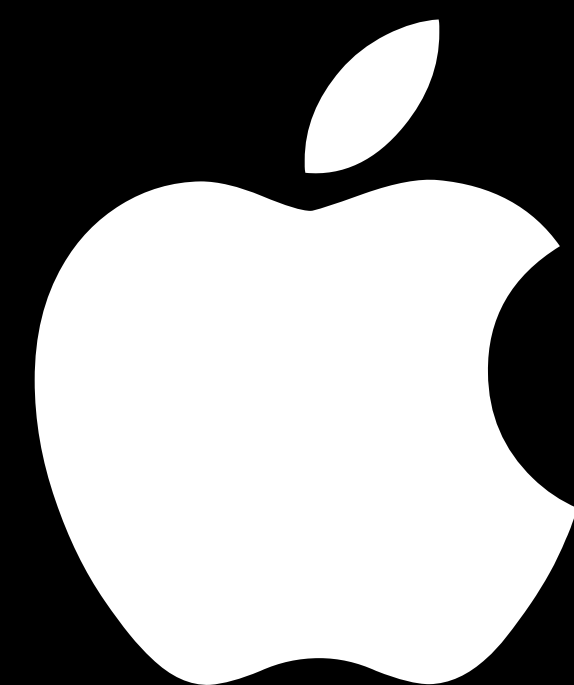


What's New in Managing Apple Devices

Session 301

Todd Fernandez Senior Manager, Device Management













Configuration Profiles

Supervision

Device Enrollment Program

Volume Purchase Program

Apple IDs for Students






SpreadsheetsUndoPlanting a Green Space

Project OverviewPlanting a Green SpaceBuilding an Owl BoxResults

Planting a Green Space





Supplies	Estimated Cost
Seeds	\$4.99
Equipment	\$29.99
Flowers	\$35.00
Planter	\$40.00
Soil	\$14.99
Watering Can	\$16.99
Plant Food	\$5.00
Wheel Barrel	\$40.00
Total	\$186.96

Planting Checklist


Task
1. Designate the planting areas
2. Check soil health and add new soil
3. Till garden
4. Mark off the rows for the seeds
5. Plant the seeds
6. Add plant food and/or fertilizer
7. Plant flowers in open spaces
8. Water soil and flowers in all planters

Designated Planting Area





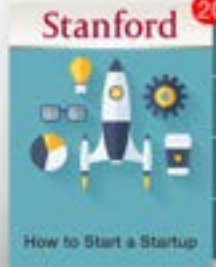



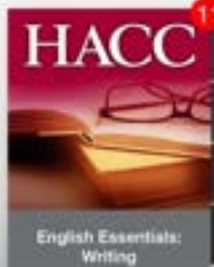



Week	MON	TUE	WED	THU	FRI
Week 1	3	4	2	3	4
Week 2	4	4	5	5	5
Week 3	10	8	7	7	6
Week 4	12	11	9	13	10


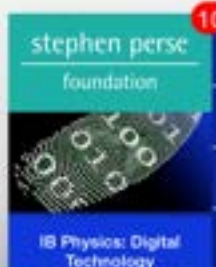

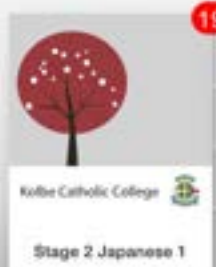






Catalog+All CoursesMy Courses

Edit









UndoPlants and Butterflies

2345678

Pollinators

ough bees are the best-known
torts, we decided to make a
y garden. Butterflies are
as a great indicator of an
em's well-being, and it's
o count them and track the
is of our green space.

I to pick which kind of butterfly.
I thought it would be Monarch
ies because they are the most
ones in Northern California,
we live. But we learned that
hs only eat Milkweed, which would
ke for a very diverse garden. Then
ned about Painted Lady butterflies, and
ey are getting more endangered
e their ecosystems are being damaged.
unded perfect for our butterfly garden.

American Typewriter

A 36A B / u

E R T Y U I O P

S D F G H J K L return

X C V B N M ! ?

.?123



Enrollment



Distribution



Management



Tools



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



```
graph TD; DEP[Device Enrollment Program] --- MDM[MDM Server]; DEP --- ID[\"iOS Device or Mac\"]
```

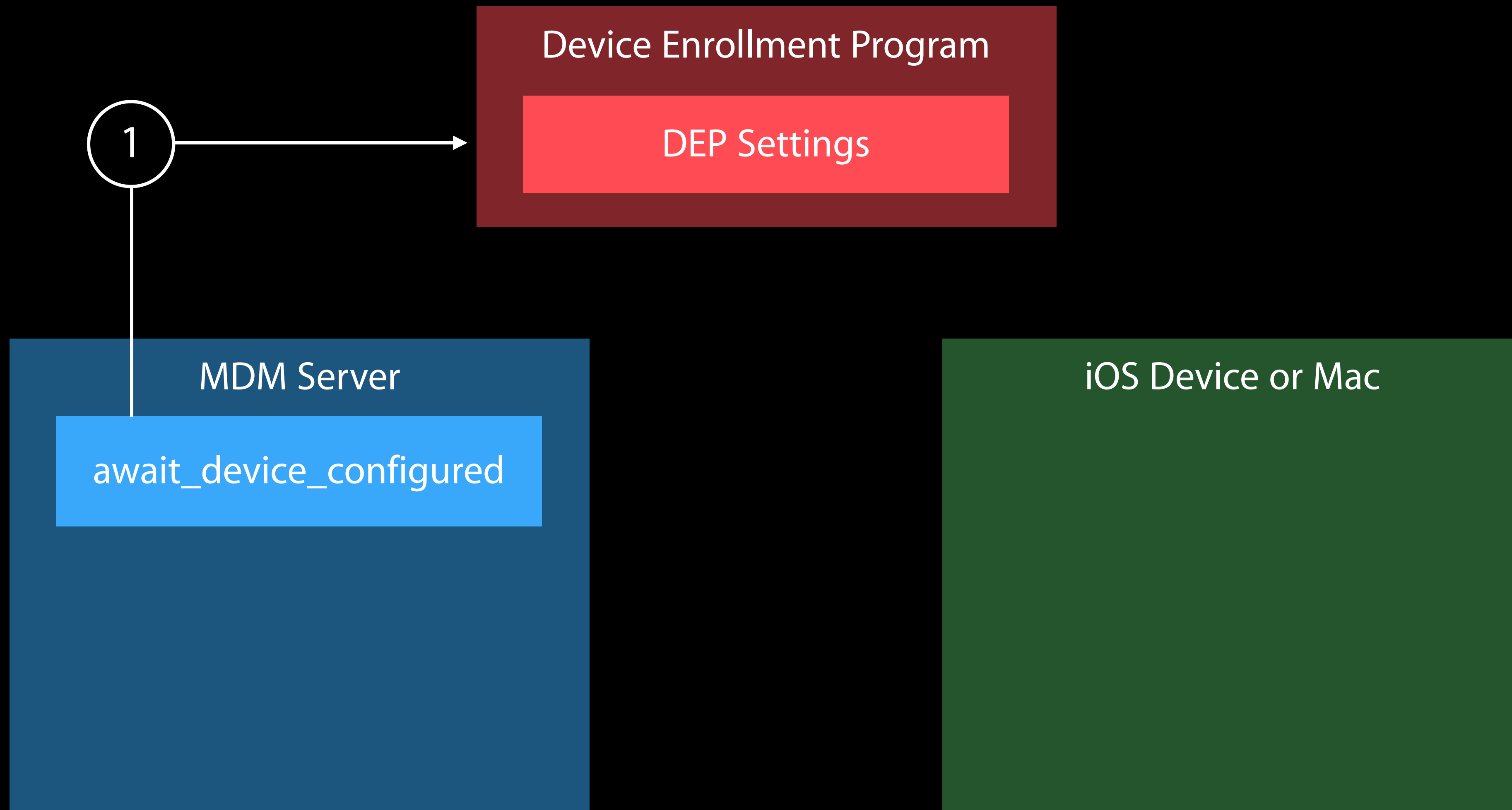
Device Enrollment Program

MDM Server

iOS Device or Mac

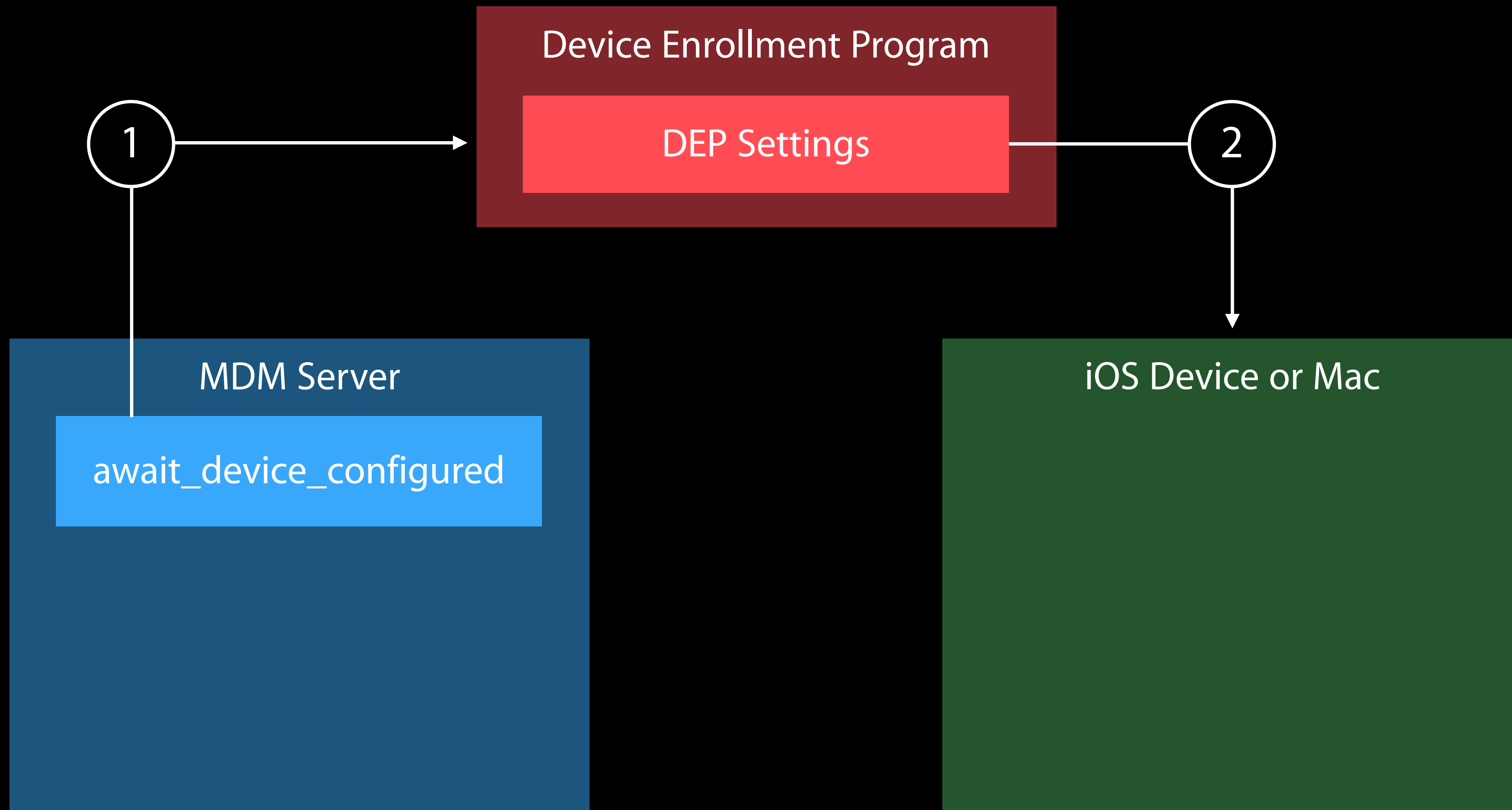
Device Enrollment Program

Enrollment optimization



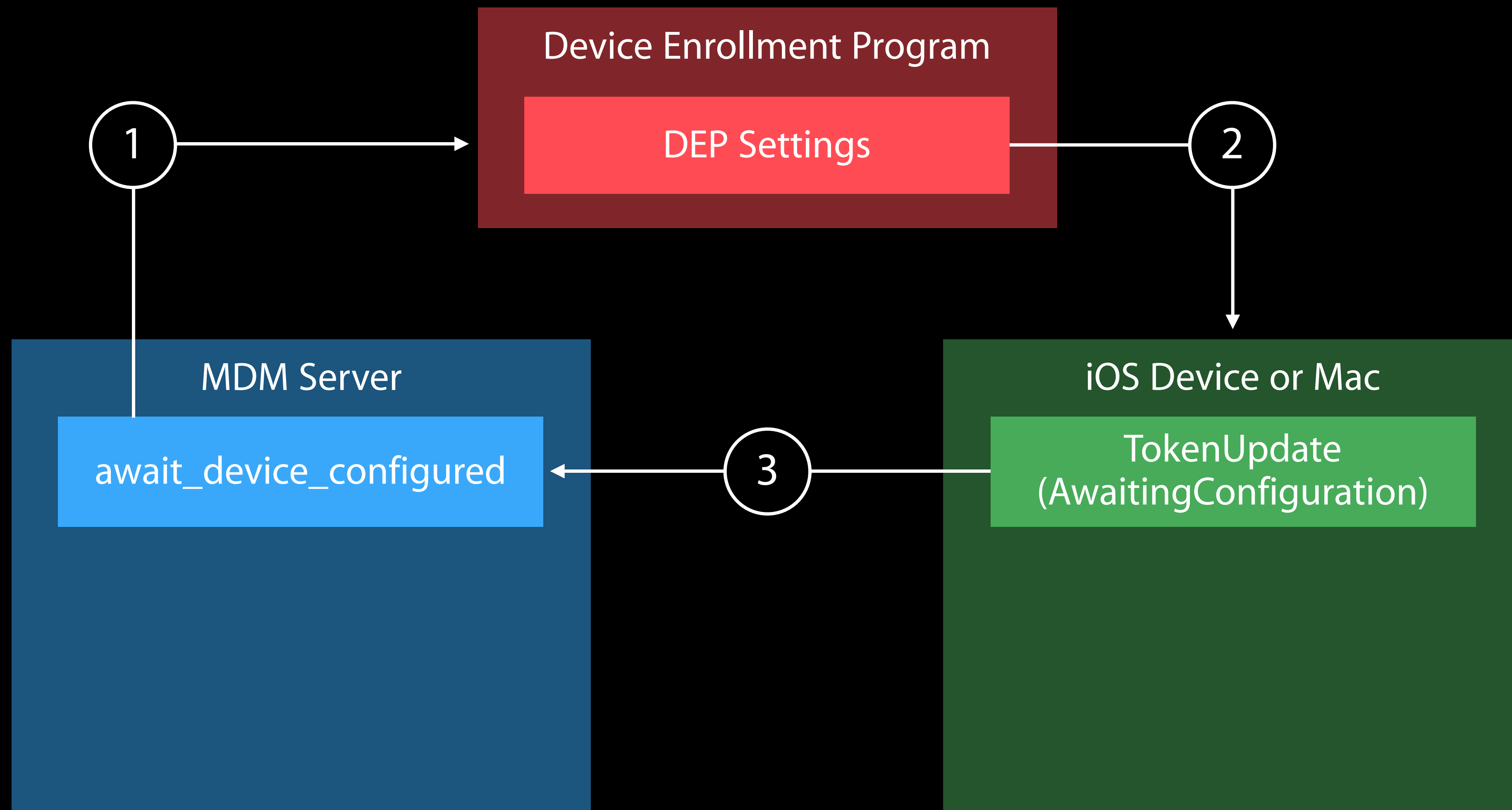
Device Enrollment Program

Enrollment optimization



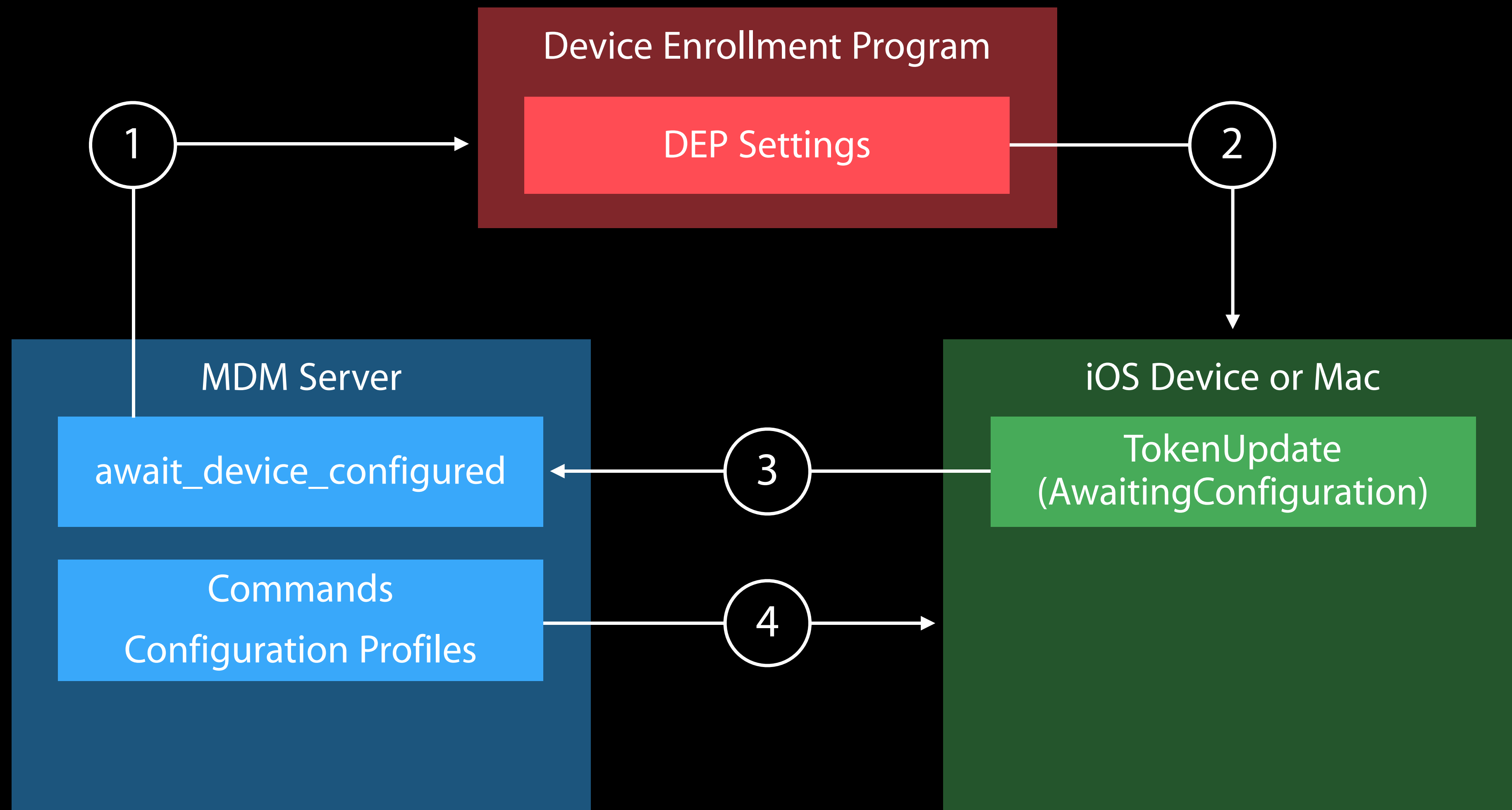
Device Enrollment Program

Enrollment optimization



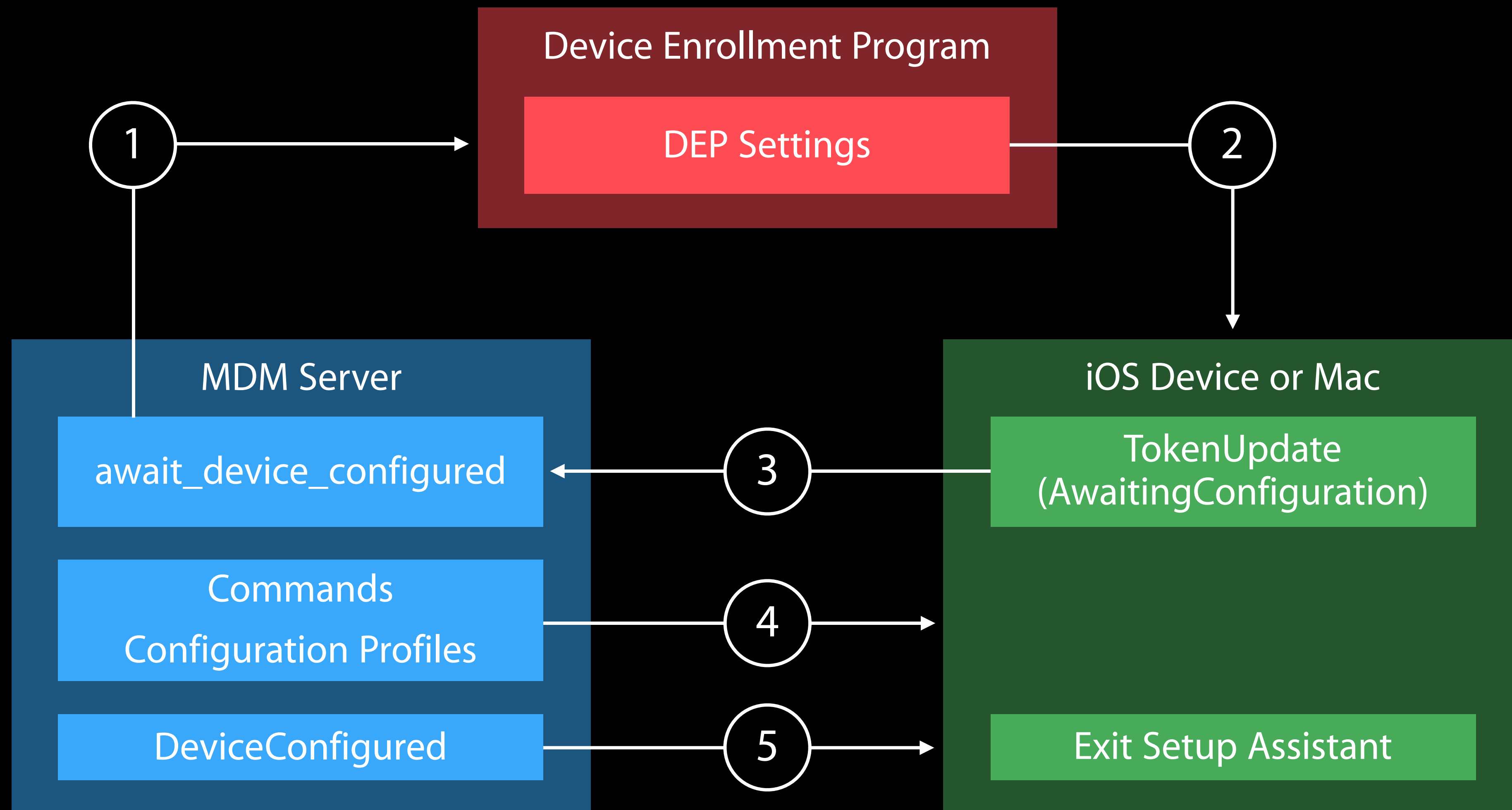
Device Enrollment Program

Enrollment optimization



Device Enrollment Program

Enrollment optimization



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



Device Enrollment Program

DEP Settings

1

iOS Device

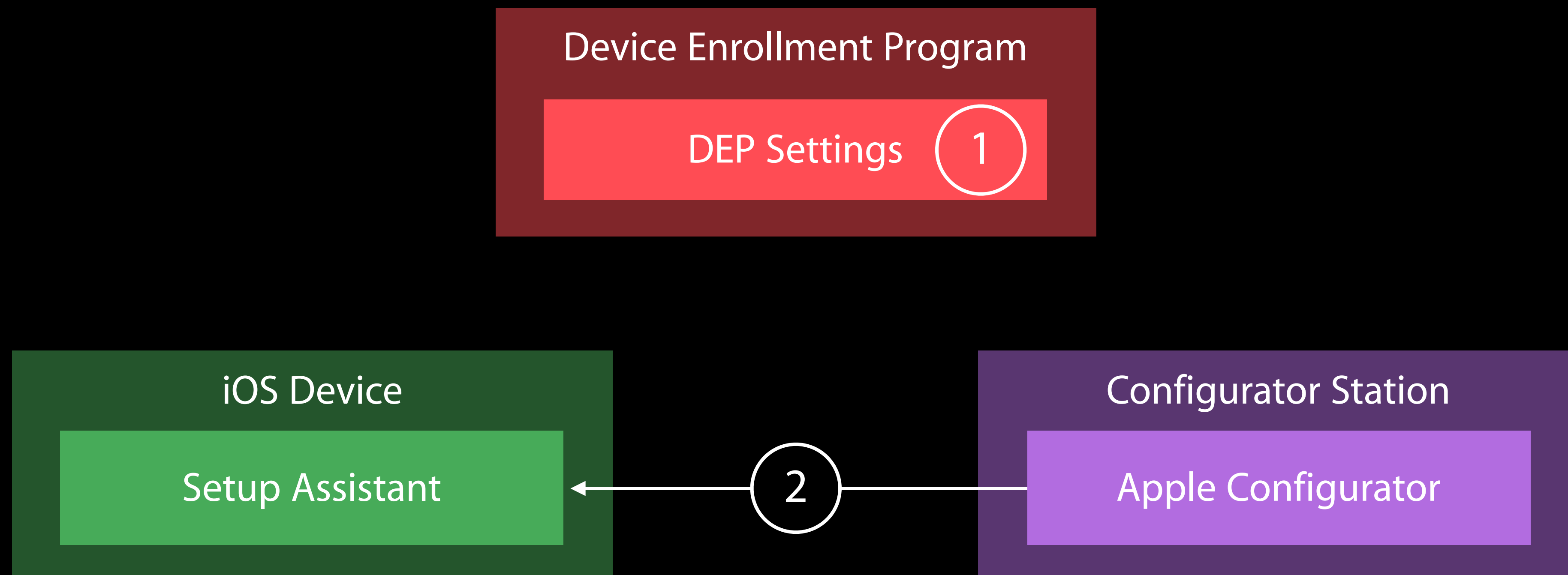
Setup Assistant

Configurator Station

Apple Configurator

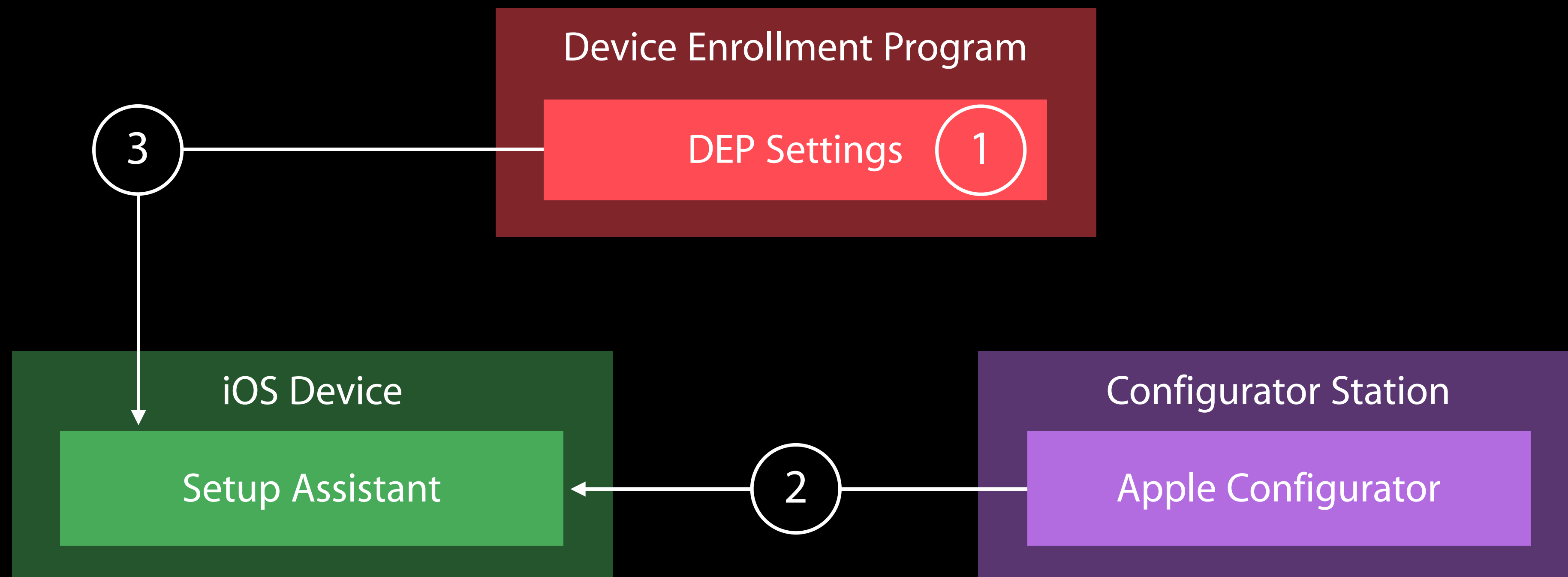
Device Enrollment Program

Automated enrollment



Device Enrollment Program

Automated enrollment



Device Enrollment Program

Configure Setup Assistant

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



Enrollment



Distribution



Management



Tools



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

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VPP Managed Distribution

Device app assignment: What's different

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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

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

Mission

Tuesday 3:30PM

CloudKit Tips and Tricks

Pacific Heights

Thursday 4:30PM

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



9:41 AM

100%

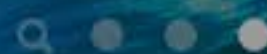


Acme

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](#)



Phone



Mail



Safari



Music



9:41 AM

100%

[General](#) Profiles & Device Management

MOBILE DEVICE MANAGEMENT



MDM



ENTERPRISE APP



Acme, Inc.





9:41 AM

100%

[← Back](#)

Acme, Inc.

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



9:41 AM

100%

< Back

Acme, Inc.

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
DISTR



1.0

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

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

Cancel

Trust



9:41 AM

100%

[Back](#)

Acme, Inc.

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



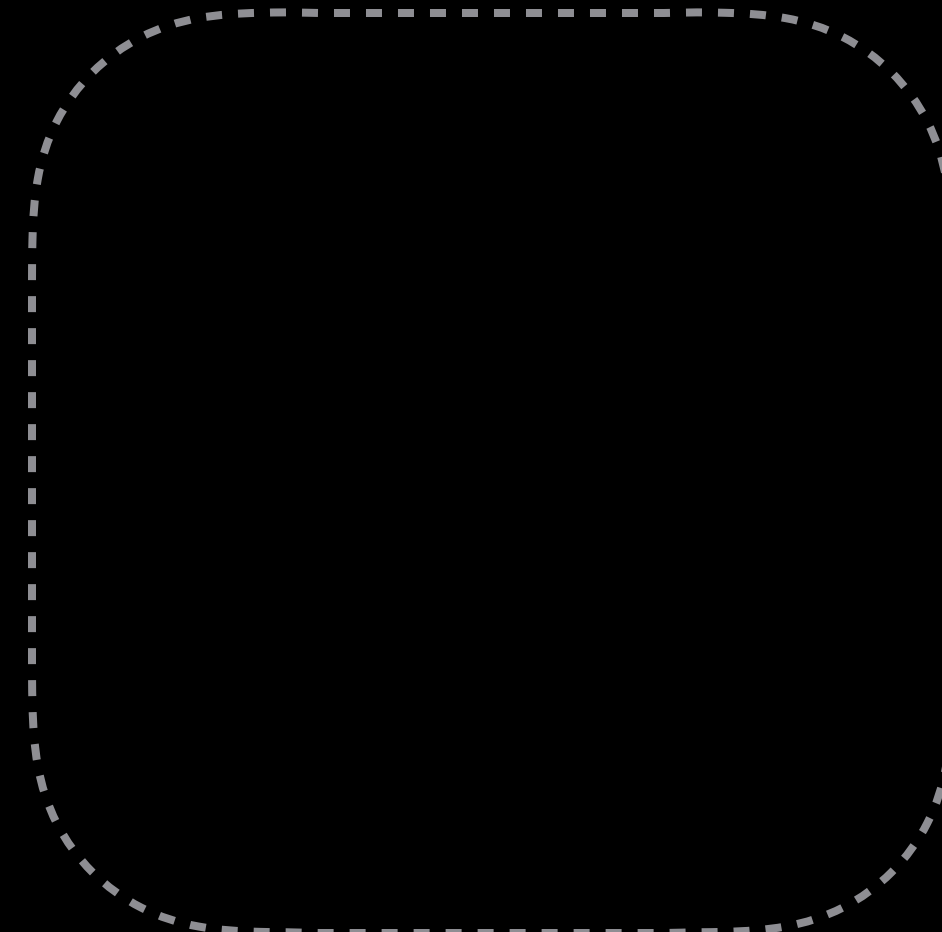
App Store App

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



Management

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

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



Enrollment



Distribution



Management



Tools



Tools

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



Settings Apps Setup

Name:

☐ Number sequentially starting at 1

Supervision: ☒ ON

☒ Allow devices to connect to other Macs

Update iOS:

☒ Erase before installing

Restore:

Profiles:



No Profiles
Click + to add a profile



Prepare

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



Apple Configurator 2

Goals

Devices front and center

Discrete tasks

Easy automation

Multiple stations

Companion to DEP and MDM server



Demo

Apple Configurator 2

Enrique Osuna

Lead Engineer, Apple Configurator

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

Command line tool

No device database

Works off-network

Suite of Automator actions

Works with DEP devices

Wallpaper

Rename

Install personal apps

iCloud support

Caching Server

Blueprints

Install VPP apps

Renaming Tokens

Tags

Scripting library

Device and task-centered UI

Powerful searching

VPP device assignments

Export and import supervising organizations

Complete app-handling workflow





Enrollment



Distribution



Management



Tools

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

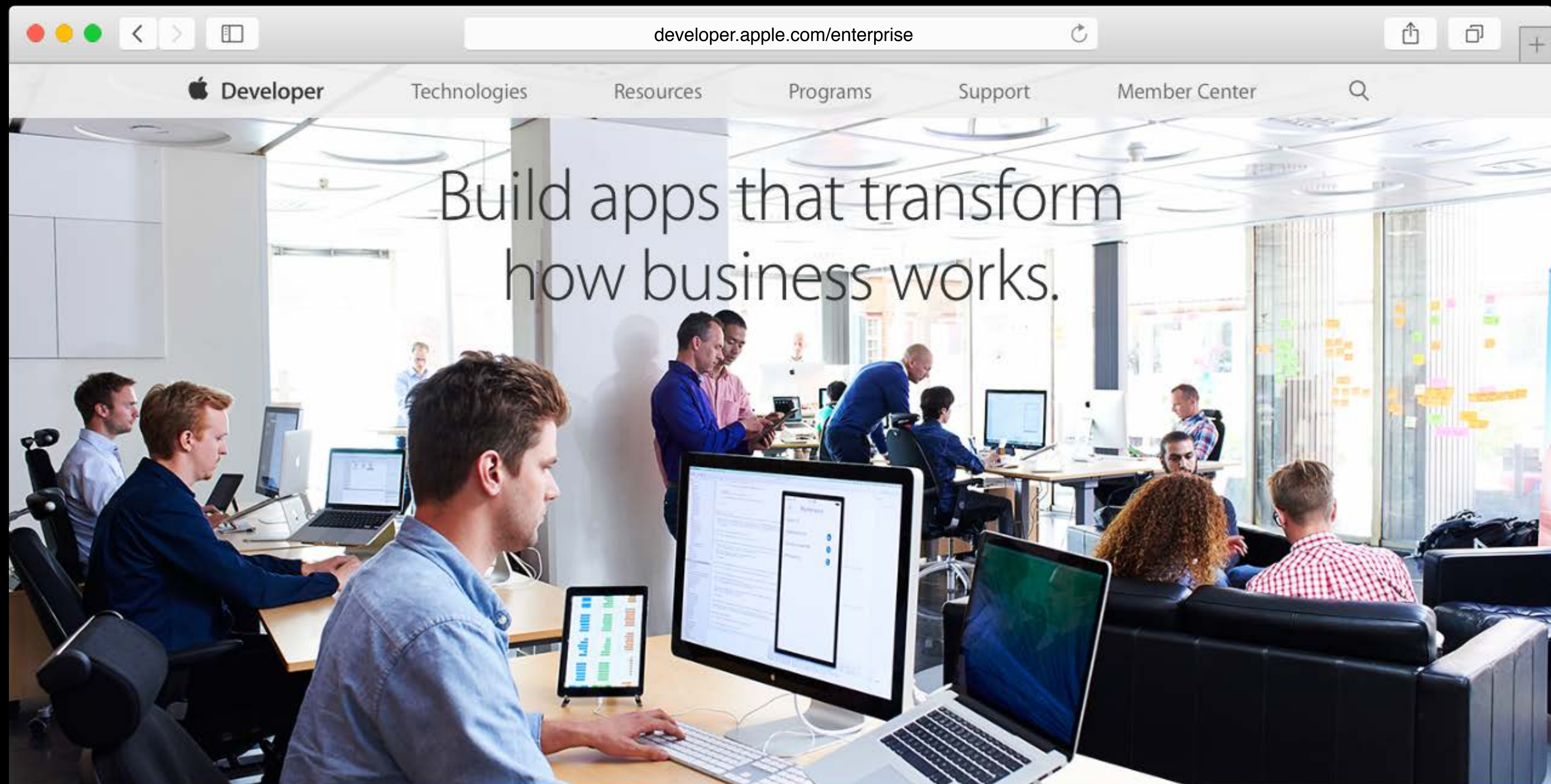
What's New in CloudKit	Mission	Tuesday 3:30PM
Transforming Enterprise Get Together	Buena Vista Park	Tuesday 6:00PM
Supporting the Enterprise with OS X Automation	Nob Hill	Thursday 1:30PM
CloudKit Tips and Tricks	Pacific Heights	Thursday 4:30PM
What's New in Network Extension and VPN	Nob Hill	Friday 9:00AM

Related Labs

Education and Enterprise Development and Deployment Lab	Frameworks Lab D	Tuesday 12:00PM
Education and Enterprise Development and Deployment Lab	Frameworks Lab D	Thursday 12:00PM
Education and Enterprise Development and Deployment Lab	Frameworks Lab C	Friday 2:30PM

Resources for Enterprise

developer.apple.com/enterprise



iOS makes it easy to build amazing and powerful apps for business. By leveraging the latest iOS technology, you can create even more engaging

More Information

MDM Developers

Apple MDM Protocol

<https://developer.apple.com/downloads/index.action?name=Mobile%20Device%20Management%20Protocol%20Reference>

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

<http://help.apple.com/deployment/ios>

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

<http://help.apple.com/configurator/mac>

Profile Manager Help

<http://help.apple.com/profilemanager/mac>

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

