UNIX/Linux Shell Programming

Course code: UNIXSH

The course is designed for administrators who need to understand the system scripts, to modify their content and create new ones for the functions automation, monitoring and a dialogue with the user. In the course the participant will learn about the possibilities which are offered in shell, he will also master the basic programming techniques and will learn to create useful scripts on practical examples, these techniques will make his or other users´ work easier.

Who is the course for
The course is designed for OS UNIX administrators who need to write scripts in shell environment.

What we teach you
The course participant will learn about the possibilities which are offered in shell. He will acquire the basic

programming techniques and through practical examples he will learn to create useful scripts which make his or other

users´s work easier.

Required skills
Good knowledge of OS UNIX environment. Knowledge of basic users´ commands. The knowledge of vi editor is

essential.

Course outline
 Introduction

Overview of basic UNIX shell constructions

UNIX architecture

Possibilities and support of scripting in Bourne shell, Korn shell and Bash

Processes control

Types of commands

Processes

Commands starting

Basics for scripts writing

Scripts starting

Comments

Code tuning

Echo command, print, formatting output using printf

Variables

User variables

Variable environment

Read command

Positional parameters

Special variables

Quoting

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Metacharacters, differences in their use

Commands substitution

Eval command

Decision contruction

Returne codes

Command test and [ ]

Command if

Command case

Special constructions

Cycles

Command expr

Command while

Command until

Command for

Parameters processing using getopts command

Working with descriptor files using exec

Functions

Functions in shell

Parameters handing over

Return command

Working with signals

Asynchronous events

Signals generation

Signals processing using trap command

Enlargements available in ksh and bash

Select command

Arithmetic support

Working with field

[[ ]] command

Enlarged pattern-matching

UNIX/Linux Shell Programming

Ksh and bash environment modification

Tools and external programs
Data mining from files

Combination of data content

Sorting out the file content

Editing using sed and awk

Regular expressions

Effective creation of scripts

Time command
Working with PATH variable
Absolute vs. relative paths
Shell built-in commands
Effective way of using the pipe

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