Windows Internals

Module 1: Introduction

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Course Objectives

- Understand Windows features and architecture
- Uncover internal mechanisms relevant for developers
- Enhance ability to write better software for Windows

Windows Versions

- Windows NT 3.1 (July 1993)
- Windows NT 3.5 (September 1994)
- Windows NT 3.51 (May 1995)
- Windows NT 4.0 (July 1996)
- Windows 2000 (December 1999)
- Windows XP (August 2001)
- Windows Server 2003 (March 2003)
- Windows Vista (January 2007)
- Windows Server 2008 (February 2008)
- Windows 7 & 2008 R2 (October 2009)
- Windows 8 & Windows Server 2012 (October 2012)
- Windows 8.1 (“Blue”) (expected August 2013)

Tools

- **Windows built in**
  - Task manager, resource monitor, performance monitor, others
- **SysInternals**
  - Obtained from http://www.sysinternals.com (which is redirected to http://microsoft.technet.com/sysinternals)
  - Most written by Mark Russinovich
  - No installation needed
  - Free
- **Debugging tools for Windows**
  - Now part of the Windows SDK
  - No installation needed
  - Free

Demo

Getting the tools

Summary

- Windows has maintained roughly the same architecture since the first Windows NT version
- Various tools will be used throughout the course to demonstrate Windows features and behaviors