

# Index

## A

access control 318–326, 338  
 model 345–357  
 active tracing 368  
 activity monitoring 358, 362  
 ADAM 333  
 advanced encryption standard (AES) 60  
 aerial photography 300  
 Al-Jazeera 21  
 Al-Qaida 8  
 Al Qaeda 51  
 amplification attack 265  
 anomaly detection 327–337, 358  
 antispam 254–261  
 association rule mining 359  
 attacker 165  
 auditing 210  
 authentication 130, 189, 258, 338  
 authenticity 415  
 authentification 319  
 authority 194  
 authorization 318, 319, 356  
 availability 130, 319

## B

barrier  
 analysis 245  
 design 245  
 behavioral information security 199–205  
 bin Laden, Osama 2, 51  
 bio-cyber machine gun (BCMG) 338–344  
 Blaster worm 78–82  
 bouncing techniques 392–396  
 business integrity (BI) 67

## C

Carnivore 476  
 charities 141  
 Chechen rebel 43

chief knowledge officer (CKO) 12  
 cipher 57  
 Civil Liberties Monitoring Project (CLMP) 174  
 civil rights 173–181  
 Civil War 300  
 cluster 359  
 clustering 375  
 hamming 379  
 unsupervised 375  
 Code Red 267  
 COMCRIME study 432–438  
 command and control warfare (C2W) 441–445  
 commercial off-the-shelf (COTS) 404  
 common sense 209  
 competitive early warning (CEW) 211  
 computer  
 crime 398  
 monitoring 175  
 Computer Misuse Act 308  
 confidentiality 130, 285, 319, 415  
 copyright 433–438  
 corporate security 208  
 Council of Europe (CoE) 470  
 counterterrorism 10, 292  
 counterterrorism program  
 crime 4  
 cracker 307  
 critical infrastructure 36  
 critical infrastructure protection (CIP) 84  
 cryptanalysis 59  
 cryptography 57–64, 319, 338  
 cyber  
 attack 85, 97, 109, 229, 404, 448  
 counterterrorism 291–297  
 criminal 121  
 exploit 37  
 forensics 397–402

intrusion 374  
 planning 9  
 security 78–82, 191, 446  
 model 228–240  
 stalking 216–227  
 terrorism 7–16, 36, 42, 83–90, 138, 155, 254, 273, 345, 383  
 attack 1–6  
 terrorist 43, 113, 184, 241, 392  
 war 18  
 attack 105–111  
 defense 241–253  
 warfare 35, 291–297, 327, 439–445  
 warrior 241  
 weapon 17  
 cybercrime 431–438, 470  
 Cybercrime Convention 433–438  
 cyberspace 7, 36, 91, 421

## D

data  
 encryption standard (DES) 60  
 flow diagram (DFD) 246  
 intrusion 470  
 mining 358–365  
 identification 374  
 protection 420–430  
 transformation 329  
 database management system (DBMS) 162  
 denial-of-service (DoS) 133, 232, 262–272, 273, 328  
 attack 421  
 Department of Defense (DoD) 320, 404, 439–445  
 digital address  
 denial-of-service (DoS) 366–373  
 security 208  
 signature 51, 283

- discretionary access control (DAC) 356
- distributed  
attack tool 413  
denial-of-service (DDoS) 262
- domain name 122  
server (DNS) 448  
service 94  
system 258
- dual criminality 476
- dynamic survivability model 408
- E**
- e-  
postage 257  
stamp 257
- E-Crime Watch survey 470
- eavesdropping 307–317  
software 309
- Echelon 453–468
- electromagnetic spectrum 299
- electronic  
bank 139  
commerce 129, 262  
communication 424  
document interchange (EDI) 285  
government 322  
mail 123, 394–396  
phishing 192  
money management 129–137  
signature 283  
surveillance 173–181
- emergency response system 383–391
- encryption 59
- Environmental Protection Agency (EPA) 294
- espionage  
economic 457  
political 458, 459
- ethics 105
- European Union (EU)  
149, 282, 422, 431–438
- exploitation 121
- F**
- face-to-face conversation 184
- false  
negative 328  
positive 328
- Federal Bureau of Investigation (FBI)  
4, 177, 254
- firewall 100, 311
- flood attack 265
- Foreign Intelligence Surveillance Court (FISC) 460
- fraud 436–438
- FS-ISAC 83–90
- G**
- G8 436–438
- General Accounting Office (GAO) 85
- Geneva Convention 107
- geographic information systems (GIS) 291–297
- global system for mobile communication (GSM) 148
- Google 125
- gray market informatics 114
- guerilla warfare 12
- H**
- hacker 9, 33, 45, 91, 121  
hacking 307–317, 433–438, 469
- hacktivism 90
- Hammas 9
- harassment 217
- hashcash 257
- Hezbollah 46
- hidden pattern 359
- hindering 434–438
- HIPAA 116
- Honeynet Project 99
- honeynets 107
- honeypot 98, 276  
signature 98
- human interaction 207
- hybrid system 379
- I**
- information  
extraction (IE) 361  
gathering 120–128  
security 129  
sharing 85  
technology (IT) 2, 65, 86  
warfare 17–25, 44, 403, 441–445
- instant messaging (IM) 147
- integrity 130, 319, 415
- intellectual property 433–438, 436–438
- International Cybercrime Convention 469–476
- international outsourcing 113
- Internet 42–49, 120, 129, 368, 469  
Engineering Task Force (IETF) 449  
growth 200  
protocol (IP) 107, 122, 256, 310, 374, 448  
relay chat (IRC) 152  
service provider (ISP) 393–396, 400, 448
- usage 360
- user 147
- interruption 434–438
- intrusion detection 268, 274  
system 327, 358, 398
- K**
- Kazaa 311
- key  
logger 310  
logging 185
- keystroke 185  
recording 176
- kill files 220
- knowledge 8  
discovery in databases (KDD) 359  
management 7–16  
system (KMS) 247  
society 7  
worker 8
- L**
- Land Information Warfare Activity (LIWA) 441–445
- light detection and ranging (LIDAR) 294
- link analysis 360
- load balancing 268
- local area network (LAN) 310
- logs 275
- M**
- Magic Lantern software 309
- malware 37, 154–160
- mandatory access control (MAC) 321
- Massachusetts Institute of Technology (MIT) 61
- measurers of performance (MOP) 407
- micropayment 269
- military  
classification 349  
history 97
- MINARET 459
- mobile payment 138, 142
- money laundering 138–145, 436–438
- Morris worm 273
- N**
- naïve Bayes (NB) 377
- National Security Agency (NSA) 453–468
- NetWar 7, 11
- network

effect 79–82  
monitoring 273  
security 274, 281–290  
sniffer 275

**O**

Office of Emergency Preparedness (OEP) 386  
offshoring 113  
outsourcing 113  
over-criminalization 434–438  
overloading 193

**P**

pacifism 106  
packet sniffing 37, 312  
passive attack 400  
password 309  
  cracking 313  
PayPal 129  
penetration test 415  
perception war 21  
personal  
  computer (PC) 469  
  data 432–438  
  digital assistant (PDA) 398  
  identification  
    card (PID) 210  
    number (PIN) 310  
  information 112  
  privacy 173  
personality disorder 219  
personnel anomaly detection 206–215  
phishing 22, 93, 255  
pingsweep 368  
Polybius 58  
port address translation (PAT) 369  
portscan 368  
port scanning 121  
predictive modeling 359  
prepaid card 142  
privacy 50, 66, 175, 207, 216, 432–438  
  protection 422  
Privacy Rights Clearinghouse 178  
privilege escalation 93  
propaganda 43  
public  
  -key certificate 284  
  key  
    cryptography 61, 282  
  infrastructure 281–290

**Q**

quality of service (QoS) 268

**R**

rank 209  
reciprocation 193  
reliability 66, 130  
remailer approach 256  
remote  
  -to-local (R2L) attack 328  
  sensing 298  
reverse firewall 100  
risk  
  analysis 244  
  identification 243  
role-based access control (RBAC)  
  322  
root key 284  
rootkit 313  
round-trip time (RTT) 369

**S**

security 19, 57, 66, 129, 187, 208, 345, 413, 421  
  monitoring 274  
  national 347, 449  
  needs 243  
  scan 415  
  system 2  
  vulnerability 92  
self-awareness 209  
sender authentication 258  
September 11  
  3, 36, 183, 293, 443–445, 446  
short messaging service (SMS) 147  
signature 98  
simple  
  mail transfer protocol (SMTP) 123  
  public key infrastructure (SPKI) 287  
smart identification (ID) card 211  
sniffer 99, 267, 275  
social  
  awareness 206  
  engineering 121, 182–190, 191–198, 415  
  network analysis 11  
software  
  security 78–82  
  survivability 406  
  vendor 80–82  
spam 146–153, 254  
  trafficking 147  
SpamMimic 52  
spim 146–153  
spoofing 92  
spyware 101, 311

**SQL**

  code poisoning 161–172  
SQL injection attack 161  
stalker  
  off-line 219  
stalking  
  computer 217  
  e-mail 217  
  Internet 217  
static survivability model 408  
steganography 50–56, 62  
strong affect 193  
surveillance  
  174, 221, 309, 456, 476  
survivability 404  
Syracuse Information Systems Evaluation (SISE) 201

**T**

terrorism 1, 7–16, 42–49, 345, 420–430  
  financing 140  
terrorist  
  attack 293, 443–445, 449  
  crime 3  
  group 345  
  groups 301  
  organization 360  
Terrorist Detection System (TDS) 362  
threat analysis 244  
time  
  -to-live (TTL) 368  
  between attacks 230  
timestamps 275  
traceroute 368  
transfers 140  
Tribe Flood Network (TFN) 266  
Trojan horse 94, 154–160, 190, 415  
trust 75, 193  
trustworthiness 68  
Tupac Amaru Revolutionary Movement (MRTA) 43

**U**

U.S. Defense Advanced Research Projects Agency (DARPA) 367  
ultra high frequency (UHF) 455  
user  
  datagram protocol (UDP) 264  
  profile 350

**V**

VeriSign 131  
very high frequency (VHF) 455  
virtual  
gold currencies 141  
private network (VPN) 282  
virus 6, 34, 37, 108, 314, 433–438  
attachment 308  
detection 275  
visual  
data mining 359  
evoked potential (VEP) signal 339

**W**

warfare 26–34  
watch lists 459  
watermark 51, 284  
weapons of mass destruction (WMD)  
16, 26  
Web  
content mining 358  
crawling 124  
hacking 165  
information agents 358  
mining 358  
server hacking 313  
workplace privacy 175  
worms 37, 260, 273, 309  
attack 331

**X**

XACML standard 349  
xenophobic 476

**Y**

Y2K 386