Christopher Holmes

Christopher Holmes is a Senior Engineer/Technical Training Specialist for HCS Technology Group. While a relative newcomer to the industry he has been delivering high quality consulting and training to customers across the south for the last eight years. Christopher has the privilege of being an Apple Professional Service Provider, Apple Certified Trainer and has served on the Apple Consultant Network Advisory Council for the last three years.



Deploying Devices: State of the Union and How to Select a MDM

What are we going to cover?

Manage Devices & Distribute Content

What are we going to cover?

- **Apple Deployment Programs**
  - Device Enrollment Program (DEP)
  - Volume Purchase Program (VPP)
  - Apple IDs for Students (Deprecated)
  - Apple School Manager (Managed Apple ID's) *EDU Only
- **Profile Manager**
- **Apple Configurator 2**
- **Caching Server**
- **3rd Party Options**

Apple ID Overview

- Personal Apple ID
  - iCloud
    - App Adoption/Installation
  - Institutionally Managed Apple ID's
    - Apple Push Notification
    - GSX Program facilitators
    - Apple Developer Program
    - Apple Deployment Program
      - Program Agent
      - Administrator Account

Apple IDs for Students

Apple IDs for students under 13 include the following features:

- Account settings, such as email address and date of birth, cannot be changed.
- No credit card is attached to the account at setup.
- Limit Ad Tracking is turned on for the account to ensure the student does not receive targeted advertising from Apple.
- Students can't opt-in to receive marketing materials.
- A parent or guardian can be notified of any significant changes

Apple IDs for Students

Enrollment process for students under 13:

1. Prepare Apple IDs
2. Upload list of students
    1. Account Creation CSV Requires
        A. Batch ID: Name for batch of students
        B. Language
        C. Parent Email: Where the parent/gaurdian request from Apple is sent.
        D. Apple ID: desired Apple ID for students.

Apple IDs for Students

Enrollment process for students under 13:

Batch	No. of Accounts	Last Modified	Download	Consent Email
Test	6	09/05/2014 12:43 PM PDT	Download CSV	Resend Email

3. Parent or Guardian reviews request and submits online consent form.
4. Check status of parental consent.
5. Resend email to parents if needed.


Apple Inc. school.apple.com
Learn More
preview
School
Manage your institution's devices, apps, and accounts.
Apple ID
Password
Remember me
Forgot Managed Apple ID or password?
Not enrolled? Enroll your institution now ›
Apple School Manager Terms and Conditions | Privacy Policy | Terms of Use | Copyright © 2016 Apple Inc. All rights reserved

Apple School (Preview)

Looking ahead...

- Apple ID for Students will end July 30th
  - After this date IT won't be able to reset passwords.
- Apple School Manager is in Preview.
  - school.apple.com
  - Managed Apple IDs
- It's a tool that enables and empowers the teacher to engage students in personal learning.

- https://help.apple.com/schoolmanager

Profile Manager

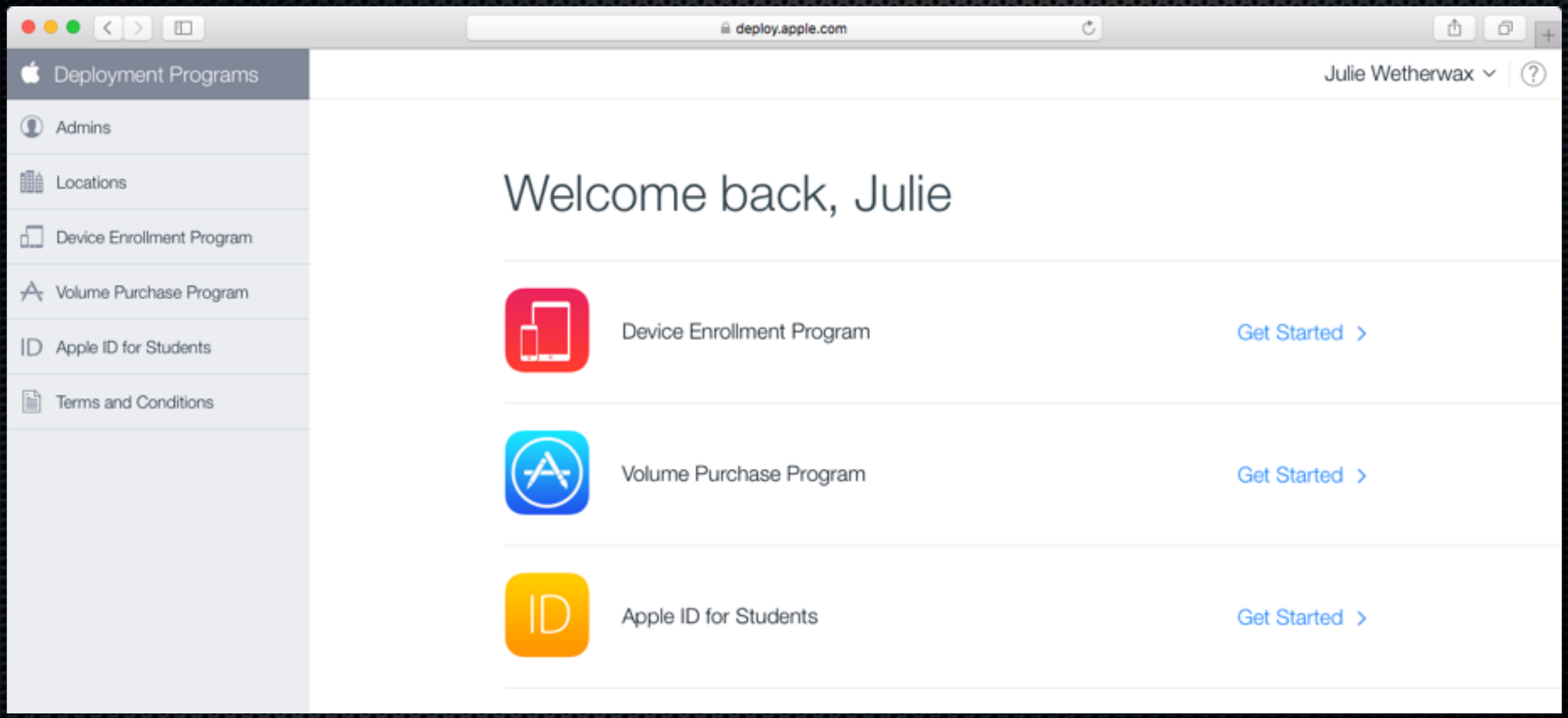
Apple's MDM- built into OS X Server

Features

- Supports DEP
- Supports VPP
- Supports ASM (Edu)
- Settings
- Restrictions
- App Assignment
- Cost Effective



Apple Deployment Portal (ADP)



deploy.apple.com

Device Enrollment Program (DEP)

Overview

Mandatory and lockable MDM enrollment

Wireless Supervision

Zero-touch configuration for IT

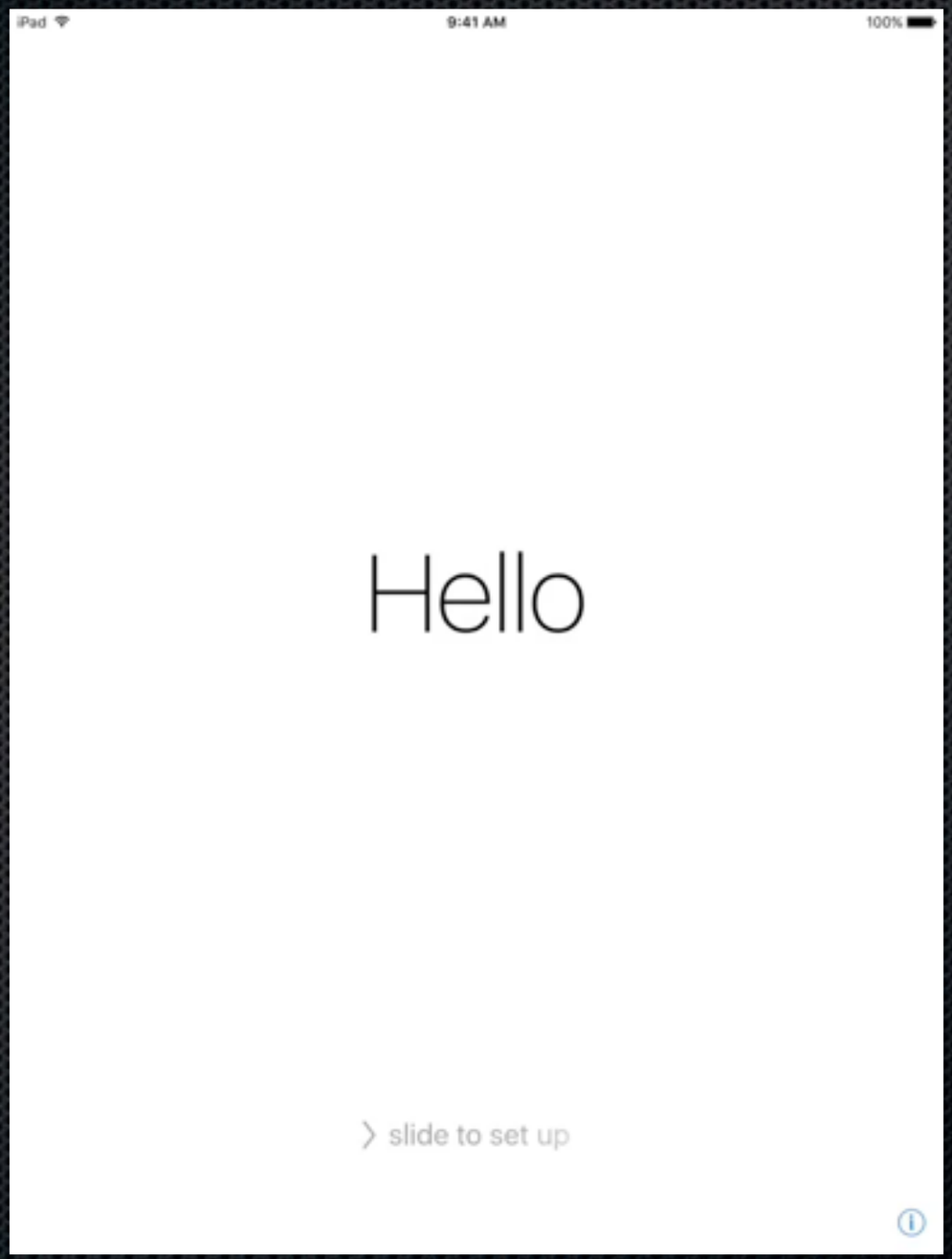
Streamlined Setup Assistant

Availability

*http://images.apple.com/business/docs/VPP_Business_Guide.pdf

https://help.apple.com/deployment/business/e3

Device Enrollment Program (DEP)



Device Enrollment Program (DEP)

Account Creation

- ADP Apple IDs must be new and linked to your organization's domain. (Administrative Apple ID)
- ADP Apple IDs can't be used to log into other services like iTunes. (Personal Apple ID)
- Consider using generic accounts
  - DEP Accounts: domain-dep@domain.com
  - VPP Account(s): domain-vpp@domain.com
    or: domain-vpp-mdm@domain.com
    domain-vpp-configurator@domain.com

Device Enrollment Program (DEP)

Enrollment Process

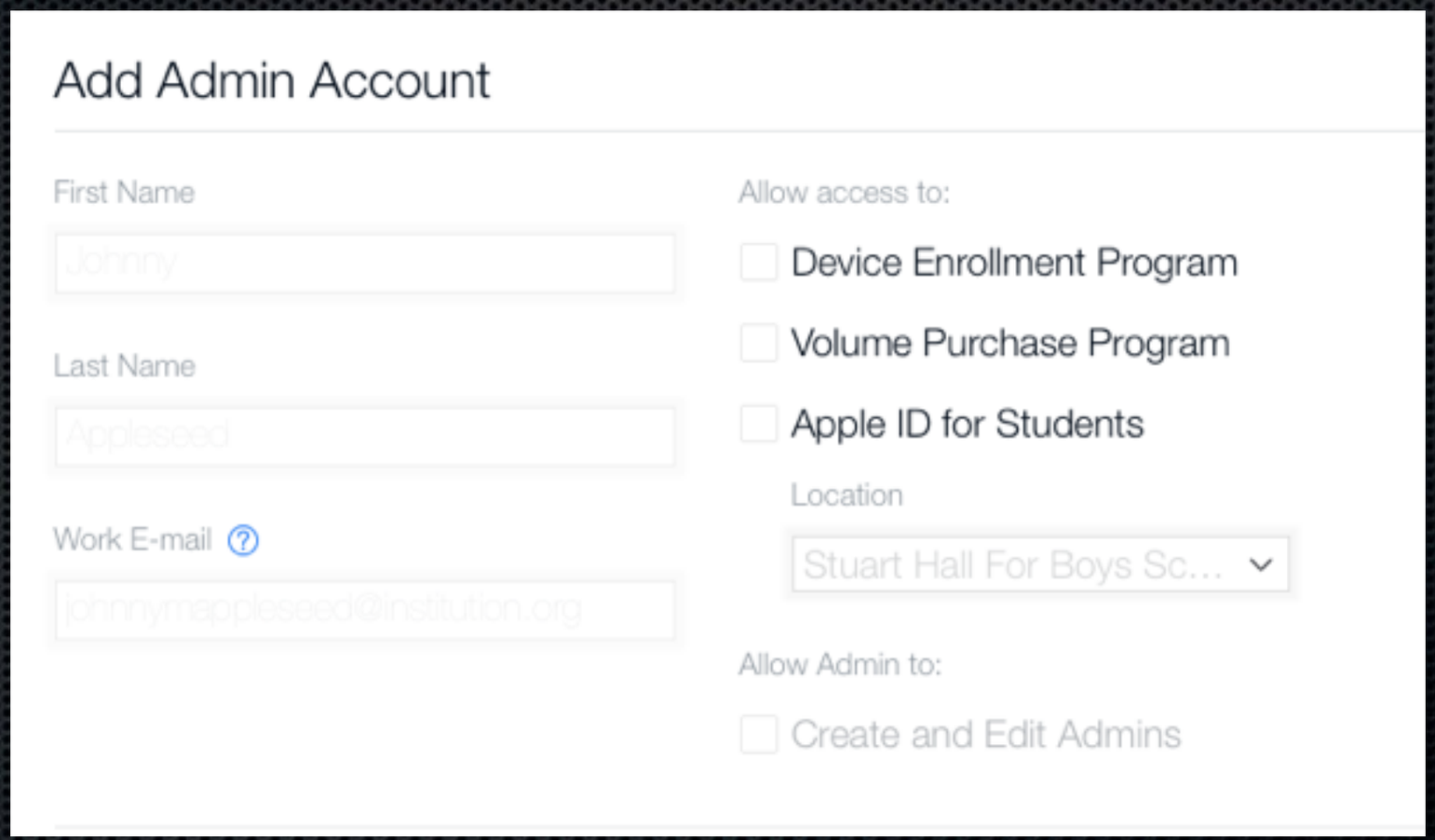
1. Setup an Admin Account
2. Enable two step verification
3. Provide additional institutional information
   - Verification Contact
   - Physical Address Information
   - DUNS #
   - Apple Customer # or DEP Reseller ID*
   - When enrollment is complete you will receive a DEP Customer ID #.

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Device Enrollment Program (DEP)

Next Steps

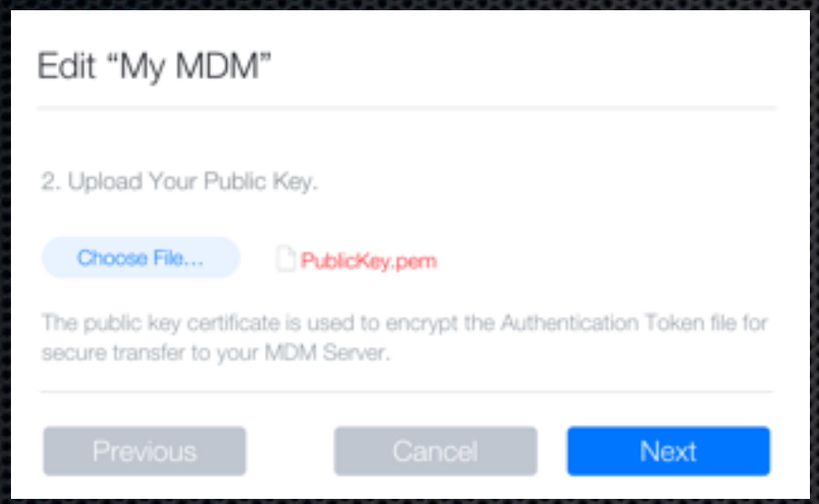
1. Create Admin Accounts

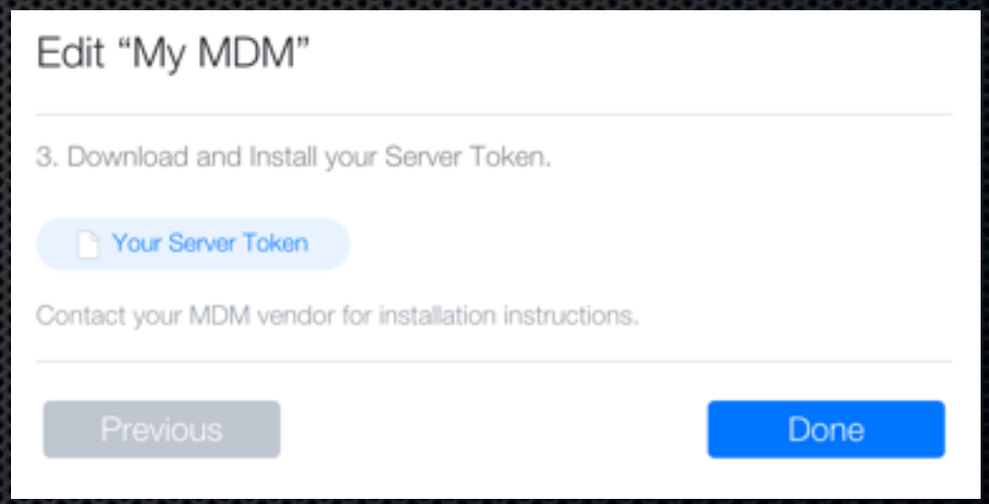


Device Enrollment Program (DEP)

Next Steps

2. Link MDM to DEP with token.





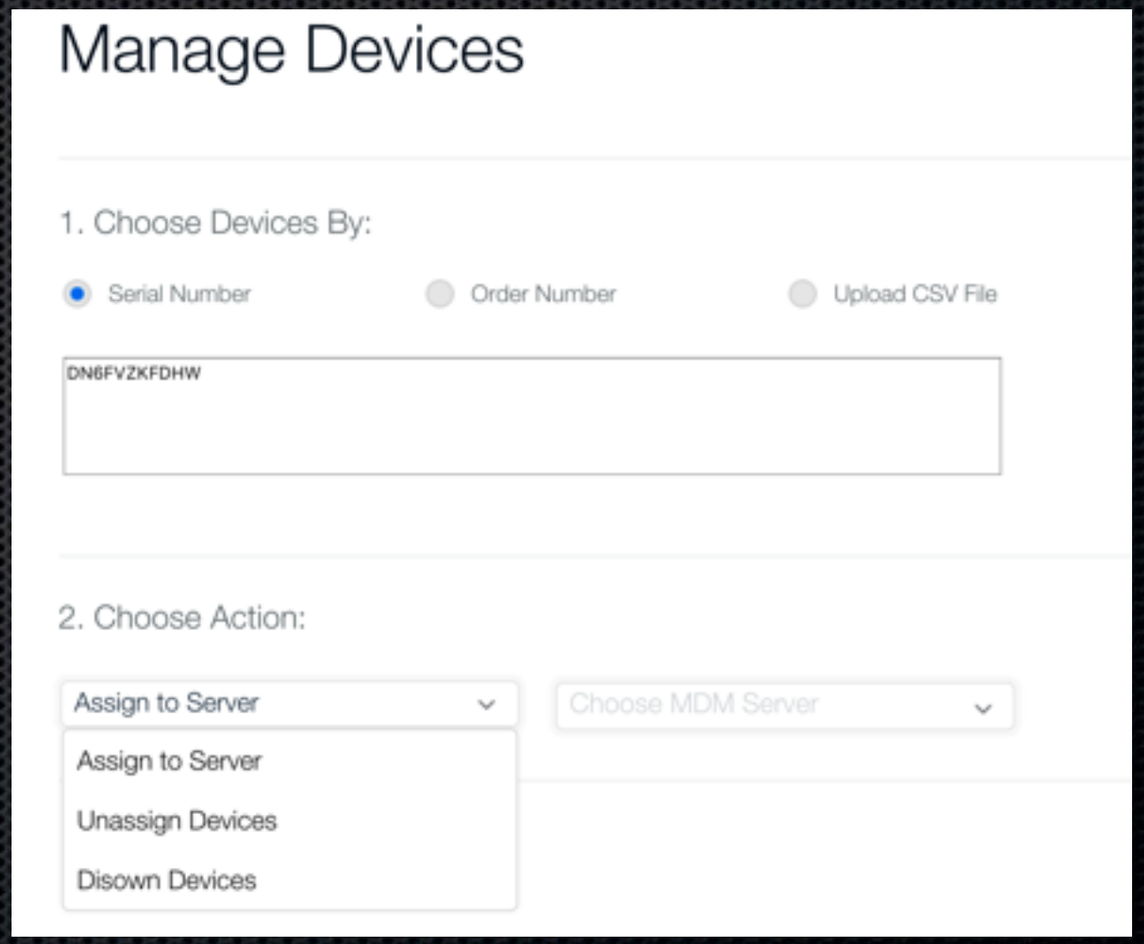
1. Download Public Key from your MDM.
2. Upload Public key to DEP
3. Download newly created token
4. Upload new token to MDM

Device Enrollment Program (DEP)

Next Steps

3. Assign Devices - Devices can be manually added by serial, or purchase order #.

Devices can also be disowned from DEP, but this is PERMANENT.



Volume Purchase Program (VPP)

- Apple program that allows you to find, buy and distribute Apps in bulk for your institution.
- Available for Business and Educational Institutions.

Discounts available on bulk purchases of Apps (20 or more).

Volume Purchase Program (VPP)

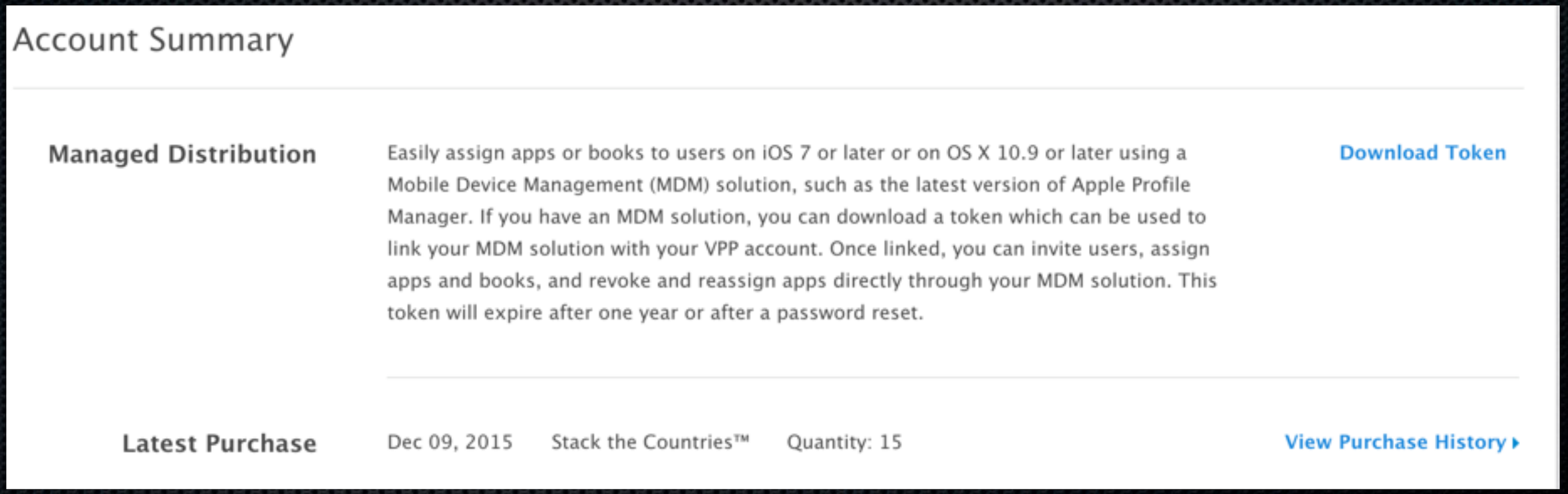
Enrollment Process

1. Create Account or use existing ADP Apple ID
2. Provide additional institutional information
   - Verification Contact
   - Physical Address Information
3. Submit to Apple for Approval

Volume Purchase Program (VPP)

Linking to your MDM

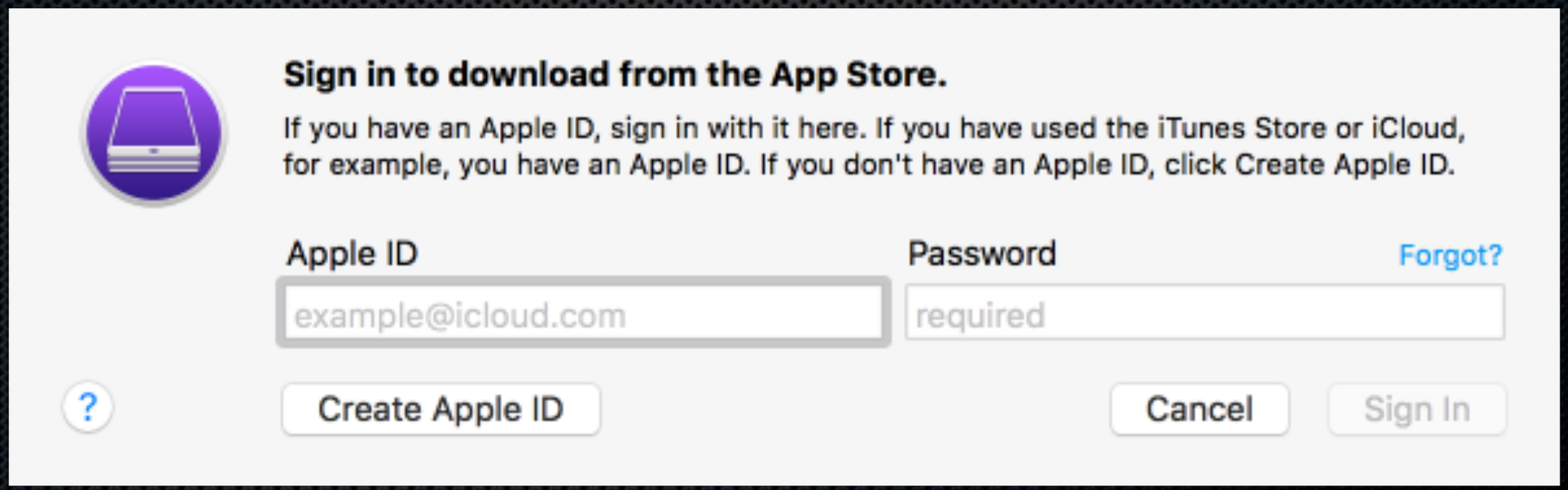
Download token from VPP Account Summary, and upload it to your MDM.



Volume Purchase Program (VPP)

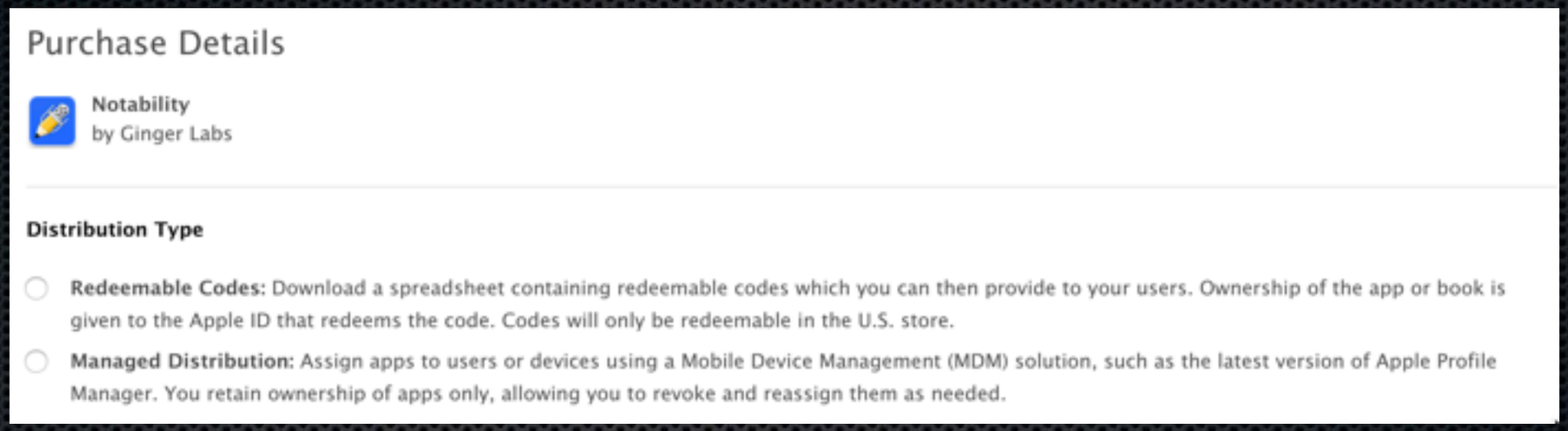
Sync with Configurator

- Authenticate with your VPP Admin account in Configurator to access Managed Distribution apps.



Volume Purchase Program (VPP)

Purchasing Apps



- Redeemable Codes: Apps delivered as a spreadsheet of (sometime) one-time use codes. The codes are permanently attached to the Apple ID that redeems them.
- Managed Distribution: Apps can be assigned to an Apple ID or Device, and then revoked later. (MDM/Configurator 2)

Volume Purchase Program (VPP)

Managed Distribution

- User Based: Assigned via Apple ID, available on any device that Apple ID is associated with. (MDM)
- Device Based: Assigned based on device- only can be used on that device. (Configurator 2)

Caching Server

- OS X Server
- Zero Client Configuration
- Cache Content
  - iTunes & iBooks (OS X & Windows)
  - OS X (10.8.4 Recommended)
  - iOs 7 & Apple TV



https://support.apple.com/en-us/

Apple Configurator 2



Overview

- New Interface
- Apple Deployment Programs
- Blueprint
- Command Line (cfgutil)
- iCloud Drive

Requirements

- El Capitan or later
- iTunes 12.3 or later

Apple Configurator 2

Additional Features

- Device-based app assignment
- New IKEv2 VPN Options
- Allow trusting new enterprise app authors
- Allow screenshots and screen recordings
- Treat AirDrop as unmanned destination
- Allow Modifying device name
- Allow modifying

Apple Configurator 2

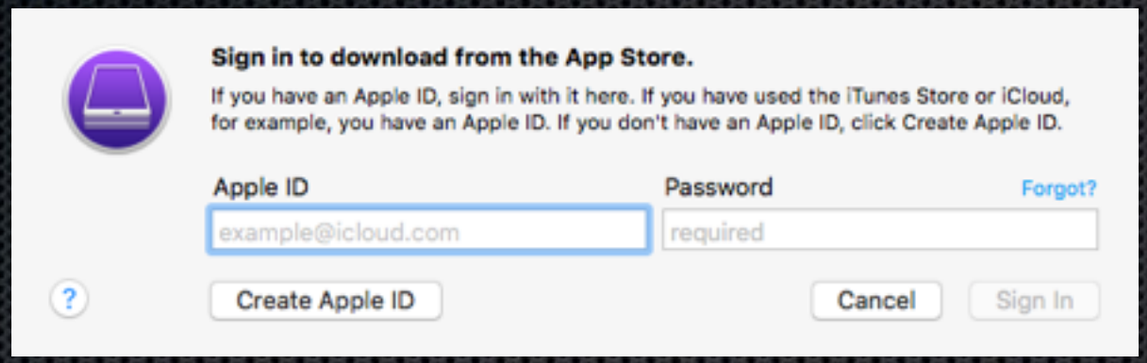
Additional Features (Supervised Only)

- Allow Modifying device name
- Allow modifying wallpaper
- Allow modifying passcode
- Allow automatic app downloads
- Allow pairing with Apple Watch
- Allow news
- Allow keyboard shortcuts

*http://help.apple.com/configurator/mac/2.0/

Apple Configurator 2

Managed Distribution



- Sign in with VPP Admin Account
- Migrate redemption codes to VPP
  - Business: https://www.apple.com/support/itunes/vpp/
  - EDU: https://www.apple.com/support/itunes/vpp-edu/
  - Migrates all apps, and is one way process
- Assign and Revoke Apps

Deployment Scenarios

- Shared Usage/Communal: (not Shared iPad)

Configurator - Managed Distribution - Device Based Assignment

- One to One

MDM - Managed Distribution - User Based Assignment

3rd Party Options

- **Mobile Device Management:** MDM suites manage the whole device, that includes remote lock and wipe capability, policy enforcement, and data tracking.
- **Mobile Content Management:** MCM focuses on secure document management through authentication, authorization, and access. Users gain access to content based on usernames, passwords, IP address, and mobile device authentication.
- **Mobile Application Management:** MAM focuses on securing access and actions of applications rather than entire devices. MAM provisions, controls, monitors, updates, and removes applications from a user's device.

3rd Party Options

Airwatch

- Initial Rollout: Easy when using the paid setup assistance.
- Pricing: High per device cost.
- Supports: Mac, Windows, Chrome OS, iOS, Android and Blackberry
- Tiered "Management Suites"
- Good for BYOD programs- easy enrollment.



3rd Party Options

MobileIron



- Pricing: Tiered levels, fairly inexpensive per/device
- Supports: Mac, Windows, iOS and Android
- Scalable for large fleets or large BYOD programs
- Excellent security profiles
- Content Management

3rd Party Options

MaaS360



- Initial Rollout: Fast initial deployment
- Pricing: Inexpensive per/device for MDM, can purchase additional tools if desired.
- Supports: Mac, Windows, iOS, Android, Blackberry
- Easy to use interface

3rd Party Options

JAMF- Casper



- Initial Rollout: Lot's of support through Jumpstart program, but expensive.
- Pricing: Dependent on #s, discounts for Education
- Supports: Mac, iOS
- Great customer support team
- High focus on Education customers and features

3rd Party Options

JAMF- Bushel



- Initial Rollout: Easy setup
- Pricing: Inexpensive (3 devices free)
- Supports: Mac and iOS
- Good for smaller rollouts
- Now support blueprints! (Not the same as AC2)
- Easy to use interface, good for non IT folks

3rd Party Options

Meraki System Manager

- Pricing: Free for 100 devices or less. Per device cost is high.
- Supports: Mac, Windows, Chrome OS, iOS, Android, Windows phone and Blackberry
- Ties into Cisco Meraki systems
- Used to be a free service, but now only Enterprise version receives updates.



3rd Party Options

Filewave



- Pricing: Inexpensive for Edu
- Supports: Mac, Windows, iOS and Android
- Works with institution owned or BYOD programs
- Offer site licenses as well as per device pricing.
- Can manage multiple OS through a single UI

3rd Party Options

Absolute Manage

- Pricing: Dependent on package
- Supports: iOS, Windows Phone, and Android
- Excellent inventory and reporting system
- MDM is an Add-on option to main software package

3rd Party Options

Points to consider

Features:

- Single or Multi Platform
- Day Zero Support?
- Reporting levels?
- Scalability?
- Size of your organization?
- Cost?
- Who are your users?

- AirWatch
- MobileIron
- MaaS360
- JAMF

  Casper & Bushel
- Meraki System Manager
- Filewave
- AbsoluteManage

Resources

- ADP: https://deploy.apple.com/
- ADP Help: http://help.apple.com/deployment/programs/
- iOS 9 Deployment: http://help.apple.com/deployment/ios/#/apd5b9e6434f
- Migrate VPP codes: https://support.apple.com/en-us/HT202863
- Configurator 2: https://help.apple.com/configurator/mac/2.1/
- MDM Comparison: http://enterpriseios.com/wiki/Comparison_MDM_Providers

Mobile Device Management

The framework is developed by Apple

but NOT all MDM's are equal.

Questions?



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