



SENECAGLOBAL



**IOS APP-RESIGNING AND VOIP
CERTIFICATE GUIDE**

Process Revision History

Ver. No	Date	Author	Approved by	Description
1.0				

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1 CONFIGURING IOS SUPPORT

In order to provide the best security possible, Lookout distributes its Lookout for Work iOS app outside of the iOS App Store. Before distributing apps that aren't in the App Store for employees of your enterprise, you need to re-sign them with your iOS Enterprise Developer Certificate.

2 REQUIREMENTS

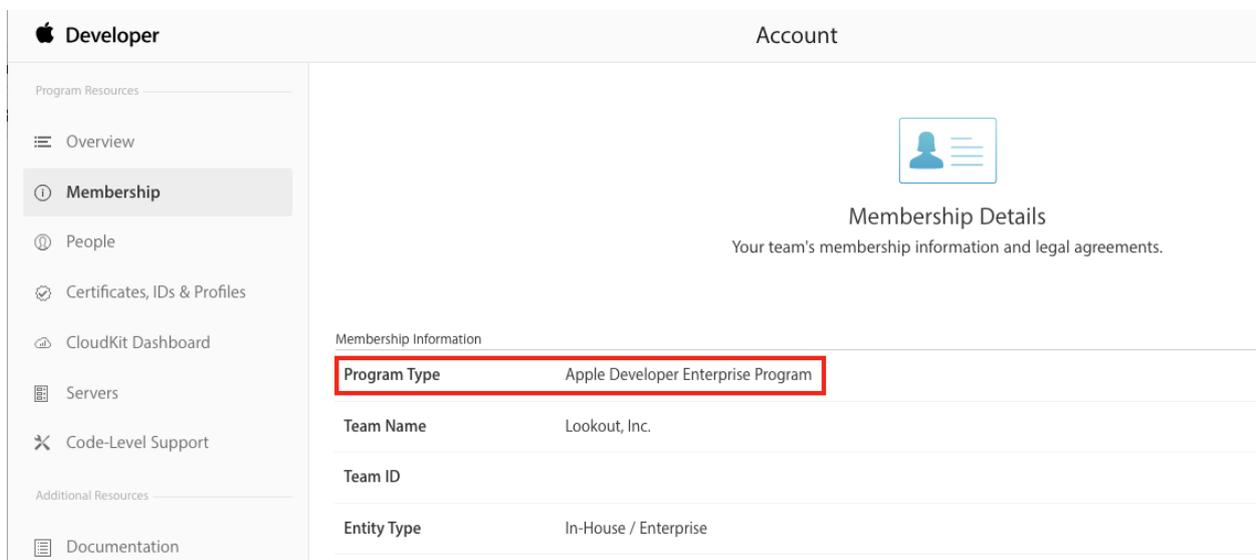
1. Apple Developer Program membership
2. Mac running OS X 10.9 or newer
 - You may need admin access on the Mac in order to run applications downloaded from the internet
 - You will need to install the Xcode Command Line Tools from: <https://developer.apple.com/download/s/>
 - You will need to add the "WWDR Certificate (Expiring 02/07/23)" to your keychain. It can be found at: <https://www.apple.com/certificateauthority/>

3 SETTING UP THE IOS ENTERPRISE DEVELOPER ACCOUNT

IntelligentKit framework has proprietary code which has below features

STEP 1. LOG IN TO YOUR IOS ENTERPRISE DEVELOPER ACCOUNT

- Log in to your iOS Enterprise Developer account at <https://developer.apple.com/account/#/membership>
- You can verify this is an iOS Enterprise Developer account (and not a normal iOS Developer account) by clicking "Membership" and checking the program type "Apple Developer Enterprise Program"



The screenshot shows the Apple Developer account interface. On the left is a navigation sidebar with 'Membership' selected. The main content area is titled 'Membership Details' and shows a table of membership information. The 'Program Type' field is highlighted with a red border.

Membership Information	
Program Type	Apple Developer Enterprise Program
Team Name	Lookout, Inc.
Team ID	
Entity Type	In-House / Enterprise

STEP 2. CREATE A NEW APPLICATION IDENTIFIER

In order to distribute a new application, you'll first need to create a new, unique App ID. Lookout recommends using `com.lookout.enterprise.YourCompanyName`

- From the Program Resource column on the left click "Certificates, IDs, & Profiles."

Developer Account

Program Resources

- Overview
- Membership
- People
- Certificates, IDs & Profiles**
- CloudKit Dashboard
- Servers
- Code-Level Support

Additional Resources

- Documentation
- Downloads

Lookout, Inc.
Apple Developer Enterprise Program

People
Send invitations to your development team so they can take advantage of membership resources.

Certificates, Identifiers & Profiles
Manage the certificates, identifiers, profiles, and devices you need to develop and distribute apps.

- Then click “App IDs” under identifiers.

Developer Discover Design Develop Distribute Support Account

Certificates, Identifiers & Profiles kingston yan

iOS, tvOS, watchOS

iOS App IDs + Q

86 App IDs total.

Name	ID
Aad Poc	com.lookout.aad-poc
Disney LES App	com.disney.LES
Enterprise DNS Filter Demo	com.lookout.enterprise.dnsfilter
JMMCompanyName	com.lookout.enterprise.JMMCompanyName
Jenkins Lookout Enterprise App	com.Lookout.Enterprise
Justins Fake Positive	com.lookout.fakePositive
L4W Personal VPN POC	com.lookout.enterprise.personalvpn
LKOsecMalwareApp	*
Login	com.lookout.login.internal
Lookout Dogfooding	com.flexilis.security.internal

Identifiers

- App IDs**
- Pass Type IDs
- Website Push IDs
- iCloud Containers
- App Groups

Devices

- All

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- Click the “+” button in the upper right corner.

The screenshot displays the Apple Developer portal interface. At the top, the 'Developer' logo is on the left, and navigation links for 'Technologies', 'Resources', 'Programs', 'Support', and 'Member Center' are on the right. A search bar labeled 'Search Developer' is also present. Below the navigation, the page title is 'Certificates, Identifiers & Profiles' with the user name 'David Richardson' on the right. The main content area is titled 'iOS App IDs' and features a red box around a '+' button in the top right corner. Below this, it shows '1 App IDs Total' and a table with the following data:

Name	ID
Xcode iOS App ID com drinc HelloWidgetObjC	com.drinc.HelloWidgetObjC

The left sidebar contains a navigation menu with three main sections: 'Certificates', 'Identifiers', and 'Devices'. Under 'Identifiers', the 'App IDs' option is highlighted with a red box. Other options include 'Pass Type IDs', 'Website Push IDs', 'iCloud Containers', 'App Groups', and 'Merchant IDs'. The 'Devices' section includes 'All', 'Apple TV', 'Apple Watch', 'iPad', 'iPhone', and 'iPod Touch'. The 'Provisioning Profiles' section includes 'All', 'Development', and 'Distribution'.

- For Name use “Lookout for Work”

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Under App ID Prefix if it allows you to choose a value select the value with “(Team ID)” written after it.

- For App ID Suffix select the “Explicit App ID” radio button.
- For Bundle ID put “com.lookout.enterprise.**YourCompanyName**”

Note: YourCompanyName should not contain any punctuation or special characters. For example, “Acme Inc” should become “AcmeInc”. You will need to remember this value later!

ID Registering an App ID

The App ID string contains two parts separated by a period (.)—an App ID Prefix that is defined as your Team ID by default and an App ID Suffix that is defined as a Bundle ID search string. Each part of an App ID has different and important uses for your app. [Learn More](#)

App ID Description

Name:
You cannot use special characters such as @, &, *, ', "

App ID Prefix

Value: (Team ID)

App ID Suffix

Explicit App ID

If you plan to incorporate app services such as Game Center, In-App Purchase, Data Protection, and iCloud, or want a provisioning profile unique to a single app, you must register an explicit App ID for your app.

To create an explicit App ID, enter a unique string in the Bundle ID field. This string should match the Bundle ID of your app.

Bundle ID:
We recommend using a reverse-domain name style string (i.e., com.domainname.appname). It cannot contain an asterisk (*).

Wildcard App ID

This allows you to use a single App ID to match multiple apps. To create a wildcard App ID, enter an asterisk (*) as the last digit in the Bundle ID field.

Bundle ID:
Example: com.domainname.*

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- Under App Services check “Push Notifications”. No other boxes need to be checked. It is okay if some options are stuck checked. Then click Continue.

App Services
Select the services you would like to enable in your app. You can edit your choices after this App ID has been registered.

Enable Services:

- App Groups
- Associated Domains
- Data Protection
 - Complete Protection
 - Protected Unless Open
 - Protected Until First User Authentication
- Game Center
- HealthKit
- HomeKit
- Wireless Accessory Configuration
- iCloud
 - Compatible with Xcode 5
 - Include CloudKit support (requires Xcode 6)
- In-App Purchase
- Inter-App Audio
- Passbook
- Push Notifications
- VPN Configuration & Control

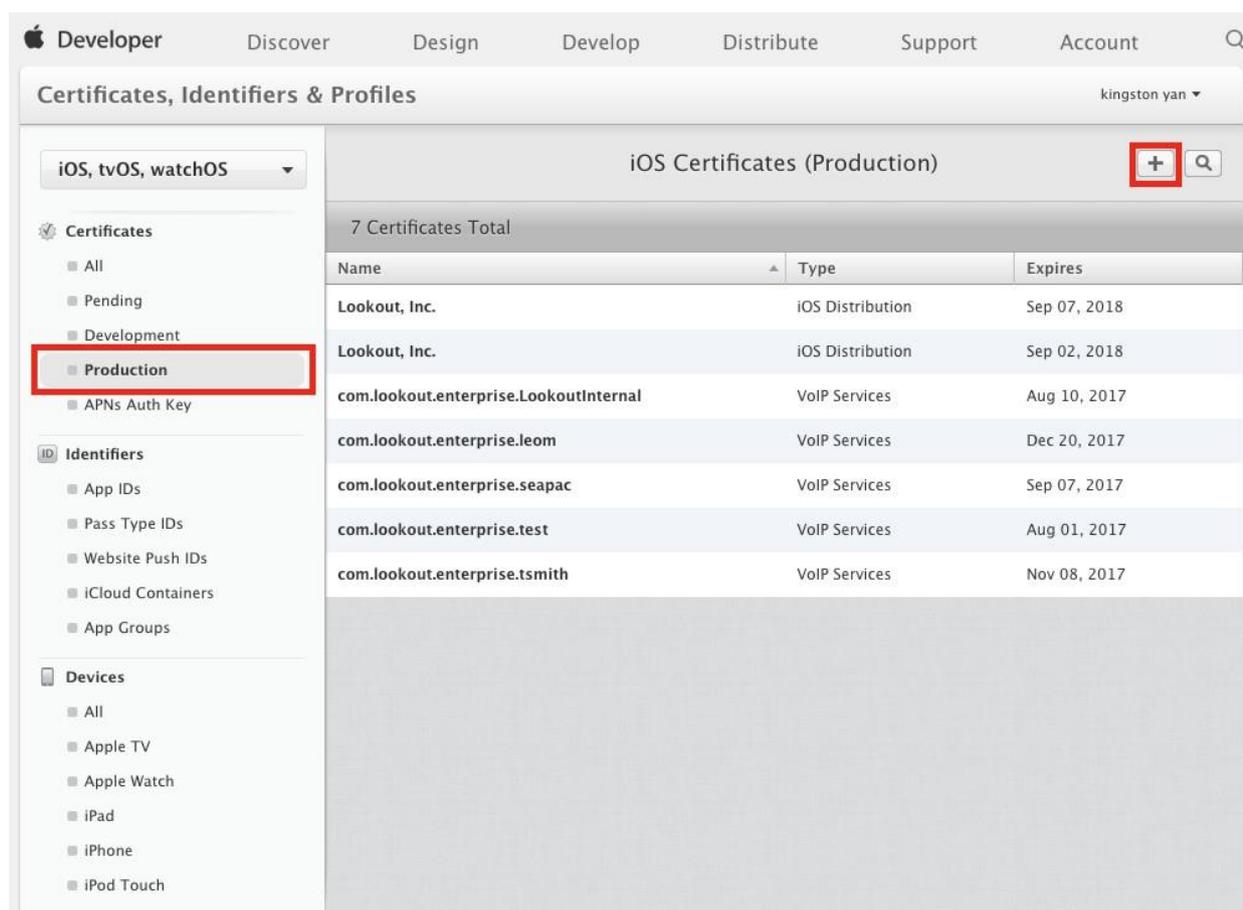
Cancel Continue

- On the following screen double check that the App ID description is “Lookout for Work”, the Identifier is **TeamID.com.lookout.enterprise.YourCompanyName** and Push Notifications are “Configurable”. If you need to fix anything, click “Back” otherwise hit “Register” and then “Done”.

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STEP 3: NOW, NAVIGATE TO CERTIFICATES, AND CREATE A VOIP CERTIFICATE.

- Select the App ID you just created (or your existing one) Certificates>Production. This will require creating a certificate signing request via Keychain.
- Select Production section under Certificates and then the “+” icon.

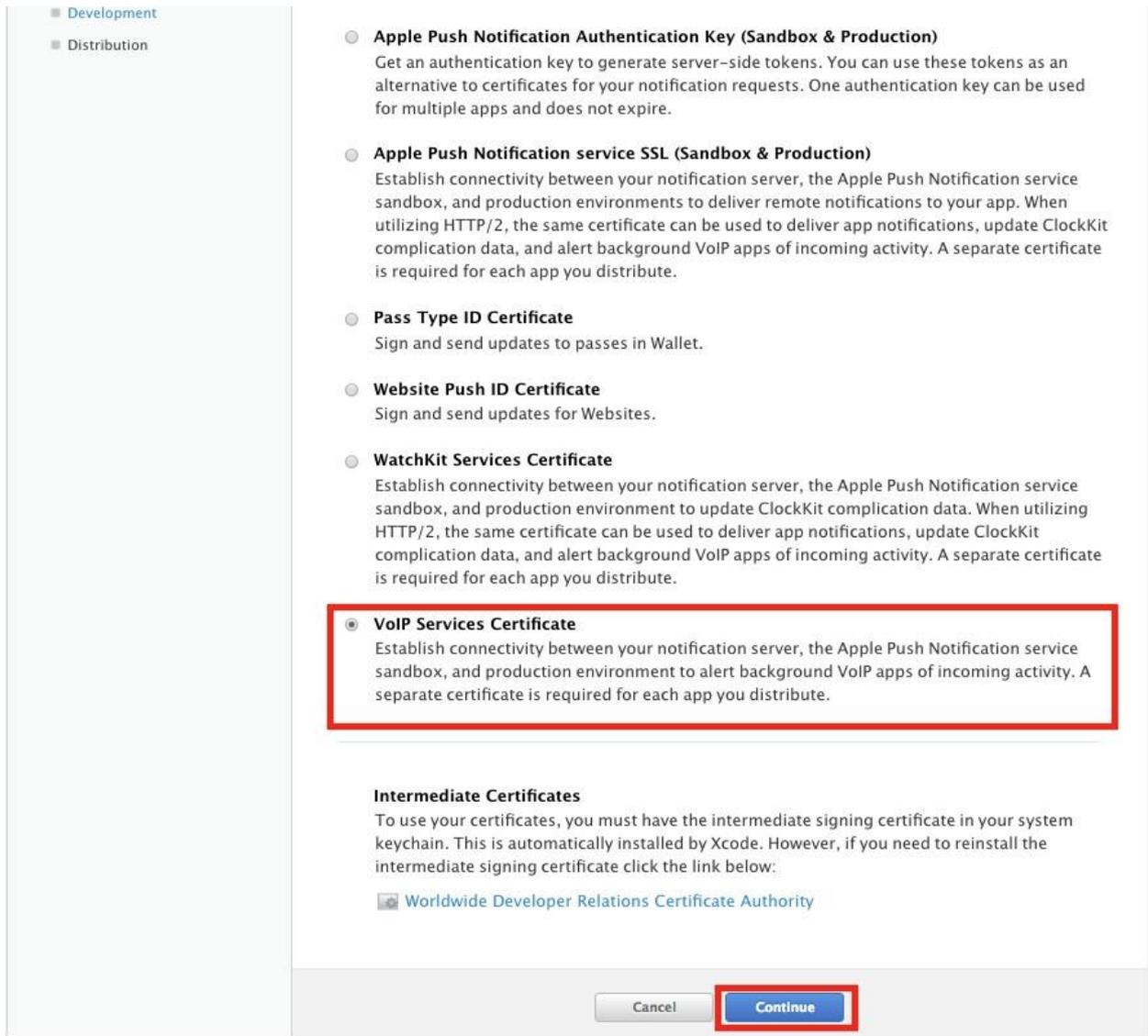


The screenshot shows the Apple Developer portal interface. The top navigation bar includes 'Developer', 'Discover', 'Design', 'Develop', 'Distribute', 'Support', and 'Account'. The main header is 'Certificates, Identifiers & Profiles' with a user name 'kingston yan' and a search icon. The left sidebar has three main sections: 'Certificates', 'Identifiers', and 'Devices'. Under 'Certificates', the 'Production' option is highlighted with a red box. The main content area is titled 'iOS Certificates (Production)' and shows a table of certificates. A red box highlights the '+' icon in the top right corner of the main content area. The table lists 7 certificates with columns for Name, Type, and Expires.

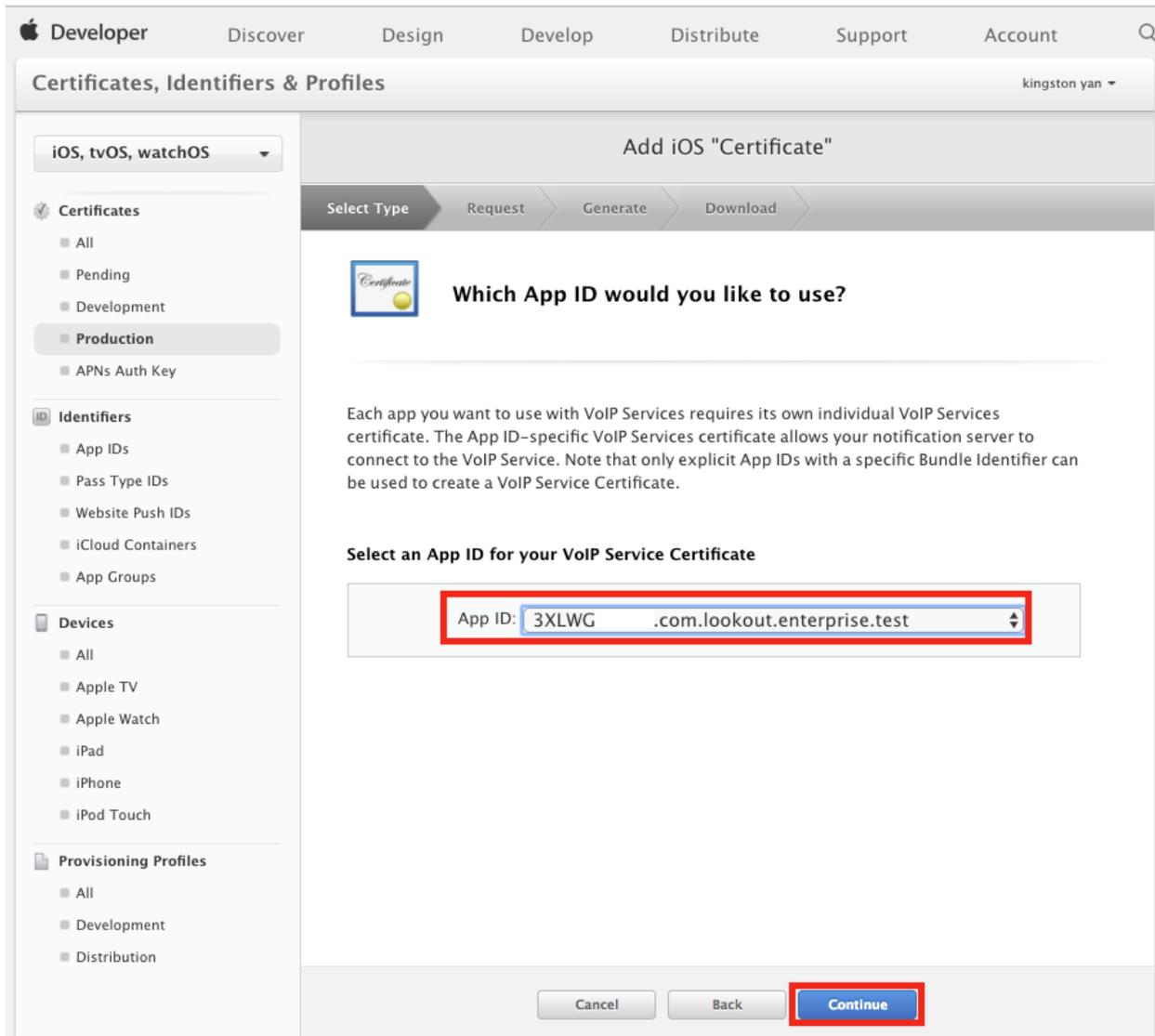
Name	Type	Expires
Lookout, Inc.	iOS Distribution	Sep 07, 2018
Lookout, Inc.	iOS Distribution	Sep 02, 2018
com.lookout.enterprise.LookoutInternal	VoIP Services	Aug 10, 2017
com.lookout.enterprise.leom	VoIP Services	Dec 20, 2017
com.lookout.enterprise.seapac	VoIP Services	Sep 07, 2017
com.lookout.enterprise.test	VoIP Services	Aug 01, 2017
com.lookout.enterprise.tsmith	VoIP Services	Nov 08, 2017

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- Select VoIP Services Certificate then the “Continue” button

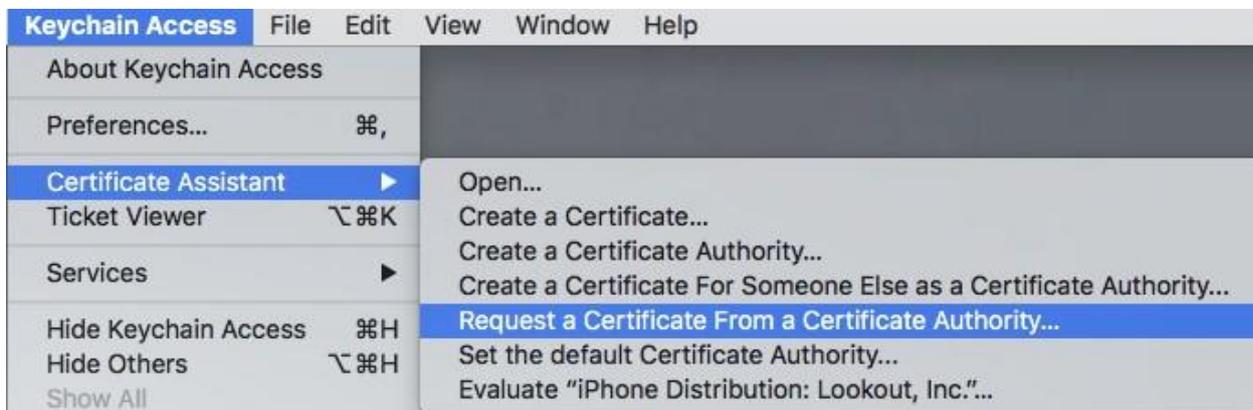


- From the drop-down menu, select the App ID that was previously made in step 2

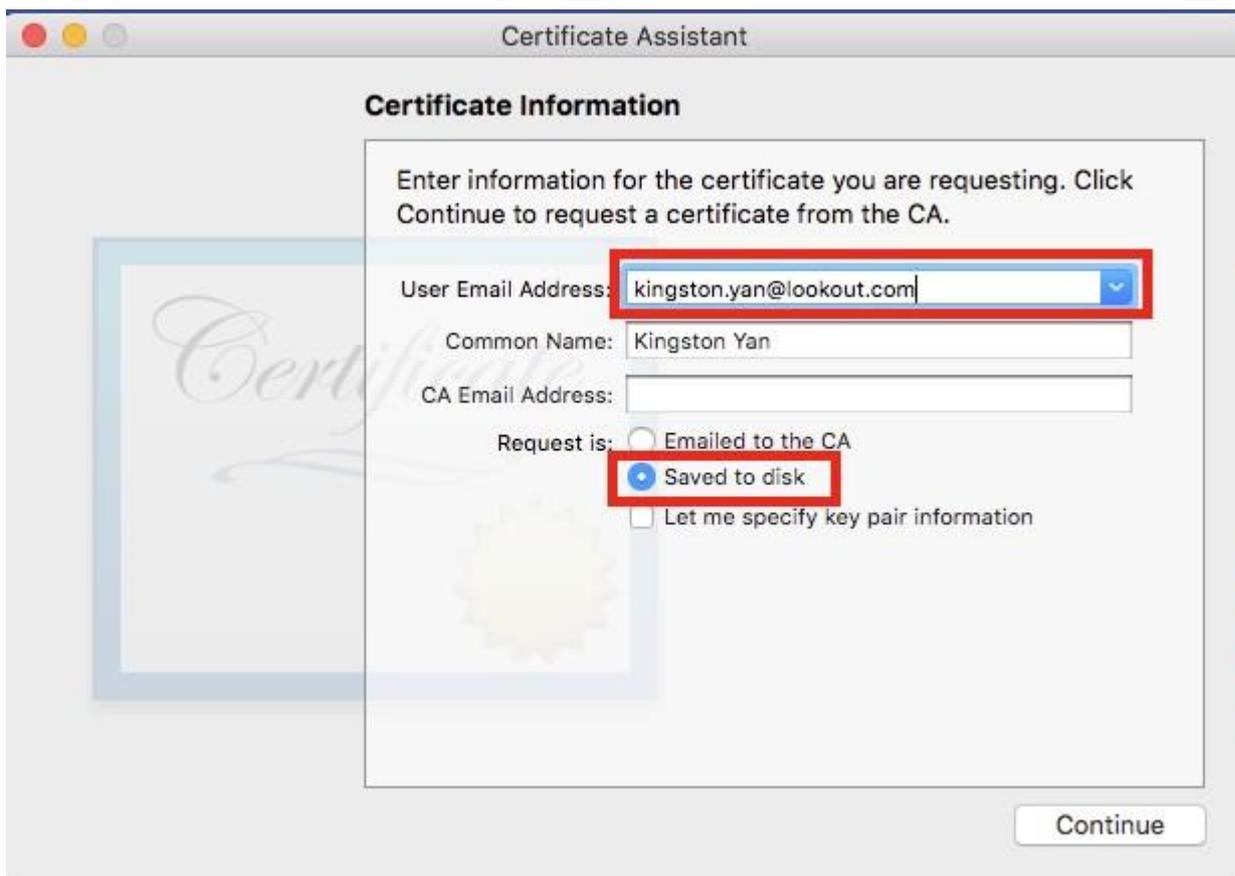


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- Create a CSR file from the Mac Keychain Access by going to Certificate Assistant>Request a Certificate from a Certificate Authority...

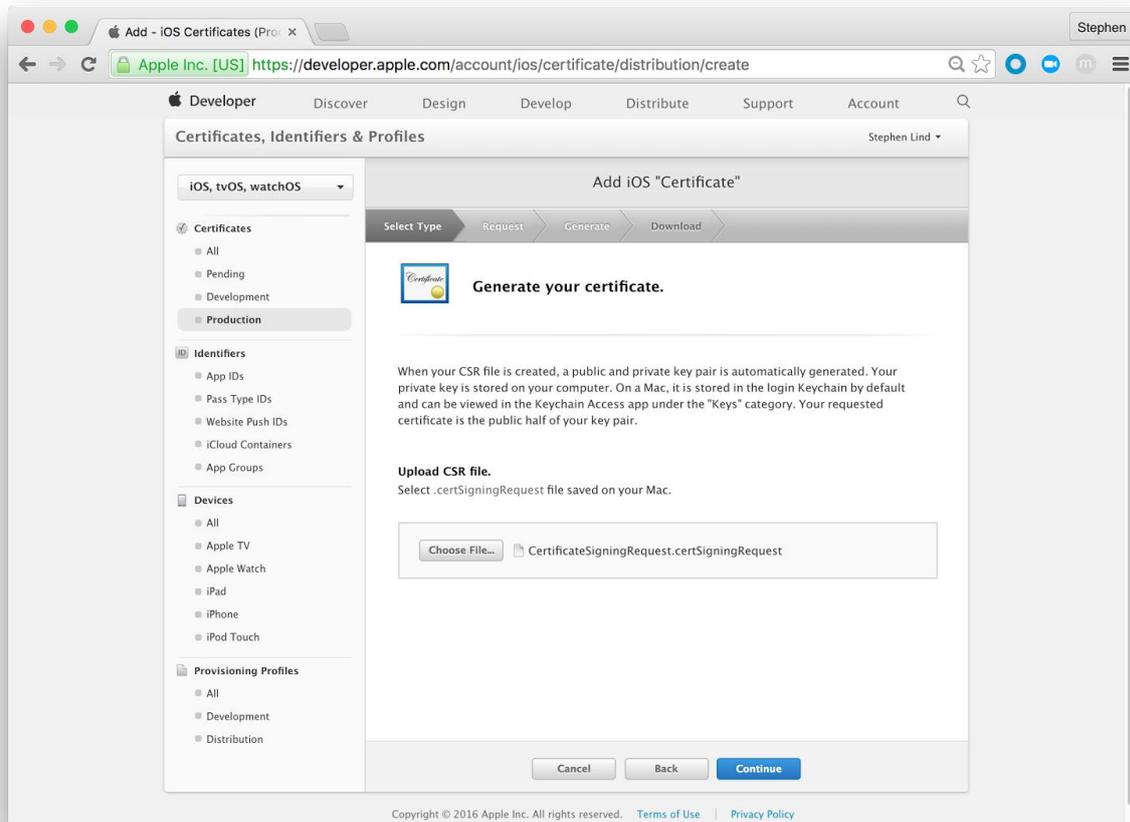


- Input your email address, select "Saved to disk", select Continue and save the CSR.

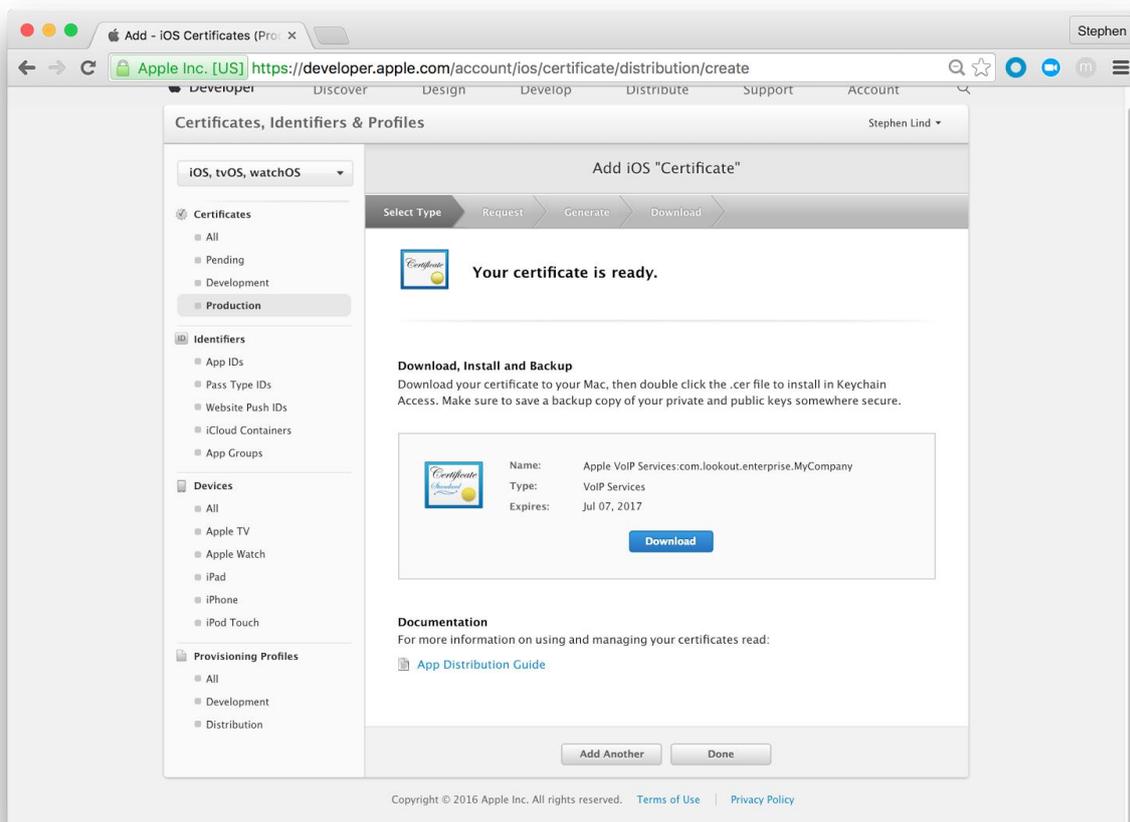


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- Go back to your Apple Developer account and choose the CSR created from the Keychain Access and select “Continue”.



- Download the certificate file and import to your Keychain Access as login.



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STEP 4. CREATE A NEW PROVISIONING PROFILE WITH YOUR NEW APPLICATION ID

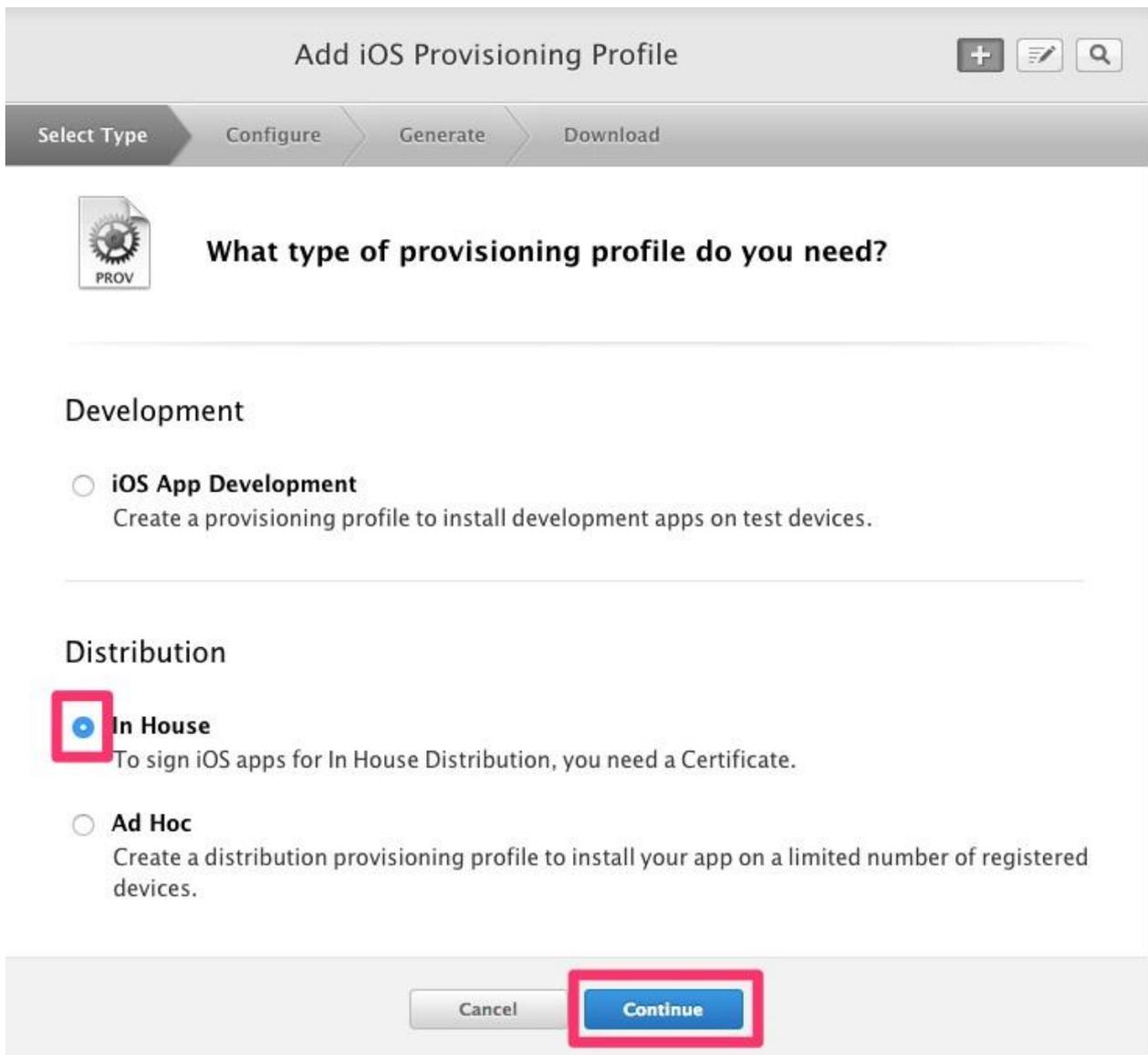
- Under Provisioning Profiles on the left navigation bar click “Distribution” and then click the “+” in the upper right corner.

The screenshot shows the Apple Developer portal interface. The top navigation bar includes 'Technologies', 'Resources', 'Programs', 'Support', and 'Member Center'. The main header is 'Certificates, Identifiers & Profiles' with a user dropdown 'David Richardson'. The left sidebar has a navigation menu with categories: 'iOS Apps', 'Certificates', 'Identifiers', 'Devices', and 'Provisioning Profiles'. Under 'Provisioning Profiles', the 'Distribution' option is highlighted with a red box. The main content area is titled 'iOS Provisioning Profiles (Distribution)' and shows a table with one profile. A red box highlights the '+' button in the top right corner of the main content area.

Name	Type	Status
XC: com.drinc.Widget.Widget	iOS Distribution	Active

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- Select “In House” under “Distribution” on the next screen and then click “Continue”



Add iOS Provisioning Profile

Select Type | Configure | Generate | Download

What type of provisioning profile do you need?

Development

iOS App Development
Create a provisioning profile to install development apps on test devices.

Distribution

In House
To sign iOS apps for In House Distribution, you need a Certificate.

Ad Hoc
Create a distribution provisioning profile to install your app on a limited number of registered devices.

Cancel | Continue

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- Select “Lookout for Work (*TeamID.com.lookout.enterprise.YourCompanyName*)” as the App ID for this in-house provisioning profile. Click Continue.

Add iOS Provisioning Profile

Select Type > **Configure** > Generate > Download



Select App ID.

If you plan to use services such as Game Center, In-App Purchase, and Push Notifications, or want a Bundle ID unique to a single app, use an explicit App ID. If you want to create one provisioning profile for multiple apps or don't need a specific Bundle ID, select a wildcard App ID. Wildcard App IDs use an asterisk (*) as the last digit in the Bundle ID field. Please note that iOS App IDs and Mac App IDs cannot be used interchangeably.

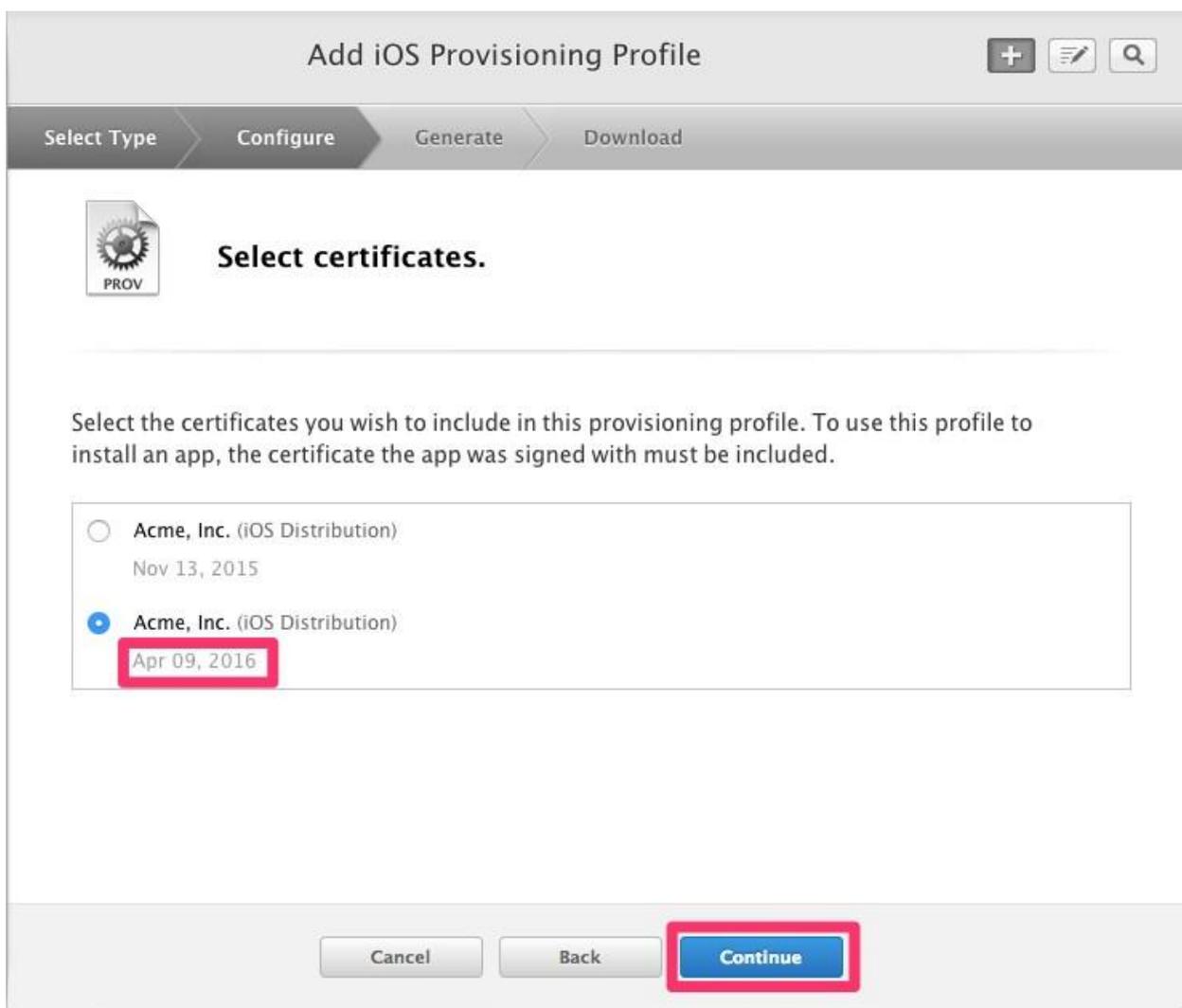
App ID: Lookout for Work (com.lookout.enterprise.Acmelnc)

Cancel Back **Continue**

- Select the newest distribution certificate that you can. You will need to have the private key for this certificate on the Mac you use for re-signing the IPA. Lookout recommends using a certificate that will not expire in the next 6 months.

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Note: If there aren't any certificates, you don't have the private key available or they all expire soon, go to "Certificates -> Production" to create a new certificate. You may have up to 2 active Enterprise Certificates at any given time, so be careful not to revoke a certificate somebody else is actively using to distribute another app. More instructions are available [here](#).



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- Give the Profile a nice name like “Lookout for Work Enterprise Distribution Profile” and click “Generate”

Add iOS Provisioning Profile

Select Type > **Configure** > **Generate** > Download



Name this profile and generate.

The name you provide will be used to identify the profile in the portal.

Profile Name:

Type: **iOS Universal**

App ID: **Lookout for Work**
(██████████.com.lookout.enterprise.AcmelInc)

Certificates: **1 Included**

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Click “Download” on the next screen and save this file. The profile will be used with Lookout’s IPA resigning Tool.

Add iOS Provisioning Profile

Select Type > Configure > Generate > **Download**

 **Your provisioning profile is ready.**

Download and Install
Download and double click the following file to install your Provisioning Profile.



Name: Lookout for Work Enterprise Distribution Profile
Type: In-house Distribution
App ID: ██████████.com.lookout.enterprise.Acmelnc
Expires: Apr 09, 2016

Download

Documentation
For more information on using and managing your Provisioning Profile read:
[App Distribution Guide](#)

Add Another **Done**

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You will embed this file into the Lookout for Work IPA which allows it to be installed on all your employee's devices.

4 HOW TO CREATE .P8 FILE

- Open the Keys -> "All" page in your Developer Center and click the + button to create a new Auth Key.

The screenshot displays the 'Certificates, Identifiers & Profiles' interface in the Apple Developer Center. The top right corner shows the user name 'Elad Nava'. The main content area is titled 'Keys' and shows a summary of '1 Key(s) Total'. Below this is a table with the following data:

Name	Services Enabled
Auth Key ABCDLKUZD6	1

The left sidebar contains navigation options for 'Certificates' (All, Pending, Development, Production), 'Keys' (All), and 'Identifiers' (App IDs). The 'iOS, tvOS, watchOS' platform is selected at the top left.

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- In the next page, enter a name for your key, enable APNs and click Continue at the bottom of the page.

Key Description

Name:

You cannot use special characters such as @, &, *, ', "

Key Services

Enable and configure services for this key. Associating a service with this key allows you to use the service and authenticate communication with the service.

Enable	Service
<input checked="" type="checkbox"/>	APNs Use the Apple Push Notification service for your notification requests. One key is used for all of your apps. For more information refer to the Local and Remote Notification Programming Guide .

- Finally, click Confirm in the next page. Apple will then generate a .p8 key file containing your APNs Auth Key.

Download and Back Up

After downloading your key, it cannot be re-downloaded as the server copy is removed. If you are not prepared to download your key at this time, click Done and download it at a later time. Be sure to save a backup of your key in a secure place.

Name:	MyApp
Key ID:	6U27QJ3Z5P
Services	APNs
<input type="button" value="Download"/>	

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Download the .p8 key file to your computer and save it for later. Also, be sure to write down the Key ID somewhere, as you'll need it later when connecting to APNs.

Next, copy the .p8 file you just downloaded into the apns folder we created. Name it apns.p8 for simplicity. And integrate in backend services.

5 REFERENCES

- <https://developer.apple.com/library/archive/documentation/Performance/Conceptual/EnergyGuide-iOS/OptimizeVoIP.html>