Microsoft MTA Operating System Fundamentals

Course Outline:

Lesson 1: Understanding Operating System and Configurations

- Configure Control Panel options

  - Configure administrative tools, configure accessibility options, configure power settings, configure File Explorer settings

- Configure desktop settings

  - Configure profiles, display settings, and shortcuts; configure and customize Start Menu; configure Task Bar settings; configure toolbars; configure notifications

- Configure native applications and tools

  - Configure Microsoft Edge, configure Cortana, configure Hyper-V, configure settings using MSCONFIG, configure processes and applications using Task Manager, configure computer management

- Configure mobility settings

- Configure Sync Center, Windows Mobility Center, and Remote Desktop

- Configure and use management tools

  - Configure MMC, configure the Windows PowerShell console and Windows PowerShell ISE

Installing and Upgrading Client Systems

- Identify Windows operating system editions

  - Identify hardware and compatibility requirements, determine appropriate editions per device type

- Identify upgrade paths

  - Identify upgrade paths from previous Windows versions, identify application compatibility

- Understand installation types

  - Perform a clean install, upgrade via Windows Update, migrate from previous Windows versions, perform removable media installation, perform network installation

- Understand operating system architecture

  - Understand kernel mode; understand user mode; understand memory, IRQs, drivers, CPUs, and UI; understand 32-bit versus 64-bit architecture

Lesson 2: Managing Applications

- Configure applications

  - Understand local versus network applications, configure desktop applications, configure app startup options, configure Windows features, configure Windows SmartScreen, configure application removal, configure Windows Store apps

- Configure user account control (UAC)

  - Understand standard user versus administrative user, understand types of UAC prompts and levels

- Configure antivirus settings

  - Configure Windows Defender and the Malicious Software Removal tool

- Understand services

  - Understand service start-up types, service accounts, and service dependencies

Managing Files and Folders

- Understand file systems

    - Understand FAT32, NTFS, and ReFS

- Understand file and print sharing

    - Configure File System permissions, configure Share Permissions, configure HomeGroup settings, configure print drivers, configure effective permissions, create shares, create mapped drives

- Understand encryption

    - Understand BitLocker and Encrypting File Systems (EFS)

- Understand libraries

    - Understand offline files, configure libraries, add multiple local locations to a library, add networked locations

Lesson 3: Managing Devices

- Connect devices

    - Connect, enable, and disable plug-and-play and Bluetooth devices; connect and disconnect printers; install third-party software for devices; install device drivers

- Understand storage

    - Understand disk types, security (encryption), storage device types (eSATA, USB, IEEE 1394, iSCSI, InfiniBand), and storage drive types (basic, primary, extended, logical, dynamic disk, VHDs); configure OneDrive use; optimize drives

- Understand printing devices

    - Understand local printers, network printers, print queues, print-to-file, and Internet printing

- Understand system devices

    - Understand video, audio, and infrared input devices; understand Device Manager

Lesson 4: Understanding Operating System Maintenance

- Understand backup and recovery methods

    - Configure System Restore; configure a recovery drive; configure recovery boot options, such as Last Known Good, and various Safe Mode options; recover files from OneDrive

- Understand maintenance tools

    - Understand Disk Defragmenter, Disk Cleanup, Task Scheduler, and System Information

- Configure updates

    - Configure Windows Update options; implement Insider Preview, Current Branch, and Current Branch for Business scenarios; manage update history; roll back updates