macOS & iOS System Administration
Course Outline

Automata Technology Services LLC

Revision 1.1

macOS Management Basics

- Apple Macintosh Hardware & Troubleshooting
- Installing macOS
- macOS Recovery
- Advanced Finder Techniques
- System Preferences for the System Admin
- macOS System Utilities
- Apple Silicon vs Intel Architecture
- Managing across macOS versions 10.13 - 11.0

Apple Remote Desktop

- Installation of Apple Remote Desktop (ARD)
- Configuring Clients to use ARD
- Apple Remote Desktop User Interface
- Adding macOS Clients to the ARD console
- Managing Macs with ARD
- Installing Applications using ARD
- IT Asset Management with ARD
- Configuring a Remote Task Server for ARD

iOS Management Basics

- iPhone and iPad Hardware & Troubleshooting
- iOS Reset & Restore
- Activation Lock
- Configuring a VPN
- Managing iOS Device Restrictions
- ScreenTime Management Techniques

Managing Devices Using Apple Configurator

- Installing Apple Configurator 2
- The Apple Configurator 2 Interface
- Creating Mobile Config Profiles
- Enrolling Devices into Apple Configurator
- Managing Devices with Apple Configurator
- Accessibility and Guided Access

macOS Server

- Overview of macOS Server
- Installing macOS Server
- Managing macOS Server
- Introduction to Profile Manager
- Introduction to Directory Services
- Binding macOS Clients to Open Directory
- Introduction to File-Print Services
- Managing a Small Network of Macs

Apple Device Enrollment Program (DEP)

- Introduction to Device Enrollment
- Apple School Manager - Apple Business Manager Overview
- iTunes U Course Manager
- Apple Volume Purchase Program

Fundamentals of Mobile Device Management

- Introduction to Mobile Device Management (MDM)
- Configuring Profile Manager in macOS Server
- Managing iOS Clients Using Profile Manager
- Managing macOS Clients Using Profile Manager

Apple and Microsoft Integration

- Microsoft File & Printer Sharing with macOS Clients
- Integrating Microsoft Office 365 with macOS and iOS
- Using MDM and Microsoft Apps to Configure Apple Devices for the Enterprise
- Integrating macOS Clients with Microsoft Active Directory
- Joining a Mac to Microsoft Active Directory

Enterprise Mac Management

- Using the Terminal CLI
- macOS Multiple Computer Name Locations
- The Differences between Mobile and Network Logins
- Configuring Apache Web Services on macOS
- Extending Apple Remote Desktop in an Enterprise Environment

Mass Application Installation

- Mass Installation of Applications from a Unix Command in ARD
- Scripting Software Installation from Disk Image, Zip File, App Store, etc.
- Managing Application Preferences and End User Configuration
- The User Template Folder (legacy macOS)
- Deploying Captured Preferences with a Custom Script

Introduction to Munki

- Munki Components
- Installation of a Munki Environment
- Configuration of a Munki System Admin Mac
- Installing Munki Tools

Packaging Software for Munki Deployment

- Importing Software into Munki for Deployment
- Creating custom Packages to run Scripts
- Automatically Importing Packages into Munki
- Using Munki to Distribute mobileconfig Profiles (legacy macOS)
- Using Munki to Install Printers

Deploying Software with Munki

- Building Manifests
- Upgrading Software
- Upgrading Configuration Profiles
- Removing Software
- Receipts and Bill of Materials Files

Multi-Site macOS Management with Munki

- Using DNS CNAMES to Access Nearest Server
- Syncing Munki Servers Across Locales
- Using CRON to Sync Multiple Munki Servers
- Using Munki with Traveling Users & MacBooks
- Using LaunchDaemons to Erase User Folder
- Controlling How Often Munki Runs

Scripted Out-of-Box Experience with macOS

- Using Bootstrappr
- Creating Workflows
- Bonus: Understanding the chroot Command

FileVault

- Introduction to FileVault
- Installing and Configuring FileVault with Individual Macs
- Installing and Configuring FileVault in an Organization/Institution
- Authorized Restart
- Decrypt Drive in macOS Recovery
- Encrypting an External Drive

Upgrading macOS

- Configuring macOS Upgrade media
- Using Munki to upgrade macOS
- Deploying the Upgrade via Shell or ARD