# **Certificate Course in Network Security**

# Course Objective

with Vulnerabilities & Threats all over, this course aims at preparing participants to secure their Computer Networks in various environments like Microsoft, Linux and Cisco

## Course Outcomes

On completion of this course the participants will be able to:

- Understand of ethical hacking ethics and legality
- Implement the Foot printing and social engineering, Scanning and enumeration, system hacking
- Identifying of Trojans, back doors, virus and worms, sniffers, Denial of services and session hijacking
- Understand Hacking web servers, web application vulnerabilities
- Implementing Evading IDS honey pots and firewalls, wireless hacking
- Implementing Cryptography, penetration testing methodologies

- Configuring, verifying & troubleshooting a switch with VLANs and interswitch communications
- Implementing an IP addressing scheme and IP services to meet network requirements
- Implementing CBAC and zone-based firewalls, IPS
- Install, Configure of STP, VLAN, Secure layer 2 Switches
- Implement Traffic Control IP tables , NAT, SNAT, DNAT, PAT
- Implement SQUID (proxy server), QOS, Bandwidth, Splitting

- Implementing of Securing Web, FTP, Open SSH, NFS, Email
- Implementing of IPcop as Firewall Intrusion Detection and Recovery
- Installing and configure AD, group policy, access control, DFS.
- Configure ADCS & PKI deploying a CA hierarchy EFS
- Configure ADRMS, IPSec, NAP, NAT, VPN services.
- Design & Identifying treats to network security
- Implementation and maintaining of TMG

# Target Audience

This course is designed for individuals expected to have some hands-on experience with Windows Server, Windows based networking, Active Directory, Anti-Malware products, firewalls, network topologies and devices, and network ports

# Teaching Methodology

This course is based on theoretical lessons and delivered in a Classroom atmosphere.

# Prerequisites

Graduates / Engineers / Diploma holders with basic Knowledge of Hardware and networking application used

Duration: 10 Weeks (5 days a week, 6 - 8 hours per day)

**Batch 1 -** 03-07-2017 to 09-09-2017 **Batch 2 -** 11-09-2017 to 18-11-2017

#### Course Outline

#### Network Essentials

- Networking Essentials, LAN, WAN, Protocols
- ISO Model, IP Addressing, Internet, Intranet, Network Cables

#### Essential of IT Security System

- Introduction to ethical hacking ethics and legality
- Foot printing and social engineering
- O Scanning and enumeration, system hacking
- Trojans, backdoors, virus and worms, sniffers
- Denial of services and session hijacking
- Hacking web servers, web application vulnerabilities,
- Evading IDS honey pots and firewalls, wireless hacking
- Cryptography, penetration testing methodologies

# ■ Forefront Threat Management Gateway (TMG)

- Installing and Maintaining TMG Server, Enabling Access to Internet Resources
- Configuring TMG as a firewall, Access to Advanced Application & Web Filtering
- Implementing Caching to Browsing & TMG Enterprise Edition

### Windows Security

- Overview of AD, group policy, access Control, file system Security.
- Config AD CS overview of PKI deploying a CA hierarchy, EFS.
- O Config AD right management services,
- Configuration of IPSec and network access protection.
- Config VPN access, routing and remote access, NAT.
- Designing network security, identifying threats to network Security.

#### Linux Security

- O Traffic Control Iptables, NAT, SNAT, DNAT, PAT
- O SQUID (proxy Server), QOS, Bandwidth Splitting
- Internet Security Web, FTP, OpenSSH, NFS, Email
- IPcop as Firewall Intrusion Detection and Recovery

#### CCNA Security

- Administrative access, administrative access using AAA & RADIUS. Policy development & implementation.
- CBAC and zone-based firewalls, intrusion prevention system (IPS) using the CLI and SDM.
- Spanning tree, VLAN, securing layer 2 wwitches, VPN using Cisco IOS and SDM, remote access VPN server & client