Networking - basic and security of web technologies

Course code: GOC217

Two-days instructor-led traning teaches detailed functionality of HTTP, HTTPS and proxy servers and their farms, overview of TLS (SSL) protocols and especially certificate requirements, briefly basics of HTML and JavaScript, but in detail principles of cookies and other methods of state management, methods of web authentications such as Basic, Windows, forms-based (FBA) and OAuth, WS-Fed or SAML-P, captcha, multifactor authentication (MFA). Great emphasis is given to troubleshooting skills and basic of usage of developer tools such as the Developer Toolbar (F12) and Fiddler.

Prerequisities

Knowledge in extent of the courses which are listed in the bellow sections **Previous Courses** and **Related Courses**

Good understanding of TCP/IP and DNS technologies

Course outline

Overview of web technologies

HTTP protocol and its security using HTTP encryption by TLS

Essential HTTP headers

Web proxy servers and application HTTP firewalls

Browser identification, language customization, IP addresses etc.

Web servers with static content

Application web servers with dynamic content such as ASP.NET, Java, ASP, PHP etc.

Principles and basics of JavaScript dynamic web content in browser clients

Methods of GET, POST, HEAD requests and their differences and security properties, form upload (post-back)

Error states, redirects

Session cookies and persistent cookies, their security and other properties

Same-origin policy of HTML elements such as pictures, scripts, cookies, iframes etc

Intro into first-party and third-party cookies, their blocking and privacy (GDPR)

Forms-base (cookied-based) authentication and its common implementations

Troubleshooting HTTP communications with Fiddler proxy

Developper tools integrated into web browsers

Other HTTP authentication methods such as basic or windows and SAML

Security and other properties of TLS/HTTPS certificates and protecting communications

Principles, functionality and configuration of TLS protocol in Windows and in browsers

Basic principles of web application security and their development

Modern protection technologies such as HSTS or X-Frame-Options

Overview of essential web attacks such as XSS or CSRF/XSRF

Preparation for Microsoft certification

Most Microsoft certification exams do not require students to attend an official MOC course in order to pass the exam.

This applies to all certifications except for MCM

Official Microsoft MOC courses as well as our own GOC courses are good ways of preparation for Microsoft certifications such as MCP, MTA, MCSA, MCSE or MCM

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This does not mean that official MOC courses would serve as the only necessary praparation. The primary goal of an MOC course is to provide for sufficient theoretical knowledge and practical experience to effectively work with the related product

MOC courses usually cover most of the topics required by their respective certification exams, but often do not give every topic the same amount of time and emphassis as may be required to completelly pass the exam

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