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| **Cross platform commands for Windows and Unix**  Ch is a C compatible platform-independent shell. The following tables contain a summary of commonly used commands portable across different platforms in Ch under both **Unix** and **Windows**. There are more than 250 Unix commands in Ch for Windows 32 and 64 bits as listed at the end of this page. Some commonly used commands are listed below by category. These commands are very useful for shell programming in Ch.  If you are interested in knowing more about Ch shell programming, click [here](http://www.softintegration.com/docs/ch/shell/).  If you would like to have other Unix commands included in Ch for Windows for shell programming, please contact us.  **1. File Systems**   |  |  | | --- | --- | | **Command** | **Usage** | | cd | change working directory | | chgrp | change the group of a file or library | | chmod | change the access permission of a file | | chown | change the owner of a file or library | | cp | copy files or directories | | dd | use to block input/output operations on files and performing conversions on them | | df | ("disk free") reports available space and space in use in drives accessible by your system | | du | report the amount of disk space used by a hierarchy of directories | | find | search for files or directories that match a certain criterion, i.e. name, modification time etc | | ln | make a hard link or symbolic link | | ls | list contents of directory | | mkdir | create a new directory | | mv | rename files or move them to other directory | | pwd | print name of working directory | | rm | remove files or directories | | rmdir | remove directories | | touch | create a new empty file or update the modification time of an existing file | | wget | a non-interactive network retriever | | which | show the full path of commands, functions, header files | |  |  |   **2. Binary Files**   |  |  | | --- | --- | | **Command** | **Usage** | | ar | archive maintenance utility; create libraries to be linked to other programs | | nm | list the symbol in an executable, object file or libary | | ranlib | generate an index for an ar format archive; enables faster linking | | size | print the sizes of sections in object files and executable programs | | strings | print the ASCII text strings embedded in binary file | | strip | remove debugging symbols and line number information from files to make file smaller | | wget | Download files using http or ftp URL | | curl | Download files using http or ftp URL | | hexdump | Dump files in hexadecimal numbers and ASCII characters | |  |  |   **3. Text Files**   |  |  | | --- | --- | | **Command** | **Usage** | | awk | scan one or more files and perform an action on all of the lines that match a particular conditon | | cat | concatenate files together and send the result to the standard output | | cksum | calculate a CRC checksum for files | | csplit | context based file splitter | | cut | cut out selected fields of each line of a file | | egrep | search a file for a pattern using full regular expressions | | expand | replace the tabs in a file with a specified number of spaces | | fgrep | searched a file for fixed-character string | | fmt | simple text formatters | | fold | wrap files to fit in a specified number of columns | | grep | include also grep,egrep and fgrep; search for patterns matching on lines in a file | | head | print a specified number of lines from the beginning of a file | | indent | formatter for C source code | | join | conditionally merge two files together based on matching fields in the files | | less | a display paginator similar to more and pg in UNIX | | make | update a file based on a series of dependency rules stored in a special format | | md5sum | calculate a "fingerprint" for files using the MD5 algorithm | | more | copy by the screenful | | nl | add line number to files | | od | dump the contents of a file in a number format, including octal,hex and several ASCII format | | patch | apply changes to files | | paste | merge multiple files together into one file by concatenating lines from each file to form one line in the output file | | pr | pring files | | sed | "stream editor" based on the line editor ed; useful for editing streams of data | | sort | sort lines in a file based on fields in the file | | split | cut files into multiple fixed size pieces | | sum | calculate a simple checksum for files | | tail | print a specified number of line from the end of a file | | tr | character translation | | tsort | topological sort | | troff | typeset or format documents |  | | unexpand | "unexpand" sequences of a specified number of spaces into tab characters |  | | uniq | remove duplicate lines from a sorted file |  | | vi | screen text editor |  | | vim | improved vi with syntax highlighting for Ch |  | | wc | count characters, words and/or lines in a file |  |   **4. Comparing Files**   |  |  | | --- | --- | | **Command** | **Usage** | | cmp | compare two files and display the line and byte number differences | | comm | report common lines in two files | | diff | compare files, showing lines that differ in any of serveral formats | | diff3 | compare three files | | sdiff | compare two files side by side and interactively merges them into a third file | |  |  |   **5. Shell Utilities**   |  |  | | --- | --- | | **Command** | **Usage** | | basename | echo its argument, a file name, minus any directory name | | date | display date and time of the system | | dirname | print the directory component of file name | | echo | print its argument\\ | | env | used to modify the environment in which a program is run | | expr | evaluate various types of expressions involving arithmetic,relational,logical and string operators | | factor | get all prime factors for a positive integer | | hostname | the name of the local host machine | | id | display the user and group IDs and names | | logname | display the user's login name | | pathchk | check path names | | printenv | ouput the environment under which a command will execute | | sh | the Bourne shell | | sleep | stop all actions in a shell for a specified period of time | | tee | copy its standard input to files named on the command line and also to standard output | | uname | display information about computer system; set node name (system name) | | whoami | display the login name | | xargs | construct argument lists and invoke utility | |  |  |   **6. Archiving Files**   |  |  | | --- | --- | | **Command** | **Usage** | | cpio | file archiving and backup utility | | gzip | file compression program; does both compressing and uncompressing | | gunzip | same as gzip | | tar | create and manipulate tar archives | |  |  | |

**7. Portable Unix Commands in Windows 32 and 64 bits for Interactive Command Shell and Shell Programming**

ar.exe expr.exe mkfifo.exe table-from.exe

astyle.exe factor.exe mknod.exe table-to.exe

at.exe false.exe move.exe tac.exe

awk.exe fgrep.exe mv.exe tail.exe

basename.exe file.exe nawk.exe tar.exe

bash.exe filetype-compile.exe nice.exe tbl.exe

bunzip2.exe filetype.exe nl.exe tee.exe

bzcat.exe find.exe nm.exe test.exe

bzcmp findstr.exe nohup texinfo2man.exe

bzdiff fmt.exe nohup.exe time.exe

bzegrep fold.exe od.exe title.exe

bzfgrep funzip.exe paste.exe touch.exe

bzgrep gawk.exe patch.exe tree.exe

bzip2.exe gdate.exe pathchk.exe tr.exe

bzip2recover.exe gecho.exe pcre-config troff.exe

bzless ginstall.exe pcregrep.exe true.exe

bzmore gln.exe pcretest.exe tsort.exe

bznew gmkdir.exe pgawk.exe tty.exe

cacls.exe graftabl.exe pic.exe type.exe

cat.exe grcat.exe pinky.exe uname.exe

chcp.exe grep.exe pr.exe uncompress

chgrp.exe grmdir.exe printenv.exe unexpand.exe

chide.exe groff.exe print.exe uniq.exe

chmod.exe grotty.exe printf.exe unlink.exe

chown.exe groups ptx.exe unzip.exe

chroot.exe gsar.exe pwcat.exe updatedb

chs.exe gsort.exe pwd.exe uptime.exe

cksum.exe gunzip.exe ranlib.exe uzexampl.exe

cls.exe gzexe readlink.exe vdir.exe

cmp.exe gzip.exe recover.exe ver.exe

comm.exe head.exe ren.exe verify.exe

comp.exe hexdump replace.exe vi9x.exe

convert.exe hostid.exe restore.exe vint.exe

copy.exe hostname.exe rgrep vol.exe

cp.exe iconv.exe rmdir.exe wc.exe

csplit.exe id.exe rm.exe wget.exe

curl.exe igawk sdiff.exe whoami.exe

cut.exe indent.exe sed.exe xargs.exe

date.exe install.exe seq.exe yes.exe

dd.exe join.exe setuidgid.exe zcat.exe

del.exe kill.exe sha1sum.exe zcmp

df.exe lessecho.exe sh.exe zdiff

diff3.exe less.exe shred.exe zegrep

diff.exe lessfile size.exe zfgrep

dir.exe lesskey.exe sleep.exe zforce

dirname.exe lesspipe sort.exe zgrep

diskcomp.exe ln.exe split.exe zipcloak.exe

du.exe locate.exe start.exe zip.exe

echo.exe logname.exe stat.exe zipinfo.exe

egrep.exe ls.exe strings.exe zipnote.exe

endlocal.exe make.exe strip.exe zipsplit.exe

env.exe man stty.exe zless

eqn.exe mawk.exe su.exe zmore

erase.exe md5sum.exe sum.exe znew

expand.exe mkdir.exe sync.exe