



Yashwant Singh
Vandana Mohindru

Wireless Sensor Networks Security Attacks

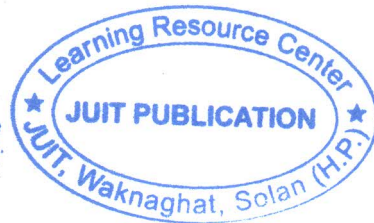
A Node Clone Attack

 **LAMBERT**
Academic Publishing

**Yashwant Singh
Vandana Mohindru**

Wireless Sensor Networks Security Attacks

A Node Clone Attack



LAP LAMBERT Academic Publishing

Impressum / Imprint

Bibliografische Information der Deutschen Nationalbibliothek: Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.d-nb.de> abrufbar.

Alle in diesem Buch genannten Marken und Produktnamen unterliegen warenzeichen-, marken- oder patentrechtlichem Schutz bzw. sind Warenzeichen oder eingetragene Warenzeichen der jeweiligen Inhaber. Die Wiedergabe von Marken, Produktnamen, Gebrauchsnamen, Handelsnamen, Warenbezeichnungen u.s.w. in diesem Werk berechtigt auch ohne besondere Kennzeichnung nicht zu der Annahme, dass solche Namen im Sinne der Warenzeichen- und Markenschutzgesetzgebung als frei zu betrachten wären und daher von jedermann benutzt werden dürften.

Bibliographic information published by the Deutsche Nationalbibliothek: The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <http://dnb.d-nb.de>.

Any brand names and product names mentioned in this book are subject to trademark, brand or patent protection and are trademarks or registered trademarks of their respective holders. The use of brand names, product names, common names, trade names, product descriptions etc. even without a particular marking in this work is in no way to be construed to mean that such names may be regarded as unrestricted in respect of trademark and brand protection legislation and could thus be used by anyone.

Coverbild / Cover image: www.ingimage.com

Verlag / Publisher:

LAP LAMBERT Academic Publishing

ist ein Imprint der / is a trademark of

OmniScriptum GmbH & Co. KG

Bahnhofstraße 28, 66111 Saarbrücken, Deutschland / Germany

Email: info@omniscryptum.com

Herstellung: siehe letzte Seite /

Printed at: see last page

ISBN: 978-3-659-80624-7

Copyright © Yashwant Singh, Vandana Mohindru

Copyright © 2017 OmniScriptum GmbH & Co. KG

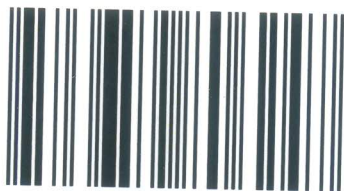
Alle Rechte vorbehalten. / All rights reserved. Saarbrücken 2017

Table of Contents

Abstract	2
Chapter 1	3
Chapter 2	9
Chapter 3	12
Chapter 4	26
Chapter 5	28
Chapter 6	39
Chapter 7	46
References	28

Wireless sensor networks (WSNs) becoming popular nowadays due to the low-cost, unattended nature and the capability of self-organization of sensor nodes. Security is critical for many sensor network applications, such as military target tracking, weather monitoring and security monitoring. The deployment of sensors in a hostile environment and communication over the wireless medium, make the WSNs vulnerable to several types of attacks, like eavesdropping, Denial of Services (DoS) attacks, flooding and Sybil attack. Among these attacks, the node clone attack is a harmful attack, through which attacker compromises a node and then inject clones within the sensor networks. These clones perform various destructive operations, which obstructs the working of WSNs. The wireless sensor network requires robust mechanisms for the detection of node clone attack. This book presents security attacks classification for wireless sensor networks and the focus is given on the node clone attack. Analysis of various detection mechanisms for node clone attacks is also illustrated in this book.

Dr. Yashwant Singh is Associate Professor in the Department of CSE at Jaypee University of Information Technology (JUIT), Waknaghat, India. Mrs. Vandana Mohindru is Ph. D. Research Scholar at the Department of CSE at JUIT. Yashwant and Vandana's research interest lies in Wireless Sensor Networks, Security Attacks in WSN and Routing WSN.



978-3-659-80624-7