What’s New in Managing Apple Devices

Session 301

Todd Fernandez Senior Manager, Device Management
Configuration Profiles
Supervision
Device Enrollment Program
Volume Purchase Program
Apple IDs for Students
Enrollment
Four-hour turnaround time for iOS device replacements
Enrollment optimization
Account creation
Password policies
Automated enrollment
Setup Assistant
Device Enrollment Program

Enrollment optimization
Device Enrollment Program
Enrollment optimization

MDM Server

iOS Device or Mac
Device Enrollment Program

Enrollment optimization

MDM Server

await_device_configured

Device Enrollment Program

DEP Settings

iOS Device or Mac
Device Enrollment Program

Enrollment optimization

1. MDM Server
   - await_device_configured

2. iOS Device or Mac

Device Enrollment Program
- DEP Settings
Device Enrollment Program

Enrollment optimization

1. MDM Server
   - await_device_configured

2. Device Enrollment Program
   - DEP Settings

3. iOS Device or Mac
   - TokenUpdate (AwaitingConfiguration)
Device Enrollment Program

Enrollment optimization

1. MDM Server
   - MDM Server
     await_device_configured
   - Commands
     Configuration Profiles
   - DeviceConfigured

2. Device Enrollment Program
   DEP Settings

3. iOS Device or Mac
   TokenUpdate
   (AwaitingConfiguration)

4. Commands
   Configuration Profiles

5. Exit Setup Assistant
Device Enrollment Program

Account creation

Prevent user account creation
Set passcode policy
Create standard user account
Create admin account
  • Optionally hidden

Configured using SetupConfiguration command
Device Enrollment Program
Automated enrollment
Device Enrollment Program
Automated enrollment

- Device Enrollment Program
- iOS Device
  - Setup Assistant
- Configurator Station
  - Apple Configurator
Device Enrollment Program

Automated enrollment

- iOS Device
  - Setup Assistant

- Configurator Station
  - Apple Configurator

DEP Settings 1
Device Enrollment Program
Automated enrollment

- iOS Device
  - Setup Assistant
- Configurator Station
  - Apple Configurator

DEP Settings

1. Device Enrollment Program
2. Connect iOS Device to Configurator Station
Device Enrollment Program
Automated enrollment

Device Enrollment Program
- DEP Settings

iOS Device
- Setup Assistant

Configurator Station
- Apple Configurator
Device Enrollment Program
Configure Setup Assistant

Touch ID
Apple Pay
Zoom
Device Enrollment Program
Configure Setup Assistant

Touch ID  Apple Pay  Zoom  Android Migration
Device Enrollment Program

MDMServiceConfig

Equivalent to Storebag from iTunes Store

Informs tools what info they can obtain from your server

Unauthenticated HTTPS request at URI MDMServiceConfig

UTF8 JSON-encoded hash

• dep_enrollment_url
• dep_anchor_certs_url
• trust_profile_url
Device Enrollment Program

MDMServiceConfig

Equivalent to Storebag from iTunes Store
Informs tools what info they can obtain from your server
Unauthenticated HTTPS request at URI MDMServiceConfig
UTF8 JSON-encoded hash
  • dep_enrollment_url
  • dep_anchor_certs_url
  • trust_profile_url
Profile Manager has implemented
Configurator now supports
Distribution
Distribution

App types
Distribution

App types

- App Store
- Business-to-Business
- Enterprise
- Ad-hoc
Distribution

App types

- App Store
- Business-to-Business
- Enterprise
- Ad-hoc
Distribution

Delivery methods

- App Store
- iTunes
- Xcode
- Apple Configurator
- Mobile Device Management
- Over the Air
Distribution

Delivery methods

- App Store
- iTunes
- Xcode
- Apple Configurator
- Mobile Device Management
- Over the Air
Distribution

Purchasing methods
Distribution

Purchasing methods

App Store

VPP Redemption Codes

VPP Managed Distribution
Distribution

Purchasing methods

App Store

VPP Redemption Codes

VPP Managed Distribution
VPP Managed Distribution
VPP Managed Distribution

Multinational app assignment
VPP Managed Distribution
Multinational app assignment

Purchase in VPP country
VPP Managed Distribution
Multinational app assignment

Purchase in VPP country
Assign to any country where app is sold
VPP Managed Distribution

Device app assignment: What’s different

- No invitation process
- No Apple ID required on device
- Does not appear in user’s purchase history
- Installation and updates controlled by MDM server
- Need to buy app for each device
VPP Managed Distribution

Device app assignment: What’s different

No invitation process

No Apple ID required on device

Does not appear in user’s purchase history

Installation and updates controlled by MDM server

Need to buy app for each device
VPP Managed Distribution

Device app assignment: What’s different

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- Need to buy app for each device

No Apple ID required on device!
VPP Managed Distribution

Device app assignment: What’s the same

Purchasing
Reassignable
Smooth migration from user assignment
Requires MDM server or Apple Configurator
VPP Managed Distribution
App developers

Support device assignments
• Opt in
• Update receipt checking

Store app data in the cloud
• iCloud Drive, CloudKit, KVS
• Your own cloud-based storage solution
VPP Managed Distribution
App developers

Support device assignments
• Opt in
• Update receipt checking

Store app data in the cloud
• iCloud Drive, CloudKit, KVS
• Your own cloud-based storage solution

What's New in CloudKit

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CloudKit Tips and Tricks
Distribution

OS X Server: Caching Server

Pre-heat cache of iCloud data on local network
Data encrypted

iCloud Drive documents
CloudKit data
iCloud Photo Library photos
On-demand app resources
VPP Managed Distribution

MDM developers

iTunes Store APIs to assign and revoke
InstallApplication command to install app
Support assigning apps to devices and device groups

Designed for centralized app management workflows
VPP Managed Distribution

MDM developers: InstallApplication

Installs app if not installed
Updates app if installed managed
Install fails if user installed unmanaged

For iOS device assignments, use the same Purchase Method as OS X
VPP Managed Distribution

MDM developers: New iTunes Store APIs

manageVPPLicensesByAdamIdSrv
- Supersedes associateVPPLicenseWithVPPUserSrv and disassociateVPPLicenseWithVPPUserSrv APIs
- Bulk association and disassociation of a single asset to and from users or devices

getVPPAssetsSrv
- returns assets owned by organization
- includeLicenseCounts option
VPP Managed Distribution

MDM developers: Updated iTunes Store API

VPPServiceConfigSrv
• maxAssociateLicenseCount
• maxDisassociateLicenseCount
VPP Managed Distribution

MDM developers: Retry-after header

RFC 2616 sec 14.37

May include with 503 Service Unavailable status to abusive clients

Clients ignoring delay may be rejected or VPP account suspended
Distribution

What’s new

Migrate user to device assignment
Convert unmanaged to managed
Install via MDM or Configurator
Distribution

What’s more convenient

Migrate user to device assignment without reinstalling or losing user data
Convert unmanaged to managed without reinstalling or losing user data
Install via MDM or Configurator when App Store disabled
Distribution

ChangeManagementState

InstallApplication command with ChangeManagementState = Managed

Silent on supervised device

User accepts on unsupervised device

Managed Open In considers app data managed

Installs app if uninstalled
Distribution

Enterprise apps

New explicit user trust flow for apps
Prevent users from trusting apps
Apps installed via MDM do not require explicit user trust
Untrusted Enterprise Developer

“iPhone Distribution: Acme, Inc.” has not been trusted on this iPhone. Until this developer has been trusted, their enterprise apps will not be available for use.

Dismiss
Apps from developer “iPhone Distribution: Acme, Inc.” are not trusted on this iPhone and will not run until the developer is trusted.

Trust “Acme, Inc.”

APPS FROM DEVELOPER “IPHONE DISTRIBUTION: ACME, INC.”

Acme

1.0
Apps from developer "iPhone Distribution: Acme, Inc." are not trusted on this iPhone and will not run until the developer is trusted.

Trust "Acme, Inc."

Trust "iPhone Distribution: Acme, Inc." Apps on This iPhone

Trust will allow any app from this enterprise developer to be used on your iPhone and may allow access to your data.

Cancel  Trust
Apps from developer "iPhone Distribution: Acme, Inc." are trusted on this iPhone and will be trusted until all apps are deleted.

Delete App

APPS FROM DEVELOPER "IPHONE DISTRIBUTION: ACME, INC."

Acme 1.0
Distribution

B2B apps
Distribution
B2B apps

App Store App
Distribution

B2B apps

App Store App

Adam ID 123456789
Distribution

B2B apps

App Store App

B2B App
Distribution

B2B apps

- App Store App
- B2B App
- Deleted App Store App
Demo

Enrolling and distributing apps to Macs

Shruti Gupta
Device Management Engineer
Recap

Install passcode policy before user account created
Create standard user account
Create hidden admin account
Assign VPP apps to a device
Enrollment  Distribution  Management  Tools
What’s New in iOS 9
EAS16 calendar improvements

Improved reliability
• Creating meeting invitations from iOS
• Creating and modifying exceptions in recurring meetings
• Handling all-day event time zones

Attachments
Physical locations
What’s New in iOS 9

MDM commands and queries

Available Software Updates

Update to latest iOS (DEP devices)

- Including downloading and staging with later installation

DeviceInformation returns AwaitingConfiguration

DeviceConfigured

InstallApplication: ChangeManagementState
What’s New in iOS 9

Configuration profile payloads

- Network Usage Rules
- OS X Server Account
- Mail: Mail Drop
- SSO: Specify wildcards for URLPrefixMatches
- VPN: Many new IKEv2 settings
- Restrictions: many new settings
What’s New in iOS 9

Configuration profile restrictions

- Screen recording
- Trust new enterprise app authors
- Treat AirDrop as unmanaged destination
- Automatic app downloads
- iCloud Photo Library
- Keyboard shortcuts
- Modify device name, passcode, Wallpaper
- News
- Pair with Apple Watch
What’s New in iOS 9

Configuration profile restrictions: deprecations

App installation
App removal
FaceTime
Safari
iTunes
Explicit content
iCloud documents and data
Multiplayer gaming
Add GameCenter Friends
What’s New in iOS 9

Configuration profile restrictions: deprecations

- App installation
- App removal
- FaceTime
- Safari
- iTunes
- Explicit content
- iCloud documents and data
- Multiplayer gaming
- Add GameCenter Friends
What’s New in OS X El Capitan

MDM commands and queries

Available Software Updates
Install Software Update (DEP Macs)

DeviceInformation returns AwaitingConfiguration (and iTunesStoreAccountHash)
SetupConfiguration
DeviceConfigured

ActiveManagedUsers
What’s New in OS X El Capitan

Configuration profile payloads

Ethernet proxy
Login Window
- Disable account migration during login
Restrictions
- Use camera
- iCloud documents and data
- Use iCloud password for local accounts
- Spotlight Suggestions
Security and Privacy
- Send diagnostic and usage data to Apple
Enterprise Network Connectivity

Improvements to

• Per-app VPN
• Advanced Content Filtering
• IPSec/IKEv2 mobility
• VPN Plug-ins
• VPN Settings UI
Enterprise Network Connectivity

Improvements to

- Per-app VPN
- Advanced Content Filtering
- IPSec/IKEv2 mobility
- VPN Plug-ins
- VPN Settings UI

What’s New in Network Extension and VPN

Nob Hill  Friday 9:00AM
Demo
Managing shared iOS devices

Shruti Gupta
Device Management Engineer
Recap

Disable changing device name, wallpaper, and passcode and installing apps
Assign VPP app to iOS device
Install app via MDM while App Store disabled
Tools

DEP and VPP Simulators

Simulate DEP and VPP services
Test handling of service errors

Available for download on developer portal
Support new features
Apple Device Management Tools
Apple Device Management Tools

Profile Manager
Apple Device Management Tools

Profile Manager

Apple Configurator
Apple Configurator

Features

Three workflows
Supervise
Install apps using VPP redemption codes
Install profiles
Database of devices, apps, and profiles
Apple Configurator 2
Apple Configurator 2
Apple Configurator 2

Goals

Devices front and center
Discrete tasks
Easy automation
Multiple stations
Companion to DEP and MDM server
Recap

Configure devices using Apple Configurator 2
Install VPP apps
Create device groups using tags
Use a blueprint to create and replay custom set of actions on multiple devices
Recap

Configure devices using Apple Configurator 2
Install VPP apps
Create device groups using tags
Use a blueprint to create and replay custom set of actions on multiple devices
Great companion to MDM server
Works off-network
Wallpaper
iCloud support
Blueprints
Renaming Tokens
Device and task-centered UI
Export and import supervising organizations
Command line tool
Suite of Automator actions
Powerful searching
No device database
Works with DEP devices
Install personal apps
Caching Server
Install VPP apps
Tags
Scripting library
VPP device assignments
Complete app-handling workflow
Summary

Administrators

Use DEP (wireless) or Configurator (wired) to enroll devices in MDM
Use VPP Managed Distribution to distribute apps to devices or users
Apple Configurator 2 Beta available now
Summary

Developers

App developers opt in for device assignments

Support VPP Managed Distribution device assignments

• Documentation available now
• New iTunes Store APIs in production

Support new features in iOS 9 and OS X El Capitan

Use DEP and VPP simulators
### Related Sessions

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## Related Labs

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Build apps that transform how business works.

iOS makes it easy to build amazing and powerful apps for business. By leveraging the latest iOS technology you can create even more engaging experiences that help your business to succeed.
More Information

MDM Developers
Apple MDM Protocol

Configuration Profile Reference
http://developer.apple.com/library/ios/featuredarticles/iPhoneConfigurationProfileRef

MDM Developer Forum
https://devforums.apple.com/community/ios/mdmdev
More Information

Administrators
iOS Deployment Reference

OS X Deployment Reference
http://help.apple.com/deployment/osx

Deployment Programs Help
http://help.apple.com/deployment/programs
More Information

Administrators
Apple Configurator Help

Profile Manager Help

iPad in Business and Education
http://discussions.apple.com/community/ipad/ipad_in_business_and_education

iPhone in Business and Education
http://discussions.apple.com/community/iphone/iphone_in_business_and_education