Publication date : 04/10/2024

Course : Perl language

Unix/Linux/Windows system scripts

Practical course - 3d - 21h00 - Ref. PRL

Price : 1940 CHF E.T.

This course will teach you how to program or maintain operating procedures written in Perl. It will not only help you master the language itself, but also introduce you to the [[Perl philosophy]], which includes the use of a large number of modules to extend its possibilities almost to infinity.

Teaching objectives

At the end of the training, the participant will be able to:

- Master the syntax of the PERL language
- Using regular expressions
- Managing files and directories
- Interacting with the operating system
- Exploit relational database data
- Writing Perl scripts in a Web context

Intended audience

IT specialists involved in operating procedures in Unix, Linux or Windows environments.

Prerequisites

Basic knowledge of programming and an operating system (Windows or Linux/Unix).

Course schedule

1 Presentation

- Language history.
- Perl, for what purpose?
- Features of the Perl language.
- The different distributions and versions.
- Official documentation.
- Install and run a Perl program for the first time.
- Source files, extension and interpretation.
- Tools for using Perl.

Hands-on work

Installation of the Perl interpreter.

PARTICIPANTS

IT specialists involved in operating procedures in Unix, Linux or Windows environments.

PREREQUISITES

Basic knowledge of programming and an operating system (Windows or Linux/Unix).

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

2 Language essentials

- Perl program structure, script header.
- Coding conventions and naming rules.
- Add comments.
- Character strings, code interpretation.
- Variables, naming and typing. Scope of variables.
- Scalars.
- Operators: calculation, increment, assignment, comparison, etc.
- Arrays, initialization, content display.
- Associative arrays (hash table), keys and values functions.
- Memory references.
- System variables.
- The notion of blocks.
- Conditional control structures: if, if... else, if... elsif... else.
- Iterative control structures: while, for, until, foreach.
- Standard I/O flows (stdin, stdout, stderr).

Hands-on work

Manipulate the language by writing different programs.

3 Regular expressions

- Expression use cases.
- Overview of different patterns: metacharacters, quantifiers, special characters.
- Pattern Matching.
- Pattern Substitute.
- Command line options for the interpreter.
- Third-party programs: sed, awk...
- Perl used as an additional filter.

Hands-on work

Use of regular expressions.

4 Functions, procedures, modules

- Defining functions. Difference between functions and procedures.
- Declare a function, call it, pass arguments and retrieve results.
- Visibility of variables, the my operator.
- Use of references.
- Perl's built-in functions: chomp, chop, length...
- Notion of "package" and module.
- Standard distribution modules.
- CPAN modules, census, documentation, resource sites.
- Module installation.
- Using a "classic" module and a "object-oriented" module. The require and use functions.
- Making a module.
- Document the modules created.

Hands-on work

Writing functions. Integrating a module into development. Creating a module.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

5 File and directory management

- Notion of filehandle.
- File management: open, read, write, close...
- Information on files (owner, size, rights, etc.), stat.
- The diamond operator.
- Directory management: change, browse, create, delete...
- Error handling for file and directory manipulation.

Hands-on work
Read/write files. Directory manipulation.

6 Interaction with the operating system

- Access to operating system information.
- System commands: mkdir, rmdir, chown, chroot, chmod...
- Process management.
- Creation of child processes: system, exec.
- Reverse quotes.
- Interaction with the Windows system (Win32 and Win32API modules).

Hands-on work
Create child processes.

7 Advanced aspects, databases, object implementation

- Customized sorting.
- Additional string processing.
- Data structures based on anonymous references.
- Database access using the DBI module.
- Establish and configure a connection, query and retrieve results.
- Class structure creation and instantiation: package, subroutine and reference.
- Object constructor and destructor.
- Invoking class methods.
- The crumb tray.

Hands-on work
Exploit data from a relational database.

8 Perl scripting in a Web context, CGI module

- HTTP protocol, Web server, CGI block diagram.
- The CGI module.
- Environment variables, GET and POST methods.
- Generate HTML form elements with Perl.
- Processing of forms, exploitation of results.

Hands-on work
Writing a CGI script in Perl.

Dates and locations

REMOTE CLASS
2026 : 10 June, 2 Dec.