

Windows Debugging

Duration: 3 Days

Description: This course teaches the student how to master today's most powerful Windows debugging tools, including NTSD, CDB, WinDbg, KD, and ADPlus:

- Debug code that wasn't designed or written for easy debugging
- Understand debuggers "under the hood," and manage symbols and sources efficiently
- Debug complex memory corruptions related to stacks and heaps
- Resolve complex security problems
- Debug across processes: identity tracking, RPC debugger extensions, and tracking IPCs with Ethereal
- Find and fix resource leaks, such as memory and handle leaks.
- Debug common thread synchronization problems
- Learn when and how to write custom debugger extensions
- Perform "postmortem debugging" using crash dumps and Windows Error Reporting
- Automate debugging with DebugDiag and the Analyze Debugger command

Audience: Intermediate and advanced debuggers; system-level and application developers.

Topics:

PART I - OVERVIEW

- Chapter 1: Introduction to the Tools
- Chapter 2: Introduction to the Debuggers
- Chapter 3: Debugger Uncovered
- Chapter 4: Managing Symbol and Source Files

PART II - APPLIED DEBUGGING

- Chapter 5: Memory Corruptions Part I – Stacks
- Chapter 6: Memory Corruptions Part I – Heaps
- Chapter 7: Security
- Chapter 8: Inter-process Communication
- Chapter 9: Resource Leaks
- Chapter 10: Synchronization

PART III - ADVANCED TOPICS

- Chapter 11: Writing Custom Debugger Extensions
- Chapter 12: 64-bit Debugging
- Chapter 13: Postmortem Debugging
- Chapter 14: Power Tools
- Chapter 15: Windows Vista Fundamentals

APPENDIX A

Application Verifier Test Settings