

Digital Forensic Investigation Professional (DFIP)

Program Coverage

Part I - Introduction to Digital Forensics

- 1.1 Traditional & Non-traditional Forensics
- 1.2 Virtualization
- 1.3 History of Forensics
- 1.4 Legal Considerations
- 1.5 Computer Forensics

Part II - Computer Network Forensics

- 2.1 Network forensics
- 2.2 Database forensics
- 2.3 Network Infrastructure
- 2.4 Data link layer
- 2.5 Network Layer
 - 2.5.1 IP Addressing
 - 2.5.2 Examples of IP address calculation
 - 2.5.3 Examples of Classes of IP Addresses
 - 2.5.4 Subnet Mask - The Network address identifier
 - 2.5.5 Private IP addresses
 - 2.5.6 Time to live (TTL)
- 2.6 Routing
 - 2.6.1 Static Routing
 - 2.6.2 Dynamic Routing
- 2.7 Introduction to Subnetting
 - 2.7.1 Subnetting Basics
 - 2.7.2 Classless Inter-Domain Routing (CIDR)
- 2.8 Transport layer
 - 2.8.1 Connection oriented protocol

2.9 Switching

- 2.9.1 Layer 2 Switching Methods
- 2.9.2 Store-and-Forward Switching
- 2.9.3 Cut-Through Switching
- 2.9.4 Carrier Sense Multiple Access / Collision Detection (CSMA/CD)

2.10 Layer 3 Switching

- 2.10.1 Spanning Tree protocol (STP)
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- 2.10.3 VTP Modes of operation

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- 3.1 Mobile Device Forensics
- 3.2 Mobile operating Systems
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- 3.4 Data Acquisition on Mobile devices
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- 4.1.2 FAT32

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- 4.2.1 Clusters and Sectors on an NTFS Volume
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- 4.5 Mac OS file systems
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 - 5.1.3 Filtering Parameters
- 5.2 Promiscuous Mode Capture
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- 5.5 TCP flags
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- 5.7 Dissectors
- 5.8 Importing files from other capture programs
- 5.9 Interpreting the captured data
- 5.10 Display time formats
- 5.11 Follow TCP streaming
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- 6.2 File Structure based Carving
- 6.3 Block Based Carving
- 6.4 Fragment Recovery Carving
- 6.5 Volatile Data carving
- 6.6 The limitations of data carving
- 6.7 Extracting the data from the media
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- 6.10 Steganography
- 6.11 Hiding files
 - 6.11.1 Hide Files using the Steganography Technique
 - 6.11.2 The Secure Hiding of Files and Folders

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- 7.2 Symmetric Cryptography
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 - 8.2.2 ARP Poisoning Attack

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 - 9.3.1 Admissibility
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- 9.4 Planning Acquisition
 - 9.4.1 Preparations for acquiring data
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- 10.3 CAINE
- 10.4 Sans Investigative Forensics Toolkit - SIFT
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- II SIM Card Architecture
- III Limitations in Mobile Device Forensics
- IV Data Destruction Industry Standards
- V Subnetting Class A, B and C networks
- VI Challenges in present day Digital Forensics