

Windows Client: Supporting and Troubleshooting

Workshop**PLUS**

Target Audience:

This course is an basic course for Windows Desktop Client support people and is targeted at support IT staff who have Windows Server or Windows Desktop basic troubleshooting knowledge.

Overview

This workshop provides attendees with the knowledge and understanding of the troubleshooting techniques and tools needed to identify and solve issues either on Windows 7, Windows 8 or Windows 10. Through presentations, white-board discussions, and goal-based labs, this 3-day workshop covers the individual approaches for troubleshooting problems and explores the tools available to monitor, trace and help to identify the root cause of the issues.

Key Features and Benefits

Each group of modules is organized by scenario and is designed to provide participants with in-depth expertise, tools and hands-on experience to help to understand and troubleshoot specific scenarios. This course will increase the productivity by establishing an effective helpdesk. They will learn essentials about Windows Internals and Security architecture.

Technical Highlights

After completing this course, you will be able to:

- Understand which tools exists and can help troubleshooting Windows Desktop Client.
- Understand how to approach different troubleshooting scenarios.
- Troubleshoot performance issues.

Syllabus

Hosted Requirements:

Participants will need a computer running at least Windows 7, with 50 GB free drive space, a USB port, a 10 Mbps or faster network adapter, at least an evaluation copy of Office 2010 Professional or later, and a PDF reader. Participants also need a Microsoft/Windows Live ID to connect to the virtual environment. The classroom must be networked, with access to the Internet and at least total Internet bandwidth of 2 megabits per second. TCP port 443 must be open. We highly recommend a wired network in the classroom.

Hardware

Requirements:

Windows 10, with at least 30GB of free space and 4GB of RAM

This workshop runs for **3** full days. Students should anticipate consistent start and end times for each day. Early departure on any day is not recommended.

Module 1: Windows Internals and Architecture:

- Understanding the difference between User Mode and Kernel Mode.
- Understanding the difference between an application and a thread.
- What are system, idle and hosting processes?
- How to configure symbols and troubleshoot DLL files.
- Understanding the difference between physical and virtual memory.

Module 2: Support Analysis & Troubleshooting Framework & Tools:

- Support workflow best practices.
- Steps to take before escalation starts.
- Best practices for root cause analysis.
- How to use the Problem Step Recorder.
- How to use the eventlog viewer.

Module 3: Debugging Tools:

- How to troubleshoot with logman.
- How to use WPA during boot phase.
- Using and configuring Performance Monitor.
- Use Sysinternal tools for troubleshooting Windows Devices.
- How to use and configure Process Monitor.

Module 4: Windows Management Instrumentation:

- How does WMI work.
- A deeper look at the components that make WMI.
- Using built in WMI tools to gather device data.
- How do I troubleshoot WMI corruptions.
- How to collect remote devices information using WMI and PowerShell.

Module 5: Application Failures - Hangs and Crashes:

- Application failures.
- Understanding and Diagnosing Application Crashes.
- Data Gathering and Troubleshooting of Application Crashes.
- Understanding, diagnosing and troubleshooting application hangs.
- Troubleshoot Windows Store Apps.

Module 6: Troubleshooting OS Crashes and Hangs:

- Understand why Windows can crash.
- Understand why Windows can hang.
- How to configure memory dumps.
- How to do basic Windows Crash and Hang troubleshooting.
- When should I refresh or rest the Device.