

iOS MDM and the iOS Developer Enterprise Program



Requirements for MDM:

- iOS MDM relies on APNS
- APNS requires a certificate in order to communicate
- This MDM certificate must be signed by Apple
- This can only be done via the **iOS Developer Enterprise Program**



iOS Developer Enterprise Program Requirements:

- Companies with 500 or more employees
- Valid DUNS number
- \$299 USD annual fee @
<http://developer.apple.com/programs/ios/enterprise/>



Go to <http://developer.apple.com>

The screenshot shows the "iPhone Developer Enterprise Program" page on the Apple Developer website. The page features a banner with the program's name and a call-to-action button. It highlights features like in-house distribution, testing on iPad, iPhone, and iPod touch, technical support, and developer forums. A sidebar on the right contains links for comparing programs, iPhone in Business, Enterprise Developer Profiles, teaching iOS development at university, and the iPhone Developer Program.

iPhone Developer Enterprise Program – Apple Developer

Developer Technologies Resources Programs Support Member Center Search Developer

iPhone Developer Enterprise Program

iPhone Developer Enterprise Program

Gain access to the resources that will help you develop, design, and deploy proprietary, in-house iOS applications to employees within your company or organization.

Apply Now \$299/year

You must be a company or organization with 500 or more employees and a DUNS number to apply.

In-house Distribution
Deploy proprietary, in-house applications to authorized users in your company, the iPhone Developer Enterprise Program is available to companies with 500 or more employees and a Dun & Bradstreet number.

Test on iPad, iPhone, and iPod touch
See how your development application will perform in a real-world environment by installing and testing it directly on iPad, iPhone, and iPod touch.

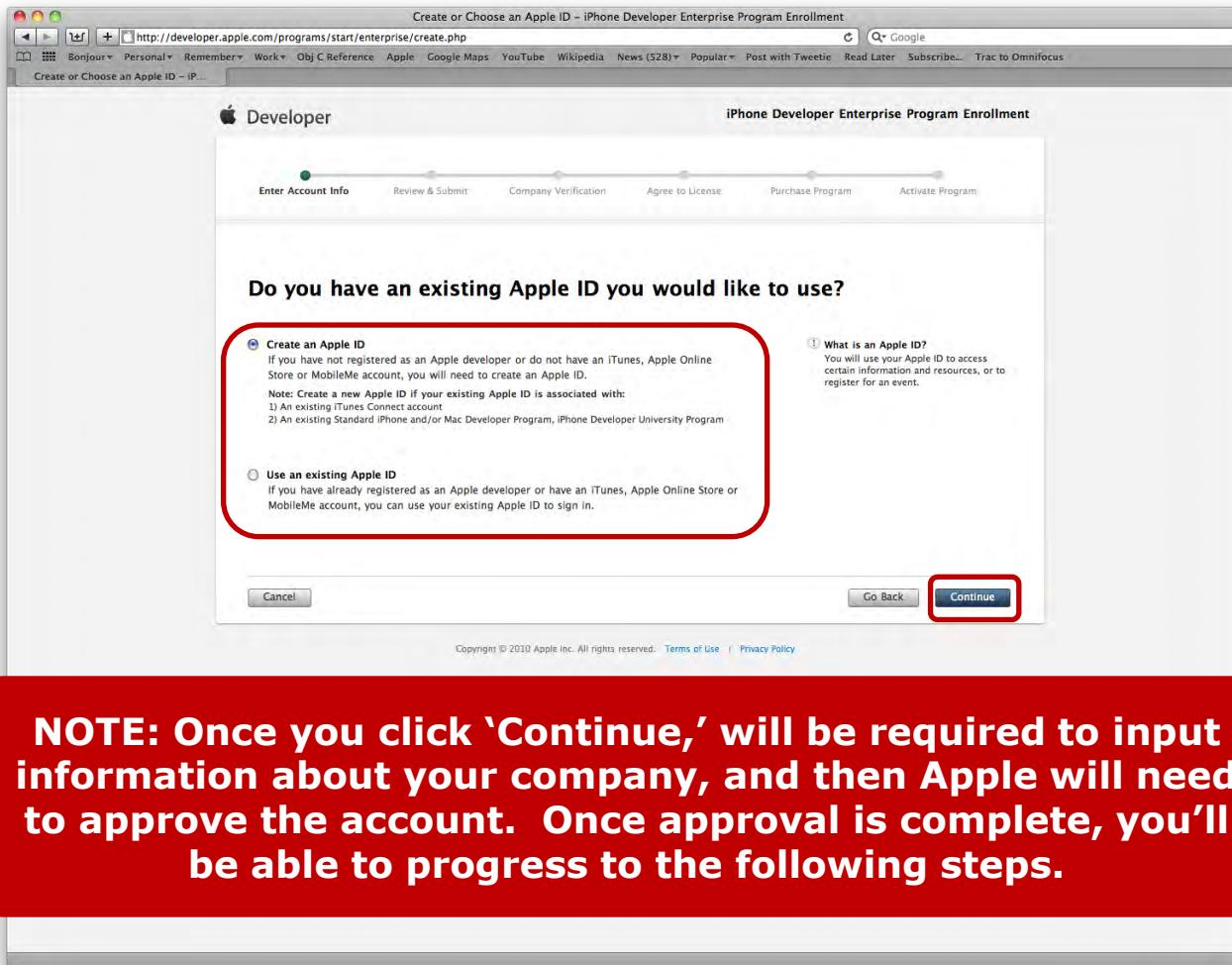
Technical Support
Apple engineers will provide you with code-level technical assistance, helpful guidance, or the appropriate technical documentation to fasttrack your development process.

Apple Developer Forums
Join the discussion in the Apple Developer Forums to post questions or offer responses to other developers and Apple engineers on iOS application design and development.

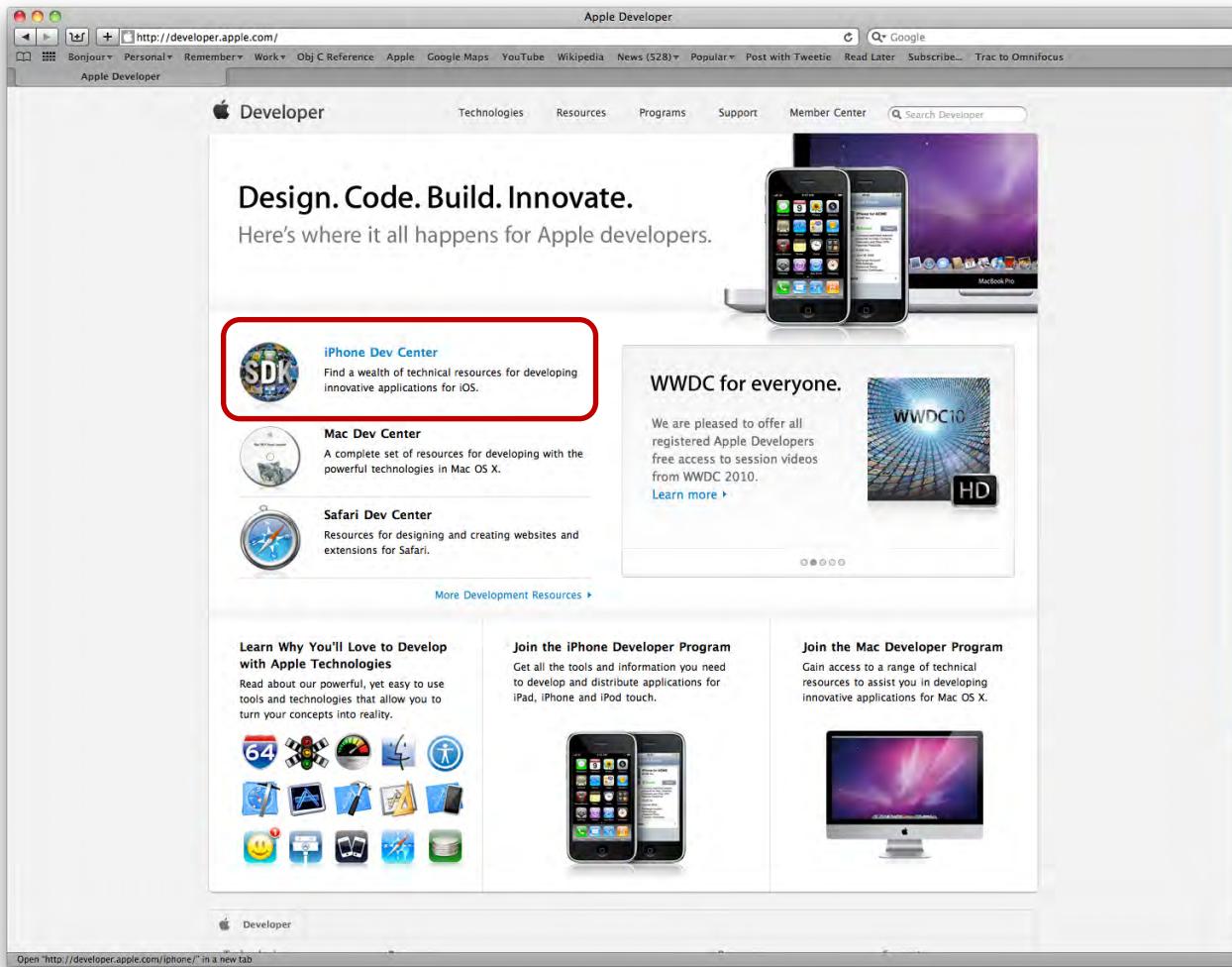
Compare iPhone Developer Programs ▶

iPhone in Business Enterprise Developer Profiles Teach iOS Development at Your University iPhone Developer Program

Create an Apple ID, or log in with an existing one



Go to the iOS Dev Center, and log in



Go to the iOS Provisioning Portal

The screenshot shows the iPhone Dev Center - Apple Developer website. At the top, there's a navigation bar with links like Bonjour, Personal, Remember, Work, Obj C Reference, Apple, Google Maps, YouTube, Wikipedia, News (S28), Popular, Post with Tweetie, Read Later, Subscribe, and Trac to Omnifocus. Below that is a main menu with Apple Developer, Technologies, Resources, Programs, Support, Member Center, and a search bar. The main content area has tabs for iPhone Dev Center, Mac Dev Center, and Safari Dev Center. A user profile for Jesse Lindeman is shown. On the left, there's a sidebar for 'Resources for iOS 4' with links for Downloads, Getting Started Videos, Getting Started Documents, iOS Reference Library, iAd JS Reference Library, Coding How-Tos, Sample Code, and Apple Developer Forums. In the center, there's a 'Featured Content' section with links for What's new in iOS 4, Supporting Multitasking In Your Applications, iAd Framework Reference, Start Developing iPad Apps, Apple Push Notification Service Programming Guide, In App Purchase Programming Guide, and Getting Started with In App Purchase. On the right, there's a large section for the 'iPhone Developer Program' which includes a link to the 'iPhone Provisioning Portal' (which is highlighted with a red box). This section also contains links for Apple Developer Forums, Developer Support Center, App Store Resource Center, Prepare for App Submission, App Store Approval Process, Managing Apps on the App Store, Marketing Resources, and iAd Network. At the bottom, there's an 'RSS News & Announcements' section with a link to iTunes Connect Mobile App Available (Jul 14, 2010) and a note about uploading screenshots and icons (Jul 14, 2010). A warning message at the bottom says: 'Read me before downloading Hide details' and 'If you have updated your iPhone or iPod touch to iOS 4.0.1 or your iPad to iOS 3.2.1 you will need to download and install iOS SDK 4.0.1 to continue your development.'

Add a New App ID

The screenshot shows a web browser window for the iPhone Provisioning Portal on the Apple Developer website. The URL in the address bar is <https://developer.apple.com/iphone/manage/bundles/index.action>. The page title is "App IDs – iPhone Provisioning Portal – Apple Developer". The navigation bar includes links for Bonjour, Personal, Remember, Work, Obj C Reference, Apple, Google Maps, YouTube, Wikipedia, News (529), Popular, Post with Tweetie, Read Later, Subscribe, and Trac to Omnifocus. The main menu has links for Technologies, Resources, Programs, Support, Member Center, and a search bar. The user is logged in as "Welcome, Jesse Lindeman" with options to Edit Profile or Log out.

The left sidebar is titled "Provisioning Portal : MobileIron" and contains links for Home, Certificates, Devices, App IDs (which is selected and highlighted in blue), Provisioning, and Distribution.

The main content area has tabs for "Manage" and "How To". The "Manage" tab is active, showing the "App IDs" section. A red box highlights the "New App ID" button. Below it, a paragraph explains what App IDs are and how they work. It states: "App IDs are an integral part of the iPhone Development and Provisioning Process that allows an application to communicate with the Apple Push Notification service and/or an external hardware accessory. In addition, an App ID can also be used to share keychain data (such as passwords) between a suite of applications." Another paragraph describes the components of an App ID: "An App ID is the combination of a unique ten character string called the "Bundle Seed ID" and a traditional CF Bundle ID (or Bundle Identifier). The Bundle Seed ID portion of your App ID can be utilized to share keychain access between multiple applications you build with a single App ID. In addition, it can be incorporated into any external hardware accessories you wish to pair your iOS application with. Registration of your App ID is required to utilize the Apple Push Notification service (APNs) and to register an application to incorporate In App Purchases."

Links for more information include: "Apple Push Notification service Programming Guide", "App ID How-To", "Apple Push Notification topic in the Apple Developer Forums", "Store Kit Programming Guide", "App ID How-Tos", "iTunes Connect User Guide", "Keychain Services Reference", and "iOS Accessories".

Create a new App ID

Your MDM certificate topic (also called 'bundle identifier') **MUST**:

- Abide by the following syntax: "com.apple.mgmt.*"
 - '*' must be any unique string (and NOT an actual asterisk)
 - '*' may be dot-delimited (ex: "com.apple.mgmt.foo.bar")
- Be globally unique
 - when you click Submit, Apple will indicate whether your selection is globally unique
- MobileIron **recommends** you use the following syntax:
"com.apple.mgmt.[YourOrganizationName].mdm"

The screenshot shows the 'iPhone Provisioning Portal' interface with the 'App IDs' tab selected. A red box highlights the 'MDM App Id' input field, which contains 'com.yourDomain.MDM'. Another red box highlights the 'Generate New' button under 'Bundle Seed ID (App ID Prefix)'. A third red box highlights the 'Submit' button at the bottom right.

Select Configure for that new App ID

The screenshot shows the 'App IDs' page in the iPhone Provisioning Portal. The left sidebar has 'App IDs' selected. The main content area is titled 'App IDs' and contains several sections of text explaining what App IDs are and how they can be used. Below this is a table listing various App IDs, their descriptions, and configuration status for Apple Push Notification service, In App Purchase, and Game Center.

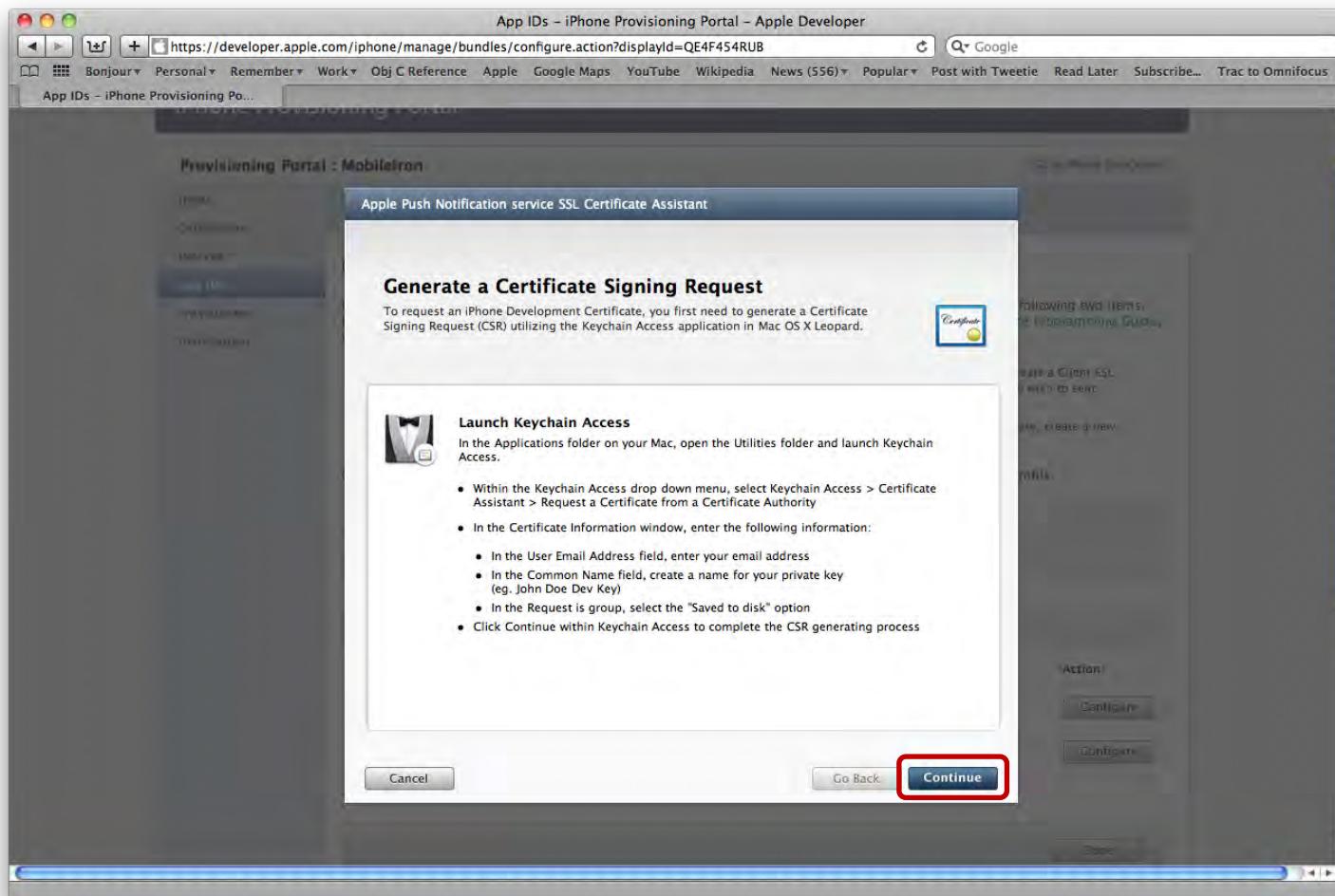
Description	Apple Push Notification service	In App Purchase	Game Center	Action
2VZD8HX4Y7.com.mobileiron... MIClient Enterprise App	<input checked="" type="radio"/> Enabled for Development <input checked="" type="radio"/> Enabled for Production	<input checked="" type="radio"/> Enabled	<input checked="" type="radio"/> Enabled	Configure
392QQ5X4PC.com.mobileiron... Sentry Enterprise	<input checked="" type="radio"/> Configurable for Development <input checked="" type="radio"/> Configurable for Production	<input checked="" type="radio"/> Enabled	<input checked="" type="radio"/> Enabled	Configure
3X9XLE89SH.* Xcode: Wildcard AppID	<input type="radio"/> Unavailable	<input type="radio"/> Unavailable	<input type="radio"/> Unavailable	Details
6AM2H69436.com.yourdomain... MDM App Id	<input checked="" type="radio"/> Configurable for Development <input checked="" type="radio"/> Configurable for Production	<input checked="" type="radio"/> Enabled	<input checked="" type="radio"/> Enabled	Configure
DNY49BCSDZ.com.mobileiron...	<input checked="" type="radio"/> Configurable for Development			

Configure Production Push SSL Certificate

The screenshot shows a web browser window for the iPhone Provisioning Portal on the Apple Developer website. The URL in the address bar is <http://developer.apple.com/iphone/manage/bundles/configure.action?displayId=QE4F454RUB>. The page title is "App IDs – iPhone Provisioning Portal – Apple Developer". The main navigation menu includes "Bonjour", "Personal", "Remember", "Work", "Obj C Reference", "Apple", "Google Maps", "YouTube", "Wikipedia", "News (529)", "Popular", "Post with Tweetie", "Read Later", "Subscribe...", and "Trac to Omnifocus". Below the menu, there's a sub-menu for "App IDs – iPhone Provisioning Po...". The main content area has a header "iPhone Provisioning Portal" with "Welcome, Jesse Lindeman" and links for "Edit Profile" and "Log out". A search bar says "Search Developer". On the left, a sidebar menu has "Home", "Certificates", "Devices", "App IDs" (which is selected and highlighted in blue), "Provisioning", and "Distribution". The main content area has tabs "Manage" and "How To". The "Manage" tab is selected. The section title is "Configure App ID". It contains instructions: "In order to set up your App ID for the Apple Push Notification service you will need to create and install the following two items. For more information on utilizing the Apple Push Notification service, view the [Apple Push Notification service Programming Guide](#), the [App ID How-To](#) as well as the [Apple Push Notification topic](#) in the [Apple Developer Forums](#)". There are two numbered steps: 1. An App ID-specific Client SSL Certificate : For each App ID you wish to enable push notifications for, you need to create a Client SSL Certificate that allows your notification server to connect to the Apple Push Notification service. Each application you wish to send notifications to will require a separate Client SSL Certificate. 2. An Apple Push Notification service compatible provisioning profile: After you have generated your Client SSL certificate, create a new provisioning profile containing the App ID you wish to use for notifications. Below these steps, it says "Once the steps above have been completed, you should build your application using this new provisioning profile." A table lists an "MDM App Id" with ID "6AM2H69436.com.yourdomain.MDM". Under the "Push SSL Certificate" column, there are two entries: "Development Push SSL Certificate" and "Production Push SSL Certificate". Both entries have a status of "Configurable" and a "Configure" button. The "Production Push SSL Certificate" row is highlighted with a red border around its entire row. The "Enable for Apple Push Notification service" checkbox is checked and also has a red border around it.

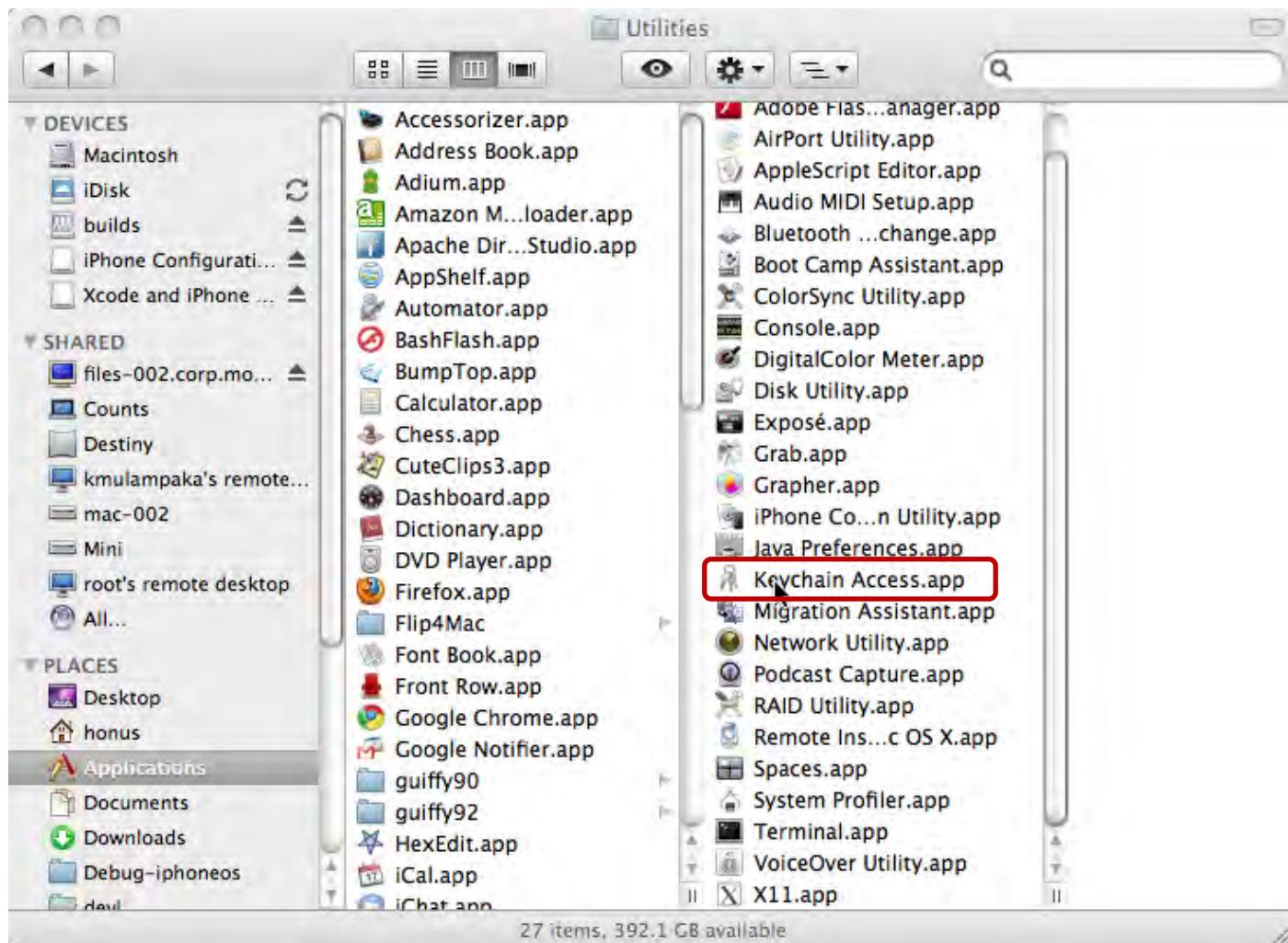
Push SSL Certificate	Status	Expiration Date	Action
Development Push SSL Certificate	Configurable		Configure
Production Push SSL Certificate	Configurable		Configure

Generate a Certificate Signing Request

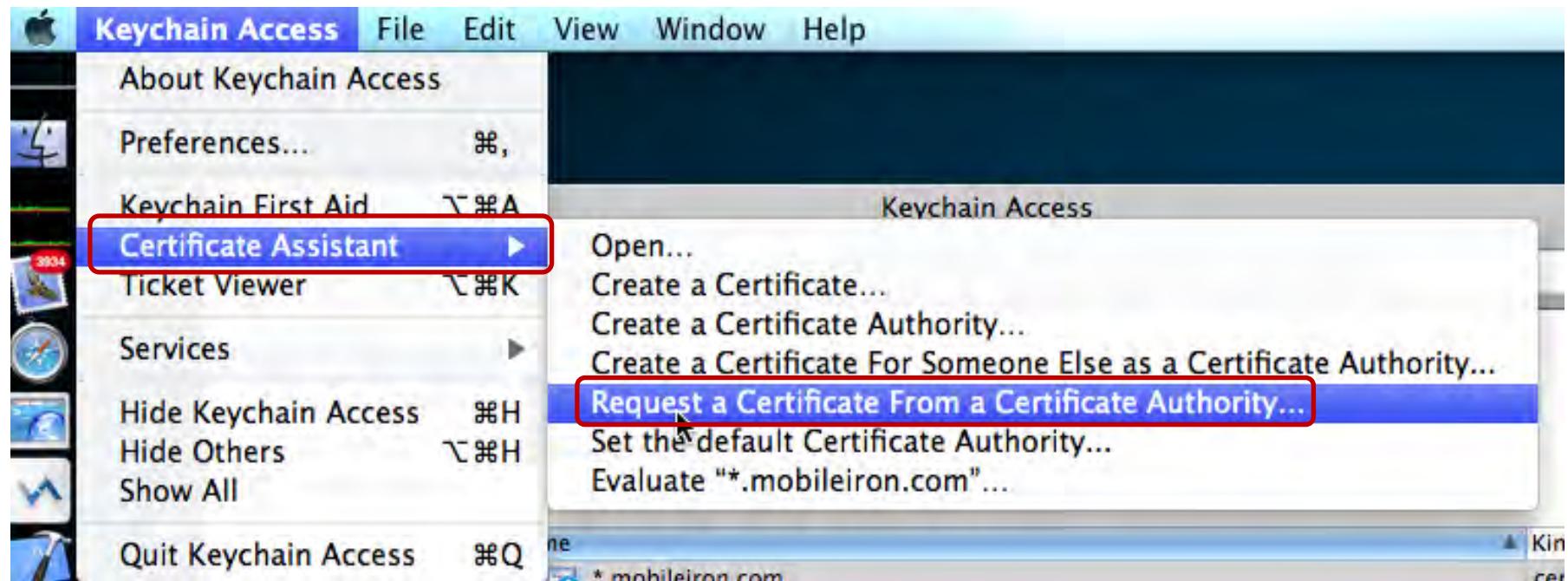


Using Apple MacOS X

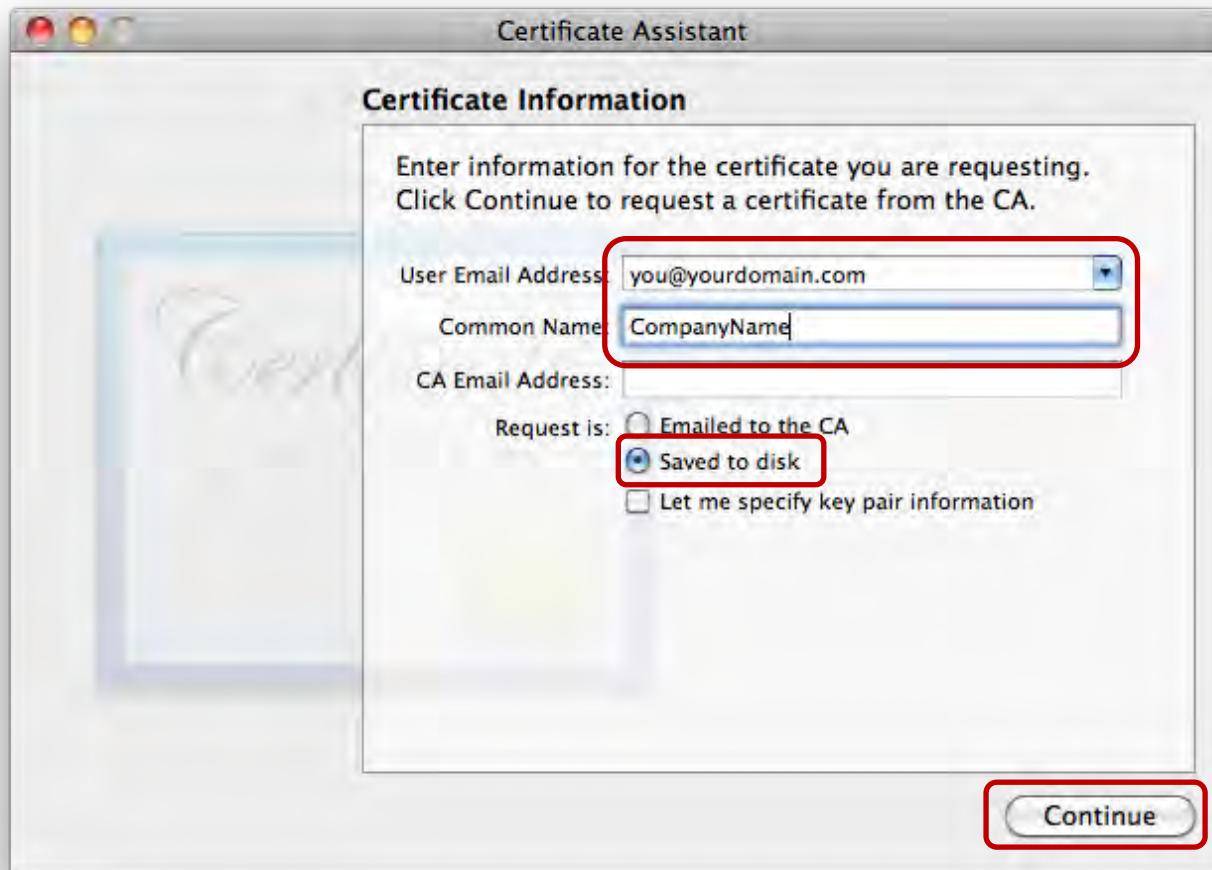
In Applications | Utilities, launch Keychain Access



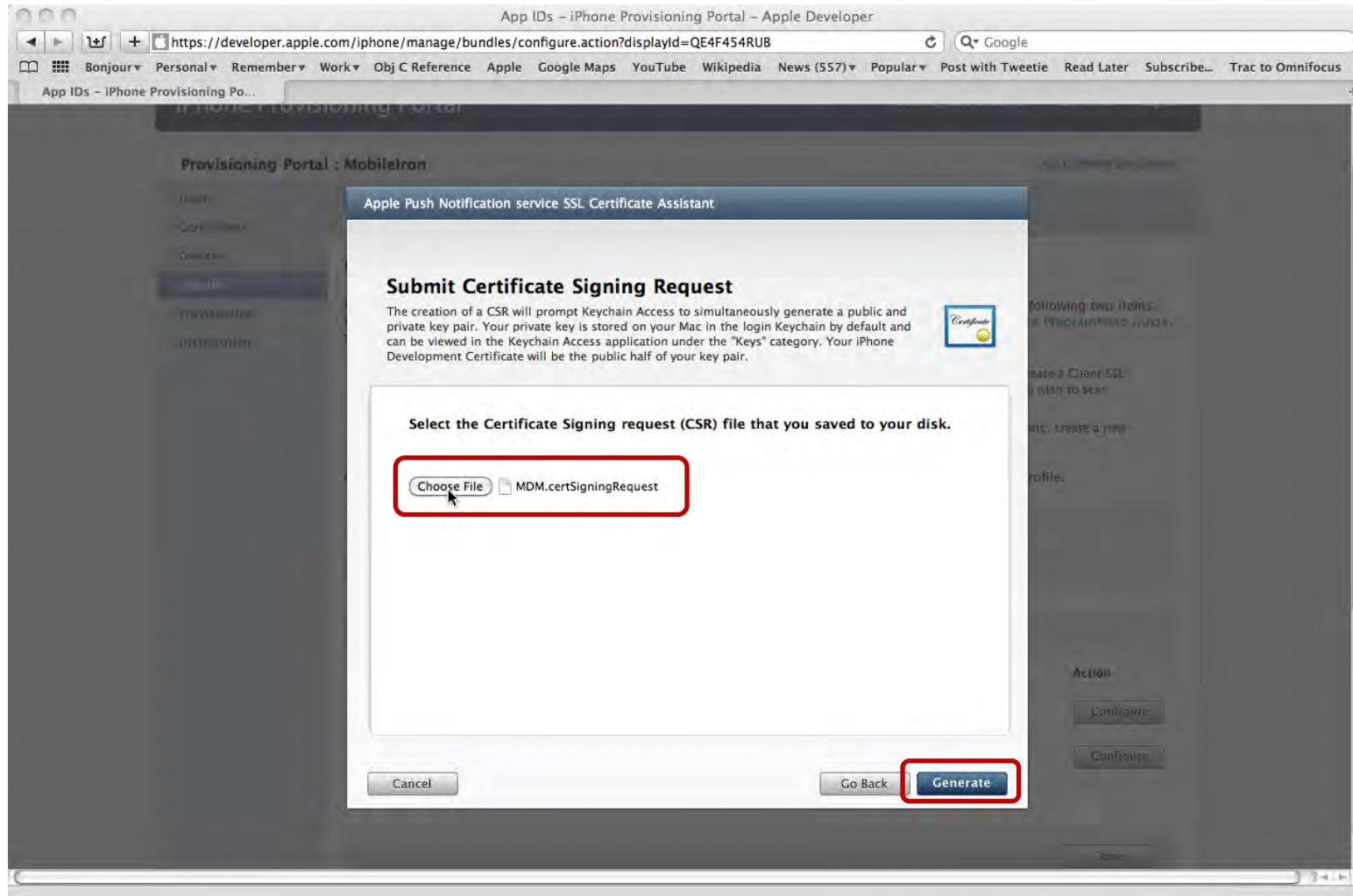
Generate a CSR from within the Keychain Access app



Input necessary contact info and save the request



Submit the saved CSR to generate key pairs



Download the Apple-signed MDM certificate

The screenshot shows a web browser window titled "App IDs - iPhone Provisioning Portal – Apple Developer". The URL is <https://developer.apple.com/iphone/manage/bundles/iphone/manage/bundles/configure.action?displayId=QE4F454P>. The page displays instructions for setting up an App ID for Apple Push Notification service, mentioning the need for a Client SSL Certificate and a provisioning profile.

Configure App ID

In order to set up your App ID for the Apple Push Notification service you will need to create and install the following two items. For more information on utilizing the Apple Push Notification service, view the [Apple Push Notification service Programming Guide](#), the [App ID How-To](#) as well as the [Apple Push Notification topic](#) in the [Apple Developer Forums](#).

1. An App ID-specific Client SSL Certificate : For each App ID you wish to enable push notifications for, you need to create a Client SSL Certificate that allows your notification server to connect to the Apple Push Notification service. Each application you wish to send notifications to will require a separate Client SSL Certificate.
2. An Apple Push Notification service compatible provisioning profile: After you have generated your Client SSL certificate, create a new provisioning profile containing the App ID you wish to use for notifications.

Once the steps above have been completed, you should build your application using this new provisioning profile.

ID MDM App Id
6AM2H69436.com.yourdomain.MDM

Enable for Apple Push Notification service

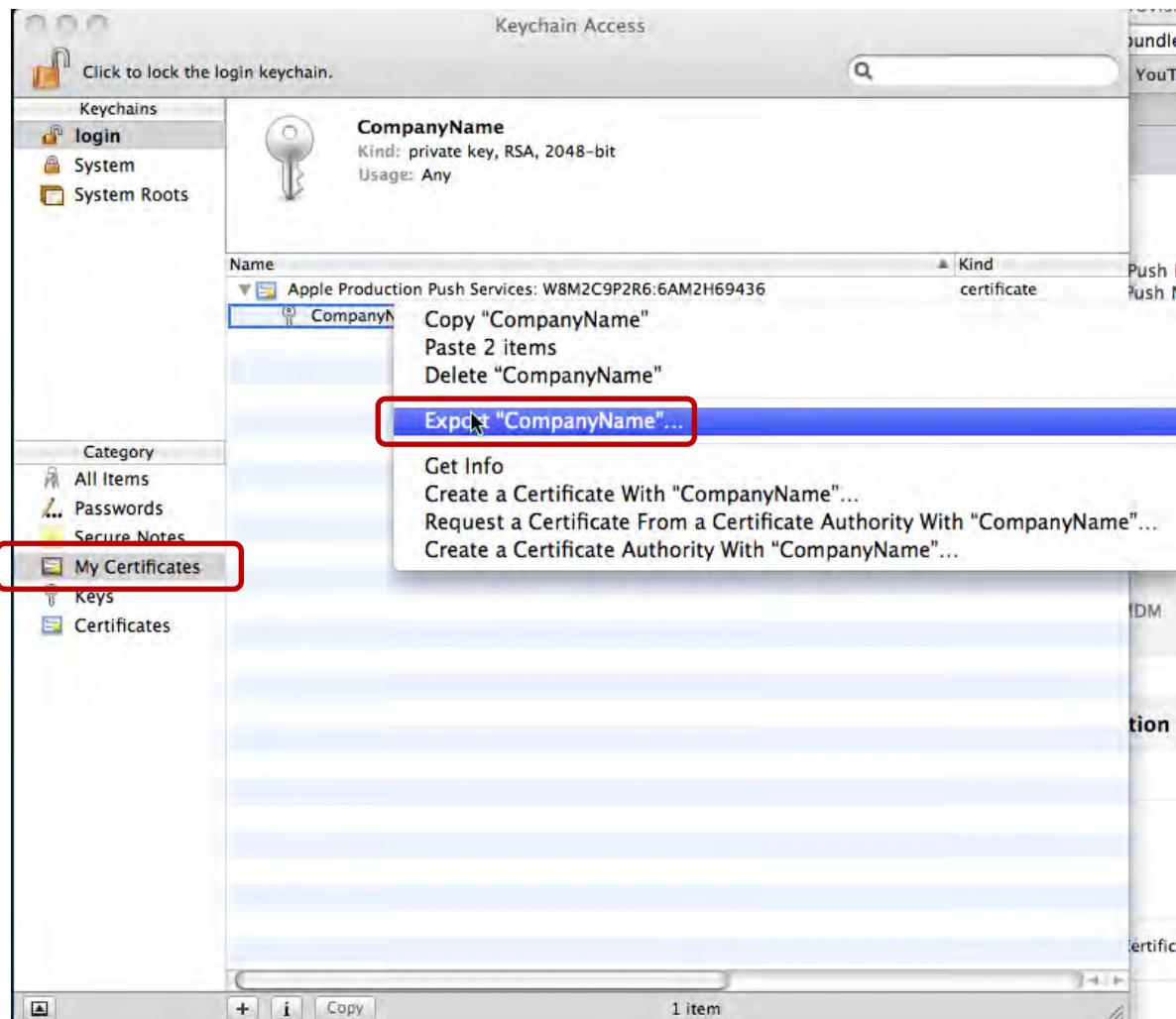
Push SSL Certificate	Status	Expiration Date	Action
Development Push SSL Certificate	Configurable		Configure
Production Push SSL Certificate	Enabled	Jul 27, 2011	Download Revoke Configure

Generate a new Production Push SSL Certificate before your current one expires.

Done

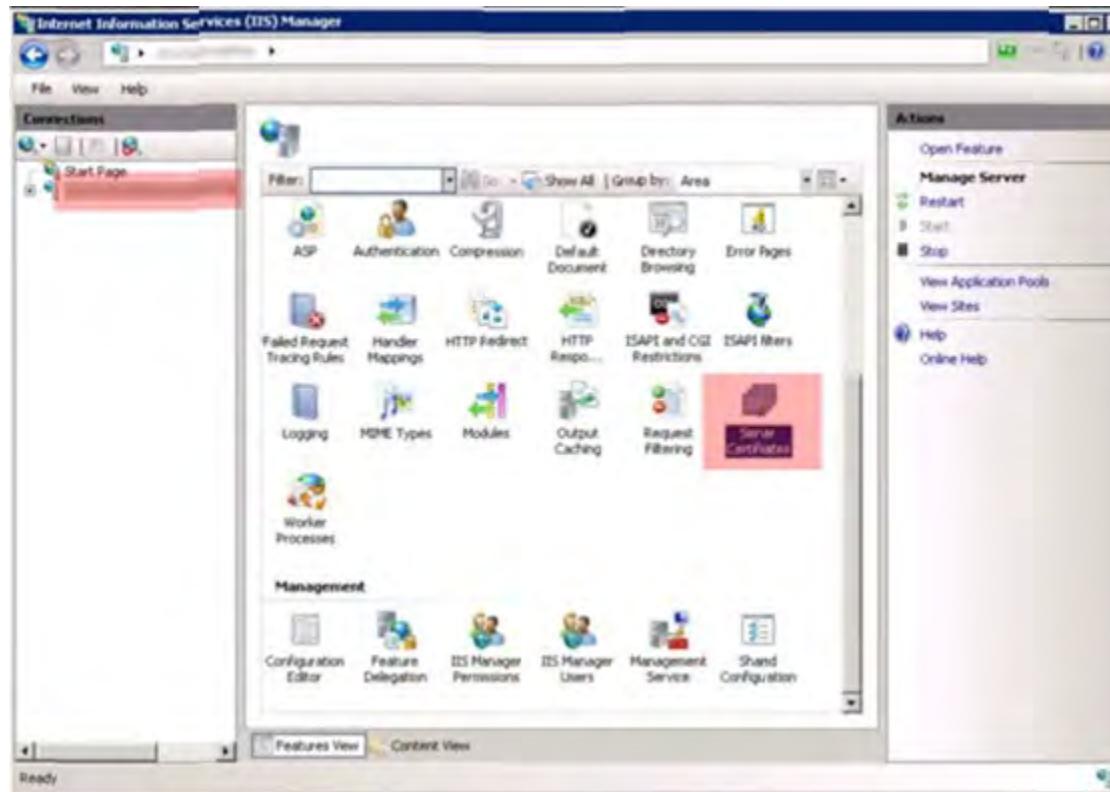
Go to "<https://developer.apple.com/iphone/manage/bundles/downloadCert.action?certDisplayId=4Q55PXST73>"

Export the key and input a cert password when prompted

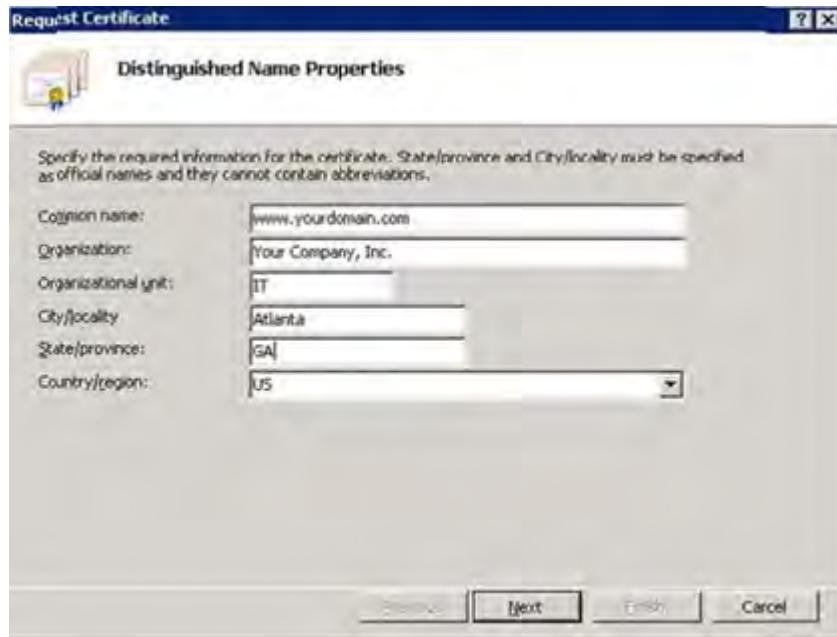
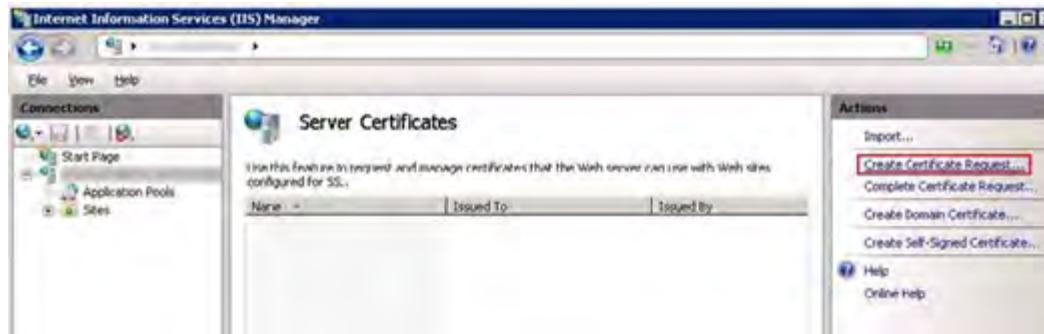


Using Microsoft Windows Server & IIS

From the center menu, double-click **Server Certificates**



On the right, click **Create Certificate Request**



In the Distinguished Name Properties window, enter the following:

- **Common Name**

The name associated with your Apple Developer account

- **Organization**

The legally registered name of your organization/company

- **Organizational unit**

The name of your department within the organization

- **City/locality**

The city in which your organization is located

- **State/province**

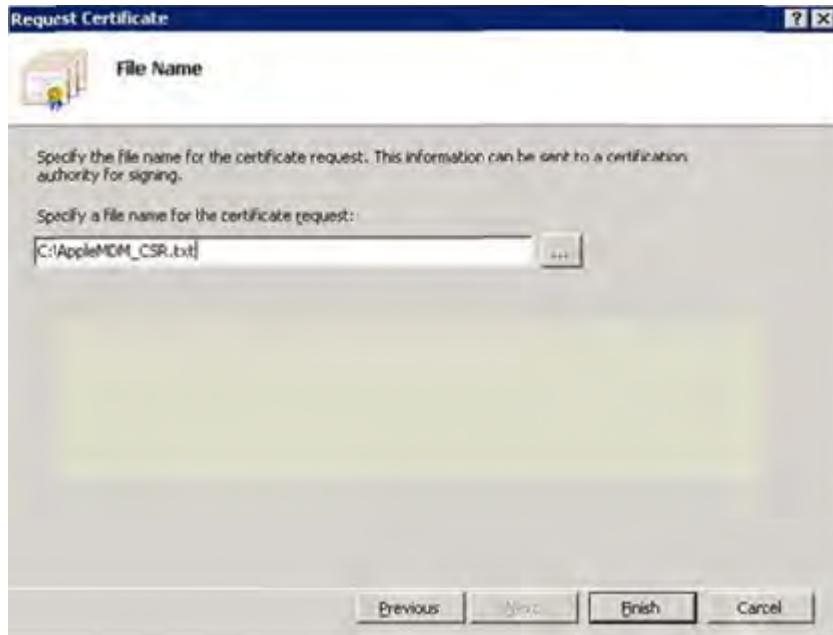
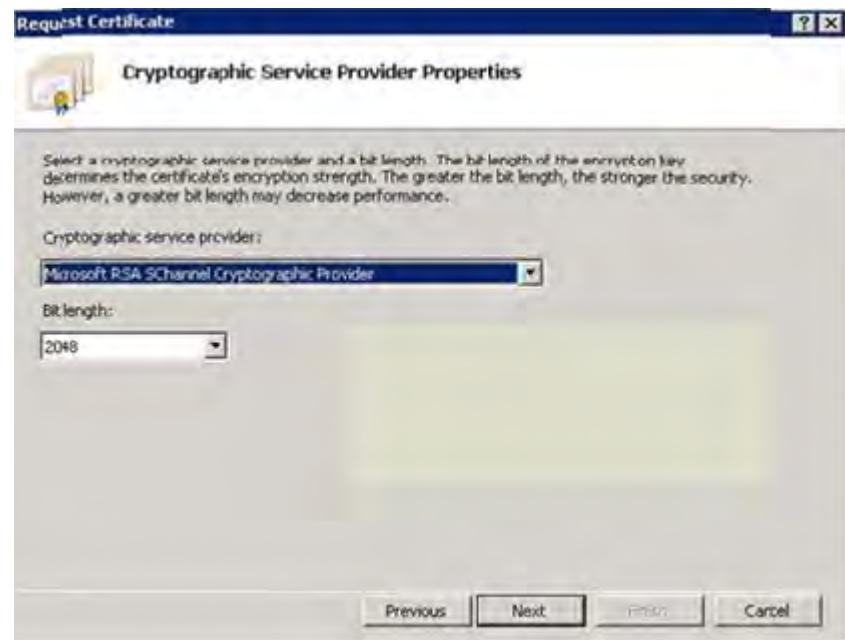
The state in which your organization is located

- **Country/region**

The country in which your organization is located

Certificate generation

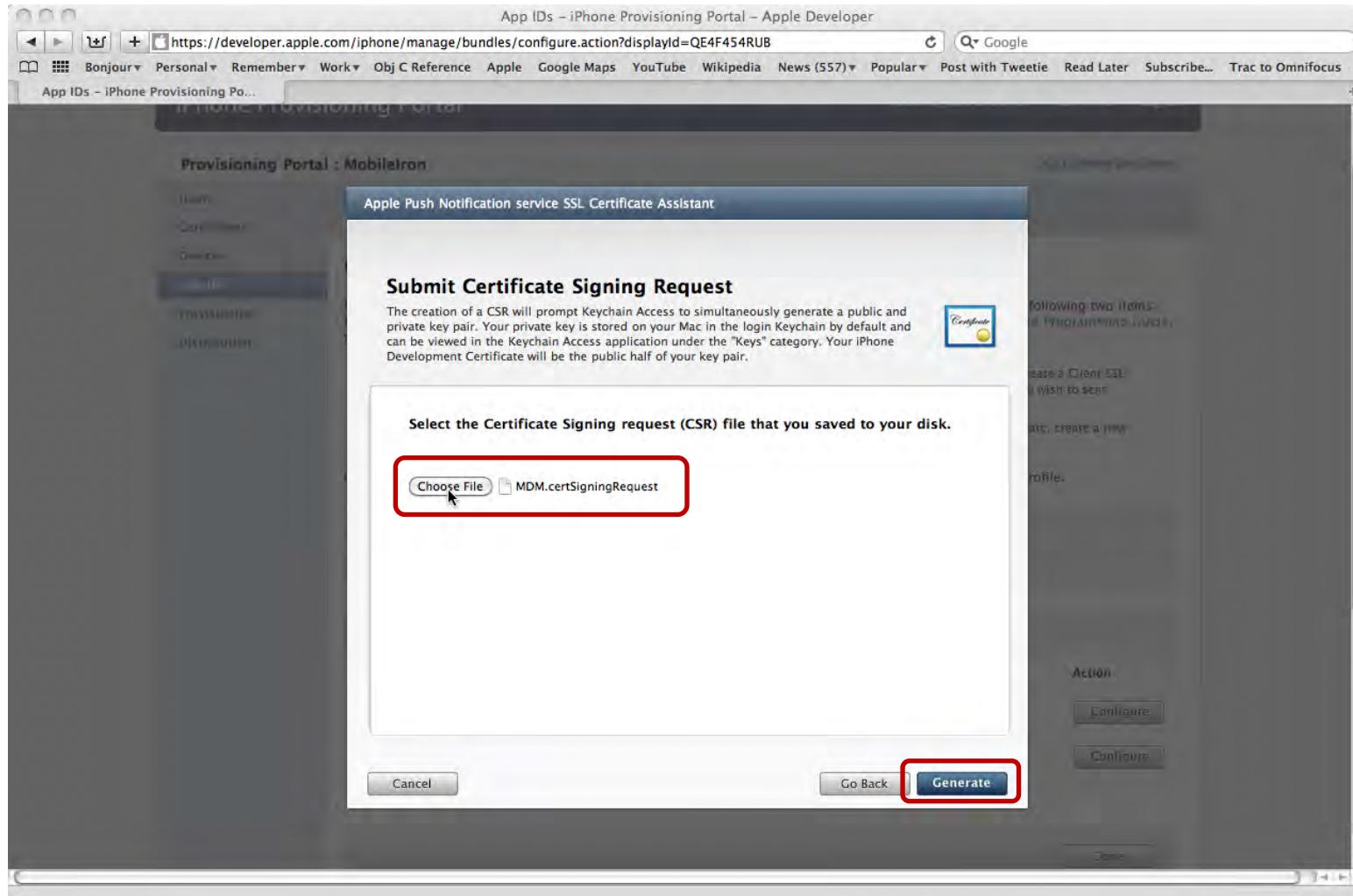
In the Cryptographic Service Provider Properties window, leave both settings at their defaults (**Microsoft RSA SChannel** and **2048**) and then select **Next**



Save the CSR to your computer. Remember the filename and location that you save the file

You have now created a CSR request and are ready to upload to your Apple development portal

Submit the saved CSR to generate key pairs



Download the Apple-signed MDM certificate

The screenshot shows a web browser window titled "App IDs - iPhone Provisioning Portal – Apple Developer". The URL is <https://developer.apple.com/iphone/manage/bundles/iphone/manage/bundles/configure.action?displayId=QE4F454P>. The page displays instructions for setting up an App ID for Apple Push Notification service, mentioning the need for a Client SSL Certificate and a provisioning profile.

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1. An App ID-specific Client SSL Certificate : For each App ID you wish to enable push notifications for, you need to create a Client SSL Certificate that allows your notification server to connect to the Apple Push Notification service. Each application you wish to send notifications to will require a separate Client SSL Certificate.
2. An Apple Push Notification service compatible provisioning profile: After you have generated your Client SSL certificate, create a new provisioning profile containing the App ID you wish to use for notifications.

Once the steps above have been completed, you should build your application using this new provisioning profile.

ID MDM App Id
6AM2H69436.com.yourdomain.MDM

Enable for Apple Push Notification service

Push SSL Certificate	Status	Expiration Date	Action
Development Push SSL Certificate	Configurable		Configure
Production Push SSL Certificate	Enabled	Jul 27, 2011	Download Revoke Configure

Generate a new Production Push SSL Certificate before your current one expires.

Done

Go to "<https://developer.apple.com/iphone/manage/bundles/downloadCert.action?certDisplayId=4Q55PXST73>"

Complete the certificate request

After you have copied the file to the Windows Server, go back to the **Internet Information Services (IIS) Manager->Server Certificates** and select **Complete Certificate Request** from the Actions menu on the right. This will open the Complete Certificate Request wizard



Browse to the .cer file that was provided to you by Apple Developer Portal and enter a friendly name

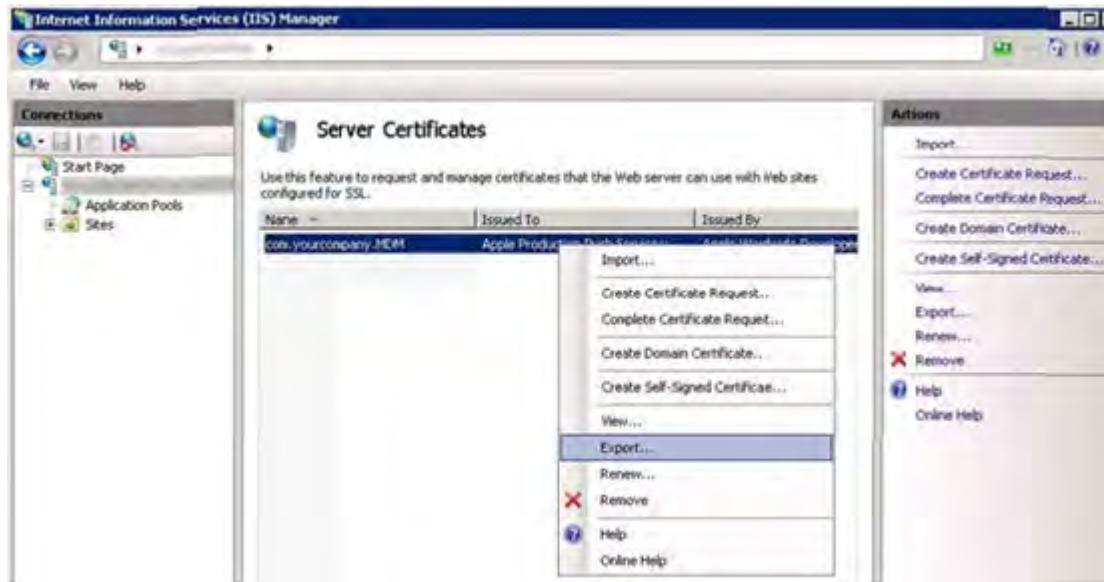
The friendly name is not part of the certificate itself, but is used by the server administrator to easily distinguish the certificate

Selecting **OK** will install the certificate to the server



Export the certificate for VSP usage

You should now see the server listed in the Server Certificates section



Save the file to your Desktop in the **.pfx** format. When exporting the certificate you are required to set a password

Please take note of this password, as you will need it when uploading the certificate to MobileIron VSP

If you only have the option to save as a **.cer** file rather than a **.pfx** you are not correctly exporting the certificate. Ensure your screen looks exactly as pictured above and you are selecting the correct certificate to export

