

# Jak se píše doplňování v shellu?!

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## Příkladový program

```
$ sterm -h
sterm: invalid option -- 'h'
Usage: sterm [options] <device>
Options:
  -b <duration> send break signal
  -c             enter command mode
  -d[PULSE]     make pulse on DTR
  -e            ignore '~.' escape sequence
  -n            do not switch the device to raw mode
  -r[PULSE]     make pulse on RTS
  -s <baudrate>
  -v            verbose mode
```

## bash: příkaz complete a doplňování

```
complete [-abcdefgjkusv] [-o comp-option] [-DE] [-A action] [-G globpat]
        [-W wordlist] [-F function] [-C command] [-X filterpat] [-P prefix]
        [-S suffix] name [name ...]
complete -pr [-DE] [name ...]
```

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```
complete -G \*.pdf mupdf
```

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```
complete -W "9600 19200 38400 57600 115200" sterm
```

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## bash: doplňovací funkce, proměnné a compgen

```
compgen [option] [word]
```

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```
_stern() {  
    COMPREPLY+=($(compgen -W "9600 19200 38400 57600 115200" \  
        -- "${COMP_WORDS[COMP_CWORD]}")  
}  
complete -F _stern stern
```

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- COMPREPLY: výsledek doplňování
- COMP\_LINE: celý dosavadní vstup
- COMP\_WORDS: pole jednotlivých slov ze vstupu
- COMP\_CWORD: poslední index do COMP\_WORDS = slovo které doplňujeme

## bash: \_init\_completion

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```
_stern() {  
    _init_completion || return  
    COMPREPLY+=($(compgen -W "9600 19200 38400 57600 115200" \  
        -- "$cur"))  
}  
complete -F _stern stern
```

---

### Definuje

- cur: Aktuálně doplňované slovo
- prev: Předchozí argument
- words: Jako COMP\_WORDS z COMP\_LINE
- cword: To samé jako COMP\_CWORD ale pro words

## bash: doplňování voleb

---

```
_stern() {  
    local cur prev words cword  
    _init_completion || return  
    case "$prev" in  
        -b|-d|-r) ;; # No completion for these  
        -s) COMPREPLY=( $(compgen -W "9600 19200 38400 57600 115200" \  
            -- ${cur}) ) ;;  
        *) COMPREPLY=( $(compgen -W "-s -b -d -r" -- ${cur}) ) ;;  
    esac  
}  
complete -o default -F _stern stern
```

---

## bash: doplňování cesty

---

```
_stern() {  
    local cur prev words cword  
    _init_completion || return  
    case "$prev" in  
        -b|-d|-r) ;; # No completion for these  
        -s) COMPREPLY=(  
            $(compgen -W "9600 19200 38400 57600 115200" \  
                -- ${cur})) ;;  
        *) COMPREPLY+=(  
            $(compgen -W "-s -b -d -r" -- ${cur}))  
            COMPREPLY+=(  
                $(compgen -G "/dev/tty*" -- ${cur})) ;;  
    esac  
}  
complete -o default -F _stern stern
```

---

## zsh: compdef a #compdef

---

```
_sterm() {  
    _values "Baudrate" "9600" "19200" "115200"  
}  
compdef _sterm sterm
```

---

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```
#compdef foobar  
_sterm() {  
    _values "Baudrate" "9600" "19200" "115200"  
}  
_sterm
```

---

```
fpath=( $(pwd) $fpath)
```



## zsh: doplňování cest

---

```
_sterm() {  
    _files  
}  
compdef _sterm sterm
```

---

---

```
_sterm() {  
    _values "tty" /dev/tty*  
}  
compdef _sterm sterm
```

---

```
_sterm_baudrate() {  
    _values "Baudrate" "9600" "19200" "115200"  
}  
_sterm() {  
    _arguments \  
        "-s[Set baudrate]:baudrate:_sterm_baudrate" \  
        "-b[Send break]" \  
        "-c[Enter command mode]" \  
        "-d[Make pulse on DTR]" \  
        "-e[Ignore '~.' escape sequence]"  
}  
compdef _sterm sterm
```

---

## zsh: poziční argumenty

---

```
_sterm_baudrate() {
    _values "Baudrate" "9600" "19200" "115200"
}
_sterm() {
    _arguments \
        "-s[Set baudrate]:baudrate:_sterm_baudrate" \
        "-b[Send break]" \
        "-c[Enter command mode]" \
        "-d[Make pulse on DTR]" \
        "-e[Ignore '~.' escape sequence]" \
        "1:device:_files"
}
compdef _sterm sterm
```

## zsh: argumenty a stavy

```

_sterm_baudrate() {
    _values "Baudrate" "9600" "19200" "115200"
}
_sterm() {
    _arguments \
        "-s[Set baudrate]:baudrate:_sterm_baudrate" \
        "-b[Send break]:break:->ignore" \
        "-c[Enter command mode]" \
        "-d[Make pulse on DTR]:pulse:->ignore" \
        "-e[Ignore '~.' escape sequence]"
    [ "$state" = "ignore" ] || _values "tty" /dev/tty*
}
compdef _sterm sterm

```

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```
compdef _gnu_generic ct-ng
```

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## Příklady

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- Bash: man complete (BASH\_BUILTINS)
- Bash: [https://www.gnu.org/software/bash/manual/html\\_node/Programmable-Completion.html](https://www.gnu.org/software/bash/manual/html_node/Programmable-Completion.html)
- Zsh lidsky: <http://zsh.sourceforge.net/Doc/Release/Completion-System.html#Completion-System>
- Zsh dokumentace: <http://zsh.sourceforge.net/Doc/Release/Completion-System.html#Completion-System>

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Děkuji za pozornost.

`git.cynerd.cz`