it

qd -n # chdir to next (i.e., parent) tree in current **@RootPath**

qd path-spec subdir # chdir to *subdir* of selected path;

use *subdir* to choose directory relative to root

qdmgt list -P # list current projects in the database

qdmgt -X # list messages supported by **qdsrv**

qdchk # check user's paths on current host

ghost host # check access to host and retrieve *qtree* and *home*

Setting Up Working and Object Trees

qd -pproject -b # chdir to *project*'s baseline tree

mkqtree -w working-dir [sub-dirs ...] # create working

tree; use argument '.' to suppress creation of sub-dirs

qd -pathnum # chdir to new working tree

mkqtree -o object-directory # create an object tree

treedirs [sub-dirs ...] # create a tree's sub-directories -

defaults to all sub-trees. If in object tree, defaults

to those sub-trees in the working directory.

Examining Your Current Configuration

qvars # list current **qvars** variables

qvars -f # list current **qvars** files

qvars -Pr # output **root.vrs**

qvars -Pc # output **conf.vrs**

confvrs # output settings by **conf.vrs**

confvrs -d # compare **conf.vrs** to default

qvars @Variable ... # retrieve value of a **qvars** variable

qvars -W Var ... # list where **qvars** variables set

qvars -l # list library mapping controls

qvars -XI # list **cc -I** flags

qvars -VD # output value of **@_DestDir_**

qvars -V? # output list of **-V** and **-X** short-cuts

Configuring Tree's root.vrs & conf.vrs

rootvrs -d dir # set **_DestDir_**

rootvrs -A dir # set **RootAlias**

rootvrs -c conf # set **ConfigName**

rootvrs -B host # set **BuildHost** - use . for current host

rootvrs -h sys # name type of build system

rootvrs -H # equivalent to **-h 'system'**

rootvrs -u # update current **root.vrs** from parent's **root.vrs**

Note: Can use **+Variable=value** to set variable

Note: Some settings may result in creation of new **qdsrv** path.

Use **'qdmgt delete -number'** to delete obsolete entry.

qconfset -v V=Val # add/change variable to **conf.vrs**

qconfset -o Opt # turn on option *Opt*

qconfset -n Opt # turn off option *Opt*

Reduced Qef -x

qef [-x2cFkMntvX] [-A...] [-d dir] [-[DUGL]...] [-P process] [-f file]

[-T {012}] [-m <num>] [args ...]

display this explanation

-x suppress the **@ForbidQef** check - use at own risk

-c suppress the time check - use at own risk

-t suppress execution by backend

-n force execution by backend

-F report all subcommands

-v set macro to value - see **qefdirs**

-D mac=value define **qvars** value (e.g., **-LDEBUGGING**)

-L var=value define **qvars** value (e.g., **-LDEBUGGING**)

-P process apply special process - see below

-d dir chdir to *dir*

-m <num> set maximum parallel processes to *<num>*

args ... arguments to backend - assigned to **@QefArgs**

defaults to **@_DefaultArgs_**

Commonly Used -P Processes

halt halt qefs started from directory (chmod -w %qef*.hlt)

ppscript output macro processed script

script output script but don't process it

targets list target descriptions for directory

treewalk walk tree, but do nothing

inclswalk walk tree refreshing running incls

Detaching Long Running Processes, etc.

go cmmid # detaches command - merged outputs to **..g**

go -d cmmid # detaches command - merged output to

-.qtree/goes/<host>/<pid><key>.g

g # view newest go file - add **-d** to see go **-d** output

g -o # view second newest go file

g -num # view *numth* newest go file

g -O # view oldest go file

g -l # list go files

g -h # output head of selected go file

g -t # output tail of selected go file

g -q # show current qefs for all gofiles

g -Q # show qef termination lines for all gofiles

g -f # tail -f .g

g -R # remove go file and show next

goes # show go audit trail for current host

goes -h host # show go audit trail for specified *host*

goes -h # show audit trails for all hosts

goes -p # purge completed jobs from current host go audit

gomonitor # monitors go messages

Running a Remote Command

qremote cmmid # run command on appropriate **@BuildHost**

qremote -<num> cmmid # run command in path number *<num>*

qremote -g ... # go -d the command on the selected host

qremote -v ... # verbosely report the full command

qremote -Sservice ... # run on one **@_Servers_** [service] hosts

Sls, Libs, Incls, Qhy, Qsg, Qefdirs ...

sls # list the files in the source path

sls -c # do it in columns

sls fname # find and list 1st file called *fname* in path

sls -a fname # find and list all files called *fname* in path

sls -S suffix # find all **.suffix* files in source path

sls -g t_* # find files that match *t_** in path

sls -n fname # find and list file *fname* but not in cwd

libs file # list libraries for 'sls file'

libs -a file # list libraries - all forms

incls file # list includes for 'sls file'

qhy module # output why and how *module* was last built

qhy -r module # qhy for *module* and each of its prereqs

qsg -M # most common script generator - **qsg** the qeffile

using *srclist_* as arguments - usually generated by **sls -Ls**

qsg -c command ... # run **qsg command**

qsgdump -S hanoi # view source for **qsg hanoi** script

x-qsg -L *scripts # list **qsg** scripts

qefdirs -L # show levels for current directory

- use **qef -Dlto=4** to suppress Installs up to level 4

- use **qef -DDoto=8** to suppress builds after level 8

qefdirs -ldir # show *dir*'s level

cush -d dir -E eset -sVar=Val cmmid ... # run *cmmid*

in directory *dir*, using **envset** set *eset*,

setting environment variable *\$Var* to *Val*

Special @ Sequences in Qvars

@@ A literal **@**

@<newline> Replaced by a space - used to split up long lines

@. Null - used to terminate variable name

@# A literal **#**

@NotSet Replaced by **@NotSet**

@var * Replaced by value of variable *var*

@var[index] * *index* evaluated before lookup done

@(func ...) * Call to function *func* - see **functions(x-qvars)**

@char Replaced by *char*

* may be followed by **-** operators - see **tildeops(x-qsg)**

See also: **syntax(x-qvars) expansion(x-qvars) keywords(x-qvars)**

Special @ Sequences in Qsg

@<newline> Replaced by space - used to split up long lines

@<space> A literal space

@<tab> A literal tab

@@ A literal **@**

@# A literal **#**

@var * Ignore balance of the line or function arguments

@(name ...) * A value of variable *var*

@[Var List ...] * Call to function *name*

@[Var List ...] * Value of *List* assigned to *Var*

@/[List ...] Global variable named by first element set to

balance of list and list returned

@{Var} * Replaced by **qvars** variable *Var*

@<script ...> * Invokes named *script*

* may be followed by **-** operators - see **tildeops(x-qsg)**

See also: **qsg-input(x-qsg) qsg-syntax(x-qsg) functions(x-qsg) faq2 faq3**

For qefdirs syntax see: **qefdirs-input(x-qefdirs)**

The Qef Subset of the Q-Tree Tool-Set

adjmat produce adjacency matrix

arcentre computes the centre point of a three point arc

artimes set last modification times for files of an archive

arupdate update an archive according to specified list of members

ascii print a table of the ASCII character set

bfsic build file system integrity check and db maintenance

bp deliver source code boiler plate

c% cannot use sh command interpreter

cancreat check if file can be created

cc_g eliminate stupid copyright notices or gratuitous warnings

cc_z eliminate stupid copyright notices or gratuitous warnings

cerrs parse input extracting cc errors and warnings

chkfile check all files exist killing argument pid on failure

chstat change the status of files named in list or arguments

cleanlog clean up instal [sic] log file

clrstr output terminal clear string in readable form

clump convert file:lineno input to ranges

cndcmp compare the outputs of two commands

com compile or process file using embedded command

commw print input terms not in dictionaries

company output company information

conldn link file1 to file2, removing file2 if necessary

confvrs create or compare **qvars** config file

contax output selected contax database entries

conv convert input characters to readable form
count produce numbers
cpifdif compare new and old and copy if different
ct cut input into cut file
cush cannot use sh command interpreter
depsmap create file mapping suffixes to mkdeps file
detox remove toxic waste normally found in dos files
dirlist produce list of all directories for input file list
dirname output directory pathname for files
dirsetup extract files and information from a directory setup file
divide split files at specified pattern
dmpdeps dump or test deps object
dosmap change Unix paths to DOS paths
double output differing lines of files separated by tab
dry run dhry stone tests
elimso eliminate n/troff inclusions
environ list arguments, user info, open files, \$vars, and ignored signals
envset output environment setting commands
envstd list arguments, open files and ignored signals
fcmp compares new and old
fdater output formatted date string
feexists output file names that match specified attributes
ffill fill in suppressed fields
filelist maintain a file list and their collective modification time
findinclude output file resolving includes
finda find and replace Ada variables
findc find and replace C variables
findf find and replace tabbed fields
findw find and replace words
fixflist remove non-existent files from a file list
fixcomm comm(1) like but columns put into files
find find a command
findstr find a string in a file and output offset
form text formatter and macro processor
fpares check bracket, brace and double quote balancing in form input
ftest test argument file attributes
g process go files
go detach a command
goes remove completed jobs from go message files
gomonitor display go message files as updated
gotstr output names of files that contain argument string
grpsort sort groups of lines specified by ranges
hhmss output a banner of the time
hoff hell of a lot faster than nroff
howto output selected howto information
incls output embedded include dependencies
instal meticulously install a file and audit it
instdir install a directory
instfls install files, but only if necessary, according to script
jlines join up selected lines
josh run jobs selecting from job file
kdbm extract data from dbm database
l list files in columns
lash long argument list shell interface
lc list files by type in columns
lcmp compare two files
ldbm extract lines from dbm database
ledmp display current lefile values
leset set up line editing keyfile
liborder process nm of a library to produce dependency graph
libs output libs information for named file
lines print first N and last M lines
linked list files with multiple links
lls ls for input files with selected fields output
linsert replace characters in master by lines from source
lntree create tree of symbolic links to input file list
man3db apply trg script to selected items from man3 TIPs database
manprep prepare xdb or manual section for qefgui help display
mimk issue updating commands according to a dependency script
mkalltraits run mktraits on remote hosts
mkddt create ddt declaration
mkdeps compile incls scanner file
mkerrs process error databases to produce other source
mkopts create options header file
mkqtree set up new qef tree
mkquete produce manual section index
mksofib create shared library externs list
mktraits process traits source to produce binary file
mkvernum create or change version string
mnfadd add a new manifest to manifest database
mnfchk check manifest database for syntax and consistency
mnfcmp compare two manifests
mnfdb output manifest database release information

mnfdel delete releases from manifest database
mnfput output a manifest or manifest database
necho echo arguments with special character interpretation
numb produce numbered lines
olex lexical analyser builder
p4files list p4 files for the current root
p4mnf list p4 files for the current root
pa output, list, or delete cut files
parmsdb output parms database in variety of formats
pathclash produce list of duplicated executables in path
pathto map argument file to special directory
pdirs manipulate a directory stack
ph output phone numbers for selected contax database entries
putifdif copy input to ofile if different
qconfset add variable setting to the conf.vrs file
qchk check host's qdsrv database entries
qdid assign qdsrv ident and/or bind to path
qdmgt general interface to qef directory server
qds output name of directory selected from list of qdsrv paths
qdsrv qef directory database server
qdupd add new or update existing path in qdsrv database
qed somewhere between a line editor and a command interpreter
qedbufs output qed save file structures
qef quod erat faciendum - that which was to be done
qefdirs qef script generator for multiple directories
qefgui qef graphical interface
qefinfo qef graphical interface
qenv output environment variables in sorted usable form
qfunc output selected qfunc function/alias file
qgdif graphical file difference viewer
qhost qtree host server
qhy report qhy targets were built
qlex interface to lex
qmsdev Microsoft Developer's Studio project file generator
qmsg send a message or mail to designated users
qremote run a command on a remote host
qrep another grep
qsg the qef script generator interpreter
qsgcomp compiles a qsg script to object
qsgdump dump a qsg object file
qsh qef shell command interpreter
qtreeinfo output information about the Q-Tree release
quete list x_db topics and quote.db entries that match patterns
qvr output qvr settings
qvrstdmp process qvr binary file
qvrsexpr evaluate and output qvr expressions
qyacc interface to yacc
r90 reflect lines around diagonal
rcslocks report the RCS locked files in a directory
readdir output real directory name for argument directory
recur execute a command repetitively
rep another grep
resort build new output in order specified by input
revl reverse input lines
rls recursive list of files
rmllist remove files named in input
rmnotnamed remove all files not named by arguments
rmwhite output rpl script to remove redundant white space and newlines
rootvrs create or change root.vrs file
roff select fields of input lines for output
rpl replace, print, or delete named lines
rtabs align output fields by inserting padding
samefile check if two paths refer to same file
sdba output statistics about sdbm database
setbytes set specified offsets to strings
sfdchk check strfx dictionaries for valid patterns
sfsic source file system integrity check and db maintenance
shfix process input file incorporating output of embedded commands
shuffle shuffle input lines and output
sls source path ls
snm standardized nm output
sreclist check the sreclist_ file
strfix replace variables according to replacement dictionary
sttyek set or display saved stty erase and kill chars
subdist create sub-distribution from master filelists
summarize summarize selected fields
sumup output summations of selected input fields
suprep suppress repeated fields
sysnm output system name or check if it matches arguments
system output system name or check if it matches arguments
tabrpl replace tabs by spaces or vice versa
tchown change ownership and mode according to a template
tdbkeys list TIPs database index keys and/or files

tdbm create TIPs key files
tdbrg apply trg program against selected TIPs dbm database entries
ted TIPs file editor
termfnd check if termcap/terminfo entry exists
termসা list all Ada variables in files
termsc list all C variables in files
termsf list all tabbed fields in files
termসw list all words in files
tf output name of non-existent comma file
tildes convert between symbolic and real character representations
timeout execute a program with a time limit
tlist formatted listing of TIPs data base files
tmkprof create new TIPs data base profile
topolstr topologically sort input
touchfiles list or create touch files
tprof output TIPs profile in various formats
traits output traits table
transl translate input fields
treedirs mkdir selected or all sub-directories of a qef tree
trg template driven TIPs report generator
trgdmp print trg object file
trgmk compile trg script
tscan interactive TIPs data base scanner
tstrhash test strhash hashing
typeset interface to typesetter and printing packages
untouch set file times
upd update conventionally named versions of files
upto print selected lines from named files
vcc create, compile, link, and remove version string source file
vci version control interface interpreter
vernumcomp compress mkvernum database by removing old entries
wcci windows C compiler interface
whats whats 2 + 2
wmode write-protect files
wordidx output input lines followed by lines indicating word count
wot output scs id strings
x-contax contax use and data bases eXplanatory D.B.
x-eml form eml macros eXplanatory D.B.
x-form form macros and syntax eXplanatory D.B.
x-html html qsg library eXplanatory D.B.
x-ldeps deps library eXplanatory D.B.
x-ldtree dtree library eXplanatory D.B.
x-lledit ledit library eXplanatory D.B.
x-lqvr qvr library eXplanatory D.B.
x-ltc tc library eXplanatory D.B.
x-ltips tips library eXplanatory D.B.
x-man the -man macro set eXplanatory D.B.
x-qed qed commands and facilities eXplanatory D.B.
x-qef QEF facilities and tools eXplanatory D.B.
x-qefdirs qefdirs eXplanatory D.B.
x-qefqef prototype qef files eXplanatory D.B.
x-qefgui qef graphical user interface eXplanatory D.B.
x-qefpp qef preprocessor controls and macros eXplanatory D.B.
x-qfsic file system integrity (fsic) package eXplanatory D.B.
x-qmisc Q-Tree miscellany eXplanatory D.B.
x-qmisc Q-Tree miscellany eXplanatory D.B.
x-qproc software process procedures eXplanatory D.B.
x-qsg qsg and its support library eXplanatory D.B.
x-qvr qvr variables, facilities, and files eXplanatory D.B.
x-ted ted the TIPs editor eXplanatory D.B.
x-trg TIPs trg functions eXplanatory D.B.
x-tscan tscan facilities and commands eXplanatory D.B.
x-xfig xfig qsg library eXplanatory D.B.
x-xppt xppt qsg library eXplanatory D.B.
x-zr qed function library eXplanatory D.B.
x_db x_db database front end
xdbmk create an x_db data base
xdfs list x_db databases or topics for named databases
xfinterp play with the -x flag formatting
xtty convert stty(1) output to full explanations
younger test if files younger than specified time
zfill zero fill digit string

For further information mail to support@qef.com or info@qef.com
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