



Mac OS X Core Dump Analysis **Accelerated**

Version 2.0

Dmitry Vostokov
Software Diagnostics Services

Published by OpenTask, Republic of Ireland

Copyright © 2014 by OpenTask

Copyright © 2014 by Software Diagnostics Services

Copyright © 2014 by Dmitry Vostokov

All rights reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior written permission of the publisher.

You must not circulate this book in any other binding or cover and you must impose the same condition on any acquirer.

Product and company names mentioned in this book may be trademarks of their owners.

OpenTask books and magazines are available through booksellers and distributors worldwide. For further information or comments send requests to press@opentask.com.

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

ISBN-13: 978-1-908043-71-9 (Paperback)

1st printing, 2014

Contents

Presentation Slides and Transcript.....	5
Core Dump Collection.....	25
Practice Exercises	31
Exercise 0 (GDB)	36
Exercise 0 (LLDB).....	39
Exercise A1 (GDB)	42
Exercise A1 (LLDB)	54
Exercise A2 (GDB).....	66
Exercise A2 (LLDB)	74
Exercise A3 (GDB)	83
Exercise A3 (LLDB)	88
Exercise A4 (GDB).....	94
Exercise A4 (LLDB)	105
Exercise A5 (GDB).....	115
Exercise A5 (LLDB)	121
Exercise A6 (GDB).....	129
Exercise A6 (LLDB)	155
Exercise A7 (GDB).....	176
Exercise A7 (LLDB)	184
Exercise A8 (GDB).....	192
Exercise A8 (LLDB)	207
Exercise A9 (GDB).....	222
Exercise A9 (LLDB)	249
Exercise A10 (GDB).....	277
Exercise A10 (LLDB)	290
Exercise A11 (GDB).....	305
Exercise A11 (LLDB)	312
Exercise A12 (GDB).....	321
Exercise A12 (LLDB)	344
App Source Code	353
App0	354
App1	355
App2	356

App3	358
App4	360
App5	362
App6	364
App7	366
App8	368
App9	370
App10	372
App11	374
Selected Patterns.....	377
NULL Pointer (data)	378
Incomplete Stack Trace	379
Stack Trace.....	380
Multiple Exceptions	381
Shared Buffer Overwrite.....	382
Incorrect Stack Trace	386
NULL Pointer (code).....	387
Spiking Thread	389
Dynamic Memory Corruption (process heap)	391
Double Free (process heap).....	392
Execution Residue	393
Coincidental Symbolic Information	395
Stack Overflow (user mode)	397
Divide by Zero (user mode)	400
Local Buffer Overflow	401
C++ Exception	403
Truncated Dump.....	404
Paratext	405