Partners

Academic Partners

- University of Bern
- University of Fribourg
- University of Geneva
- University of Neuchatel
- University of Applied Sciences of Fribourg
- University of Tübingen

Cooperation

- TECFA, School of Psychology and Education, University of Geneva

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Demo Course

URI	http://webct.unibe.ch
Login	vitels-showcase
Password	vitels-showcase

Virtual Internet and Telecommunications Laboratory of Switzerland

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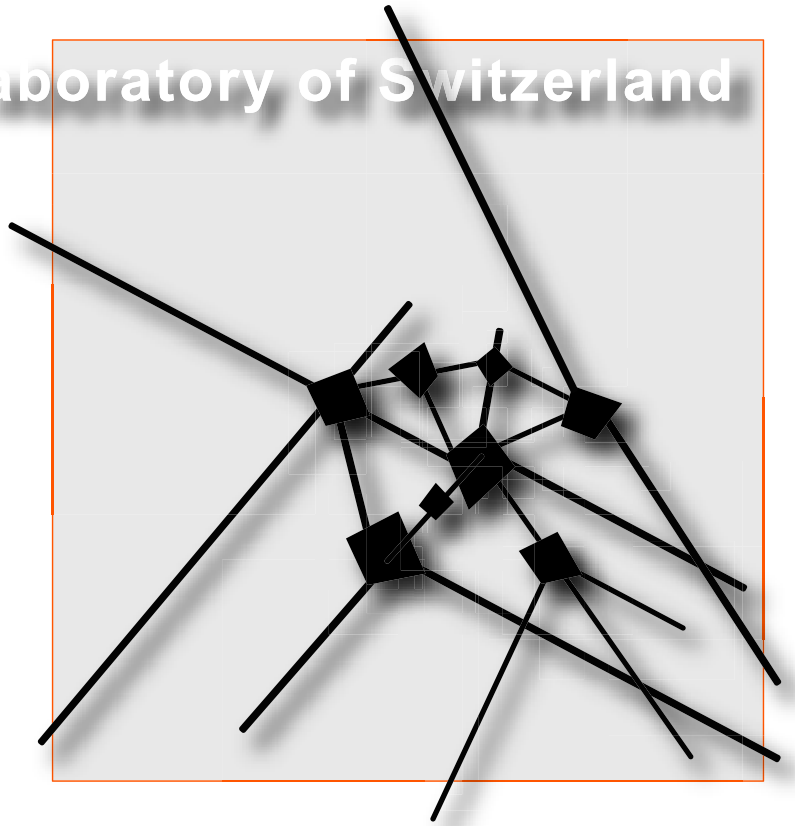

www.vitels.ch

Swiss Virtual Campus Project
991043

Virtual Internet and Telecommunications Laboratory of Switzerland

Virtual Internet and Telecommunications Laboratory of Switzerland

Overview

VITELS provides a modular structured online course covering a variety of topics in the area of tele-communications and computer networks with a special focus on hands-on experiences.

You are invited to download the VITELS Pedagogy and Graphics Design Guide together with a tool that helps developing new VITELS modules. We also provide you with information about our self-developed authentication and authorization infrastructure for hands-on sessions with distributed content providers.

All modules use the same layout:

Chapter 1: Introduction

1 Welcome
2 The Goals and how to Reach Them
3 Module Vicinity
4 My Goals
5 Tips
6 FAQ

Chapter 2: Theory

1 Theoretical Basics
2 Readings
3 Personal Synthesis
4 Self Test
5 Quiz

Chapter 3: Knowledge Application/Exploration

1 Introduction
2 Hands-on Session

Chapter 4: Prove Your Knowledge and Skills

1 Personal Synthesis
2 Final Quiz
3 Survey

Modules

Simulation of IP Network Configuration

University of Bern

- Introduces basic elements and mechanisms of IP networks such as routers and routing protocols.
- Learn how to set up routers within a medium-sized IP network using emulated router entities.
- Experiments are performed in a safe environment before students get in touch with real routers in following modules.

Client/Server Concepts

University of Neuchatel

- Introduces conceptual and practical aspects of client/server models.
- Understand the workings of the Hypertext Transfer Protocol as an example of a client/server protocol.
- Perform HTTP requests using a client application and analyze the obtained results.

IP Security

University of Bern

- Hands-on experiments with real network equipment.
- Set up a VPN-tunnel between two commercial routers and perform tests and measurements.
- Learn more about authentication and encryption with widely used routing equipment.

Firewall Management

University of Fribourg

- Teach hands-on experience about configuration and management of firewalls.
- Understand conceptual and practical aspects of firewalls and related security issues.
- Develop skills in operations for configuring and managing a real firewall.

Modules

Sockets and Remote Procedure Calls

University of Bern

- Understand Inter-Process Communication schemes and the TCP/IP Client/Server concept.
- Acquire basic network programming skills.
- Develop simple TCP/IP and RPC applications.

Remote Method Invocation

University of Bern

- Understand the RMI programming model for distributed applications and the use of middleware.
- Learn how to extend and adapt object-oriented concepts from a local to a remote context.
- Develop a client and a server application by using RMI.

Application Server

University of Bern

- Experience the possibilities of application servers.
- Understand multi-tier architectures and the J2EE platform.
- Implement application server programs.