

## Windows Server 2012 Security

### 1. Introduction to Server 2012

- Server 2012 Editions and comparison
- New features in Server 2012
- Install and Deploy Windows Server 2012

### 2. General Security

- Information Security
- Key concept in Security
- Vulnerability Research

### 3. General attacks and Countermeasures

- Attack Categories
  - Reconnaissance Attacks
    - Internet Information queries
    - Ping Sweeps
    - Port Scans
    - Packet Sniffers
    - Vulnerability Assessment
  - Access Attacks
    - Password attacks
    - Man-in-the-middle attacks
    - Social engineering
    - Phishing
  - Denial of service Attacks
    - SYN flood attack
    - Service Request Flood
    - Bandwidth Attack
    - UDP Flood
    - ICMP Flood
  - Worms, viruses, and Trojan horses

### 4. Network Infrastructure

- Dynamic Host Configuration Protocol
  - DHCP Design
  - DHCP Based Attacks
    - DHCP Starvation attack
    - Rogue DHCP Servers



- Securing DHCP
  - DHCP Authorization
  - DHCP Snooping
  - Auditing DHCP
- Domain Name System (DNS)
  - Fundamentals of DNS
  - DNS Components
  - DNS Transactions
  - Threats to the Domain Name System
    - Cache Poisoning
    - DNS Hijacking
    - DNS Spoofing
    - DNS Amplification
    - DNS Dynamic Update Vulnerabilities
    - Compromise of DNS server's authoritative data
  - Securing DNS
    - DNSSEC
    - Protecting DNS Cache
    - Transaction Signature (TSIG)

## 5. Securing Network Access

- General Network Settings
- Windows Firewall
  - Introduction to Windows Firewall with Advanced Security
  - Configuring Network Profiles
  - Creating a Rule
- Internet Protocol Security
  - Security Issues with IP
  - Introducing IPSec
  - Services
  - IPSec Components
  - Tunneling
  - IPSec Policy Structure
  - IPSec Planning

## 6. Securing Remote Access

- VPN
- Direct Access

## 7. Network Diagnostics and Troubleshooting

- Task Manager
- Resource Monitor
- Performance Monitor

- Event Viewer
- Network Monitor

## 8. Securing Data

- Encrypting File System
- BitLocker
- NTFS Security
- File Server Resource Manager
- Dynamic Access Control
- Active Directory Rights Management Service

## 9. Public Key Infrastructure (PKI)

- PKI Overview
- PKI elements
  - Certification Authorities
  - Certificate Directory
  - Key Recovery Server

## 10. Network Tools and Utilities

- Local Security Policy
- Group Policy
- Security Configuration Wizard
- Other Relevant Tools
  - PortQry
  - Microsoft Security Compliance Manager
  - Microsoft Baseline Security Analyzer
  - Enhanced Mitigation Experience Toolkit
  - Attack Surface Analyzer

## 11. Hardening IE

- Securing Cookies
- Do not Track
- InPrivate Browsing
- Pop Up Blocker
- Tracking Protection

## 12. Patch Management

- WSUS Components
- Installation of WSUS
- Configuration of WSUS Server
- Configuration of WSUS Client