

1 Bücher

[Ecke 04, GORP 04, GaSp 96, ZCC 00, Hone 02, Grim 01, BoKa 01, Stal 98, TrWa 02, Schn 96, Baue 00, Denn 99, Oaks 98, Stei 98, Kahn 96]

Im folgenden wird vertiefende Literatur zu den einzelnen Abschnitten der Vorlesung angegeben:

2 Einleitung

2.1 Internet Wurm versus Slammer Wurm

[EiRo 89, MPSS 03, Slam 03]

3 Grundlagen

3.0.1 OSI Security Architecture

[X.800, X.802, X.803, X.810, X.811, X.812, X.813, X.814, X.815]

4 Security Engineering

4.1 DoS und DDoS

[CERT 99, Ditt 99a, Ditt 99b, Ditt 99c, Ditt 00, Chan 02]

4.2 SPAM

[EU 03]

4.3 Mobile Code

[CERT 00, SecArch1.2, Gong 98a, GMPS 97, Gong 97, GoSc 98]

4.3.1 Java Sicherheitsarchitektur

[SecArch1.2, Gong 98a, GMPS 97, Gong 97, GoSc 98]

4.4 Buffer Overflow

[Smit 97]

4.5 Twenty Most Vulnerabilities

[SANS]

5 Kryptologie

5.0.1 Steganographie

[FFWW 99, WePf 00, Prov 01, PrHo 02]

5.1 DES

[FIPS 46-2]

5.2 AES

[FIPS 197]

5.3 RSA

[Koch 96, Kali 96, Silv 01]

5.4 Kryptographische Hash-Funktionen

[Rive 92, Touc 95]

6 Sicherheitsmaßnahmen

6.1 One-Time-Password Verfahren

[Hall 95, HMNS 98]

6.2 Biometrie

[PPJ 01, JHPB 97, KaJa 96, KaJa 96, MaMa 02, Mats 02, PPK 03]

6.3 Kerberos

[KoNe 93]

Literatur

- [Baue 00] BAUER, F.L.: *Entzifferte Geheimnisse. Methoden und Maximen der Kryptologie*, Band 3. Springer, Berlin, 2000.
- [BoKa 01] BOSWORTH, S. und M.E. KABAY (Herausgeber): *Computer Security Handbook*. Wiley, New York, fourth Auflage, 2002.
- [CERT 00] CERT COORDINATION CENTER: *Results of the Security in ActiveX Workshop*. Technischer Bericht, CERT CC, Pittsburgh, PA, USA, Dezember 2000, http://www.cert.org/reports/activex_report.pdf .
- [CERT 99] CERT COORDINATION CENTER: *Results of the Distributed-Systems Intruder Tools Workshop* . Technischer Bericht, CERT/CC, November 1999, http://www.cert.org/reports/dsit_workshop-final.html .
- [Chan 02] CHANG, R. K. C.: *Defending against Flooding-Based Distributed Denial-of-Service Attacks: A Tutorial*. IEEE Communications, 40(10):42–51, Oktober 2002.
- [Denn 99] DENNING, D. E.: *Information Warfare and Security*. Addison–Wesley, Reading, 1999.

- [Ditt 00] DITTRICH, D.: *The “mstream” distributed denial of service attack tool*. Technischer Bericht, University of Washington, 2000, <http://staff.washington.edu/dittrich/misc/mstream.analysis.txt> .
- [Ditt 99a] DITTRICH, D.: *The DoS Project’s “trinoo” distributed denial of service attack tool*. Technischer Bericht, University of Washington, 1999, <http://staff.washington.edu/dittrich/misc/trinoo.analysis.txt> .
- [Ditt 99b] DITTRICH, D.: *The “Tribe Flood Network” distributed denial of service attack tool*. Technischer Bericht, University of Washington, 1999, <http://staff.washington.edu/dittrich/misc/tfn.analysis.txt> .
- [Ditt 99c] DITTRICH, D.: *The “stacheldraht” distributed denial of service attack tool*. Technischer Bericht, University of Washington, 1999, <http://staff.washington.edu/dittrich/misc/stacheldraht.analysis.txt> .
- [Ecke 04] ECKERT, C.: *IT-Sicherheit: Konzepte – Verfahren – Protokolle*. Oldenbourg, München, 3 Auflage, 2004.
- [EiRo 89] EICHIN, M. W. und J. A. ROCHLIS: *With Microscope and Tweezers: An Analysis of the Internet Virus of November 1988*. In: *Proceedings of the 1989 IEEE Computer Society Symposium on Security and Privacy*, Oakland, Ohio, 1989. , <http://www.thok.org/intranet/resume/mwe97.html> .
- [EU 03] EU KOMMISSION: *Unerbetene E-Mails: Kommission diskutiert Spam-Bekämpfung mit Vertretern aus Wirtschaft und Verwaltung sowie Verbraucherverbänden*. Presseerklärung, Oktober 2003, http://europa.eu.int/information_society/topics/ecom/highlights/current_spotlights/spam/index_en.htm .
- [FFWW 99] FEDERRATH, H., E. FRANZ, A. WESTFELD und G. WICKE: *Steganographie zur vertraulichen Kommunikation*. IT-Sicherheit, (3):10–13, 1999, <http://os.inf.tu-dresden.de/~westfeld/publikationen> .
- [FIPS 197] NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST): *Advanced Encryption Standard (AES)*. Federal Information Processing Standards 197, U.S. Department of Commerce, Gaithersburg, November 2001, <http://csrc.nist.gov/encryption/aes/> .
- [FIPS 46-2] NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST): *Data Encryption Standard (DES)*. Federal Information Processing Standards 46-2, U.S. Department of Commerce, Gaithersburg, Dezember 1993, <http://www.itl.nist.gov/fipspubs/fip46-2.htm> .
- [GaSp 96] GARFINKEL, SIMSON und GENE SPAFFORD: *Practical Unix and Internet Security*. O’Reilly & Associates, 2 Auflage, 1996.
- [GMPS 97] GONG, L., M. MUELLER, H. PRAFULLCHANDRA und R. SCHEMERS: *Going Beyond the Sandbox: An Overview of the New Security Architecture in the Java(TM) Development Kit 1.2*. In: *Proceedings of the USENIX Symposium on Internet Technologies and Systems*, Monterey, California, USA, Dezember 1997. USENIX, <http://java.sun.com/security/usenix-jdk12security.ps> .
- [Gong 97] GONG, LI: *Survivable Mobile Code is Hard to Build*. In: *Foundations for Secure Mobile Code Workshop*, 1997, <http://www.cs.nps.navy.mil/research/languages/statements/> .

- [Gong 98a] GONG, L.: *Secure Java Class Loading*. IEEE Internet Computing, 2(6):56–61, November 1998.
- [GORP 04] GERLONI, H., B. OBERHAITZINGER, H. REISER und J. PLATE: *Praxisbuch Sicherheit für Linux-Server und -Netze*. Hanser, Mai 2004, <http://www.nm.ifi.lmu.de/~sicherheitsbuch>. ISBN 3–446–22626–5, 430 p.
- [GoSc 98] GONG, LI und ROLAND SCHEMERS: *Signing, Sealing, and Guarding Java Objects*. Nummer 1419 in LNCS, Seiten 206–216, Berlin, Heidelberg, 1998. Springer, <http://link.springer.de/link/service/series/0558/bibs/1419/14190206.htm>.
- [Grim 01] GRIMES, R. A.: *Malicious Mobile Code – Virus Protection for Windows*. O’Reilly, 2001.
- [Hall 95] HALLER, N.: *RFC 1760: The S/KEY One-Time Password System*. RFC, IETF, Februar 1995, <ftp://ftp.isi.edu/in-notes/rfc1760.txt>.
- [HMNS 98] HALLER, N., C. METZ, P. NESSER und M. STRAW: *RFC 2289: A One-Time Password System*. RFC, IETF, Februar 1998, <ftp://ftp.isi.edu/in-notes/rfc2289.txt>.
- [Hone 02] THE HONEYNET PROJEKT (Herausgeber): *Known your Enemy – Revealing the Security Tools, Tactics, and Motives of the Blackhat Community*. Addison Wesley, 2002.
- [JHPB 97] JAIN, A., L. HONG, S. PANKANTI, und R. BOLLE: *An Identity Authentication System using Fingerprints*. Proceedings of the IEEE, 85(9):1365–1388, 1997.
- [Kahn 96] KAHN, D.: *The Codebreakers: The Story of Secret Writing*. Scribner, 1996.
- [KaJa 96] KARU, K. und A. JAIN: *Fingerprint Classification*. Pattern Recognition, 29(3):389–404, 1996.
- [Kali 96] KALISKI, B.: *Timing Attacks on Cryptosystems*. RSA Bulletin 2, RSA Laboratories, Januar 1996, <http://www.rsasecurity.com/rsalabs/bulletins/index.html>.
- [Koch 96] KOCHER, P. C.: *Timing Attacks on Implementations of Diffie-Hellman, RSA, DSS, and Other Systems*. In: KOBLITZ, N. (Herausgeber): *Advances in Cryptology - CRYPTO ’96*, Band 1109 der Reihe *Lecture Notes in Computer Science (LNCS)*, Seiten 104–113. August, Springer, August 1996, <http://www.cryptography.com/resources/papers/crypto1996.html>.
- [KoNe 93] KOHL, J. und C. NEUMAN: *RFC 1510: The Kerberos Network Authentication Service (V5)*. RFC, IETF, September 1993, <ftp://ftp.isi.edu/in-notes/rfc1510.txt>.
- [MaMa 02] MATSUMOTO, T. und H. MATSUMOTO: *Impact of artificial ”gummyfingers on fingerprint systems*. In: RENESSE, R. L. VAN (Herausgeber): *Optical Security and Counterfeit Deterrence Techniques IV*, Nummer 4677 in *Proceedings of SPIE*, Januar 2002.
- [Mats 02] MATSUMOTU, T.: *Importance of Open Discussion on Adversarial Analyses for Mobile Security Technologies – A Case Study for User Identification* —. Presentation, ITU-T Workshop on Security, Seoul, 2002, <http://www.itu.int/itudoc/itu-t/workshop/security/present/>.
- [MPSS 03] MOORE, D., V. PAXSON, S. SAVAGE, C. SHANNON, S. STANIFORD und N. WEAVER: *Inside the Slammer Worm*. IEEE Security & Privacy, 1(4), 2003, <http://www.computer.org/security/v1n4/j4wea.htm>.

- [Oaks 98] OAKS, SCOTT: *Java Security*. The Java Series. O'Reilly, 1998.
- [PPJ 01] PANKANTI, S., S. PRABHAKAR und A. JAIN: *On the Individuality of Fingerprints*. In: *Proceedings Computer Vision and Pattern Recognition (CVPR)*, Hawaii, Dec. 11-13 2001.
- [PPK 03] PRABHAKAR, S., S. PANKANTI und A. K. JAIN: *Biometric Recognition: Security and Privacy Concerns*. IEEE Security and Privacy, 1(2):33–42, März 2003.
- [PrHo 02] PROVOS, N. und P. HONEYMAN: *Detecting Steganographic Content on the Internet*. In: *Network and Distributed System Security Symposium (ISOC NDSS 02)*, San Diego, CA, 2002. , <http://www.citi.umich.edu/u/provos/cv.html#papers> .
- [Prov 01] PROVOS, NIELS: *Defending Against Statistical Steganalysis*. In: *10th USENIX Security Symposium*, Washington, DC, 2001. , <http://www.citi.umich.edu/u/provos/cv.html#papers> .
- [Rive 92] RIVEST, R.: *RFC 1321: The MD5 Message-Digest Algorithm*. RFC, IETF, April 1992, <ftp://ftp.isi.edu/in-notes/rfc1321.txt> .
- [SANS] SANS (SYSADMIN, AUDIT, NETWORK, SECURITY) INSTITUTE: *The Twenty Most Critical Internet Security Vulnerabilities*, <http://www.sans.org/top20/> .
- [Schn 96] SCHNEIER, BRUCE: *Applied Cryptography*. Wiley & Sons, Second Auflage, 1996.
- [SecArch1.2] GONG, LI: *Java 2 Platform Security Architecture*. Technischer Bericht Version 1.2, Sun Microsystems, Inc., Palo Alto, CA, 2001, <http://java.sun.com/j2se/1.4/docs/guide/security/spec/security-spec.doc.html> .
- [Silv 01] SILVERMAN, R. D.: *A Cost-Based Security Analysis of Symmetric and Asymmetric Key Lengths*. RSA Bulletin 13, RSA Laboratories, November 2001, <http://www.rsasecurity.com/rsalabs/bulletins/index.html> .
- [Slam 03] COOPERATIVE ASSOCIATION FOR INTERNET DATA ANALYSIS (CAIDA): *The Spread of the Sapphire/Slammer Worm*. <http://www.caida.org/outreach/papers/2003/sapphire/>, 2003, <http://www.caida.org/outreach/papers/2003/sapphire/> .
- [Smit 97] SMITH, N.: *Stack Smashing Vulnerabilities in the UNIX Operating System*. Technischer Bericht, Southern Connecticut State University, 1997, <http://destroy.net/machines/security/nate-buffer.ps> .
- [Stal 98] STALLINGS, W.: *Cryptography and Network Security — Principles and Practice*. Prentice Hall, 1998.
- [Stein 98] STEIN, L. D.: *Web Security: A Step-by-Step Reference Guide*. Addison–Wesley, 1998.
- [Touc 95] TOUCH, J.: *RFC 1810: Report on MD5 Performance*. RFC, IETF, Juni 1995, <ftp://ftp.isi.edu/in-notes/rfc1810.txt> .
- [TrWa 02] TRAPPE, W. und L. C. WASHINGTON: *Introduction to Cryptography with Coding Theory*. Prentice Hall, 2002.
- [WePf 00] WESTFELD, A. und A. PFITZMANN: *Attacks on Steganographic Systems*. In: PFITZMANN, A. (Herausgeber): *Information Hiding. Third International Workshop, IH'99*, Nummer 1768 in LNCS, Seiten 61–76. Springer, 2000, <http://os.inf.tu-dresden.de/~westfeld/publikationen> .

- [X.800] ITU: *X.800 — Data Communication Networks; Open Systems Interconnection (OSI); Security Structure and Application — Security Architecture for Open Systems Interconnection for CCITT Applications*. Recommendation, International Telecommunication Union, Geneva, 1991.
- [X.802] ITU: *X.802 — Data Networks and Open System Communications Security — Information Technology — Lower Layer Security Model*. ITU–T Recommendation, International Telecommunication Union, Geneva, 1995. also published as ISO/IEC International Standard 13594.
- [X.803] ITU: *X.803 — Data Networks and Open System Communications Security — Information Technology — Upper Layer Security Model*. ITU–T Recommendation, International Telecommunication Union, Geneva, 1995.
- [X.810] ITU: *X.810 — Data Networks and Open System Communications Security — Information Technology — Open Systems Interconnection — Security Frameworks for Opens Systems: Overview*. ITU–T Recommendation, International Telecommunication Union, Geneva, 1996. also published as ISO/IEC International Standard 10181-1.
- [X.811] ITU: *X.811 — Data Networks and Open System Communications Security — Information Technology — Open Systems Interconnection — Security Frameworks for Opens Systems: Authentication Framework*. ITU–T Recommendation, International Telecommunication Union, Geneva, 1995. also published as ISO/IEC International Standard 10181-2.
- [X.812] ITU: *X.812 — Data Networks and Open System Communications Security — Information Technology — Open Systems Interconnection — Security Frameworks for Opens Systems: Access Control Framework*. ITU–T Recommendation, International Telecommunication Union, Geneva, 1995. also published as ISO/IEC International Standard 10181-3.
- [X.813] ITU: *X.813 — Data Networks and Open System Communications Security — Information Technology — Open Systems Interconnection — Security Frameworks for Opens Systems: Non-repudiation Framework*. ITU–T Recommendation, International Telecommunication Union, Geneva, 1996. also published as ISO/IEC International Standard 10181-4.
- [X.814] ITU: *X.814 — Data Networks and Open System Communications Security — Information Technology — Open Systems Interconnection — Security Frameworks for Opens Systems: Confidentiality Framework*. ITU–T Recommendation, International Telecommunication Union, Geneva, 1995. also published as ISO/IEC International Standard 10181-5.
- [X.815] ITU: *X.815 — Data Networks and Open System Communications Security — Information Technology — Open Systems Interconnection — Security Frameworks for Opens Systems: Integrity Frameworks*. ITU–T Recommendation, International Telecommunication Union, Geneva, 1995. also published as ISO/IEC International Standard 10181-6.
- [ZCC 00] ZWICKY, E. D., S. COOPER und D. B. CHAPMAN: *Building Internet Firewalls*. O’Reilly, 2 Auflage, 2000.