



Institute for Development and Research in Banking Technology

(Established by Reserve Bank of India)

Castle Hills, Road No. 1, Masab Tank, Hyderabad-57, India.

e-Programme on

INTRODUCTION TO HARDWARE SECURITY FOR BANKS

April 26 – 29, 2022

Introduction

Computer security vulnerabilities involving hardware are under-represented within the security industry. With a growing number of attackers, malware, and researchers moving beyond pure software attack scenarios and into scenarios incorporating a hardware element, it is important to start laying a foundation on how to understand, characterize, and defend against these types of hybrid attacks.

The goal of this e-program is to start seeding hardware security concepts and discussions into the banking security community and to start laying a foundational understanding that can be leveraged if/when hardware security topics start coming to the forefront of their security concerns. Many of these concepts are already established and recognized in hardware-centric private forums (within hardware, BIOS, and OS vendors, etc.), so it is a matter of expanding the audience of these concepts. It is high time to start including hardware-specific elements and accommodations into the established security understanding and practices. This will, in turn, naturally lead to a unified view & management of security risk found within a platform without distinction for software elements vs. hardware elements.

Objective

The objective of this e-Programme is to introduce and describe a starting taxonomy of security attacks called hardware-involved software attacks in an effort to further security community awareness of hardware security and its role in upholding the security of the PC platform.

Contents

- Hardware Trojan
- Hardware involved software attacks
- Hardware and Firmware vulnerabilities
- Critical vulnerabilities in modern processors (Meltdown and Spectre)
- ATM Logic Attacks
- HSM, Key logger

Mode of Teaching

Online teaching plus learning inputs through reading material, videos, webinars, assignments, quizzes, online interactions and clarifications. Each e-Programme will have four live webinars and course material will be made available in advance for study.

Who Can Participate?

Bank officials working in IT Department, cyber Security Operations Centre, Network Operations Centre and related activities.

End Use:

This e-Programme will help the participant strengthen their knowledge and awareness of hardware security, ATM attacks, and different vulnerable hardware components and help the banks improve their security provisions.

Programme Coordinator:

Dr. Dipanjan Roy, Assistant Professor, IDRBT; e-mail: droy@idrbt.ac.in

Fees:

For Indian Participants

- RRBs & Coop Banks: Rs. 11,800/- (Rs. 10,000/- + 18% GST)
- All Other Banks & Financial Institutions: Rs. 14,750/- (Rs. 12,500/- + 18% GST)

For International participants

- US \$ 220 (per participant, All inclusive)

Bank Account Details for Remittance of Fees

The fees for this e-programme can be remitted to the following accounts:

For Indian Participants

Account Name : IDRBT
Bank & Branch : Axis Bank Limited, Humayun Nagar, Mehdiapatnam, Hyderabad
Account No. : 426010100018823
MICR Code : 500211012
IFSC Code : UTIB0000426

For International participants

Receiver's Correspondent Bank : JP Morgan Chase, New York, USA
Swift Code : CHASUS33XXX
Fed Wire Routing Number : ABA 021000021
Beneficiary Bank & Branch : Axis Bank Ltd., Mumbai, India
Account Number : 0011407376
Beneficiary Bank Swift Code : AXISINBB

Ultimate Beneficiary

Account Name : IDRBT
Customer ID : 030021632
Account No. : 426010100018823
Bank & Branch : Axis Bank Ltd., Jubilee Hills, Hyderabad, India. (AXISINBB030)

Nominations

Banks may nominate any number of participants to these e-Programmes, which may be accepted on a first-cum-first-served basis. While nominating, please provide the details of the participants (Name, Designation, Bank, Mobile No/Phone No, email address, fees billing address, GST No. of the Bank).

Apart from nominations by banks, staff members of banks can self-nominate themselves for these e-Programmes by providing their employee credentials and paying the programme fee latest by **April 25, 2022**.

How to Register

The nominations for these e-Programmes, and queries if any, may please be sent to eprogram@idrbt.ac.in. Please visit <https://www.idrbt.ac.in/eprogrammes> for more details about these programmes.

e-Programmes in April 2022

S. No.	Name of the e-Programme	Date	e-Programme Coordinator	Last Date for Nomination
1	Distributed Ledger Technology and Banking Applications	04 – 07	Dr. N. V. Narendra Kumar	Apr 01, 2022
2	Technologies for Financial Inclusion	04 – 07	Dr. M.V.N.K. Prasad	Apr 01, 2022
3	Workshop on Registration Authority Operations	05 – 08	Dr. N. P. Dhavale	Apr 04, 2022
4	AI/ML for Cyber Security	05 – 08	Dr. Rajarshi Pal	Apr 04, 2022
5	Adversarial ML for Banks	18 – 21	Dr. V. Ravi	Apr 13, 2022
6	Smart Banking using AI and ML	18 – 21	Dr. Mridula Verma	Apr 13, 2022
7	Cyber Forensics for Cyber Defence - A Proactive Approach	19 – 22	Dr. B. M. Mehtre	Apr 18, 2022
8	API Development	19 – 22	Dr. V. Radha	Apr 18, 2022
9	Future of Innovative Smart Banking	25 – 28	Dr. Susmita Mandal	Apr 22, 2022
10	Security in Cloud Computing	26 – 29	Dr. P. Syam Kumar	Apr 25, 2022
11	Introduction to Hardware Security	26 – 29	Dr. Dipanjan Roy	Apr 25, 2022

e-Programmes in May 2022

S. No.	Name of the e-Programme	Date	e-Programme Coordinator	Last Date for Nomination
1	Re-imagining customer engagement with conversational Chatbots	09 – 12	Dr. Mridula Verma	May 06, 2022
2	Introduction to Governance, Risks and Compliance	10 – 13	Dr. Abhishek Kumar Thakur	May 09, 2022
3	Continuous Security Validation	10 – 13	Dr. V. Radha	May 09, 2022
4	Secure Financial Infrastructure	10 – 13	Dr. Susmita Mandal	May 09, 2022
5	Cyber Security for Remote Working Scenario	17 – 20	Dr. Rajarshi Pal	May 16, 2022
6	Proactive Cyber Defence Strategies	17 – 20	Dr. Dipanjan Roy	May 16, 2022
7	Dark Web Monitoring for Threat Intelligence	17 – 20	Dr. B. M. Mehtre	May 16, 2022
8	Introduction to Authentication Techniques	23 – 26	Dr. M.V.N.K. Prasad Dr. N.P.Dhavale	May 20, 2022
9	Explainable AI for Banks	24 – 27	Dr. V. Ravi	May 23, 2022

10	Big Data and Cloud	24 – 27	Dr. P. Syam Kumar	May 23, 2022
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e-Programmes in June 2022

S. No.	Name of the e-Programme	Date	e-Programme Coordinator	Last Date for Nomination
1	Privacy Preserving Machine Learning for Banks	06 – 09	Dr. V. Ravi	June 03, 2022
2	Distributed Ledger Technology and Banking Applications	06 – 09	Dr. N. V. Narendra Kumar	June 03, 2022
3	5G Use Cases and IoT Applications for Banks	06 – 10	Dr. V. N. Sastry	June 03, 2022
4	Threats to Digital Payment Ecosystem	07 – 10	Dr. Susmita Mandal	June 06, 2022
5	Technologies for Financial Inclusion	07 – 10	Dr. M.V.N.K. Prasad	June 06, 2022
6	Emerging AI/ML Technologies	13 – 16	Dr. Mridula Verma	June 10, 2022
7	Workshop on Registration Authority Operations	14 – 17	Dr. N. P. Dhavale	June 13, 2022
8	Privacy and Security Risks in Machine Learning	14 – 17	Dr. Rajarshi Pal	June 13, 2022
9	RBI Guidelines on Cyber Security	20 – 23	Dr. Dipanjan Roy	June 17, 2022
10	Introduction to Containers	21 – 24	Dr. P. Syam Kumar	June 20, 2022
11	Targeted Attacks - Detecting in Early Stages	21 – 24	Dr. B. M. Mehtre	June 20, 2022
12	API Development	Jun 28 – Jul 01	Dr. V. Radha	June 27, 2022