

## Strata IT Fundamentals

3 Sessions / 9 Hours

### Session 1

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#### Section A: Introduction

- Strata Overview
- Certificate Details Certificate vs. Certification Technology and Hardware Basics
- Compatibility Issues/Installation
- Security
- Preventative Maintenance

#### Section B: The Visible PC and How It Works

- Types of Computers Three-Stage Process of Computing
- The CPU
- The System Unit
- Standard Peripherals
- Connecting the Monitor
- USB and FireWire
- Network Connections
- Audio Connections
- Additional Connections
- Legacy Connectors
- VGA Connectors

#### Section C: Inside the System Unit

- Working in the System Unit
- Understanding ESD
- CPU and RAM
- Motherboard
- Power Supply and Connections
- Drives
- Cooling the System
- System Unit Tips

#### Section D: The CPU and RAM

- CPU Overview
- CPU History - Intel

- CPU History - AMD
- Intel® Information
- Multiple Cores Concept
- AMD Information
- Dual-Core Families
- Phenom™ CPUs
- Core™ i7 and i5
- Transistors and Capacitors Synchronous Dynamic RAM (SDRAM)
- RAMBUS
- DDR
- DDR2 and DDR3
- Upgrading RAM

#### Section E: Understanding Storage Options

- Storage Types
- Hard Drives
- Drive Speed/Capacity
- Disk Cache
- Drive Types
- Removable Media
- Optical Media
- Remote Storage

#### Section F: Alternative Storage Options

- Network Attached Storage
- Storage Area Network
- RAID Benefits
- RAID 0
- RAID 1
- RAID 5
- Complex RAID Arrays
- RAID Technologies

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### Session 2

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#### Section A: The Operating System

- Beyond the Hardware
- Getting the Software
- Installing and Maintaining Software
- Understanding Operating Systems

#### Section B: Managing User Accounts

- User Account Benefits
- Account Types
- Managing Users
- Standard User Options
- Managing Accounts
- Computer Management
- Disable/Delete Accounts

#### Section C: Windows Basic Training

- Date and Time
- Power Settings
- Colors and Themes
- Icons
- Screen Resolution
- Organizing Data
- Adding Folders
- Renaming Folders
- Moving Folders

#### Section D: Software Installation

- Installing Windows 7
- Clean Install
- Easy Transfer
- Upgrading
- Updating the System
- Update Settings
- Installing an Update

- Proper Documentation
- Digital Rights Management
- Perform a Clean Uninstall

#### Section E: Performing System Maintenance

- Performance Tools
- Performance Rating
- Device Manager
- Disk Cleanup
- Backup Tools
- Backup Considerations
- Backup Types
- Perform Backup
- Restore Points
- Operating System Vulnerability
- Updates and Action Center

#### Section F: Printers

- Dot Matrix
- Ink-Jet
- Laser
- Toner
- Laser Printer Diagram
- Thermal and Solid Ink Printers
- Parallel Cables and Ports
- Port Modes
- USB Printers and Cables
- Network Printer Connections

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### Session 3

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#### Section A: Video

- Video Cards
- CRT Monitors
- Refresh Rates
- Pixel Aspect Ratio
- Safety Considerations
- Degaussing
- Carrying a CRT
- LCD Monitors
- Polarity of Light
- How an LCD Works
- LCD Pixels
- CCFL
- Brightness/Contrast

#### Section B: Multimedia

- Sound Waves/Compression
- MIDI/FM Synthesis
- Codecs/Player Association
- SC Standards/Initial Outputs
- Surround 5.1
- Additional Outputs
- S/PDIF
- Video/Compression
- Video Capture Devices
- Windows Media Center
- Personal Video Recorders
- Web Cams
- Multimedia Installation Processes
- Sound Card Drivers
- Port Assignment within Device Manager
- Sound Settings
- Headsets
- Front Panel Connectors
- Individual Application Considerations
- Volume Control

#### Section C: Wireless

- Radio Frequency
- Bluetooth
- Understanding 802.11
- 802.11 Standards
- Wireless Settings
- Wireless Issues

#### Section D: Networking

- Cat Levels
- RJ Connectors
- Standard vs. Crossover Cables
- ISDN
- DSL
- Cable Modem
- DOCSIS
- Satellite
- TCP/IP
- DHCP
- DNS
- HTTP and HTTPS
- SSL/TLS
- E-mail
- File Transfer Protocol

#### Section E: Accessing the Internet

- Customization
- Font Settings
- Color Settings
- Phishing
- ActiveX and Java
- Cookies
- Plug-ins
- VoIP

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**Session 3 (Cont'd)**

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**Section F: Security**

- Viruses and Worms
- Trojans, Spyware, and Malware
- avast! Software
- Spam Filtering
- Pop-Up Blocking
- Personal Firewalls
- Encryption Cracking
- WEP
- WEP Key Problems
- User Education
- Physical Security

**Section G: Green IT**

- Preserving Power
- Maintaining Systems
- Working in the Cloud
- Power Saving Tips
- Proper Disposal