# UNIX/Linux - Security, Secure Communication and Cryptography

Course code: UNIXB2

This course is designed for network server administrators who need secure both data on the server server and the communication with the server. The participants will familiarize themselves with the basics of encryption in the computer security field. They will also learn to work with PGP (GnuPG), SSL, DM-Crypt systems, etc.

## Who is the course for

The course is designed for network administrators and network server administrators who use OS UNIX and who would like to learn to make the communication of these servers with their surroundings secure.

# What we teach you

The participants will learn basic principles of cryptography and encryption in the computer security field. They will also learn how to implement PGP (GnuPG), SSL systems, etc.

# Required skills

Good knowledge of OS UNIX

# Teaching materials

GOPAS study materials

### Course outline

Basic principles, methods and applications of cryptography

Overview and the use of common cryptographic algorithms - HASH function, symmetric/conventional and asymmetric methods

HASH function, overview of characteristics and the use (MDx, SHAx, etc.)

Symmetric methods, overview of characteristics and the principle of running of these algorithms (DES, 3DES,AES, etc.)
Asymmetric methods, overview of characteristics and the principle of running of these algorithms, application (DH, RSA, DSA,etc.)

Some chosen applications, digital signature, confidential relations - certificates, etc.

Practical applications of cryptography

PGP (GnuPG) system, application SSL/TLS system, implementation of OpenSSL Work with keys and certificates Stunnel programme Encrypted disks using CryptoLoop and DMCrypt

GOPAS Praha

Kodaňská 1441/46 101 00 Praha 10 Tel.: +420 234 064 900-3 info@gopas.cz GOPAS Brno

Nové sady 996/25 602 00 Brno Tel.: +420 542 422 111 info@gopas.cz GOPAS Bratislava

Dr. Vladimíra Clementisa 10 Bratislava, 821 02 Tel.: +421 248 282 701-2 info@gopas.sk



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