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A Practical Guide to TPM 2.0 **Trusted Platform Module Basics** *Trusted Platform Modules* Trusted Platform Module Basics *A Practical Guide to TPM 2.0* Trusted Computing Platforms **Preliminary Analysis of a Trusted Platform Module (TPM) Initialization Process** Trusted Computing Platforms *Cognitive Radio Technology* **Intel Trusted Execution Technology for Server Platforms** *A Practical Guide to Trusted Computing* **Bootstrapping Trust in Modern Computers A Reconfigurable Trusted Platform Module Trusted Computing - Challenges and Applications Algorithmic Strategies for Solving Complex Problems in Cryptography Smart Cards, Tokens, Security and Applications Secure Smart Embedded Devices, Platforms and Applications Demystifying Internet of Things Security Information Security** A Comparison Between Smart Cards and Trusted Platform Modules in Business Scenarios **Introducing Windows 10 for IT Professionals** *The Intel Safer Computing Initiative* **Autonomic and Trusted Computing Windows 11 For Dummies** Advanced Information Technology, Services and Systems Platform Embedded Security Technology Revealed **Migration Virtual Trusted Platform Module State Using TPM Emulator** 2020 Elektro **Trusted Platform Module Third Edition Windows 11** *Building the Infrastructure for Cloud Security* Exam Ref 70-698 Installing and Configuring Windows 10 **Post-Quantum Cryptography** *Public Key Infrastructures, Services and Applications Windows 7: Up and Running* Trusted Computing **System Center Configuration Manager Reporting Unleashed Information and Communication Technology for Intelligent Systems The 15th International Conference Interdisciplinarity in Engineering Writing Secure Code for Windows Vista**

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This thesis focuses on the area of authentication and machine binding using either smart card or trusted platform module (TPM) technology, or a combination thereof. It is the major objective to demonstrate the value of each of these technologies based upon selected business scenarios. Underlying trust models and architectural requirements are discussed, and theoretical background of these technologies is provided to accommodate readers with the relevant terms to follow the subsequent discussion. The major part of this thesis consists of the research, comparison and analysis of existing publications and other sources-scientific, commercial, qualified journalistic or other-to gather a foundation of information on the subject topic. The problem cases or scenarios for applicability of smart card or TPM technology are based upon that research as well as the professional experience of the author and are not selected at random. This thesis shall provide interested readers with a decision base for the selection of protection mechanisms based upon either smart cards or TPM, or both. Break down the misconceptions of the Internet of Things by examining the different security building blocks available in Intel Architecture (IA) based IoT platforms. This open access book reviews the threat pyramid, secure boot, chain of trust, and the SW stack leading up to defense-in-depth. The IoT presents unique challenges in implementing security and Intel has both CPU and Isolated Security Engine capabilities to simplify it. This book explores the challenges to secure these devices to make them immune to different threats originating from within and outside the network. The requirements and robustness rules to protect the assets vary greatly and there is no single blanket solution approach to implement security. Demystifying Internet of Things Security provides clarity to industry professionals and provides and overview of different security solutions What You'll Learn Secure devices, immunizing them against different threats originating from inside and outside the networkGather an overview of the different security building blocks available in Intel Architecture (IA) based IoT platformsUnderstand the threat pyramid, secure boot, chain of trust, and the software stack leading up to defense-in-depth Who This Book Is For Strategists, developers, architects, and

managers in the embedded and Internet of Things (IoT) space trying to understand and implement the security in the IoT devices/platforms. In this book the authors first describe the background of trusted platforms and trusted computing and speculate about the future. They then describe the technical features and architectures of trusted platforms from several different perspectives, finally explaining second-generation TPMs, including a technical description intended to supplement the Trusted Computing Group's TPM2 specifications. The intended audience is IT managers and engineers and graduate students in information security. This book contains research papers that were accepted for presentation at the 15th International Conference on Interdisciplinarity in Engineering—INTER-ENG 2021, which was held on October 7–8, 2021, in the city of Târgu Mureș, Romania. The general scope of the conference “Innovative aspects of Industry 4.0 concepts aimed at consolidating the digital future of manufacturing in companies” is proposing a new approach related to the development of a new generation of smart factories grounded on the manufacturing and assembly process digitalization. It is related to advance manufacturing technology, lean manufacturing, sustainable manufacturing, additive manufacturing, and manufacturing tools and equipment. It is a leading international professional and scientific forum of great interest for engineers and scientists who can read in this book research works contributions and recent developments as well as current practices in advanced fields of engineering. * Clear, practical tutorial style text with real-world applications * First book on TPM for embedded designers * Provides a sound foundation on the TPM, helping designers take advantage of hardware security based on sound TCG standards * Covers all the TPM basics, discussing in detail the TPM Key Hierarchy and the Trusted Platform Module specification * Presents a methodology to enable designers and developers to successfully integrate the TPM into an embedded design and verify the TPM's operation on a specific platform * Includes an accompanying CD-ROM that contains the full source code, which can be customized and used in embedded designs—an extremely useful tool and timesaver for embedded developers! · This sound foundation on the TPM provides clear, practical tutorials with detailed real-world application examples · The author is reknowned for training embedded systems developers to successfully implement the TPM worldwide · CD-ROM includes source code which can be customized for different embedded applications Provides information on writing more secure code for Microsoft Windows Vista, covering such topics as application compatibility, buffer overrun defenses, network security, Windows CardSpace, parental controls, and Windows Defender APIs. Cryptography is a field that is constantly advancing, due to exponential growth in new technologies within the past few decades. Applying strategic algorithms to cryptic issues can help save time and energy in solving the expanding problems within this field. Algorithmic Strategies for Solving Complex Problems in Cryptography is an essential reference source that discusses the evolution and current trends in cryptology, and it offers new insight into how to use strategic algorithms to aid in solving intricate difficulties within this domain. Featuring relevant topics such as hash functions, homomorphic encryption schemes, two party computation, and integer factoring, this publication is ideal for academicians, graduate students, engineers, professionals, and researchers interested in expanding their knowledge of current trends and techniques within the cryptology field. This book provides a broad overview of the many card systems and solutions that are in practical use today. This new edition adds content on RFIDs, embedded security, attacks and countermeasures, security evaluation, javacards, banking or payment cards, identity cards and passports, mobile systems security, and security management. A step-by-step approach educates the reader in card types, production, operating systems, commercial applications, new technologies, security design, attacks, application development, deployment and lifecycle management. By the end of the book the reader should be able to play an educated role in a smart card related project, even to programming a card application. This book is designed as a textbook for graduate level students in computer science. It is also as an invaluable post-graduate level reference for professionals and researchers. This volume offers insight into benefits and pitfalls of diverse industry, government, financial and logistics aspects while providing a sufficient level of technical detail to support technologists, information security specialists, engineers and researchers. In this book I give you my honest views on the good and dark sides of Windows 11. There are more features, issues, hacks and tricks hiding in Windows 11 than most people will ever know. I unveiled some of them in this book. I've been a Windows user for over 20 years, and after further exploring two early builds of Windows 11, at first I had to admit that it looks rather nice, and is better than Windows 10. But I soon discovered there's a lot more than meets the eye. So I strongly advise you read this book first to help you decide if you should install or upgrade your OS to Windows 11. These are some of what you'll learn in this book: The new features and major changes since the Windows 11 insider preview was released. Why Microsoft's system health-check application, and the hardware constraints they plan to include in Windows 11 are shameful, and how they can affect your system and you. Why I suspect the rollout of Windows 11 will be relatively slow, and why it will take quite a long time before lots of people start using it. Apps experiencing troubles with Windows 11 and why Microsoft is unable to find a fix. 8 Windows 11 troubles Microsoft is currently investigating The Microsoft's policy and how it will affect Windows 11 users when Windows 10 support ends on October 14th, 2025. How to quickly and reliably check if your system can run Windows 11. Two methods to install Windows 11 step by step (for Windows and Linux-based systems with backup and restore options for programs and files). A work around to install Windows 11 on non-supported hardware. How to dual boot your PC with Windows 11 and 10 step by step. And so much more... New generations of IT users are increasingly abstracted from the underlying devices and platforms that provide and safeguard their services. As a result they may have little awareness that they are critically dependent on the embedded security devices that are becoming pervasive in daily modern life. Secure Smart Embedded Devices, Platforms and Applications provides a broad overview of the many security and practical issues of embedded devices, tokens, and their operation systems, platforms and main applications. It also addresses a diverse range of industry/government initiatives and considerations, while focusing strongly on technical and practical security issues. The benefits and pitfalls of developing and deploying applications that rely on embedded systems and their security functionality are presented. A sufficient level of technical detail to support embedded systems is provided throughout the text, although the book is quite readable for those seeking awareness through an initial overview of the topics. This edited volume benefits from the contributions of industry and academic experts and helps provide a cross-discipline overview of the security and practical issues for embedded systems, tokens, and platforms. It is an ideal complement to the earlier work, Smart Cards Tokens, Security and Applications from the same editors. This book gathers papers addressing state-of-the-art research in all areas of information and communication technologies and their applications in intelligent computing, cloud storage, data mining and software analysis. It presents the outcomes of the Fourth International Conference on Information and Communication Technology for Intelligent Systems, which was held in Ahmedabad, India. Divided into two volumes, the book discusses the fundamentals of various data analysis techniques and algorithms, making it a valuable resource for researchers and practitioners alike. Prepare for Microsoft Exam 70-698–and help demonstrate your real-world mastery of Windows 10 installation and configuration. Designed for experienced IT pros ready to advance their status, this Exam Ref focuses on the critical-thinking and decision-making acumen needed for success at the MCSA level. Focus on the skills measured on the exam: • Prepare for and perform Windows 10 installation • Configure devices and device drivers • Perform post-installation configuration • Implement Windows in the enterprise • Configure and support networking, storage, data access, and usage • Implement apps • Configure remote management • Configure updates, recovery, authorization, authentication, and management tools • Monitor Windows This Microsoft Exam Ref: • Organizes its coverage by the “Skills measured” posted on the exam webpage • Features strategic, what-if scenarios to challenge you • Provides exam preparation tips written by top trainers • Points to in-depth material by topic for exam candidates needing additional review • Assumes you are an IT pro looking to validate your skills in and knowledge of installing and configuring Windows 10 "This book is a must have resource guide for anyone who wants to ... implement TXT within their environments. I wish we had this guide when our engineering teams were implementing TXT on our solution platforms!” John McAuley,EMC Corporation "This book details innovative technology that provides significant benefit to both the cloud consumer and the cloud provider when working to meet the ever increasing requirements of trust and control in the cloud.” Alex Rodriguez, Expedient Data Centers "This book is an invaluable reference for understanding enhanced server security, and how to deploy and leverage computing environment trust to reduce supply chain risk.” Pete Nicoletti. Virtustream Inc. Intel® Trusted Execution Technology (Intel TXT) is a new security technology that started appearing on Intel server platforms in 2010. This book explains Intel Trusted Execution Technology for Servers, its purpose, application, advantages, and limitations. This book guides the server administrator / datacenter manager in enabling the technology as well as establishing a launch control policy that he can use to customize the server’s boot process to fit the datacenter’s requirements. This book explains how the OS

(typically a Virtual Machine Monitor or Hypervisor) and supporting software can build on the secure facilities afforded by Intel TXT to provide additional security features and functions. It provides examples how the datacenter can create and use trusted pools. With a foreword from Albert Caballero, the CTO at Trapezoid. No fewer than 55 revised full papers are presented in this volume, all given at the 4th International Conference on Autonomic and Trusted Computing, held in Hong Kong, China in July 2007. The papers, presented together with one keynote lecture, were carefully reviewed and selected from 223 submissions. The papers are organized in topical sections on, among others, cryptography and signatures, autonomic computing and services, and secure and trusted computing. Trusting a computer for a security-sensitive task (such as checking email or banking online) requires the user to know something about the computer's state. We examine research on securely capturing a computer's state, and consider the utility of this information both for improving security on the local computer (e.g., to convince the user that her computer is not infected with malware) and for communicating a remote computer's state (e.g., to enable the user to check that a web server will adequately protect her data). Although the recent "Trusted Computing" initiative has drawn both positive and negative attention to this area, we consider the older and broader topic of bootstrapping trust in a computer. We cover issues ranging from the wide collection of secure hardware that can serve as a foundation for trust, to the usability issues that arise when trying to convey computer state information to humans. This approach unifies disparate research efforts and highlights opportunities for additional work that can guide real-world improvements in computer security. This book describes the primary uses for Trusted Platform Modules (TPMs) and practical considerations such as when TPMs can and should be used, when they shouldn't be, what advantages they provide, and how to actually make use of them, with use cases and worked examples of how to implement these use cases on a real system. This book constitutes the refereed proceedings of the 11th International Conference on Information Security Conference, ISC 2008, held in Taipei, Taiwan, September 15-18, 2008. The 33 revised full papers presented were carefully reviewed and selected from 134 submissions. The papers are organized in topical sections on trusted computing, database and system security, intrusion detection, network security, cryptanalysis, digital signatures, AES, symmetric cryptography and hash functions, authentication as well as security protocols. This compact book offers the quickest path for Windows users to get started with Microsoft's Windows 7 operating system. You get the essential information you need to upgrade or install the system and configure it to fit your activities, along with a tour of Windows 7's features and built-in applications. Microsoft has learned from the mistakes of Windows Vista, and Windows 7 shows it-this new OS is much faster and more stable. With Windows 7: Up and Running, you'll learn what's new and what's changed from XP and Vista, and get advice on ways to use this system for work, entertainment, instant communication, and more. Windows 7 is poised to be a big hit, and with this handy guide, you can be up and running -- and productive -- with it right away. Master the user interface, including the taskbar, jump lists, desktop gadgets, Aero Shake, and notification area Discover the joys of networking with HomeGroup file sharing and improved Wi-Fi Tour the system's improved security, including the Action Center, User Account Control, and Credential Manager Learn how to use Windows Live Essentials for messaging, photo sharing, moviemaking, emailing, and blogging Get to know built-in applications such as Internet Explorer 8, Windows Media Player 12, Microsoft Paint, and WordPad Learn about optional Microsoft software to enhance your Windows 7 experience The Intel Safer Computing Initiative deals with computers/software. This book constitutes the thoroughly refereed post-conference proceedings of the First International Conference on Trusted Computing and Trust in Information Technologies, TRUST 2008, held in Villach, Austria, in March 2008. The 13 revised full papers presented together with 1 invited lecture were carefully reviewed and selected from 43 submissions. The papers cover the core issues of trust in IT systems and present recent leading edge developments in the field of trusted infrastructure and computing to foster the international knowledge exchange necessary to catch up with the latest trends in science and technology developments. Microsoft System Center Configuration Manager’s SQL Server database contains valuable information about your users, computers, hardware, operating systems, applications, compliance status, and much more. Microsoft has provided excellent tools for extracting this information in meaningful ways, including SQL Server Reporting Services (SSRS) and SQL Server Data Tools Business Intelligence (SSDT-BI). System Center Configuration Manager Reporting Unleashed shows you how to make the most of these tools. World-renowned System Center reporting guru Garth Jones and his expert coauthors guide you through all facets of custom reporting with System Center. You’ll walk through installing and configuring SSRS, using SQL views to find the data you need, writing SQL queries, creating basic and advanced reports, and using role-based administration to securely deliver those reports to the correct individuals. Jones brings together reliable, comprehensive, and up-to-date System Center reporting techniques you’ll find in no other book or website. Using this guide, you can consistently retrieve the right information to solve immediate problems and quickly respond to management concerns. Detailed information on how to... • Install and configure SQL SSRS for optimal System Center reporting and easier troubleshooting • Understand the data stored in the ConfigMgr site database • Efficiently retrieve ConfigMgr data by writing SQL queries in SQL Server Management Studio • Learn best practices for developing and designing System Center reports • Create report templates, customize content with report parameters, and embed charts • Customize logos, color palettes, and other report elements for your own organization • Construct advanced drillthroughs to provide deeper understanding • Strengthen report security by integrating ConfigMgr role-based administration into SQL queries • Leverage reporting to measure KPIs and gain a better understanding of your environment • Tailor your reports to the needs of end-users or management • Foreword by Wally Mead, Principal Program Manager, Cireson The only book entirely dedicated to Configuration Manager reporting, this guide complements Meyler's System Center 2012 Configuration Manager Unleashed, offering far more in-depth coverage of reporting than the single chapter in that book. Most of the content in this new guide will be equally valuable in both System Center 2016 and 2012 environments. This book includes the proceedings of the International Conference on Advanced Information Technology, Services and Systems (AIT2S-17) held on April 14–15, 2017 in Tangier, Morocco. Presenting the latest research in the field, it stimulates debate, discusses new challenges and provides insights into the field in order to promote closer interaction and interdisciplinary collaboration between researchers and practitioners. Intended for researchers and practitioners in advanced information technology/management and networking, the book is also of interest to those in emergent fields such as data science and analytics, big data, Internet of Things, smart networked systems, artificial intelligence and expert systems, pattern recognition, and cloud computing. Get a head start evaluating Windows 10--with technical insights from award-winning journalist and Windows expert Ed Bott. This guide introduces new features and capabilities, providing a practical, high-level overview for IT professionals ready to begin deployment planning now. This edition was written after the release of Windows 10 version 1511 in November 2015 and includes all of its enterprise-focused features. The goal of this book is to help you sort out what’s new in Windows 10, with a special emphasis on features that are different from the Windows versions you and your organization are using today, starting with an overview of the operating system, describing the many changes to the user experience, and diving deep into deployment and management tools where it’s necessary. For cloud users and providers alike, security is an everyday concern, yet there are very few books covering cloud security as a main subject. This book will help address this information gap from an Information Technology solution and usage-centric view of cloud infrastructure security. The book highlights the fundamental technology components necessary to build and enable trusted clouds. Here also is an explanation of the security and compliance challenges organizations face as they migrate mission-critical applications to the cloud, and how trusted clouds, that have their integrity rooted in hardware, can address these challenges. This book provides: Use cases and solution reference architectures to enable infrastructure integrity and the creation of trusted pools leveraging Intel Trusted Execution Technology (TXT). Trusted geo-location management in the cloud, enabling workload and data location compliance and boundary control usages in the cloud. OpenStack-based reference architecture of tenant-controlled virtual machine and workload protection in the cloud. A reference design to enable secure hybrid clouds for a cloud bursting use case, providing infrastructure visibility and control to organizations. "A valuable guide to the next generation of cloud security and hardware based root of trust. More than an explanation of the what and how, is the explanation of why. And why you can’t afford to ignore it!" —Vince Lubsey, Vice President, Product Development, Virtustream Inc. " Raghu provides a valuable reference for the new 'inside out' approach, where trust in hardware, software, and privileged users is never assumed—but instead measured, attested, and limited according to least privilege principles." —John Skinner, Vice President, HyTrust Inc. "Traditional parameter based defenses are in sufficient in the cloud. Raghu's book addresses this problem head-on by highlighting unique usage models to enable trusted infrastructure in this open environment. A must read if you are exposed in cloud." —Nikhil

Sharma, Sr. Director of Cloud Solutions, Office of CTO, EMC Corporation The book summarizes key concepts and theories in trusted computing, e.g., TPM, TCM, mobile modules, chain of trust, trusted software stack etc, and discusses the configuration of trusted platforms and network connections. It also emphasizes the application of such technologies in practice, extending readers from computer science and information science researchers to industrial engineers. in other words, can we track that any Trusted Platform Module project is implemented as planned, and is it working? What is our mission? Meeting the challenge: are missed Trusted Platform Module opportunities costing us money? what types of organizational problems do you think might be causing or affecting your problem, based on the work done so far? key questions are: is the solution request practical and will it solve a problem or take advantage of an opportunity to achieve company goals? This extraordinary Trusted Platform Module self-assessment will make you the entrusted Trusted Platform Module domain visionary by revealing just what you need to know to be fluent and ready for any Trusted Platform Module challenge. How do I reduce the effort in the Trusted Platform Module work to be done to get problems solved? How can I ensure that plans of action include every Trusted Platform Module task and that every Trusted Platform Module outcome is in place? How will I save time investigating strategic and tactical options and ensuring Trusted Platform Module costs are low? How can I deliver tailored Trusted Platform Module advice instantly with structured going-forward plans? There's no better guide through these mind-expanding questions than acclaimed best-selling author Gerard Blokdyk. Blokdyk ensures all Trusted Platform Module essentials are covered, from every angle: the Trusted Platform Module self-assessment shows succinctly and clearly that what needs to be clarified to organize the required activities and processes so that Trusted Platform Module outcomes are achieved. Contains extensive criteria grounded in past and current successful projects and activities by experienced Trusted Platform Module practitioners. Their mastery, combined with the easy elegance of the self-assessment, provides its superior value to you in knowing how to ensure the outcome of any efforts in Trusted Platform Module are maximized with professional results. Your purchase includes access details to the Trusted Platform Module self-assessment dashboard download which gives you your dynamically prioritized projects-ready tool and shows you exactly what to do next. Your exclusive instant access details can be found in your book. You will receive the following contents with New and Updated specific criteria: - The latest quick edition of the book in PDF - The latest complete edition of the book in PDF, which criteria correspond to the criteria in... - The Self-Assessment Excel Dashboard - Example pre-filled Self-Assessment Excel Dashboard to get familiar with results generation - In-depth and specific Trusted Platform Module Checklists - Project management checklists and templates to assist with implementation INCLUDES LIFETIME SELF ASSESSMENT UPDATES Every self assessment comes with Lifetime Updates and Lifetime Free Updated Books. Lifetime Updates is an industry-first feature which allows you to receive verified self assessment updates, ensuring you always have the most accurate information at your fingertips. Need Windows help? Find the latest tips and tricks in this perennial favorite on Windows Windows 11 promises to be the fastest, most secure, and most flexible version of the Microsoft operating system yet. With a promise like that, of course you want to start using it, as quickly as possible! Windows 11 For Dummies gives you that speed, security, and flexibility by getting you up to date with the latest in Windows. Windows expert and bestselling author Andy Rathbone gives you a helping hand by showing you how to get around the newly updated Windows 11 interface, how to use the new Windows tools like Teams and widgets, and how to use Android apps. Your tour of Windows 11 starts with the Start menu and ends with how to troubleshoot when things go wrong. In between you find out how to find files on your hard drive, connect with friends and colleagues on Microsoft Teams, transfer photos from your phone to your hard drive, or switch between your desktop and laptop. Additional topics include: Navigating the Start menu Finding where your files are hiding Adding separate user accounts to keep your kids out of your business Connecting to a WiFi network Customizing your widgets Switching to a laptop or tablet You know what you want to get done. Keep Windows 11 For Dummies by your desktop, laptop, and tablet, and you can open it at any time to find out how to get your Windows computer to do what you need. Publisher description Quantum computers will break today's most popular public-key cryptographic systems, including RSA, DSA, and ECDSA. This book introduces the reader to the next generation of cryptographic algorithms, the systems that resist quantum-computer attacks: in particular, post-quantum public-key encryption systems and post-quantum public-key signature systems. Leading experts have joined forces for the first time to explain the state of the art in quantum computing, hash-based cryptography, code-based cryptography, lattice-based cryptography, and multivariate cryptography. Mathematical foundations and implementation issues are included. This book is an essential resource for students and researchers who want to contribute to the field of post-quantum cryptography. Use Trusted Computing to Make PCs Safer, More Secure, and More Reliable Every year, computer security threats become more severe. Software alone can no longer adequately defend against them: what’s needed is secure hardware. The Trusted Platform Module (TPM) makes that possible by providing a complete, open industry standard for implementing trusted computing hardware subsystems in PCs. Already available from virtually every leading PC manufacturer, TPM gives software professionals powerful new ways to protect their customers. Now, there’s a start-to-finish guide for every software professional and security specialist who wants to utilize this breakthrough security technology. Authored by innovators who helped create TPM and implement its leading-edge products, this practical book covers all facets of TPM technology: what it can achieve, how it works, and how to write applications for it. The authors offer deep, real-world insights into both TPM and the Trusted Computing Group (TCG) Software Stack. Then, to demonstrate how TPM can solve many of today’s most challenging security problems, they present four start-to-finish case studies, each with extensive C-based code examples. Coverage includes What services and capabilities are provided by TPMs TPM device drivers: solutions for code running in BIOS, TSS stacks for new operating systems, and memory-constrained environments Using TPM to enhance the security of a PC’s boot sequence Key management, in depth: key creation, storage, loading, migration, use, symmetric keys, and much more Linking PKCS#11 and TSS stacks to support applications with middleware services What you need to know about TPM and privacy--including how to avoid privacy problems Moving from TSS 1.1 to the new TSS 1.2 standard TPM and TSS command references and a complete function library The conference is the thirteenth of the series of international conferences which began in 1995 initially as a national conference with international participation The conference is organized by the Faculty of Electrical Engineering and Information Technology, University of ilina, every two years Since 2014 publications of the ELEKTRO conferences were indexed in the databases Web of Science, Scopus and IEEE Also publications from the ELEKTRO 2020 conference will be requested to be evaluated and covered in the mentioned databases The purpose of the conference is to provide an international forum for researchers and professionals interested in electrical and electronic engineering, information and communication technologies as well as interdisciplinary areas with the main attention to the conference topics A Practical Guide to TPM 2.0: Using the Trusted Platform Module in the New Age of Security is a straight-forward primer for developers. It shows security and TPM concepts, demonstrating their use in real applications that the reader can try out. Simply put, this book is designed to empower and excite the programming community to go out and do cool things with the TPM. The approach is to ramp the reader up quickly and keep their interest. A Practical Guide to TPM 2.0: Using the Trusted Platform Module in the New Age of Security explains security concepts, describes the TPM 2.0 architecture, and provides code and pseudo-code examples in parallel, from very simple concepts and code to highly complex concepts and pseudo-code. The book includes instructions for the available execution environments and real code examples to get readers up and talking to the TPM quickly. The authors then help the users expand on that with pseudo-code descriptions of useful applications using the TPM. A Trusted Platform Module (TPM) is a security device included in most modern desktop and laptop computers. It helps keep the computing environment secure by isolating cryptographic functions and data from the CPU. A TPM is usually implemented with a small microcontroller which is near the main processor. In addition to a microcontroller, it may employ hardware acceleration to assist in cryptographic computations. When vulnerabilities are found, or new algorithms developed, TPMs become obsolete because the hardware accelerators cannot be upgraded. This thesis presents a proof of concept implementation of a TPM on an FPGA. By using an FPGA, the TPM gains the ability to be upgraded or have new cryptographic modules added. This new design easily fits on the Zynq FPGA used in this work, with room left over for additional functionality. We explore the feasibility of this approach, including the added cost of the FPGA, and the added benefits of reconfigurable hardware. As distributed system architectures such as peer-to-peer, grid computing and MANET become more popular, there is an increasing need for robust and scalable mechanisms to establish trust between entities. The Trusted Platform Module (TPM), provides for the possibility to establish trust at the hardware level for commercial hardware. While work has been done to leverage TPMs for Digital Rights Management

(DRM) and other schemes, application of TPMs for robust identification and authentication in a MANET or other distributed environment have not been addressed. This research provides a simple analysis on the applicability of leveraging TPMs for enhanced computer security in today's military environment. A military convoy using laptops in a MANET is used as a hypothetical concept of operations. The problem of TPM initialization of a laptop, in particular, at a depot prior to deployment is addressed. The initialization steps that must be performed before using a TPM in any deployment have been studied and described, and suggestions are provided to address possible DoD concerns in using this technology. Platform Embedded Security Technology Revealed is an in-depth introduction to Intel’s platform embedded solution: the security and management engine. The engine is shipped inside most Intel platforms for servers, personal computers, tablets, and smartphones. The engine realizes advanced security and management functionalities and protects applications’ secrets and users’ privacy in a secure, light-weight, and inexpensive way. Besides native built-in features, it allows third-party software vendors to develop applications that take advantage of the security infrastructures offered by the engine. Intel’s security and management engine is technologically unique and significant, but is largely unknown to many members of the tech communities who could potentially benefit from it. Platform Embedded Security Technology Revealed reveals technical details of the engine. The engine provides a new way for the computer security industry to resolve critical problems resulting from booming mobile technologies, such as increasing threats against confidentiality and privacy. This book describes how this advanced level of protection is made possible by the engine, how it can improve users’ security experience, and how third-party vendors can make use of it. It's written for computer security professionals and researchers; embedded system engineers; and software engineers and vendors who are interested in developing new security applications on top of Intel’s security and management engine. It’s also written for advanced users who are interested in understanding how the security features of Intel’s platforms work. Clear, practical tutorial style text with real-world applications First book on TPM for embedded designers Provides a sound foundation on the TPM, helping designers take advantage of hardware security based on sound TCG standards Covers all the TPM basics, discussing in detail the TPM Key Hierarchy and the Trusted Platform Module specification Presents a methodology to enable designers and developers to successfully integrate the TPM into an embedded design and verify the TPM's operation on a specific platform This sound foundation on the TPM provides clear, practical tutorials with detailed real-world application examples The author is reknowned for training embedded systems developers to successfully implement the TPM worldwide The TCPA 1.0 specification finally makes it possible to build low-cost computing platforms on a rock-solid foundation of trust. In Trusted Computing Platforms, leaders of the TCPA initiative place it in context, offering essential guidance for every systems developer and decision-maker. They explain what trusted computing platforms are, how they work, what applications they enable, and how TCPA can be used to protect data, software environments, and user privacy alike. A Practical Guide to TPM 2.0: Using the Trusted Platform Module in the New Age of Security is a straight-forward primer for developers. It shows security and TPM concepts, demonstrating their use in real applications that the reader can try out. Simply put, this book is designed to empower and excite the programming community to go out and do cool things with the TPM. The approach is to ramp the reader up quickly and keep their interest.A Practical Guide to TPM 2.0: Using the Trusted Platform Module in the New Age of Security explains security concepts, describes the TPM 2.0 architecture, and provides code and pseudo-code examples in parallel, from very simple concepts and code to highly complex concepts and pseudo-code. The book includes instructions for the available execution environments and real code examples to get readers up and talking to the TPM quickly. The authors then help the users expand on that with pseudo-code descriptions of useful applications using the TPM. This book constitutes the thoroughly refereed post-conference proceedings of the 8th European Workshop on Public Key Infrastructures, Services and Applications, EuroPKI 2011, held in Leuven, Belgium in September 2011 - co-located with the 16th European Symposium on Research in Computer Security, ESORICS 2011. The 10 revised full papers presented together with 3 invited talks were carefully reviewed and selected from 27 submissions. The papers are organized in topical sections on authentication mechanisms, privacy preserving techniques, PKI and secure applications.