



*Guarantee Business Interface*

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# Solaris shell scripting

## Course description

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**Rodina serverů:** [abclinuxu.cz](http://abclinuxu.cz) [itbiz.cz](http://itbiz.cz) [abchost.cz](http://abchost.cz) [64bit.cz](http://64bit.cz) [abcprace.cz](http://abcprace.cz) [move.cz](http://move.cz) [unixshop.cz](http://unixshop.cz) [2cars.cz](http://2cars.cz) [stickfish.cz](http://stickfish.cz)

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## ***Part 1: Shell Fundamentals***

- *What is a shell, basic principles, philosophy*
- *Shell types, families, important differences and properties*
- *Shell's place in Unix user interface*
- *Principles of command line analysis*
- *Shell as a programming environment*
- *Displaying text, echo and print commands*
- *Text coloring, principles, main rules*
- *Terminal settings, TERM variable*

## ***Part 2: Command line history***

- *Korn shell command line history implementation ( vi mode, emacs mode )*
- *Bourne-again shell command line history implementation*
- *Comparisons*

## Part 3: Special characters

- *Metacharacters ( `*`, `?`, `[]`, `[!]` )*
- *I/O redirections ( `>`, `>>`, `<`, `<<` )*
- *Pipes ( *anonymous*, *fifos* )*
- *Joining commands*
- *Bourne-again shell differences ( `<<<`, `>&`, `&>`, *etc.* )*

## ***Part 4: Command execution and basic scripts***

- *Basic rules*
- *Principles of script execution*
- *Comments, whitespaces*
- *Debugging scripts, debug modes*
- *Command line parsing sequence*

## **Part 5: Shell's environment**

- *Shell variables*
  - *What is a shell variable*
  - *Listing, setting and removing variables*
  - *Readonly variables*
- *Shell aliases*
  - *What is a shell alias*
  - *Listing, setting and removing aliases*
- *Builtin commands library*
- *Special constructions*
  - *One-line conditional variable assignments*
  - *Arrays*
  - *Aritmetic operations*
  - *String operations*

## **Part 6: Decision/Conditional constructs**

- *Process exit status, principles*
- *Test ( [, [[ ) command, usage rules*
- *Fixed exit code commands ( true, false, : )*
- *If-then-fi construction*
- *If-then-else-fi construction*
- *if-then-elif-....-fi construction ( ladder )*
- *Switch construction*
- *Conditional program execution ( &&, || )*

## Part 7: Looping

- *Basic principles of looping in shell environment*
- *Shell arithmetic, overview ( \$( ( construction, expr command )*
- *While-do-done construction*
- *Until-do-done construction*
- *For-do-done construction, special variables \$@, \$\**
- *Control commands ( continue, break )*
- *Infinite loops, basic rules*



## ***Part 8: Shell functions***

- *What is a shell function*
- *Syntax rules*
- *Function's inheritance*
- *Function libraries, usage principles*
- *Function's return code ( return statement )*

## ***Part 9: Shell signal handling***

- *Basic principles of signals*
- *Signal handling in shell, trap variables*
- *Ignoring, catching signals*
- *SIGHUP, how to let script run after logout*
- *Shell's exit pseudo signal*

## ***Part 10: Simple powerful tools***

- *Main Unix shell usage principle*
- *Fast and simple text processing commands ( `uniq`, `paste`, `cut`, `find`, ..., etc. )*

## ***Part 11: Regular expressions in shell scripting***

- *Regular expresion, main principles and rules*
- *Basic regular expressions, syntax rules*
- *Extended regular expressions, syntax rules*
- *Regular expressions in builting constructions*
- *Associated commands in Unix environment ( *grep, awk, sed, etc.* )*

## **Part 12: Sed text editor**

- *Basic principles of ed text editor*
- *Versions of sed*
- *Basic principles of streamed ed text editor ( sed ), offline text editing philosophy*
- *One-line sed commands*
- *Advanced usage of sed*
  - *Inserting, removing, replacing, substituting text*
  - *Working with pattern and hold buffers*
  - *Looping, jumping in sed scripts*

## ***Part 13: Awk text processor***

- *What is awk*
- *Overview of awk development and versions ( awk, nawk, mawk, gawk )*
- *Principles of work ( word matrix, words and lines indexing, syntax rules )*
- *Awk language ( in a very short )*
- *Usage examples*
- *Extended usage*
  - *Associative arrays ( hashes )*
  - *Functions*
  - *Parsing-control sequences*

## ***Part 14: m4 macro processor***

- *What is a macro processor*
- *Main principles and rules, macros, parametrized macros*
- *Syntax rules*
- *Examples*
- *Advanced usage*