



Apple Device Management - A Primer

Introduction to the Apple MDM Framework
How MDM Works
MDM Enrollment
Introduction to Apple Business / School Manager

Apple's MDM Framework

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.

MDM Framework 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.

MDM Framework 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.

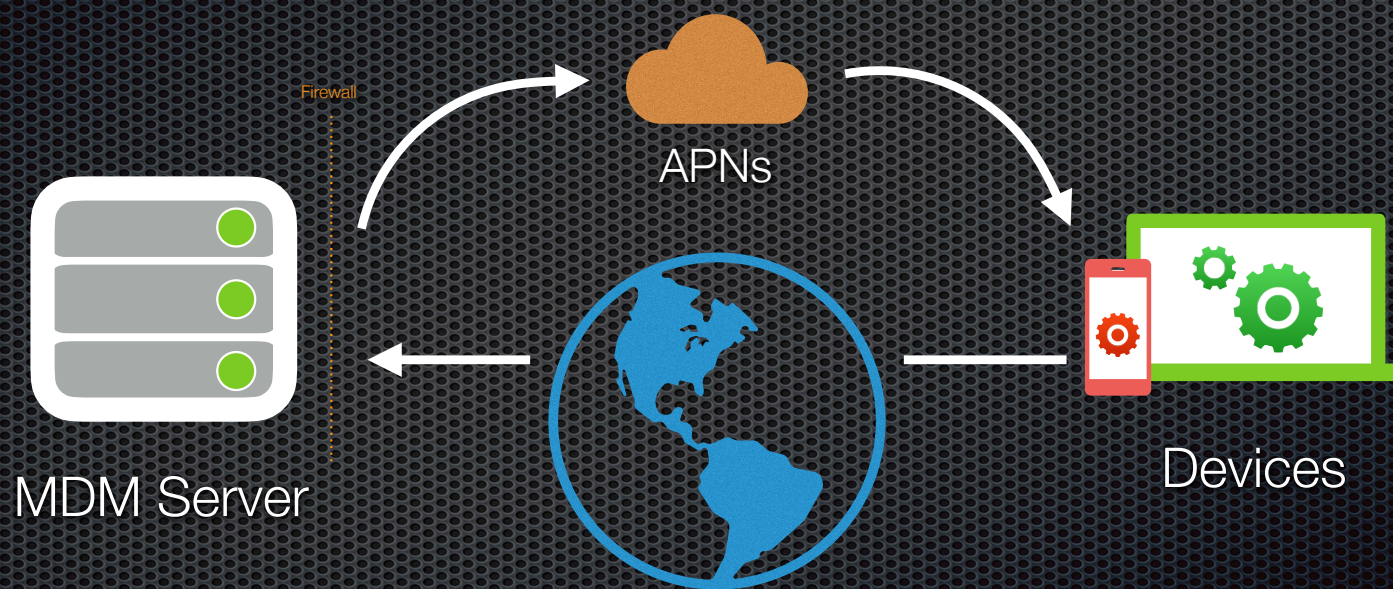
Profile Payloads

- ✦ 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.

How MDM Works

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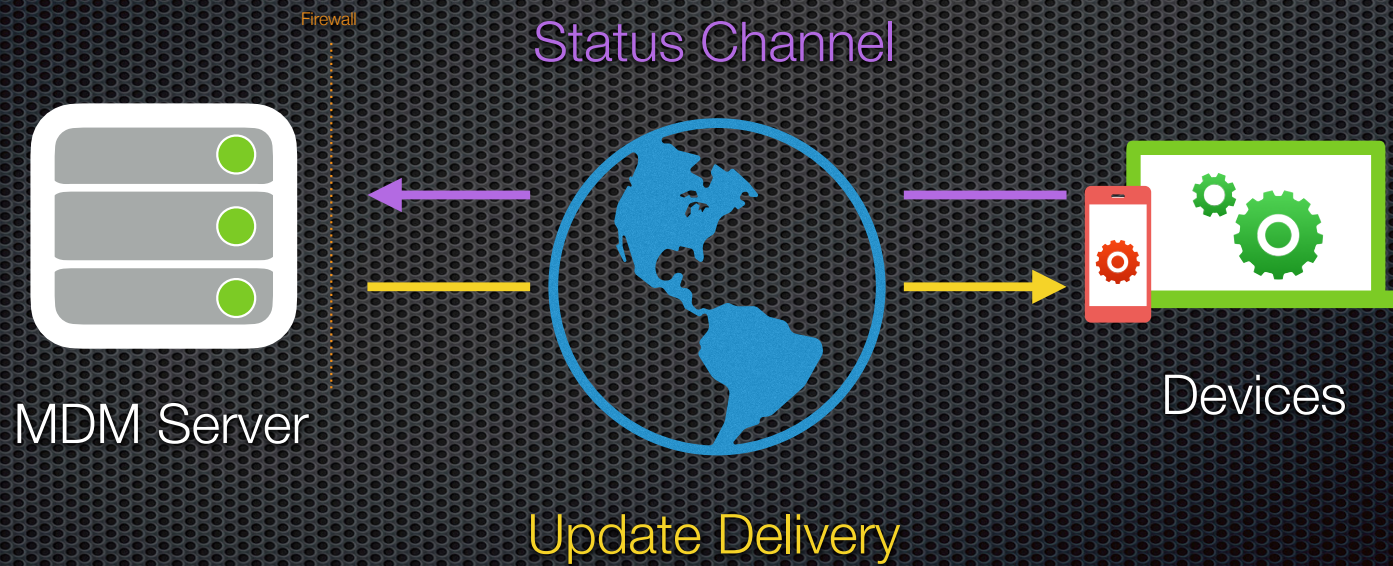
Push Notifications (APN)



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 Enrollment

Lecture

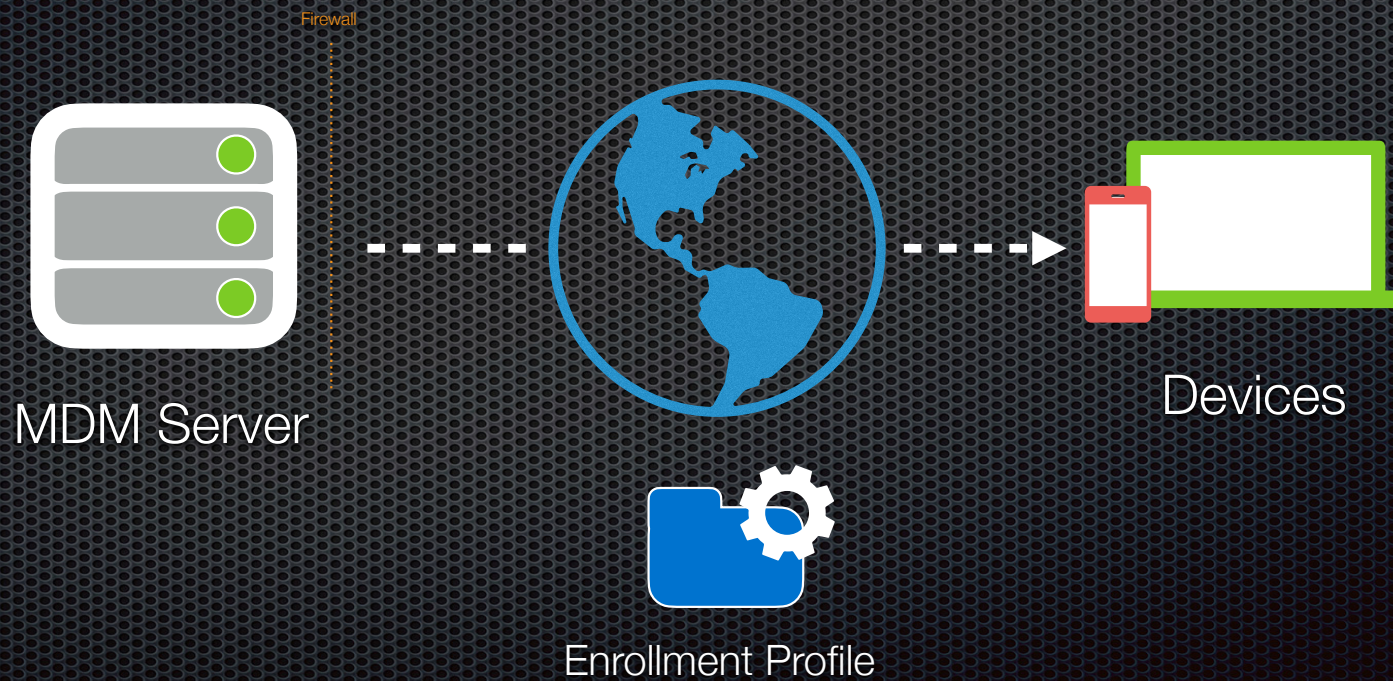
Device Enrollment



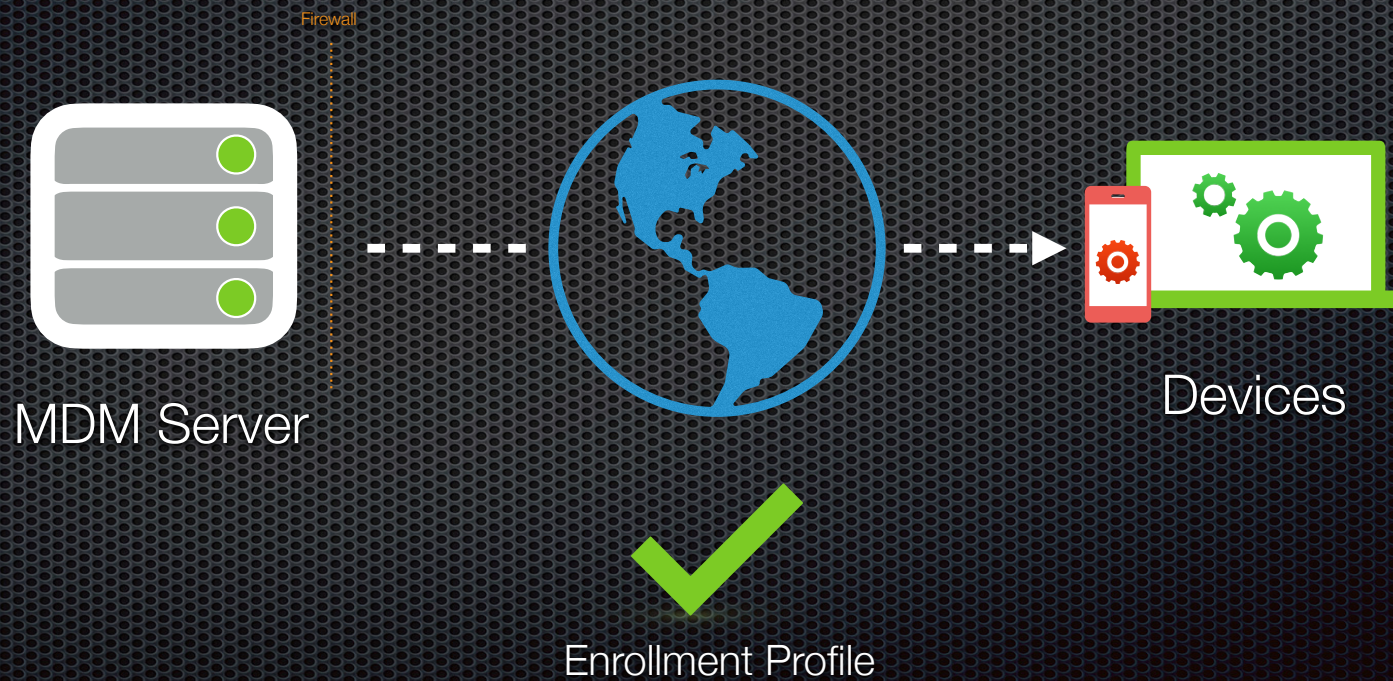
Device Enrollment



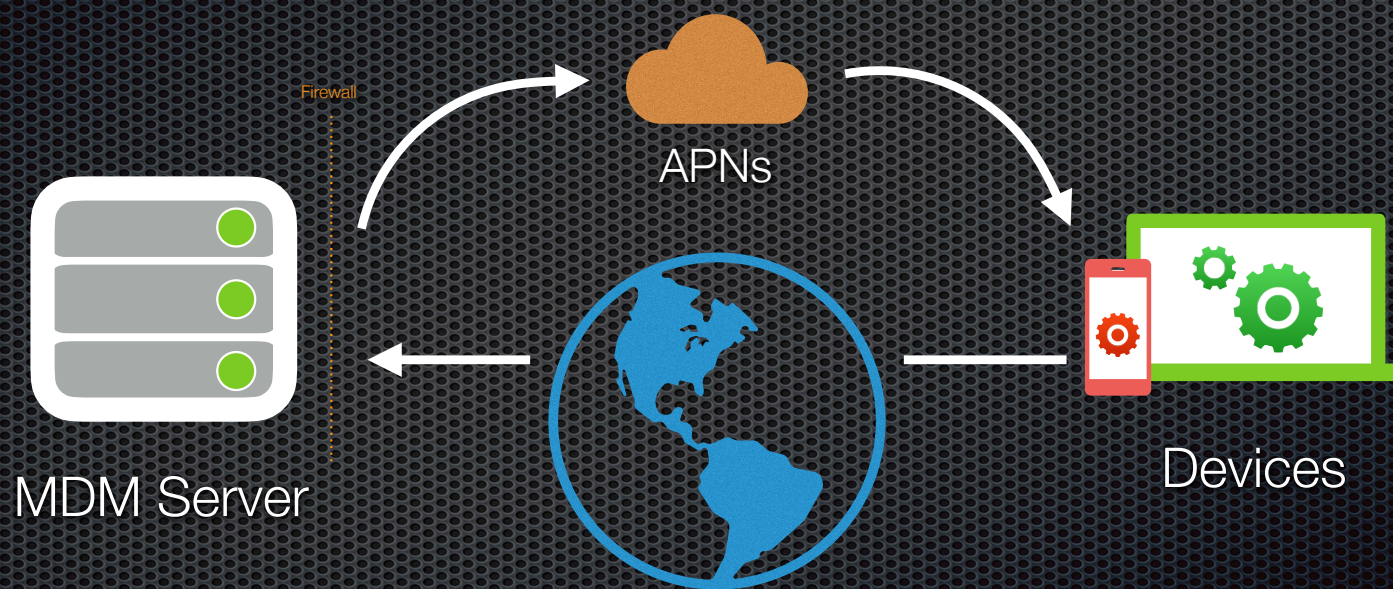
Device Enrollment



Device Enrollment



Push Notifications (APN)



MDM Certificates

- ✦ MDMs require a number of installed certificates on the device to work correctly.
 - ✦ Apple Push Notification certificate
 - ✦ Secure Socket Layer (SSL) certificate
- ✦ You may see other certificates or profiles on a managed device just needed to establish a management baseline.

Device Enrollment Models

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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.

Managed Apple Accounts

Lecture

Apple Account

- Apple Accounts are accounts for identity and access to Apple products and services.
- Specific services that require an Apple Account are as follows...
 - iTunes Store & App Store
 - iCloud
 - iWork and Notes
 - Continuity Services
- **Note: It is possible to setup & use Apple devices without an Apple Account, but it will restrict access to specific features and services.**

Types of Apple Accounts

- ✦ Personal Apple Account
 - ✦ The common Apple Account that end-users have that they provision themselves when they first encounter Apple devices and services.
 - ✦ Unrestricted.
 - ✦ Tied to an individual, not an organization.

Types of Apple Accounts

- ✦ Managed Apple Account
 - ✦ Special Apple Accounts that are generated by an MDM Administrator and tied to a specific organization.
 - ✦ Managed Apple Accounts restrict access to some services such as Find My and iCloud Mail.

Apple Account Comparison

Apple Account (personal)

User creates the Apple Account

User manages the Apple Account

User uses the Find My App to locate a lost device

User has access to create an iCloud Mail account

Full App Store access & purchasing capability

Managed Apple Account

MDM Administrator creates & assigns

MDM Administrator managed

Find My app is disabled, MDM Administrator uses Lost Mode

iCloud Mail is unavailable

App Store browsing only, no ability to purchase

Multiple Apple Accounts

- Personally owned devices (BYOD) can be configured with 2 Apple Accounts.
- A Managed Apple Account from the organization.
- A Personal Apple Account to allow for things that the Managed Apple Account doesn't provide for or to also sync personal data like Photos.

Intro to Apple Business Manager

Lecture

Introduction to ABM/ASM

- ✦ Web-based portals that work with your MDM solution.
- ✦ Organization Settings
- ✦ Database of organization owned devices
- ✦ Provision Managed Apple IDs
- ✦ Configure Federation
- ✦ Apps & Books

Sign Up

- ✦ Requirements
- ✦ Cost — FREE!