

Linux for Advanced Learners The Linux Toolbox

The central tool for every Linux administrator is the shell. It is the ubiquitous command input line that works even when there is no graphical user interface. It also offers the most powerful command set in graphical environments. However, Linux newcomers in particular only use the potential of the shell to a limited extent. For example, procedures that always run in the same way can be combined into a simple script in no time at all. Starting with very simple examples, you will get a sound introduction to how you can create simple solutions yourself, e.g. to query system information from the running machine, and develop flexible scripts.

What cannot be retrieved from the machine can be passed into the scripts by the user using various methods. A powerful language syntax makes the shell a very interesting environment for system programming. Whether it is about evaluating states or the content of variables, whether processes are to be repeated in loops - the shell can keep up with any common scripting language. It is available on every Linux system without being dependent on version numbers to the same extent as the highly acclaimed market leaders. This is why Shell is still the most popular tool for full-blown hackers.

Because many Linux systems are now also graphical desktop systems, this course also provides a comprehensive overview of shell scripting with graphical front-ends. This part is optional for a three-day course, which definitely needs to cover the basics of shell scripting, and is dependent on the rest of the course progression.

The course, together with Linux Administration II, prepares you for the LPI 102 exam.

Course Contents

- General information about shells
- From command to executable script
- Variables
- What variables are currently available?
- What can you do with them?
- System variables
- Creating variables
- Automatic variables
- Scope of variables
- How do variables get into the script?
- Declare
- Transfer
- Read
- Query values from the system
- What don't you need to program?
- Dynamic directories and their treasures
- Parsing program output
- Shell programming logic
- Tests and error levels
- If-then-else
- Single-line ifs
- case
- Accelerators: Loops
- for
- while/until
- Getting out of loops
- Shell functions
- Declaring functions
- Local variables
- Swapping shell libraries
- Arrays
- Arrays and lists
- Declaration and use
- Interaction with shell scripts
- Dialog
- Whiptail
- Graphical dialogs
- kdialog
- zenity and yad
- Regular expressions
- Overview
- Curly braces
- Character classes
- The crowbar: grep
- Other tools/facilitators
- sed
- awk
- Scripting into the network with ssh
- Remote login and remote administration
- Mass administration of computers

Target Group

This course is suitable for you if you want to make your work on the Linux system more efficient and sustainable.

This course is only partially a programming course. Programming here is a means by which we achieve system administration goals.

Prerequisites

Participants should have a solid knowledge of Linux at the level of the LPI 101 exam, as can be acquired in the courses Linux Fundamentals and Linux Administration I.

General networking basics are recommended.

Programming knowledge is generally not required for this course. Although the syntax of the command line interpreter allows programming, many people believe that it is not a fully-fledged programming language. While this course targets a problem, you will learn the tools of the shell - yes-no queries, conditionals or multiple case distinctions - in an easy and understandable way.

This Course in the Web



You can find the up-to-date information and options for ordering under the following link:

www.experteach-training.com/go/LIGA

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