Internet and Intranet Concepts

Audience Internet and Intranet Concepts Course
The course Internet and Intranet Concepts is designed for those who wish to learn about the background and operation of the Internet and Intranet.

Prerequisites Course Internet and Intranet Concepts
To join this course is no specific skills or knowledge is required.

Realization Training Internet and Intranet Concepts
The concepts are treated with the help presentation slides. A demo Web site is used to clarify the concepts. Attention is also paid to hands-on exercises. The course material is in English. The course times are from 9.30 up and to 16.30.
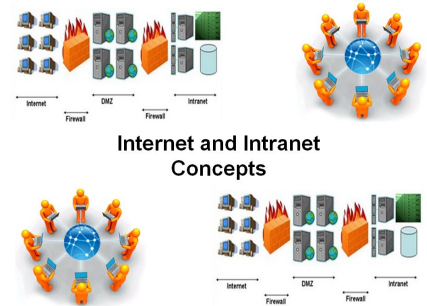
Certification Internet and Intranet Concepts
Participants receive an official certificate Internet and Intranet Concepts after successful completion of the course.

Duration: 2 days   **Price: € 1199**

Open Schedule

Internet and Intranet Concepts

Content Course Internet and Intranet Concepts

In the course Internet and Intranet Concepts the main technologies and protocols that play a role in the modern Internet and Intranets are discussed. The origins of the Internet can be traced back to ARPANET, a military network built in 1969 in the United States. The internet is now a global phenomenon, which has acquired the character of a mass medium. The basic technology based on the Internet Protocol (IP) is still in effect.

Internet Protocols
The course starts with a discussion of the network protocols that form the basis of the Internet such as IP (Internet Protocol), TCP (Transmission Control Protocol), FTP for file transfer, SMTP for email, DNS and DHCP.

HTTP Servers
Next attention is paid to how Web Servers work and how the HTTP protocol regulates the communication between a Web Server and a browser. HTTP requests, HTTP responses and HTTP headers are covered as well as the latest faster HTTP/2 protocol.

HTML, XML and JSON
Also the role of the markup language HTML with which web pages are created in combination with CSS (Cascading Stylesheets) is explained. The structured data formats XML and JSON, which play an important role in the exchange of data, are also treated.

Internet Security
Internet Security is also on the program of the course. This mainly concerns protecting activities and transactions that are carried out online. Authentication, various forms of encryption, SSL connections and the recognition of specific threats such as SQL Injection, Cross Site Scripting and Cross Site Request Forgery are discussed.

SOAP and REST Web Services
Furthermore the two main forms of Web Services are covered. Both Web Services that work with the SOAP protocol and Web Services that are based on REST are on the schedule of the course.

Client and Server Side Scripting and Ajax
Finally attention is paid to client side scripting with JavaScript and server side scripting with Java, PHP or NodeJS. And the implementation of modern Single Page Applications based on Ajax technology is discussed as well.

Modules Course Internet and Intranet Concepts

Module 1 : Internet Protocols	Module 2 : HTTP Web Servers	Module 3 : HTML and CSS
Basic Web Concepts	HTTP Protocol	HTML Markup Language
Protocols and OSI Model	Web Servers and Browsers	HTML Page Structure
Requests For Comment	Uniform Resource Locators (URL's)	Elements and Attributes
IP Protocol	HTTP Request and Responses	Links, Tables and Images
IP4 versus IP6	Request and Response Headers	Forms and Input Elements
TCP and UDP	HTTP Status Codes	Form Submission
Domain Name System (DNS)	MIME Types	Styling HTML with CSS
File Transfer Protocol (FTP)	HTTP/2	CSS Stylesheets
Email with SMTP	SPDY-protocol	CSS Selectors
POP versus IMAP	Multiplexing	CSS Box Model
DHCP Protocol	Server Push	CSS Layout
Module 4 : JSON and XML	**Module 5 : Internet Security**	**Module 6 : SOAP and REST Services**
Structured Data	HTTP Basic Authentication	SOAP Services
XML Standard	HTTP Digest Authentication	XML Transport
XML Elements	Symmetric Encryption	SOAP Message Structure
XML Attributes	Asymmetric Encryption	SOAP Headers
XML Vocabulaires	Hash Encryption	WSDL
XML Schema and XSLT	Secure Sockets Layer	REST Services
JSON Format	Secure HTTP (HTTPS)	URL Patterns
JSON Objects	Digital Certificates	Standard Methods
JSON Arrays	SQL Injection	GET and POST
Encoding JSON	Cross Site Scripting	PUT and DELETE
Decoding JSON	Cross Site Request Forgery	REST Clients
Module 7 : Client Side JavaScript	**Module 8 : Server Side Scripting**	**Module 9 : Ajax**
Client Side Scripting	Server Languages	Single Page Applications
JavaScript Syntax	Java Servlets and JSP's	Asynchronous Calls
ECMA Standards	PHP Scripts	Partial Page Updates
Variables and Data Types	$_POST Super Global	DOM API
Arrays and Functions	$_GET Super Global	Element Access
Classes and Objects	NodeJS and npm	XMLHttp Request Object
Event Handler	Package Management	Fetch API
Validation in JavaScript	Node's Event Loop	Callback Functions
JavaScript Frameworks	Session ID's	Promises
Angular, React and Vue	Session Tracking	Error Handling