getopts optstring name [args]

getopts is used by shell procedures to parse positional parameters. optstring contains the option characters to be recognized; if a character is followed by a colon, the option

is expected to have an argument, which should be separated from it by white space. The colon and question mark characters may not be used as option characters. Each time it is invoked, getopts places the next option in the shell variable name, initializing name if it does not exist, and the index of the next argument to be processed into the variable OPTIND. OPTIND is initialized to 1 each time the shell or a shell script is invoked. When an option requires an argument, getopts places that argument into the variable OPTARG.

The shell does not reset OPTIND automatically; it must be manually reset between multiple calls to getopts within the same shell invocation if a new set of parameters is to be used.

When the end of options is encountered, getopts exits with a return value greater than zero. OPTIND is set to the index of the first non-option argument, and name is set to ?.

getopts normally parses the positional parameters, but if more arguments are given in args, getopts parses those instead.

getopts can report errors in two ways. If the first character of optstring is a colon, silent error reporting is used. In normal operation, diagnostic messages are printed when invalid options or missing option arguments are encountered. If the variable OPTERR is set to 0, no error messages will be displayed, even if the first character of optstring is not a colon.

If an invalid option is seen, getopts places ? into name and, if not silent, prints an error message and unsets OPTARG. If getopts is silent, the option character found is placed in OPTARG and no diagnostic message is printed.

If a required argument is not found, and getopts is not silent, a question mark (?) is placed in name, OPTARG is unset, and a diagnostic message is printed. If getopts is silent, then a colon (:) is placed in name and OPTARG is set to the option character found.

getopts returns true if an option, specified or unspecified, is found. It returns false if the end of options is encountered or an error occurs.

getopts用到的变量

OPTIND： 存放一个要处理的参数的索引

OPTARG: 这个变量被设置为由getopts找到的选项的参数

OPTERR: 它的值为0或1.指示Bash是否应该显示由getopts产生的错误信息

基本的语法:

getopts OPTSTRING VARNAME [ARGS...]

1

OPTSTRING: 告诉getopts会有哪些选项和哪会有参数(用选项后加”:”表示)

VARNAME: 告诉getopts哪个变量用于选项报告

\*ARGS: 告诉getopts解析这些可选的参数，而不是参数位置

getopts是linux系统中的一个内置变量，一般用在循环中。每当执行循环是，getopts都会检查下一个命令选项，如果这些选项出现在option中，则表示是合法选项，否则不是合法选项。并将这些合法选项保存在VARIABLE这个变量中。

getopts还包含两个内置变量，及OPTARG和OPTIND

OPTARG就是将选项后面的参数（或者描述信息DESCPRITION）保存在这个变量当中。

OPTIND：这个表示命令行的下一个选项或参数的索引（文件名不算选项或参数）