

- **Introduction To Required Skills For Security**
 - TCP/IP
 - Unix/linux
 - Introduction to the hacking process
 - Virtualization
 - LAB: Security Skills Introduction
 - Security Model
 - Authentication
 - Confidentiality
 - Integrity
 - Availability
 - Authorization
 - LAB: Security Model
 - Security Posture
 - Promiscuous
 - Paranoid
 - Permissive
 - Prudent
 - Security Posture
 - Identifying services and allowing them
 - Risk Management
 - Defining types of risk
 - Types of risk
- **Introduction & Overview**
 - Introducing TCP/IP networks
 - What TCP/IP Networks
 - What TCP/IP provides: Key application services & multivendor capabilities TCP/IP & the internet
 - Internet RFC's & STDs
 - TCP/IP Protocol architecture
 - Protocol layering concepts
 - TCP/IP layering
 - Components of TCP/IP networks
 - Network protocols (IP, TCP, UDP, ICMP)
 - LAB: TCP/IP
 - Transport protocols
 - Packet headers
- **Encapsulation**
 - LAB: The Layers
 - Analyzing Network Traffic

- Examining the data at the packet level
- Control flags of TCP
- **Identifying the characteristics of network connections**
 - LAB: Analyzing Packets
 - Advanced Protocol Analysis - Using Protocol Analyzers
 - tcpdump
 - dsniff
 - Wireshark
 - Etherape
 - Ettercap
 - LAB: Protocol Analysis I
 - Wireshark
 - Leveraging the filter capabilities
 - Working within the GUI
 - Low level analysis
 - Following session communication
 - Customizing the interface
 - Using the statistics features within the tool
 - Text-based Wireshark
 - Packet decomposition
 - LAB: Protocol Analysis II
 - Tcpreplay
 - Using traffic replay for training & advanced analysis
 - Customizing & crafting packets
 - Command line tools
 - GUI based tools
 - LAB: Protocol Analysis III
 - Advanced features of Wireshark
 - Filters
 - Sessions
 - Graphs
 - Endpoints
 - Statistics
 - Custom
 - LAB: Advanced Wireshark
 - Colasoft
 - Hping
 - LAB: Crafting Packets
- **UNIX/Linux**
 - Interacting with UNIX

- Graphical user interfaces
- The Common Desktop Environment (CDE)
- GNOME, Java Desktop System, others
- The command line interface
- Entering commands to the shell
- Browsing online documentation
- Displaying man pages
- Managing Files
- Essential file housekeeping tools
- Copying: cp
- Renaming: mv
- Removing: rm
- Linking: ln
- Editing: vi
- Printing: lp, lpr
- Root
 - Ways to assume root
- Lab: UNIX I
 - Working with the processes & jobs
 - ps
 - jobs
 - kill
 - Disk Commands
 - Mount
 - Unmount
 - df
 - du
 - Working with files
 - gunzip
 - zcat
 - tar
 - Searching files & directories
 - find
 - grep
 - strings
- Compiling programs
- Password storage
- Networking
- Address resolution
- Editors
- Lab: UNIX II

- **Introducing Linux**
 - The UNIX heritage
 - Linux inception
 - Linux kernel & GNU tools
 - Open source licensing
 - Distributions
 - Accessing the system
 - The GNOME desktop
 - Customizing panels, launchers & applets
 - Examining graphical applications
 - Personalizing the terminal window
 - Starting at the command line
 - LAB: Linux

- **Overview of Virtual Machines**
 - Defining virtual machines (servers & workstations)
 - Advantages of deploying VMs
 - Creating a Virtual Machine from a System Image or Another Virtual Machine
 - Conversion Process for Importing from Other Formats
 - VMware Converter Compared to the Conversion Wizard
 - Supported Source machines
 - Operating System Compatibility
 - Importing from Various Sources

- **Transferring Files & Text Between the Host & Guest**
 - Using drag-and-drop
 - Enable or disable drag-and-drop
 - Using copy & paste
 - Enable or disable copy & paste
 - Using shared folders
 - Set up shared folders
 - Enabling and disabling shared folders
 - Viewing a shared folder

- **Preserving the State of a Virtual Machine**
 - Using the suspend & resume features
 - Use hard suspend or soft suspend
 - Suspend or resume a virtual machine
 - Using snapshots
 - Scenarios for using multiple snapshots
 - Information captured by snapshots
 - Snapshot conflicts

- Enable or disable background snapshots exclude a virtual disk from snapshots
- 193
- Snapshot manager overview
- Take a snapshot
- Rename a snapshot or recording
- Restore an earlier state from a snapshot
- Delete a snapshot or a recording
- Take or revert to a snapshot at power off

- **Configuring a Virtual Network**
 - Components of the virtual network
 - Virtual switch
 - DHCP server
 - Network adaptor
 - Common networking configurations

- **Building complex virtual architectures to emulate enterprise architectures**

- **Introduction to Vulnerability Assessment**
 - Defining vulnerability
 - Vulnerability scanners
 - Challenge of vulnerability assessment
 - Penetration testing defined
 - Enumeration

- **Introduction to the Hacking Process**
 - Hacking Methodology
 - Surveillance
 - Foot printing
 - Scanning
 - Vulnerability assessment
 - Exploitation
 - Covering tracks
 - Evasion

- **Challenges of Staying Current**
 - Books
 - Mailing lists
 - Videos
 - Professional organizations