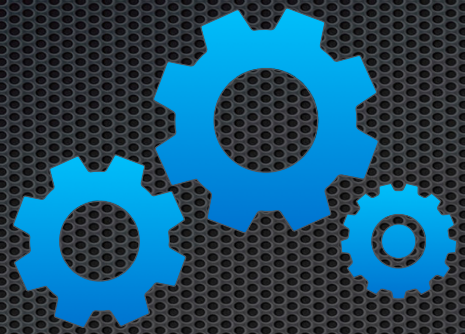


AUTOMATA

Technology Services

The Apple MDM Framework

What is MDM?
Apple's MDM Framework
Deployment Models
Declarative Device Management

Introduction to MDM

Lecture

What is MDM?

- Mobile Device Management (MDM)
- Consistent, Scalable management solution across many different kinds of devices.
- Allows you to configure both user-owned and organization-owned devices through wired, Wi-Fi, and cellular network connections.
- At a high level, MDM solutions enroll devices into a management organization, pushes configurations and commands to remote devices and also receives info back from the devices on task status and state.

Microsoft Intune

- World-class MDM Solution.
- Manages a number of platforms including…
  - Apple
  - Microsoft
  - Google
  - Linux
- Integrates with Microsoft 365 Applications and Services.
- Originally designed for BYOD but has been expanding to offer full device configuration for company owned devices in recent years.

Apple's MDM Framework

Lecture

Features

- Every MDM solution that supports Apple devices, utilize the Apple MDM Framework.
- Enables -
  - Device Enrollment/Management
  - Device Configuration
  - Device to Server Communication
- Not all MDM vendors implement all of the framework's available features. Review Microsoft's Intune documentation for details.

Features

- Categories of MDM Settings -
  - Configuration Profiles (payloads)
  - Restrictions
  - Commands
  - Queries
- Read Apple Platform Deployment Guide in Resources.

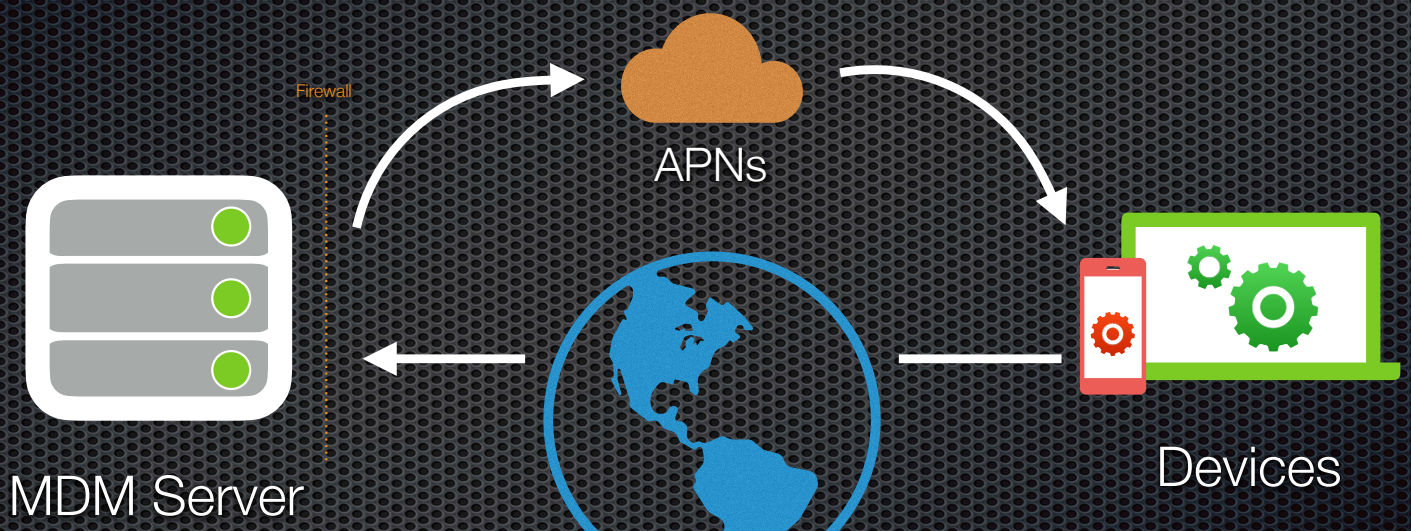
Apple's MDM Protocol

- Built into every Apple operating system.
- The protocol is what allows a device to respond to an MDM's command and knows what to do.
- Key functions enabled by the protocol include:
  - Enabling device management, assignment, enrollment.
  - Configuration, commands, queries, status reports.
  - Declarations, check-in, content management.

Profile Payloads

- Payloads are the specific configuration or restriction settings that are applied to a device through MDM.
- Payloads can be OS specific and not all payload are supported on all operating systems.
- Payloads can be stacked/combined to create a curated experience for all of your end-users.
- Payloads are detailed in the Apple Platform Deployment guide and we'll use several of them through out this course.
- Payloads are named differently depending on MDM solution.

Push Notifications (APN)



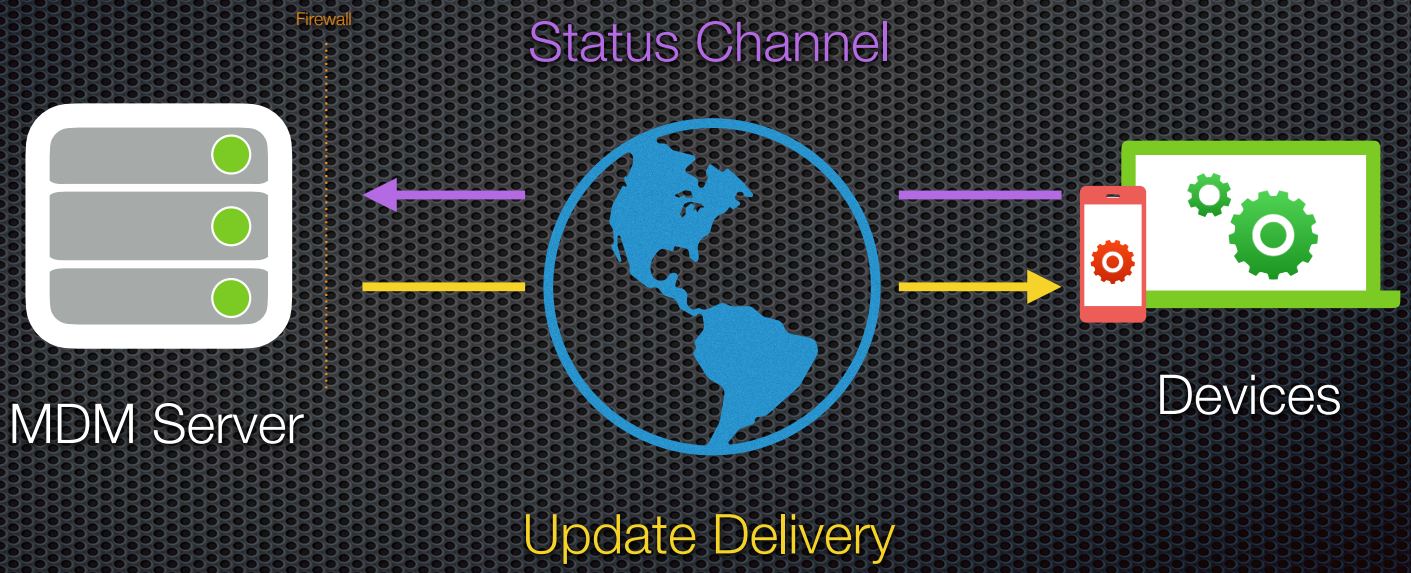
Declarative Device Management

Lecture

Declarative Device Management

- New type of mobile device management protocol.
- Uses declarations from the MDM server to asynchronously update device settings.
- Uses a status channel from the client to the server to proactively provide updates.
- Not as ‘chatty’ as the traditional APN approach.
- Must be supported by your MDM vendor.

Declarative Model



Device Ownership Models

Lecture

Ownership Models

Organization Owned

- Organizations purchase devices.
- Automated Device Enrollment and Device Enrollment available.
- Devices can be Supervised.
- Supervised Devices restrict the removal of MDM.

User Owned

- Bring Your Own Device (BYOD) model.
- Only User Enrollment is available.
- MDM can be removed by the end-user.

Device Enrollment Models

Lecture

Device Enrollment Options

- Automated Device Enrollment
  - Devices automatically enroll. “Zero-touch”.
- Device Enrollment
  - Installed on devices already in use or not eligible for Automated Device Enrollment.
- User Enrollment
  - End-users enroll their own device into MDM using a managed Apple ID or through a profile.

Personalization Strategy

- Personally Enabled Devices
  - Device assigned to a specific user (1:1)
- Non-personalized Devices
  - Multiple users sharing the same device like a computer lab.
- Shared iPad
  - Multiple users share the device, but each user has a personalized experience and their data is stored in iCloud.