John Robert Wisniewski

Digital Press

Linux & OpenVMS™ Interoperability

Tricks for Old Dogs, New Dogs and Hot Dogs with Open Systems

COMPACT SOLUTIONS

Linux & OpenVMS™ Interoperability

Tricks for Old Dogs, New Dogs and Hot Dogs with Open Systems

This Page Intentionally Left Blank

Linux & OpenVMS™ Interoperability

Tricks for Old Dogs, New Dogs and Hot Dogs with Open Systems

John Robert Wisniewski

Digital Press
An imprint of Elsevier Science
Amsterdam • Boston • London • New York • Oxford • Paris • San Diego
San Francisco • Singapore • Sydney • Tokyo

Digital Press is an imprint of Elsevier Science.

Copyright© 2003 Hewlett-Packard Development Company, L.P. All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

All trademarks found herein are property of their respective owners.

Recognizing the importance of preserving what has been written, Elsevier Science prints its books on acid-free paper whenever possible.

Library of Congress Cataloging-in-Publication Data

A catalogue record for this book is available from the Library of Congress

ISBN: 1-55558-267-2

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

The publisher offers special discounts on bulk orders of this book.
For information, please contact:

Manager of Special Sales
Elsevier Science
200 Wheeler Road
Burlington, MA 01803
Tel: 781-313-4700
Fax: 781-313-4882

For information on all Digital Press publications available, contact our World Wide Web home page at: http://www.digitalpress.com or http://www.bh.com/digitalpress

10 9 8 7 6 5 4 3 2 1

Printed in the United States of America

This Page Intentionally Left Blank

Dedicated to three Daves, Pat, Dena, Alan, Scott, John, Bill, Phil, Kurt, Clay and the rest of the DFWLUG and DECUS folks who've put up with me over the years; I've learned so much from all of you! Also to Margie, Pam, Alan, and all of the HP and Digital Press team for all their help and patience while I completed this book. And finally, thank you to Steven Smiley for his wise council, extra set of eyes, and sharing with me all the excitement that Open Source is bringing to our industry.

Table of Contents

Forward xi

Preface xiii

Chapter 1 – Assessing OpenVMS and Linux: The Right Tool for the Right Job 1

Good, Better, Best 1
Why OpenVMS? 2
Why LINUX? 5
The Bottom Line 6

Chapter 2 – Breaking into OpenVMS and Linux 9

Equipment for Those Who Have None 9
Reality Sets in on the Way Home 9
Back at the Treasure Hunt 10
Legitimate Reasons for Breaking into Linux or OpenVMS Computers 10
Ten-Step Process for Changing a Linux System's Root Password 11
Ten-Step Process for changing an OpenVMS System Password 12
First the Rush, Then the Letdown 13

Chapter 3 – TCP/IP for OpenVMS and Linux 15

Today's Networking Standards 17
The Importance of a Network Manager 18
Questions for Network Setup (Questions You Must Ask to Set up a TCP/IP Network) 19
Configuring the Systems 22
Configuring TCP/IP on Linux 22
Configuring TCP/IP on OpenVMS 24
TCP/IP Applications 26
URL Tricks and More 27

Chapter 4 – Security Tools for OpenVMS and Linux 29

Ever Been Hacked? 29
Four Days Later 29
Preparing for the Storm 31
TCP/IP Known Ports 32
Encryption—Not Just for Breakfast Anymore 35
SSH (V1 and V2) 35
SSL 36
Stunnel 37
Security in an Insecure World 55

Chapter 5 – X Windows Applications: X Windows Interoperability with VMS and Linux 57
X Windows, VMS, Linux, and a Bit of History 57
Displaying OpenVMS X Windows Applications on a Linux Workstation 58
Command Controls for Your X Windows Sessions 60
Linux Command: xhost 60
OpenVMS Commands: SHOW-SET/DISPLAY and CREATE/TERMINAL 60
OpenVMS X Windows Applications 62
Displaying Your Linux X Windows Applications on OpenVMS 67
Summary 70

Chapter 6 – Using E-mail with OpenVMS and Linux 71
Back in the Old Days 71
We Used to Copy E-mail Across 2,400-Baud Modems? 71
From the Dawn of the Network Era to Today 72
E-mail Programs Come and E-mail Programs Go 73
Open Source Open Standards Internet Mail 73
E-mail Server Configuration for OpenVMS 75
Setting up E-mail Clients for Our E-mail Server 93
Linux Mozilla Installation 93
OpenVMS Mozilla Installation 99
Mail Client Configuration on OpenVMS or Linux 104
E-mail Wants to be Free 113

Chapter 7 – SMB for Linux and OpenVMS 115
Using SMB with OpenVMS and Linux for Disk Sharing 115
Enter SAMBA 115
SMB Options for OpenVMS, Advanced Server, or SAMBA 115
Linux and SAMBA 116
OpenVMS Advanced Server Installation and Configuration 123
Step 1: Configure the OpenVMS registry 123
Step 2: Configure OpenVMS IP for Advanced Server 130
Step 3: OpenVMS Advanced Server Install 134
Step 4: Configuring OpenVMS Advanced Server processes 140
Step 5: Configure OpenVMS Advanced Server as a Domain Controller 149

Chapter 8 – Apache VMS and Linux Style 155
You Never Really Forget your First Web Server 155
Web master flash forward with Apache 156
Linux Apache Web server Installation 156
OpenVMS Apache based Secure Web server 168
Linux and OpenVMS—The Future 185

Chapter 9 – A Compendium of Open Source Tools for OpenVMS and Linux **187**
Open Source Tools 187
OpenVMS and Linux Open Source Archives 190

Index **191**

This Page Intentionally Left Blank